

# Control Reference Manual

USA Edition



## tiastar MCC Simocode Pro

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**SIEMENS**



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

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# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## 1. Introduction

The intent of this manual is to familiarize the reader with a library of standard control circuits to be used in conjunction with Sirius Motor Management and Control Devices, also known as SIMOCODE Pro.

SIMOCODE Pro is a flexible, modular motor management system that combines virtually all functions required for a complete motor feeder. The only additional components required are switching and short-circuit protection mechanisms of the main circuit (contactors, circuit breakers, fuses, etc.).

SIMOCODE Pro replaces large, complex sections of the control circuit and automatically implements all required connections. It provides a considerable amount of operating, service and diagnostic data, increasing the actionable information provided by the motor feeder. It completely integrates the motor feeder into a comprehensive automation system via Profibus DP communication.

There are two varieties of SIMOCODE Pro:

- SIMOCODE Pro C - a compact system for full-voltage non-reversing and reversing starters providing control and monitoring capabilities via a standard Operator Panel.
- SIMOCODE Pro V – a variable system with many additional functions and features.
  - o Starter functions for star-delta; two-speed one-winding; two-speed two-winding and reduced voltage soft starters – with or without reversing control.
  - o Two digital modules to increase the number and type of binary inputs and outputs.
  - o A Current/Voltage Measuring Module that provides additional measurement and monitoring of voltage and other power-related values (power management).
  - o A Temperature Module to evaluate analog temperature sensors.
  - o An Earth-Fault detection system integrated with a summation current transformer for sensitive grounding systems.
  - o An Analog Module to extend the system by adding analog inputs and outputs, such as fill level or flow-rate monitoring.
  - o An Operator Panel with Display (OPD) that provides control, indication and status of all data stored within the device.

SIMOCODE Pro C is upward-compatible with SIMOCODE Pro V. This means both levels can be used simultaneously to meet specific requirements throughout a facility.

SIMOCODE Pro is customized for a particular application by storing one of the functional circuits described in this manual into programmable, non-volatile memory of each device. Each control circuit includes the input commands and output control logic required for a specific application.

SIMOCODE Pro functions can also be customized using an optional Windows-based software application to develop highly specialized control circuits or to modify a standard control circuit. SIMOCODE ES is a powerful, user-friendly program that uses pull-down menus to select the desired functionality. The program then translates these selections for download to the SIMOCODE Pro non-volatile memory.

For more information, or to purchase SIMOCODE Pro or SIMOCODE ES, please contact your local SIEMENS sales office.

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## 2. General terms

**Control Command:** Input sent from the control station screen to start, stop, and/or change the direction of a motor.

**Control Method:** There are four input locations (Local Control, PLC/DCS, PC, and Operator Panel) from which commands may be sent to control SIMOCODE Pro operations. Each may be set independently from the others. (See Control Method Releases & Operation Mode Selector.)

**Control Method Releases:** For each control mode, there are four stations (Local Control, PLC/DCS, PC, and Operator Panel) that can have control enabled (ON) and/or disabled (OFF). (See Control Method & Operation Mode Selector.)

**Control Selection:** The act of choosing between Local Control, Remote Control, and Remote Parameterization Control (if available) using the Operation Mode Selector.

**Control Station:** Interface screen in SIMOCODE ES used to assign operation mode selection and operations control within each control method.

**FAST:** Describes the higher capacity contactor in a two speed motor starter. Used as the designation on contactor coils, push buttons, and operator panel buttons.

**Fixed Level:** A setting within the SIMOCODE ES software that provides a maintained high (1) or low (0) signal. Used in logic circuits to limit the number of variables or provide a constant signal.

**FVNR:** The non-reversing starter uses the 1M contactor to connect the motor terminals directly across the line for single-speed, single-direction, full-voltage operation.

**FVR:** The reversing starter uses the FWD & REV contactors to connect the motor terminals in positive or negative phase sequence for single-speed, dual-direction, and full-voltage operation. The FWD & REV contactors are mechanically and electrically interlocked to prevent short circuiting of the input lines.

**FWD:** Abbreviation for forward. Describes the clockwise rotating contactor in a reversing motor starter. Used as the designation on contactor coils, push buttons, and operator panel buttons.

**Local Operation Mode:** To command the starter unit using hardwired inputs or the operator panel.

**Local Control (LC):** Control method used to assign the actions for controls placed at the SIMOCODE Pro inputs.

**Local Overload Operation – Remote Monitoring:** To bypass the SIMOCODE Pro for command of the starter unit and use PROFIBUS DP communication for monitoring.

**OFF Control Command:** Input used to send a STOP command. Note: Local Control (LC) Method requires a normally closed contact. This will ensure shut down if a wire break occurs.

**OL/FVNR; OL/FVR; OL/2S1W; OL/2S2W:** Use of the SIMOCODE Pro as an overload only. Control commands must be performed external to the Simocode Pro. Monitoring over Profibus DP is still possible.

**ON > Control Command:** Input used to send a FWD and SLOW run command.

**ON < Control Command:** Input used to send a REV and SLOW run command.

**ON >> Control Command:** Input used to send a FWD and FAST run command.

**ON << Control Command:** Input used to send a REV and FAST run command.

**Operation Mode Selector:** A two input truth table used to choose between up to four different control modes (Local 1, Local 2, Local 3, and Remote). See Control Methods & Control Method Releases.

**Operator Panel (OP):** Control method used to assign the actions from the SIMOCODE Pro Operator Panel buttons.

**PC (DPV1):** Control Method used to assign the actions sent from a remote Class II workstation or laptop via Profibus DP. Must be able to utilize Profibus DPV1 protocol.

**PLC/DCS (DP):** Control method used to assign the actions sent from a remote Class I master PLC/DCS via Profibus DP.

**Profibus Cyclic Receive Bit:** Control information sent from the PLC/DCS to the SIMOCODE Pro via Profibus DP.

**Profibus Cyclic Send Bit:** Status information sent from the SIMOCODE Pro to the PLC/DCS via Profibus DP.

**Remote Operation Mode:** To control the starter unit via PROFIBUS DP communication without rights to change parameter data.

**Remote Parameterization Operation Mode:** To control the starter unit via Profibus DP communication with rights to change parameter data.

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## 2. General terms (continued)

**SIMOCODE ES:** Windows-based software program used to parameterize the SIMOCODE Pro motor management device.

**SLOW:** Describes the lower capacity contactor in a two speed motor starter. Used as the designation on contactor coils, push buttons, and operator panel buttons.

**Two Wire Control:** Characterized by maintained contact closure. Signal must always be present for operation of the contactor. Typically, two wire control provides voltage release protection, but no voltage return protection. In the event of control circuit power loss, the contactor would de-energize (voltage release protection), but would re-energize once control circuit power was restored, if the maintained contact was still closed (no voltage return protection). Proceed with caution.

**Three Wire Control:** Characterized by momentary contact closure. Signal needs only a pulse for operation of the contactor. Typically three wire control provides voltage release protection and voltage return protection. In the event of control circuit power loss the contactor would de-energize (voltage release protection). Once control circuit power was restored, a momentary start contact closure would be required before the contactor would engage (voltage return protection).

**2S1W:** The two-speed, one-winding starter uses the SLOW contactor to select low-speed and the FAST & SHORT contactors to select high-speed for dual-speed, single-direction, full-voltage operation. The SLOW and SHORT contactors are mechanically and electrically interlocked to prevent short circuits on the input lines.

**2S2W:** The two-speed, two-winding starter uses the SLOW contactor to select low-speed and the FAST contactor to select high-speed for dual-speed, single direction, full-voltage operation. The SLOW and FAST contactors are mechanically and electrically interlocked to prevent short circuits on the input lines.









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## 4. Full voltage non-reversing

The non-reversing starter uses the 1M contactor to connect the motor terminals directly across the line for single-speed, single-direction, full-voltage operation.

The basic operation of this starter is as follows.

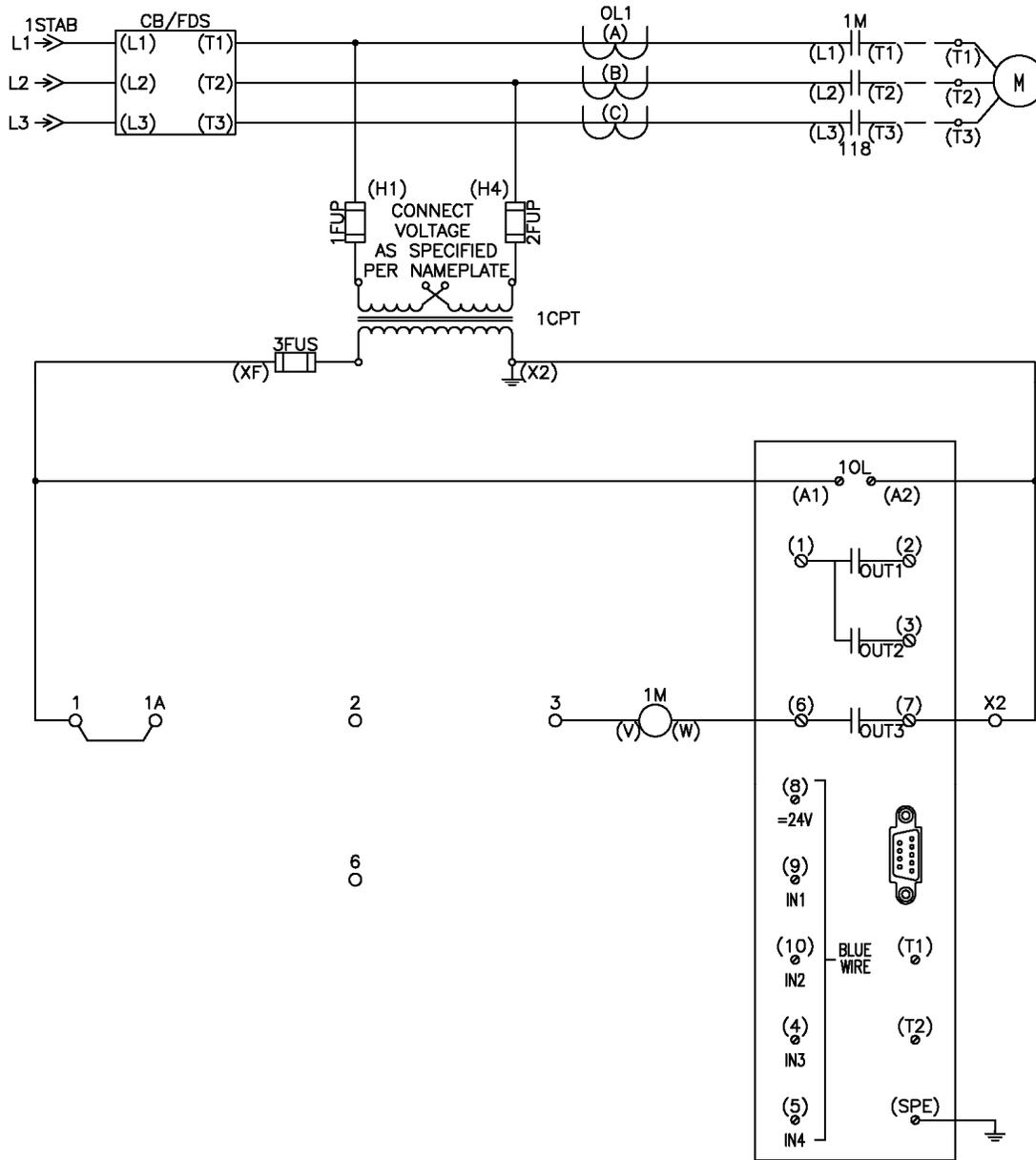
1. A local or remote start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Output 1 closes which energizes the coil of 1M Contactor.
3. A local or remote stop signal is given to the SIMOCODE Pro.
4. The SIMOCODE Pro Output 1 opens which de-energizes the coil of 1M Contactor.
5. If a fault occurs at any time, the SIMOCODE Pro will end the starter operation.

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## PB01

OL / FVNR – Fixed Operation Mode  
Local Overload Operation – Remote Monitoring

Connection Diagram



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## PB01

OL / FVNR – Fixed Operation Mode  
Local Overload Operation – Remote Monitoring

### Operating Instructions

#### Local Control

1. All control external to device.
2. In the event of an Overload or any other General Fault event the SIMOCODE Output 3 will open.

#### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

#### NOTE:

This setup is not recommended as its use eliminates local control of the starter via Simocode Pro as well as remote control over Profibus DP network communication

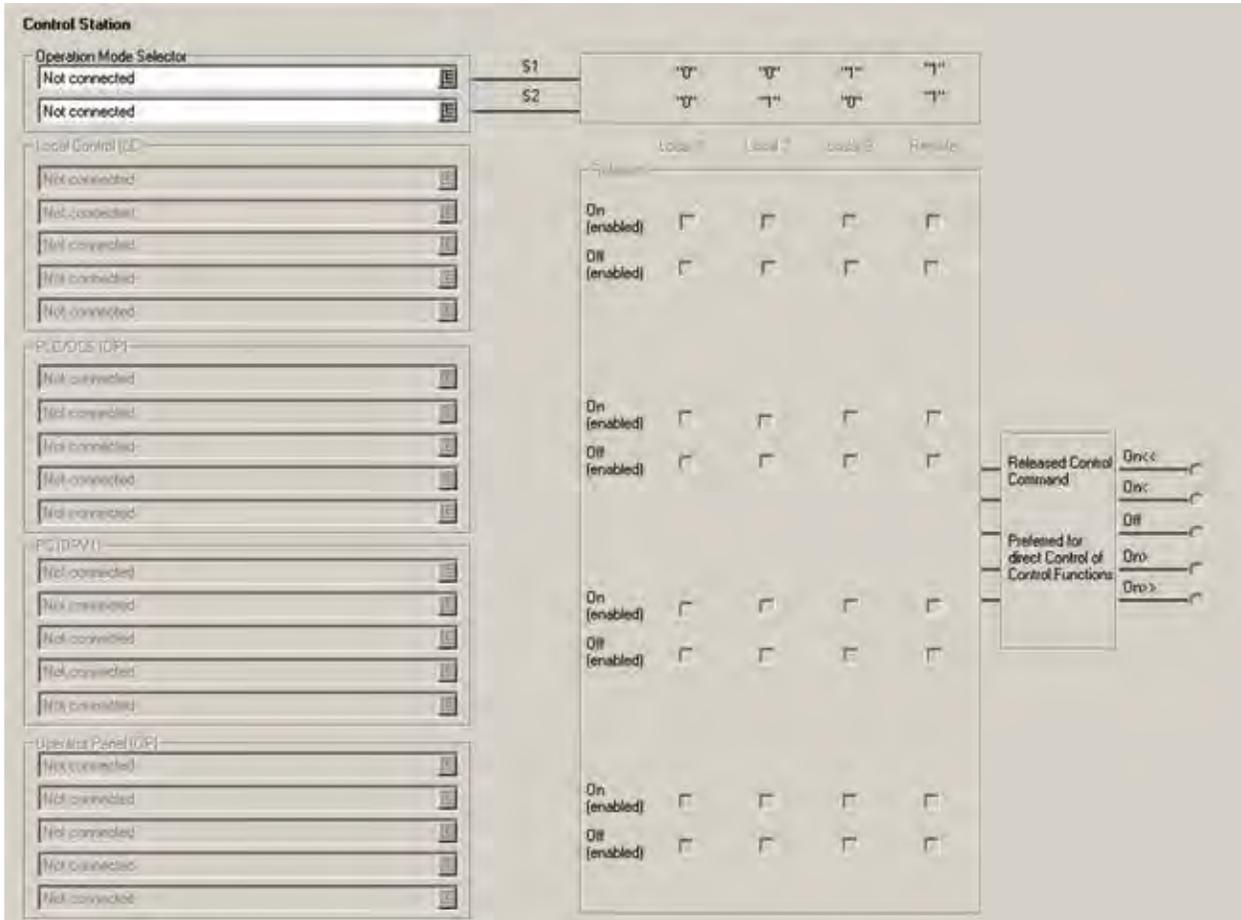
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB01

OL / FVNR – Fixed Operation Mode –  
Local Overload Operation – Remote Monitoring

### Parameter Detail

Control Selection and Operation

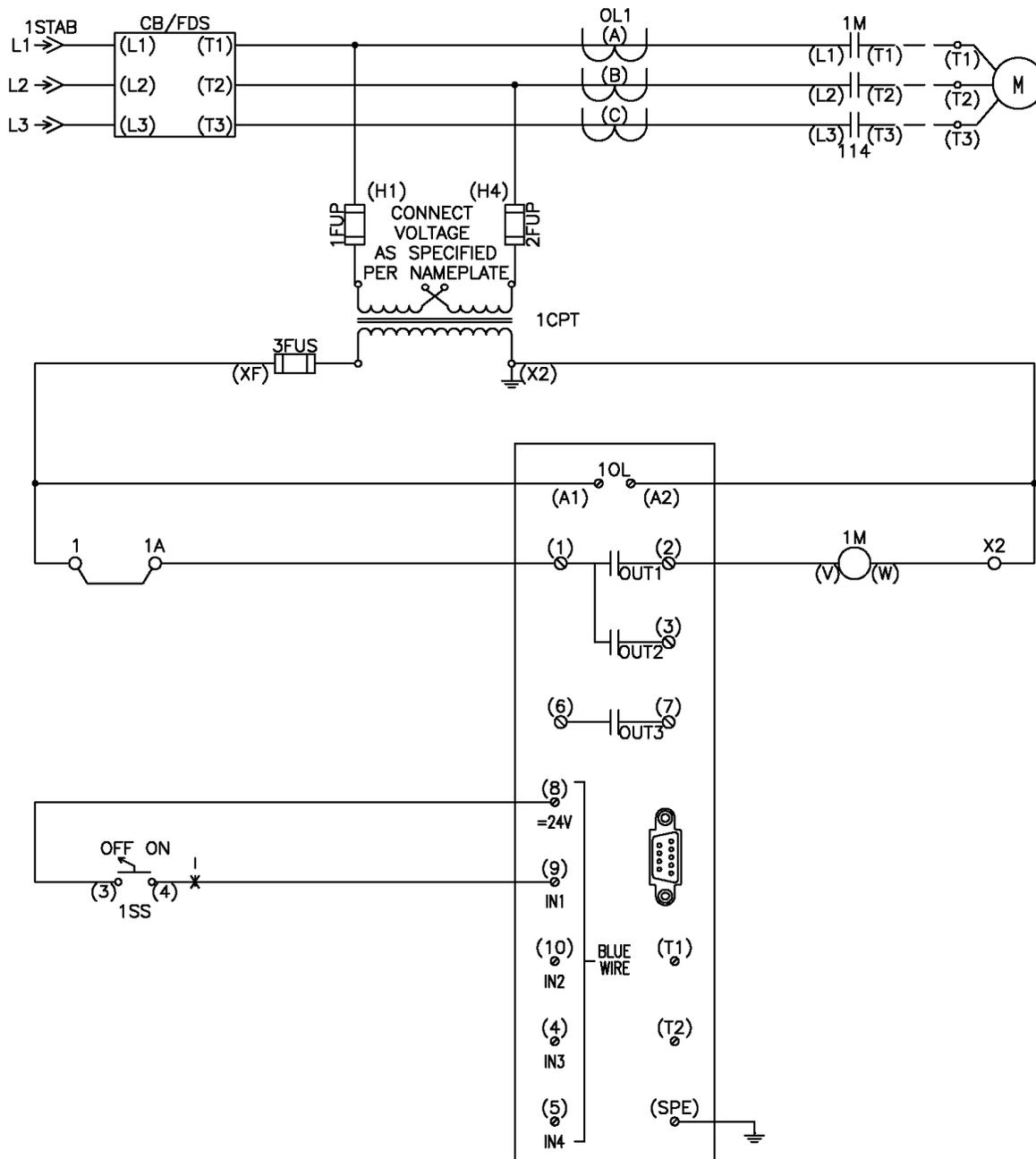


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## PB02

FVNR – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB02

### FVNR – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the 1M Contactor the selector switch is placed into the ON position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M contactor the selector switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an overload or any other general fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus cyclic receive bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB02

FVNR – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control [LC]  
 Not connected  
 Not connected  
 BU - Input 1  
 BU - Input 1  
 Not connected

PLC/DCS [DP]  
 Not connected  
 Not connected  
 Signal Conditioner 1 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Local 1	Local 2	Local 3	Remote
<b>Released</b>			
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On<<  
 On<  
 Off  
 On>  
 On>>

Preferred for direct Control of Control Functions  
 On>  
 On>>

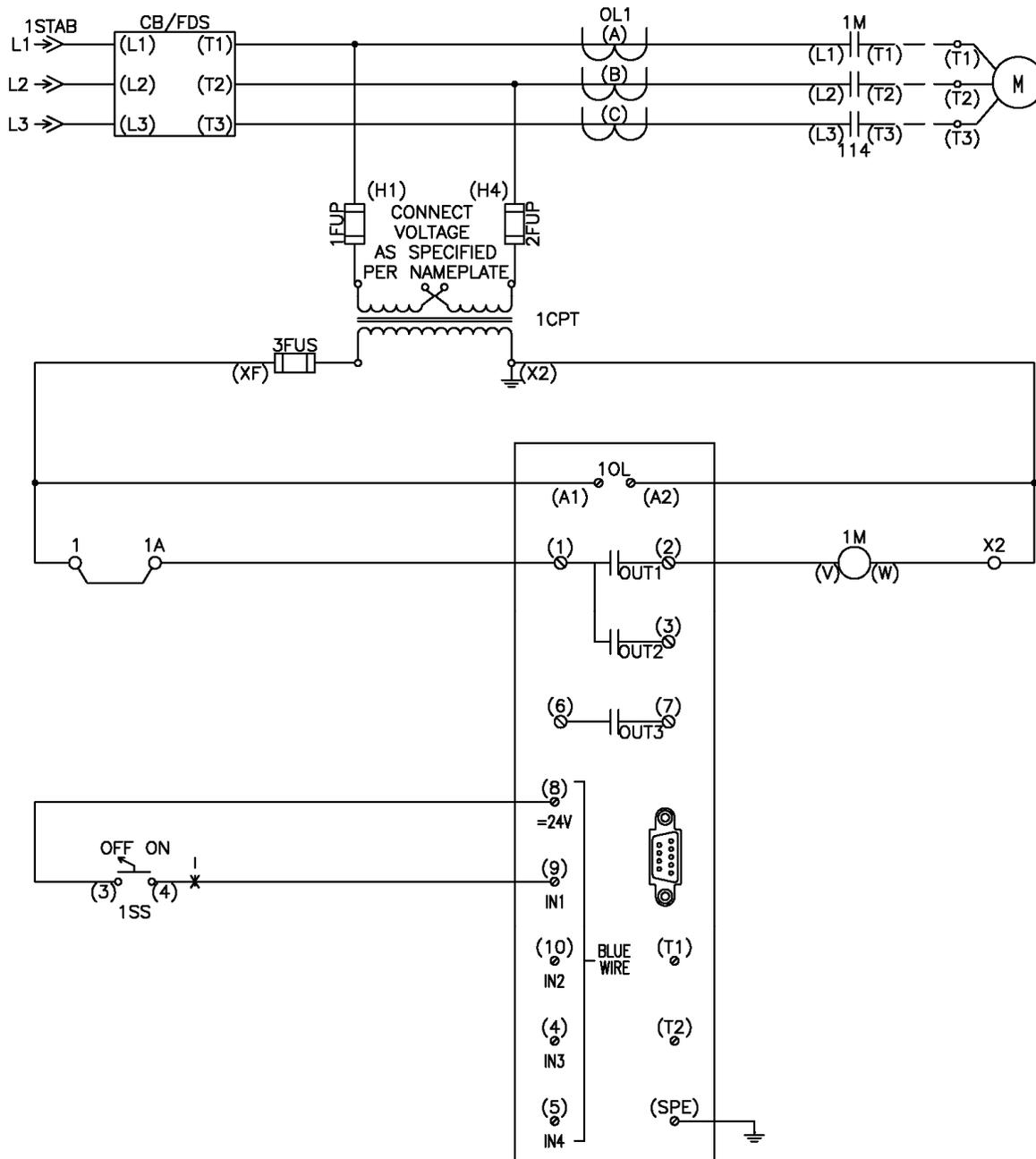
**Signal Conditioner 1**  
 Signal Conditioner - Type: inverting  
 Signal Conditioner - Input: Cyclic Receive - Bit 0.2  
 Signal Conditioner - Reset: Not connected

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## PB03

FVNR – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB03

### FVNR – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the 1M Contactor the Selector Switch is placed into the ON position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB03

FVNR – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

**Operation Mode Selector**

- Cyclic Receive - Bit 0.5
- Fixed Level - '1'

**Local Control (LC)**

- Not connected
- Not connected
- BU - Input 1
- BU - Input 1
- Not connected

**PLC/DCS (DP)**

- Not connected
- Not connected
- Cyclic Receive - Bit 0.1
- Cyclic Receive - Bit 0.2
- Not connected

**PC (DPV1)**

- Not connected

**Operator Panel (OP)**

- Not connected

	Local 1	Local 2	Local 3	Remote
Releases:				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command: On < , Off , On >

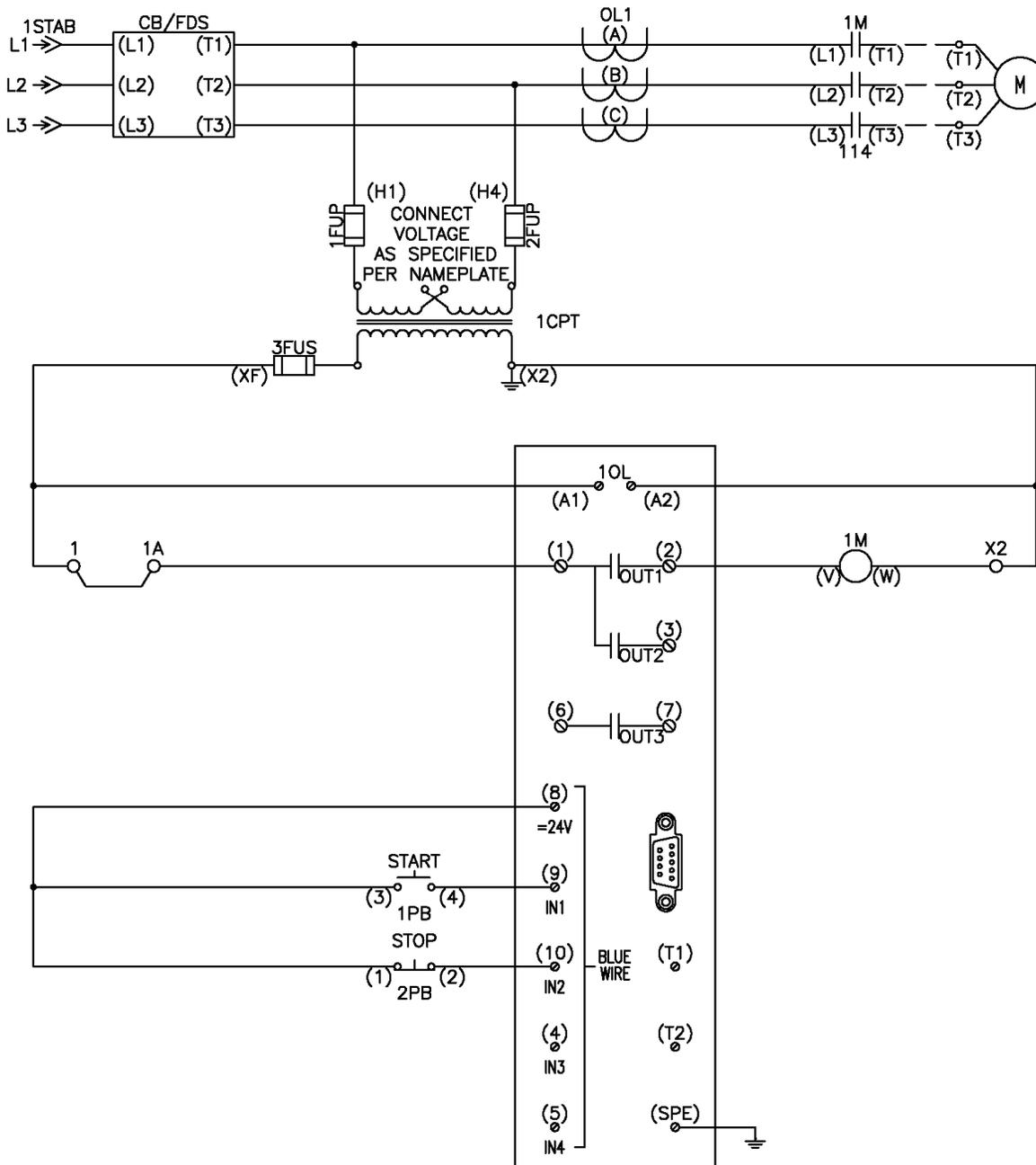
Preferred for direct Control of Control Functions: On < , Off , On >

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB04

FVNR – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire

Connection diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB04

### FVNR – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the 1M Contactor the Start Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open, which in turn de-energizes the 1M Contactor Coil thus disengaging the 1M Contactor ceasing current flow to the motor.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB04

FVNR – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC)  
 Not connected  
 Not connected  
 BU - Input 2  
 BU - Input 1  
 Not connected

PLC/DCS (DP)  
 Not connected  
 Not connected  
 Signal Conditioner 1 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	Local 1	Local 2	Local 3	Remote
Released				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On<<  
 On<  
 On

Preferred for direct Control of Control Functions  
 On<  
 On>  
 On>>

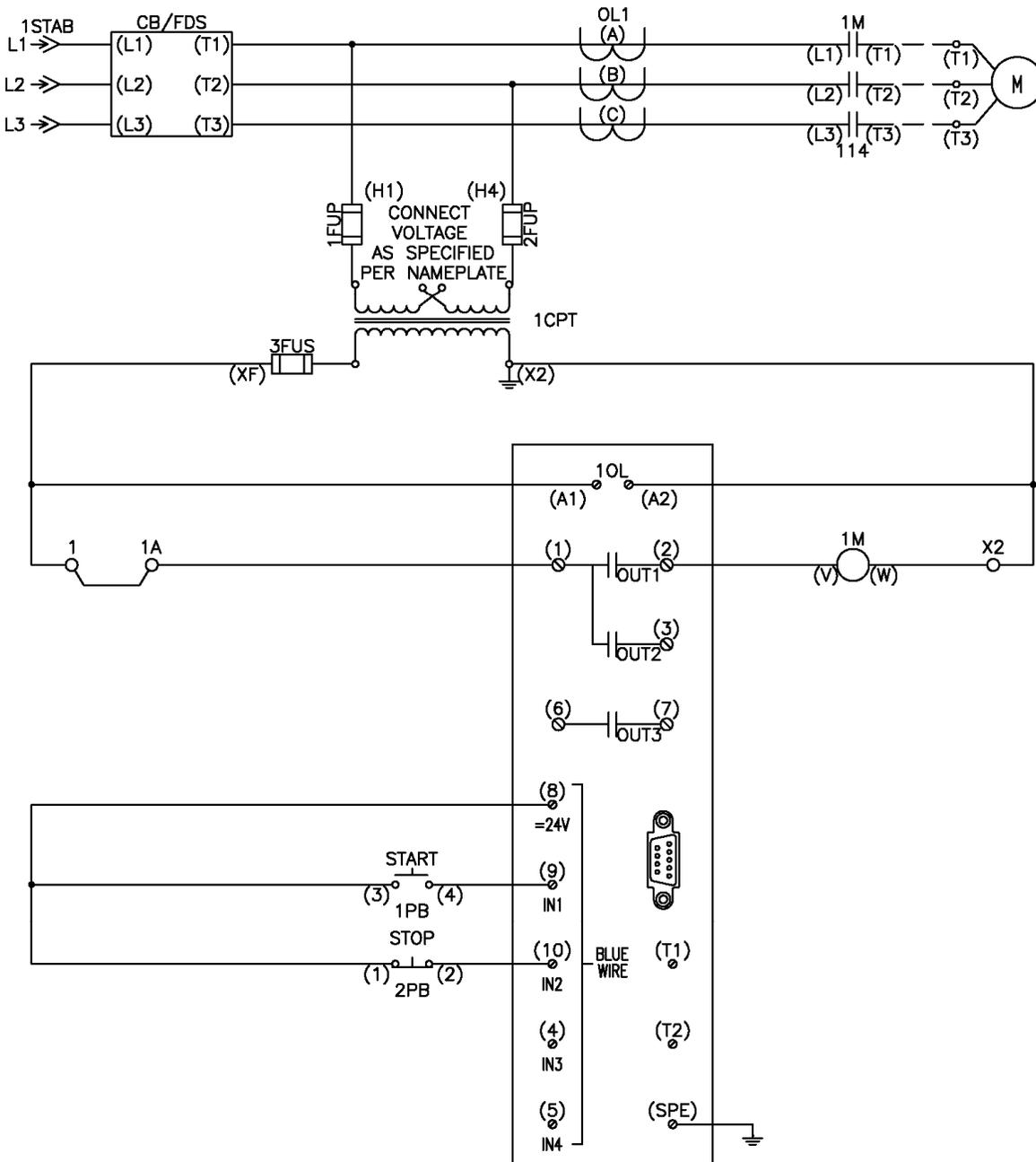
**Signal Conditioner 1**  
 Signal Conditioner - Type:   
 Signal Conditioner - Input:   
 Signal Conditioner - Reset:

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB05

FVNR – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB05

### FVNR – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the 1M Contactor the Start Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB05

FVNR – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

**Operation Mode Selector**

Cyclic Receive - Bx 0.5	51	"0"	"0"	"1"	"1"
Fixed Level - 1'	52	"0"	"1"	"0"	"1"

**Local Control (LC)**

Not connected					
Not connected					
BU - Input 2	Off				
BU - Input 1	On				
Not connected					

**PLC/DCS (DP)**

Not connected					
Not connected					
Cyclic Receive - Bx 0.1	Off				
Cyclic Receive - Bx 0.2	On				
Not connected					

**PC (DPV1)**

Not connected					
Not connected					
Not connected	Off				
Not connected	On				
Not connected					

**Operator Panel (OP)**

Not connected					
Not connected					
Not connected	Off				
Not connected	On				
Not connected					

**Releases**

	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Released Control Command**

- On<<
- On<
- Off
- On>
- On>>

**Preferred for direct Control of Control Functions**

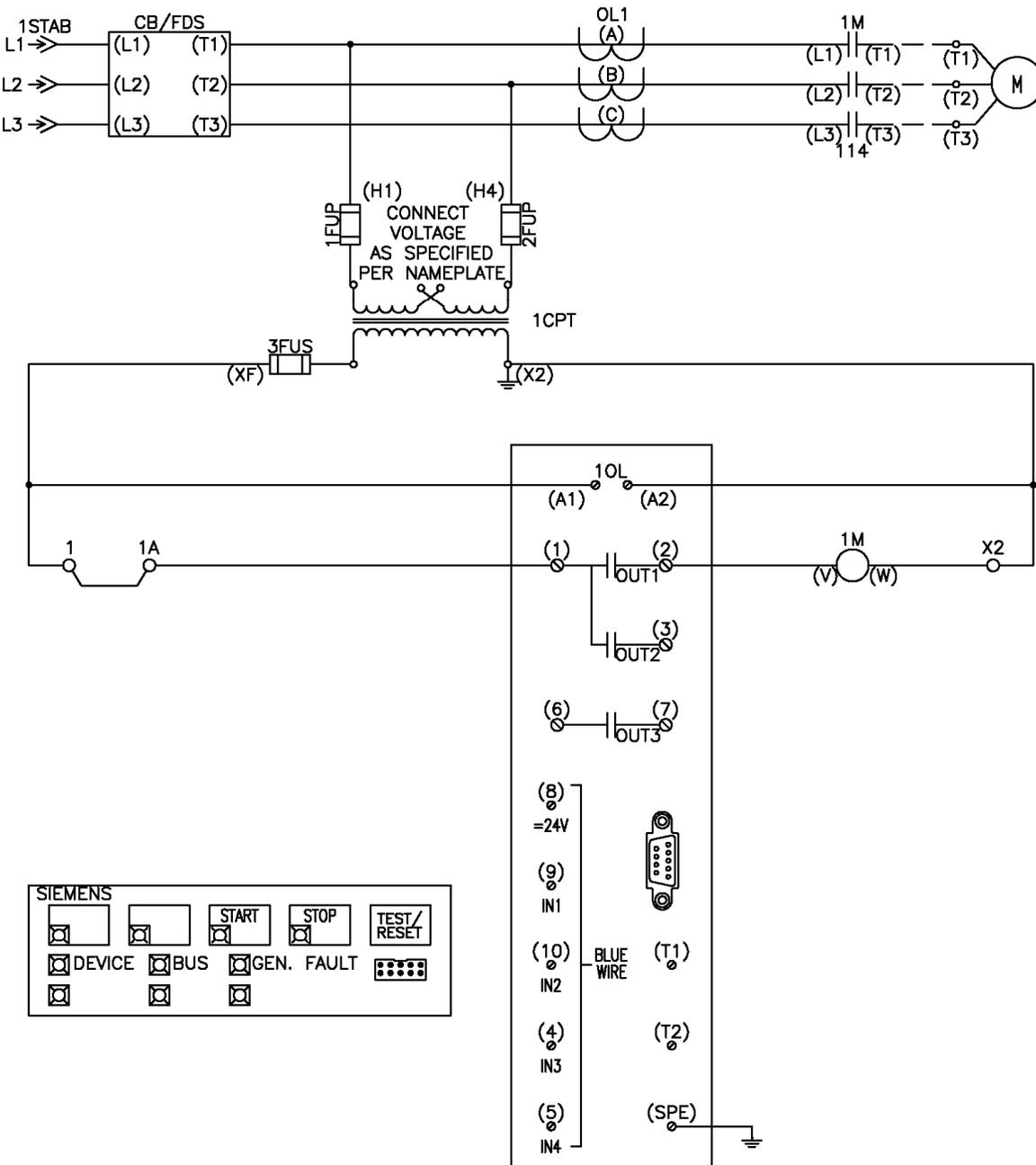


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB06

FVNR – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB06

### FVNR – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (START) is connected to the ON > Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the 1M Contactor the OP Start Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB06

FVNR – Profibus Bit Operation Mode Selection – Local 3-Wire OP(OPD) – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:**
  - Operation Mode Selector:** Cyclic Receive - Bit 0.5, Fixed Level - 1.
  - Local Control (LC):** All four slots are set to "Not connected".
  - PLC/DCS (DP):**
    - Slot 1: Not connected
    - Slot 2: Not connected
    - Slot 3: Signal Conditioner 1 - Output
    - Slot 4: Cyclic Receive - Bit 0.2
    - Slot 5: Not connected
  - PC (DPV1):** All four slots are set to "Not connected".
  - Operator Panel (OP):**
    - Slot 1: Not connected
    - Slot 2: Not connected
    - Slot 3: OP - Button 4
    - Slot 4: OP - Button 3
    - Slot 5: Not connected
- Signal Conditioner 1:**
  - Signal Conditioner - Type: Inverting
  - Signal Conditioner - Input: Cyclic Receive - Bit 0.2
  - Signal Conditioner - Reset: Not connected

The central part of the interface is a table for "Released" control functions, showing their status across four control modes: Local 1, Local 2, Local 3, and Remote. The "Released" column indicates whether the function is "On (enabled)" or "Off".

Released	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

On the right side, there are two groups of control function outputs:

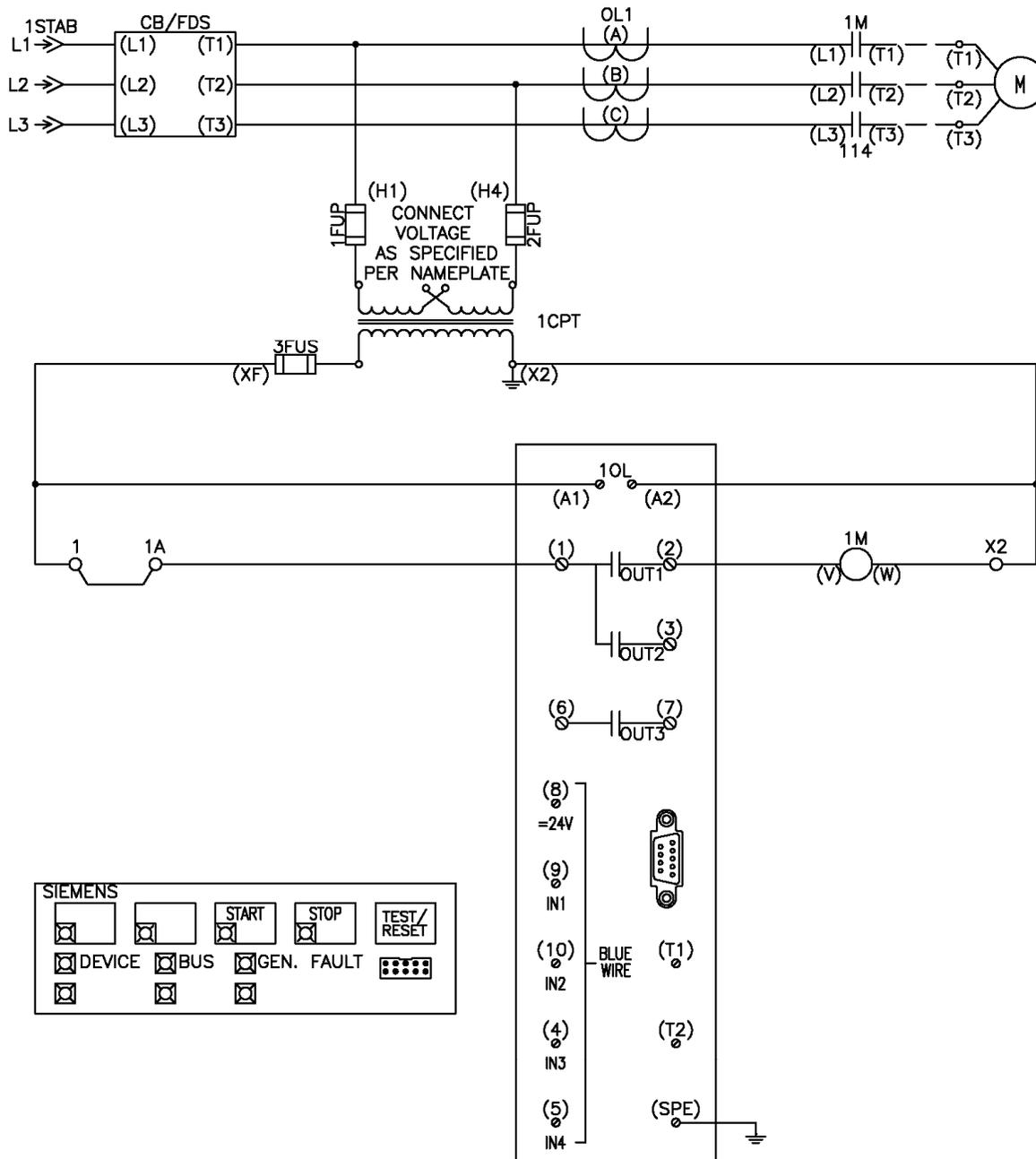
- Released Control Command:** Oncc, Onv, Off.
- Preferred for direct Control of Control Functions:** Onp, Ono.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB07

FVNR – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP – Remote 3-Wire

### Connection Diagram

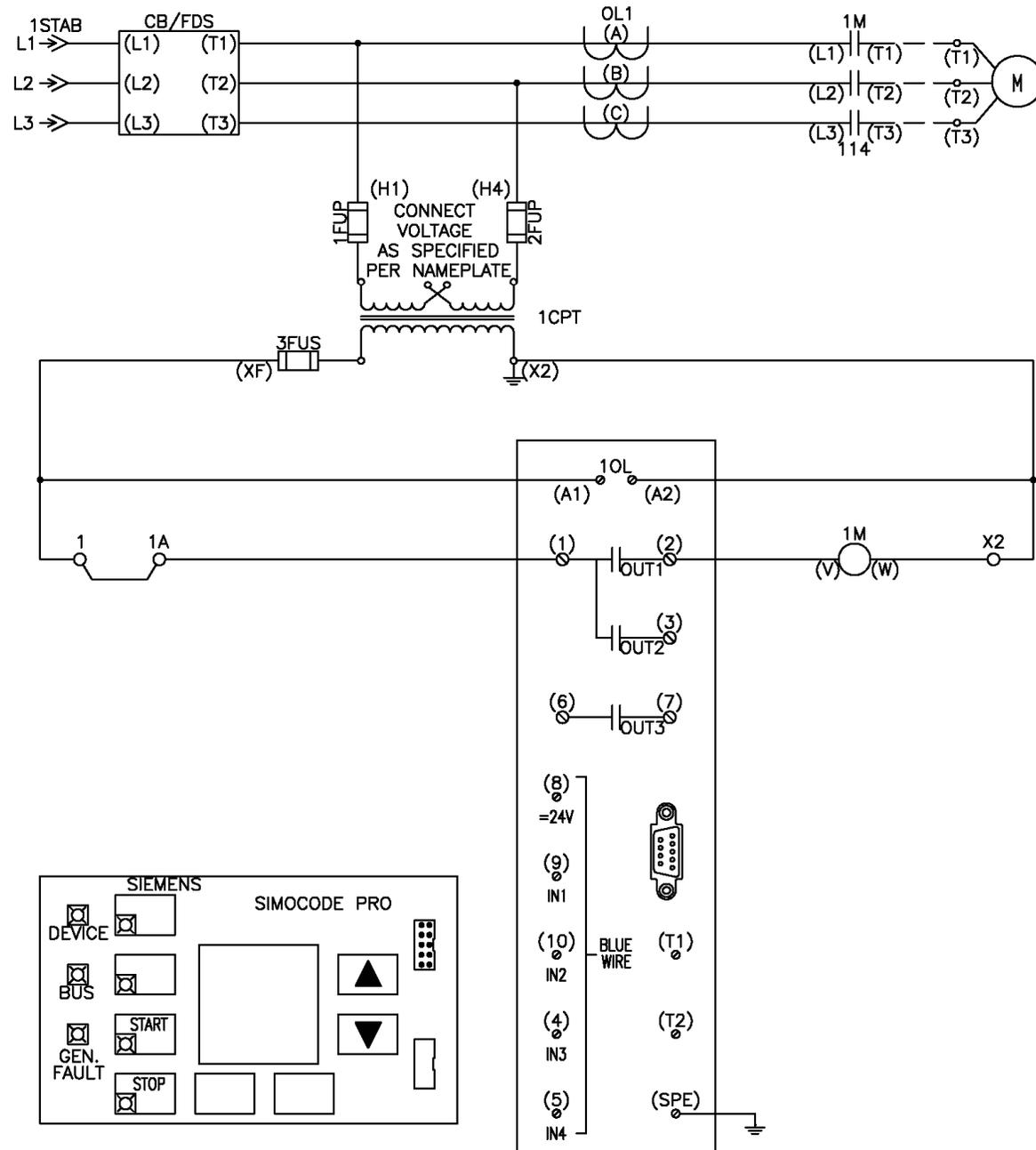


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB07

FVNR – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 3-Wire

### Connection Diagram



Section 4

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB07

### FVNR – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (START) is connected to the ON > Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the 1M Contactor the OP Start Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB07

FVNR – Profibus Bit Operation Mode Selection – Local 3-Wire OP(OPD) – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

The screenshot displays the 'Control Station' configuration window for parameter PB07. It is divided into several sections for selecting control modes and a central 'Releases' matrix.

**Control Mode Selections:**

- Operation Mode Selector:**
  - Cyclic Receive - Bit 0.5
  - Fixed Level - '1'
- Local Control (LC):**
  - Not connected
  - Not connected
  - Not connected
  - Not connected
- PLC/DCS (DP):**
  - Not connected
  - Not connected
  - Cyclic Receive - Bit 0.1
  - Cyclic Receive - Bit 0.2
  - Not connected
- PC (DPV1):**
  - Not connected
  - Not connected
  - Not connected
  - Not connected
- Operator Panel (OP):**
  - Not connected
  - Not connected
  - OP - Button 4
  - OP - Button 3
  - Not connected

**Releases Matrix:**

	Local 1	Local 2	Local OP	Remote
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Control Command Selections:**

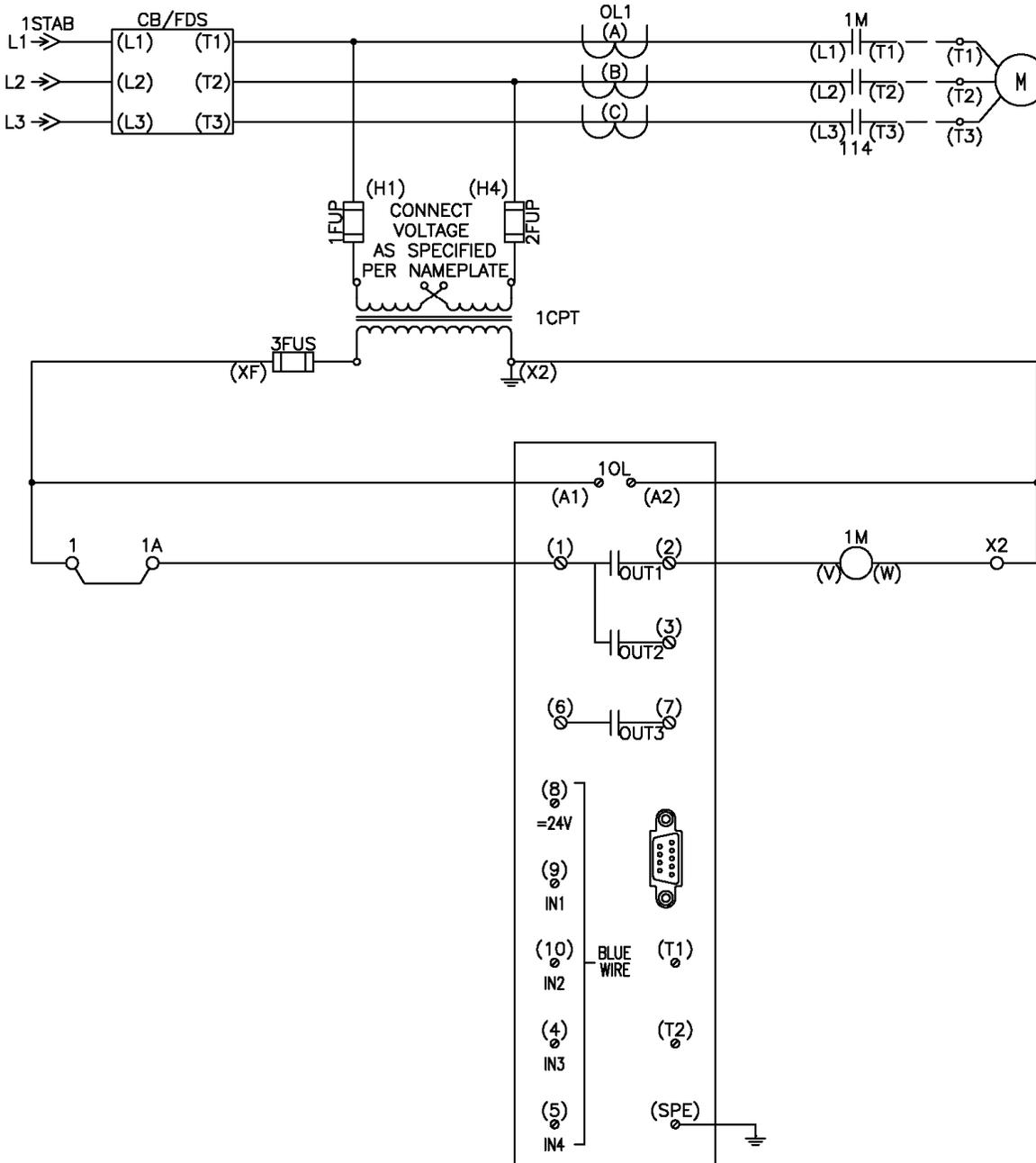
- Released Control Command: On<<, On<, Off
- Preferred for direct Control of Control Functions: On<, On>

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB08

FVNR – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB08

### FVNR – Profibus Bit Operation Mode Selection – No Local – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the 1M Contactor SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor SIMOCODE Input 1 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB08

FVNR – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - 1'

Local Control [LC]:  
 Not connected  
 Not connected  
 BU - Input 1  
 BU - Input 1  
 Not connected

PLC/DCS [DP]:  
 Not connected  
 Not connected  
 Signal Conditioner 1 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]:  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]:  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	Local 1	Local 2	Local 3	Remote
Releases				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On<<  
 On<  
 Off  
 On>  
 On>>

Preferred for direct Control of Control Functions

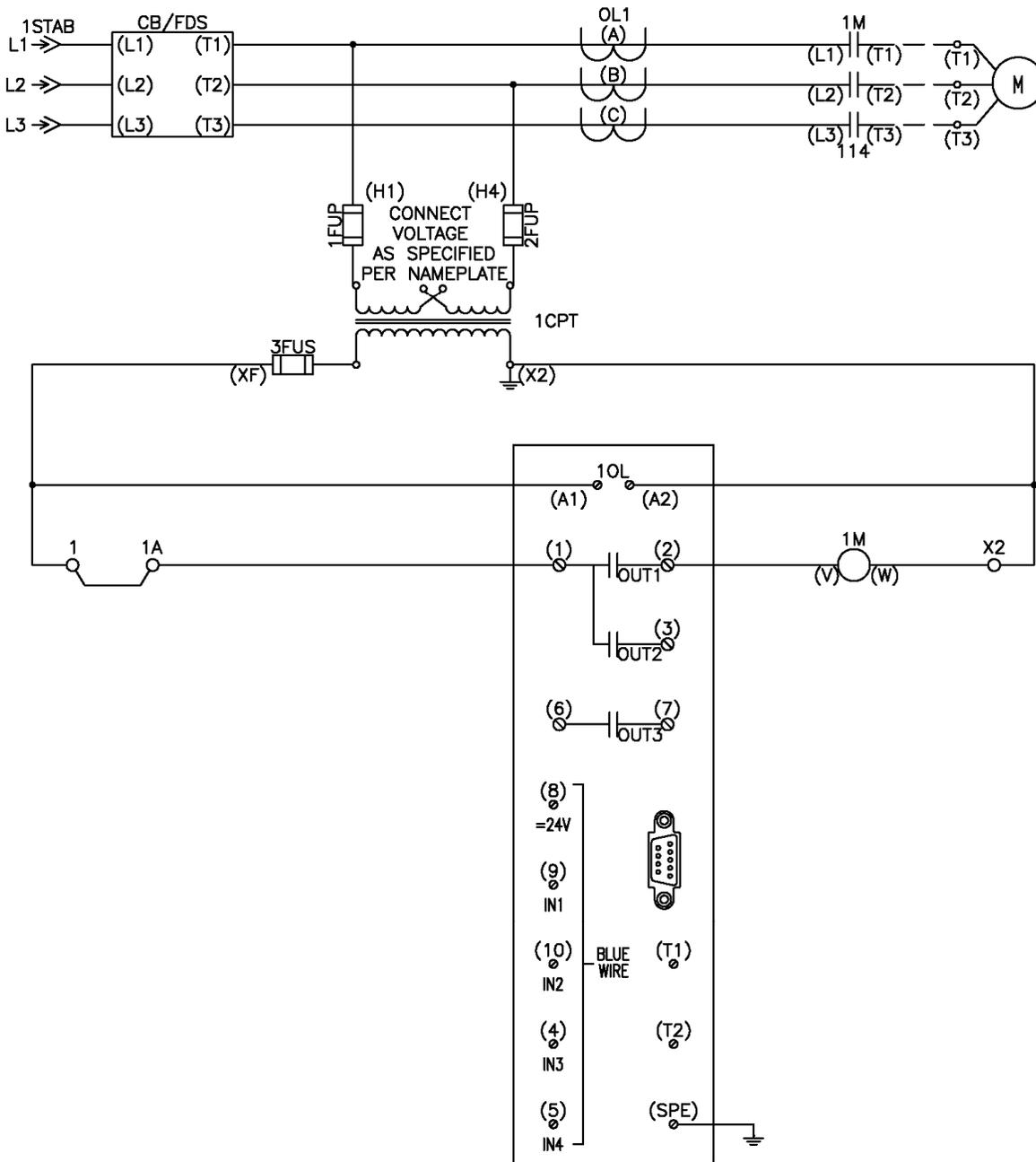
**Signal Conditioner 1**  
 Signal Conditioner - Type: inverting  
 Signal Conditioner - Input: Cyclic Receive - Bit 0.2  
 Signal Conditioner - Reset: Not connected

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB09

FVNR – Profibus Bit Operation Mode Selection –  
No Local – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB09

### FVNR – Profibus Bit Operation Mode Selection – Local 3-Wire SS – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the 1M Contactor SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor SIMOCODE Input 1 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB09

FVNR – Profibus Bit Operation Mode Selection – Local 3-Wire SS – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

The screenshot displays the 'Control Station' configuration window. It is organized into several sections on the left, each with a list of control functions and their current status. On the right, a table shows the operational state of these functions across four modes: Local 1, Local 2, Local 3, and Remote. Below the table, there are two groups of control functions: 'Released Control Command' and 'Preferred for direct Control of Control Functions', each with four associated indicators.

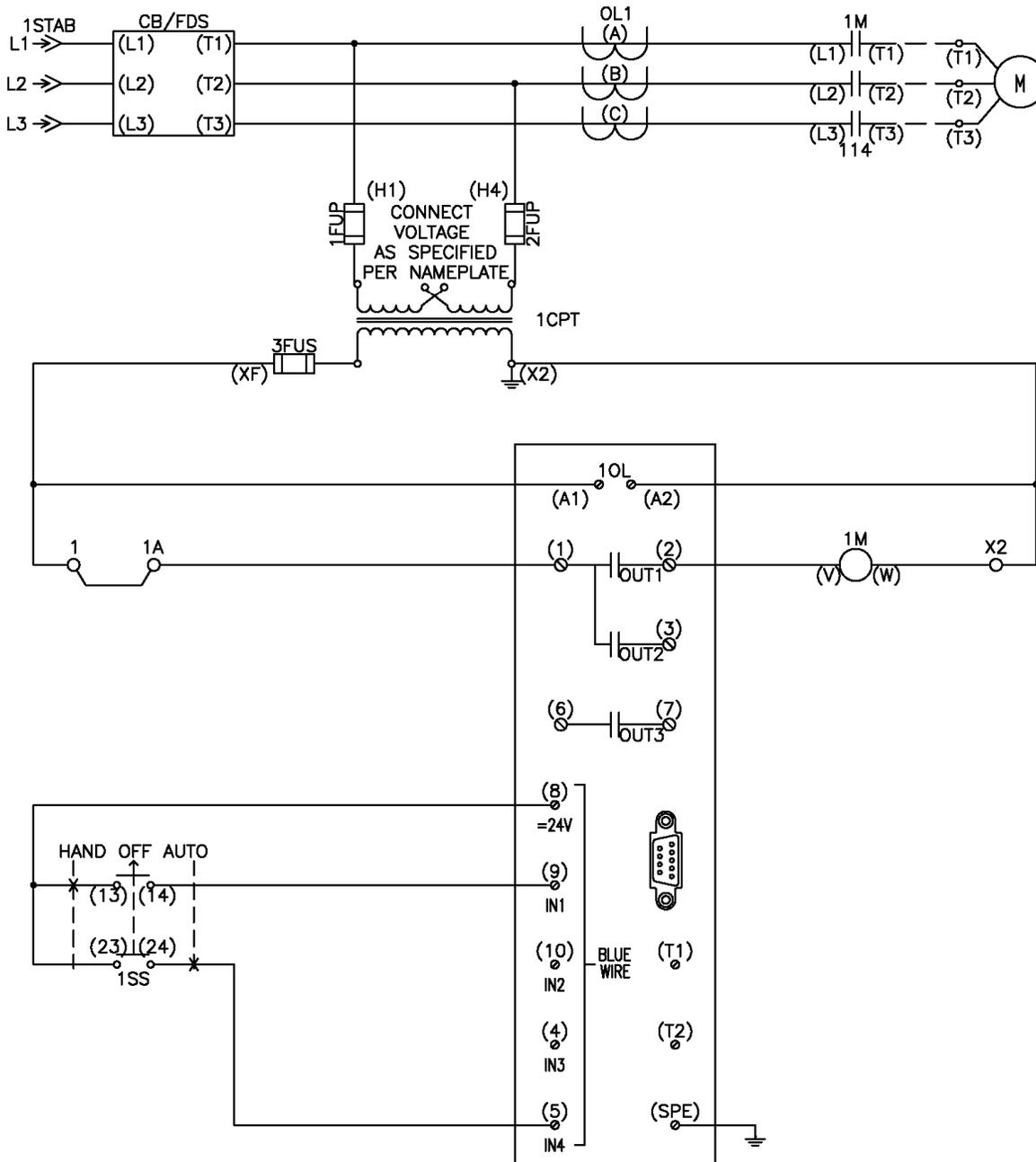
Control Function	Local 1	Local 2	Local 3	Remote
51	0	0	1	1
52	0	1	0	1
Local Control (LC)				
Not connected				
Not connected				
BU - Input 1	Off	On (enabled)	Off	Off
BU - Input 1	On	Off (enabled)	On	On
Not connected				
PLC/DCS (DP)				
Not connected				
Not connected				
Cyclic Receive - Bit 0.1	On	On (enabled)	Off	On
Cyclic Receive - Bit 0.2	On	Off (enabled)	Off	On
Not connected				
PC (DPV1)				
Not connected				
Not connected				
Not connected	Off	On (enabled)	Off	Off
Not connected	On	Off (enabled)	On	On
Not connected				
Operator Panel (OP)				
Not connected				
Not connected				
Not connected	Off	On (enabled)	Off	Off
Not connected	On	Off (enabled)	On	On
Not connected				

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB10

FVNR – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB10

### FVNR – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the 1M Contactor the Selector Switch is placed into the HAND position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

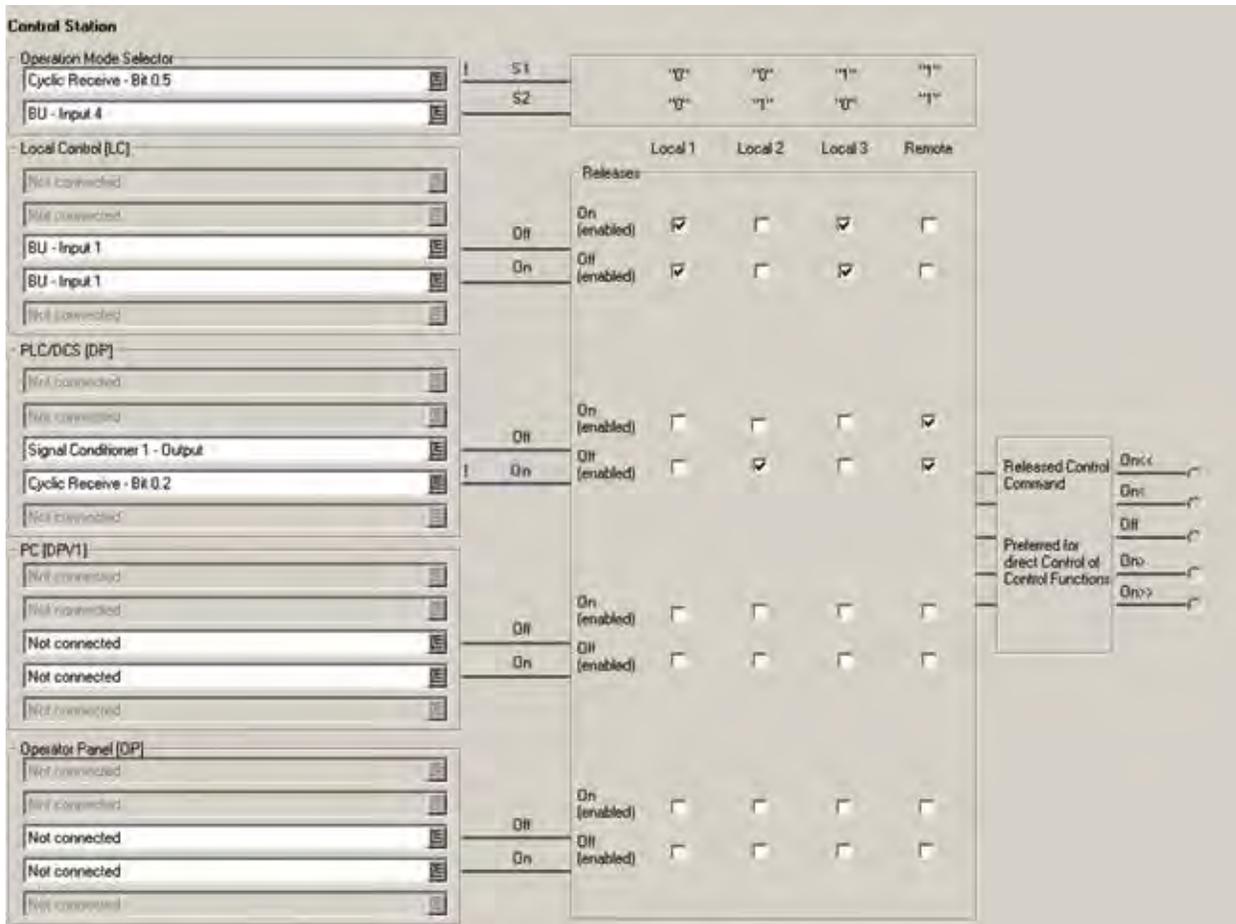
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB10

FVNR – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

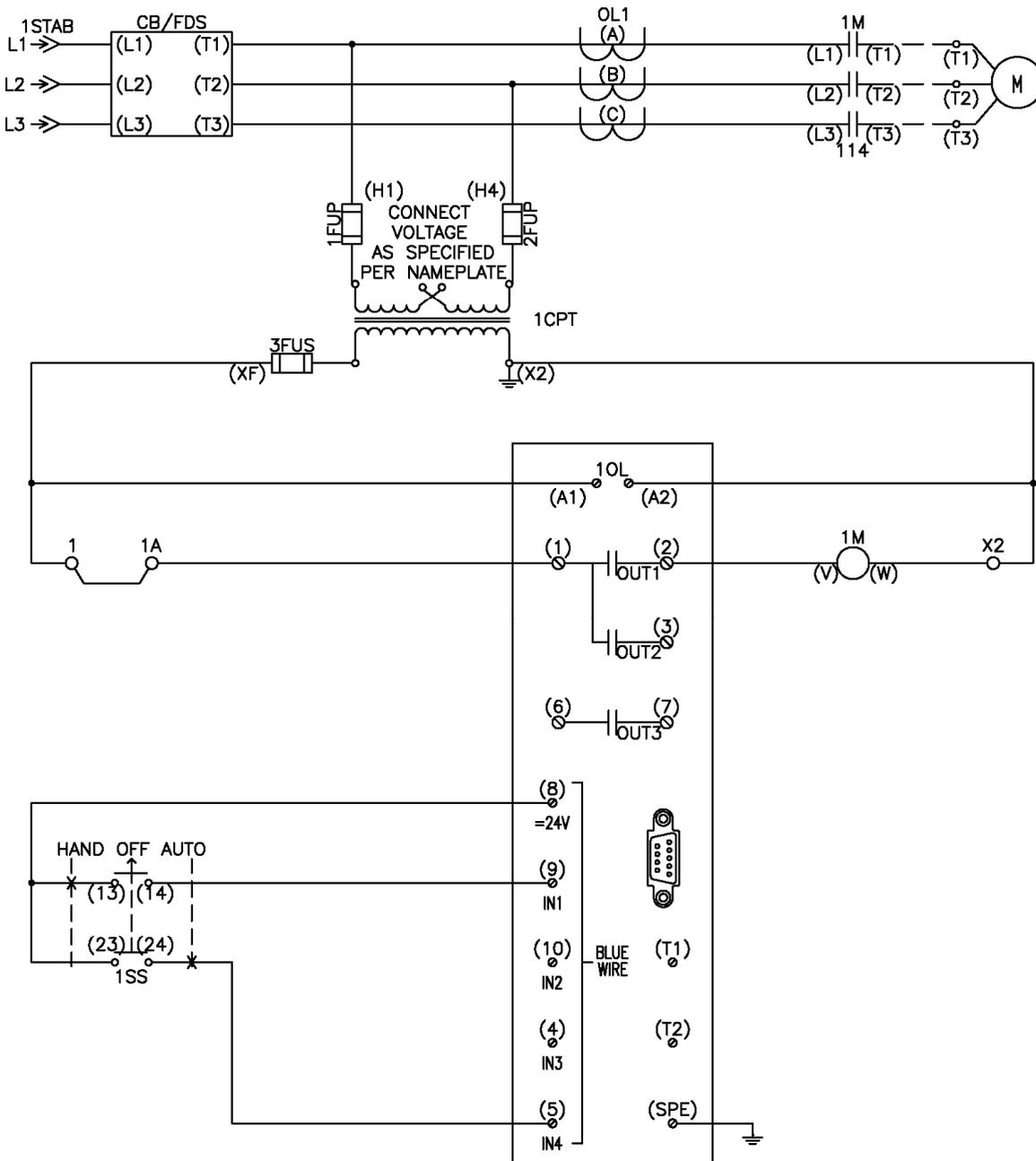


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB11

FVNR – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire

Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB11

### FNVR – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the 1M Contactor the Selector Switch is placed into the HAND position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

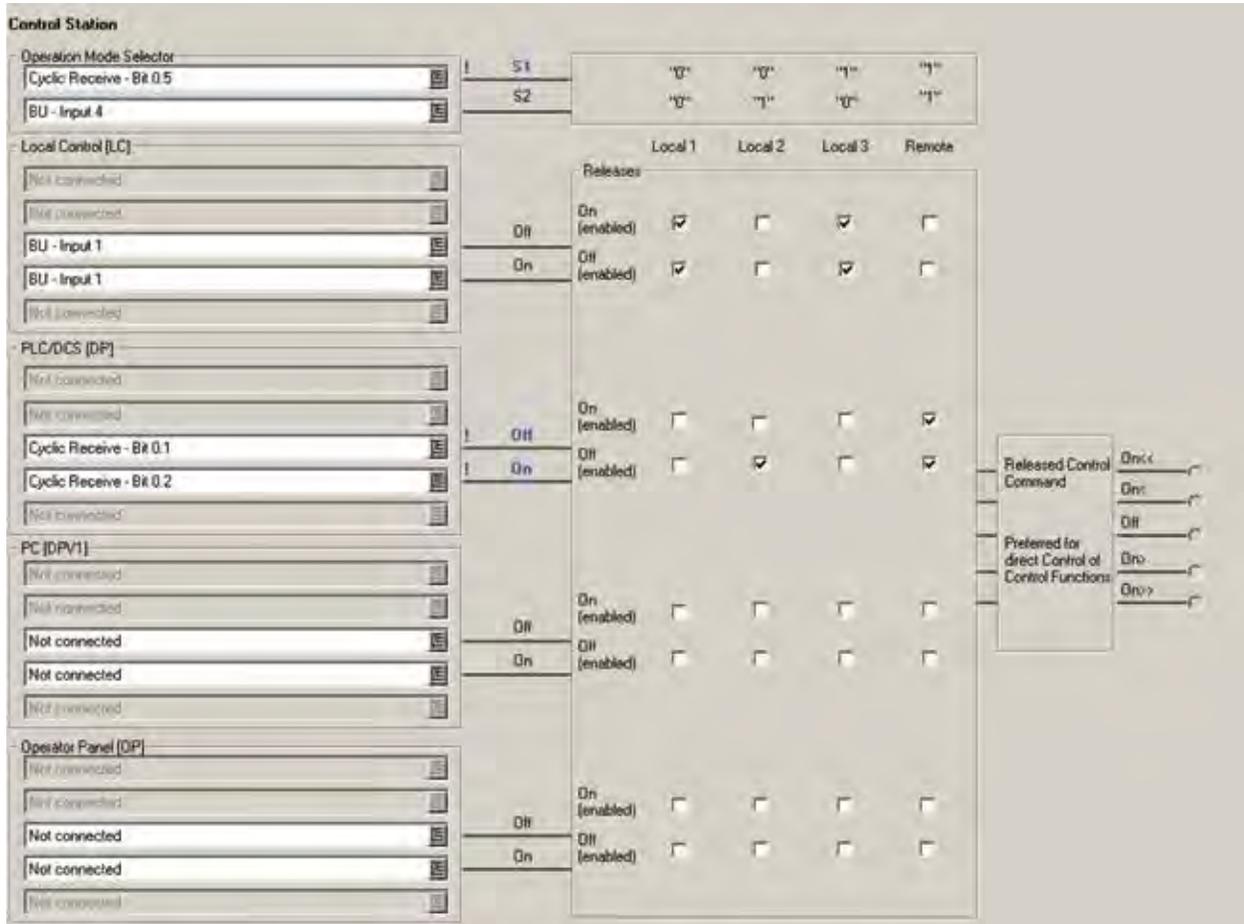
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB11

FVNR – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

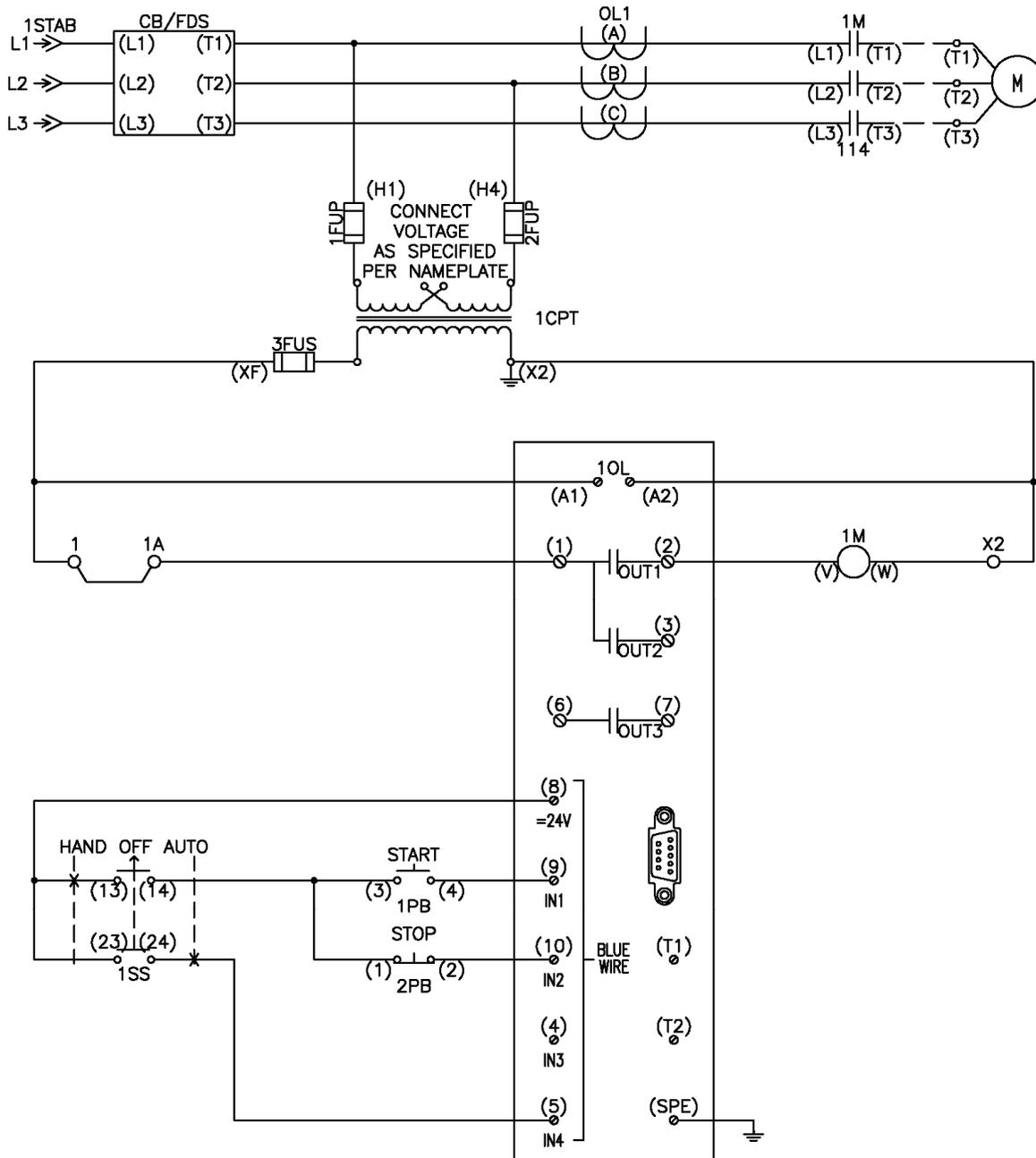


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB12

FVNR – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB12

### FVNR – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the 1M Contactor the Selector Switch is placed into the HAND position and the Start Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action the OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

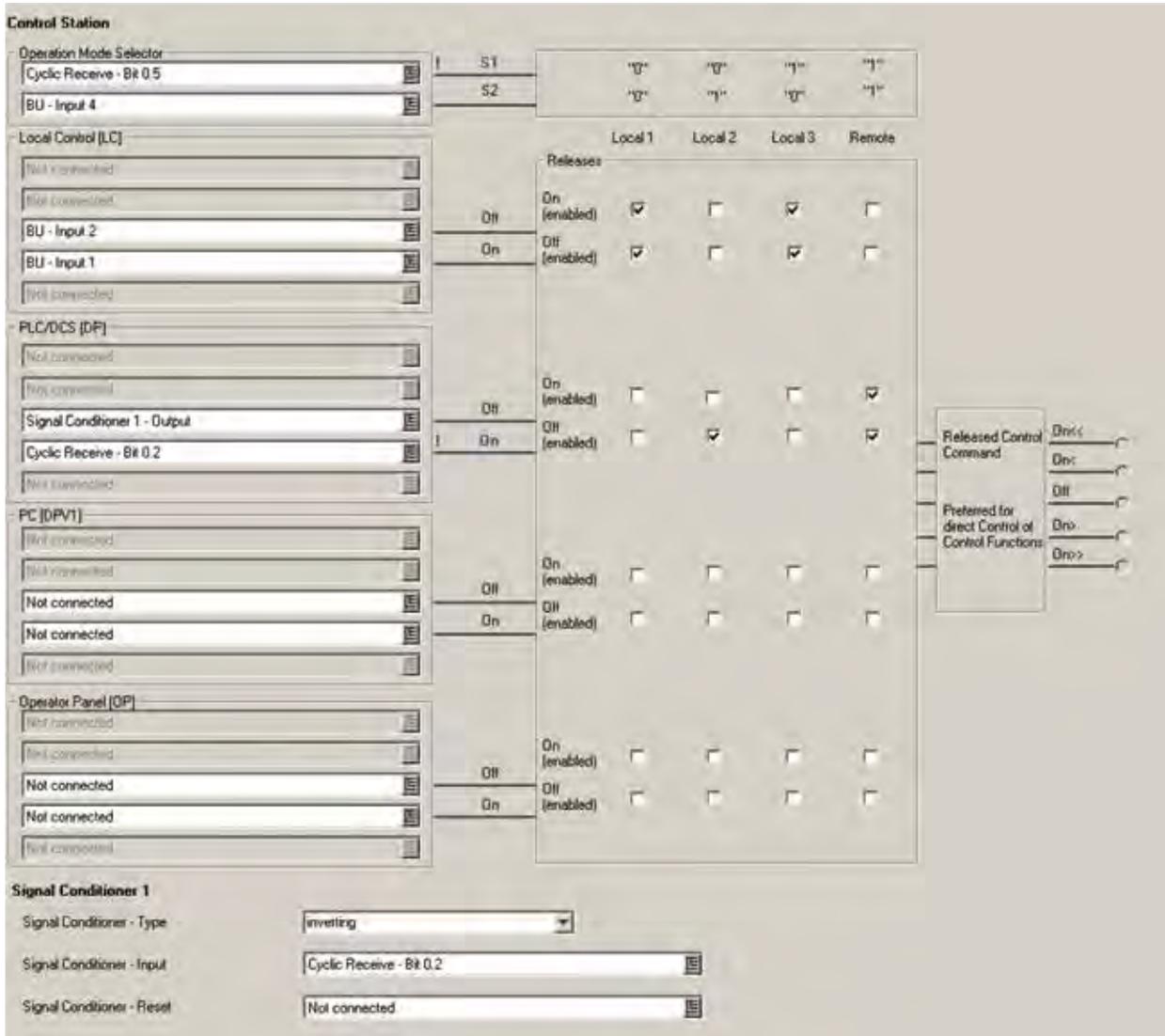
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB12

### FVNR – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire

#### Parameter Detail

#### Control Selection and Operation

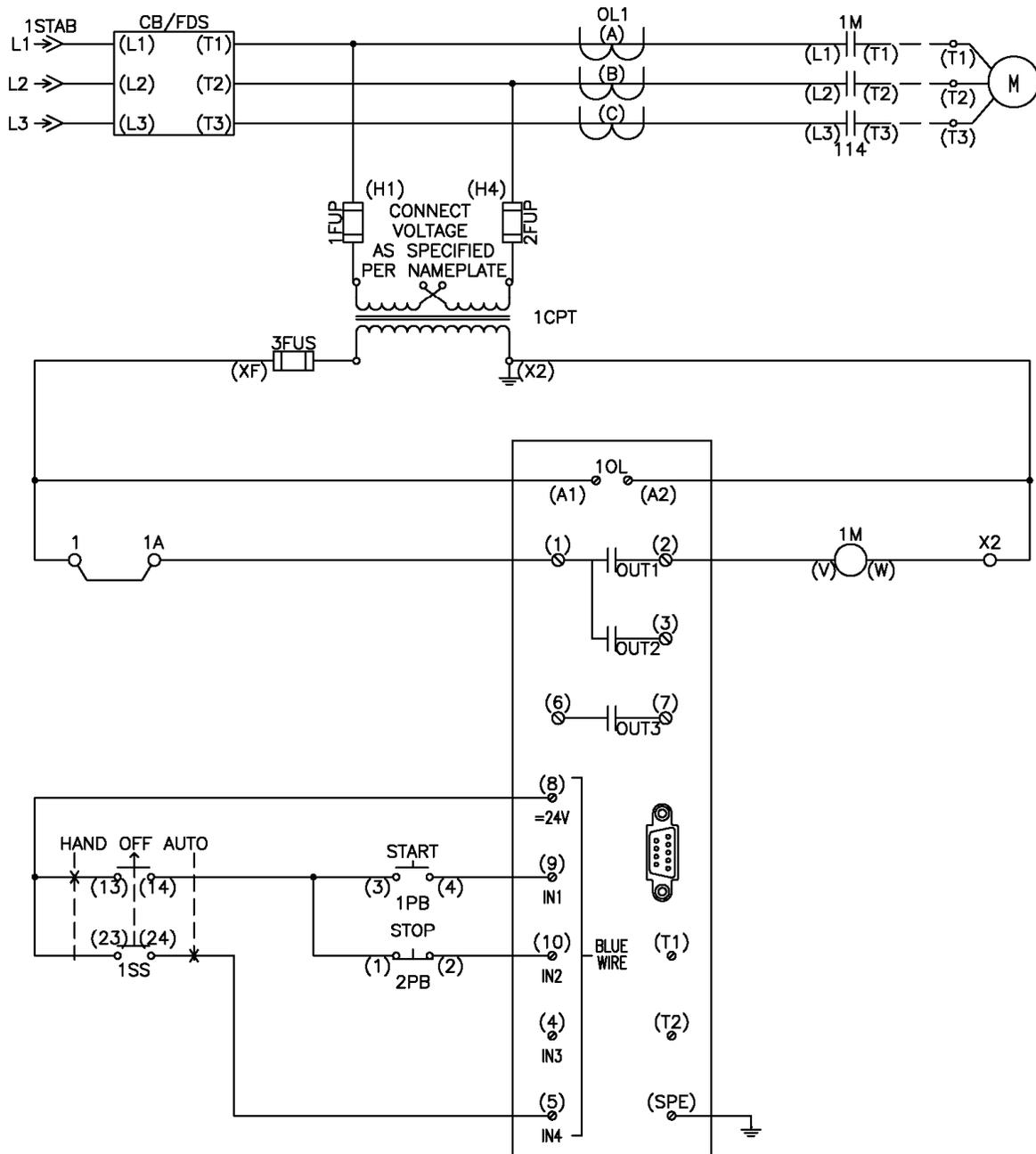


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB13

FVNR – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire

Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB13

### FVNR – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the 1M Contactor the Selector Switch is placed into the HAND position and the Start Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action the OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

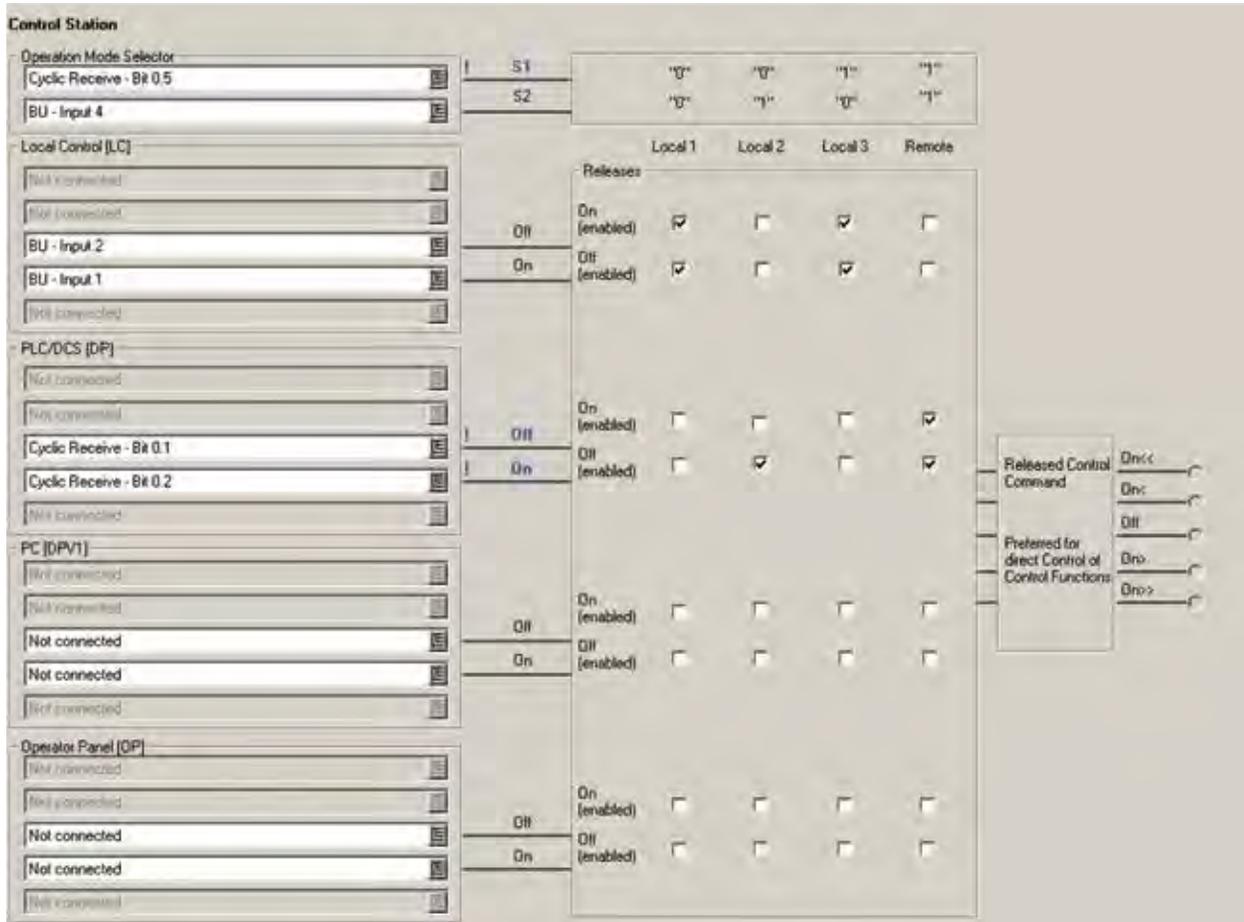
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB13

FVNR – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

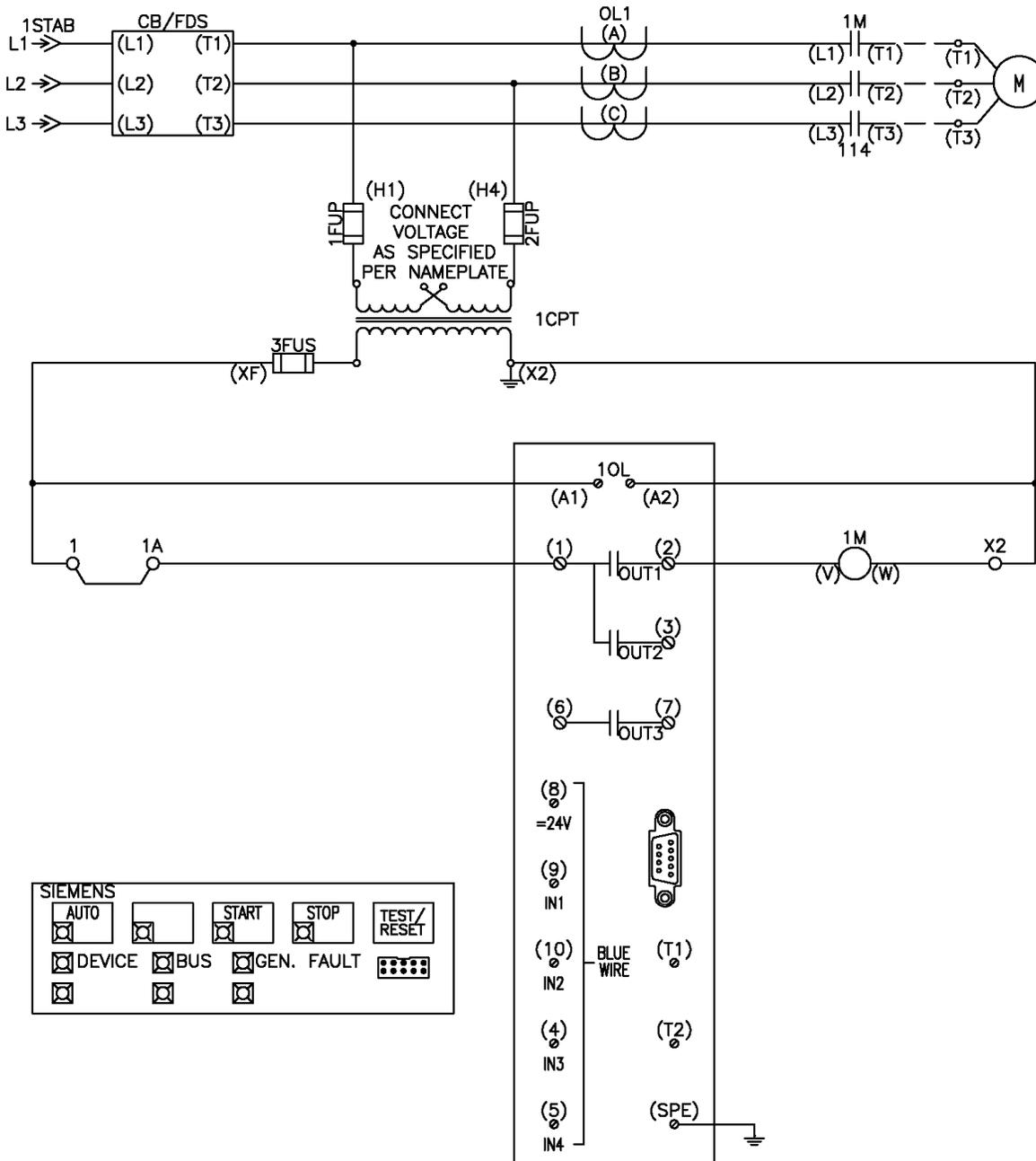


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB14

FVNR – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire

### Connection Diagram

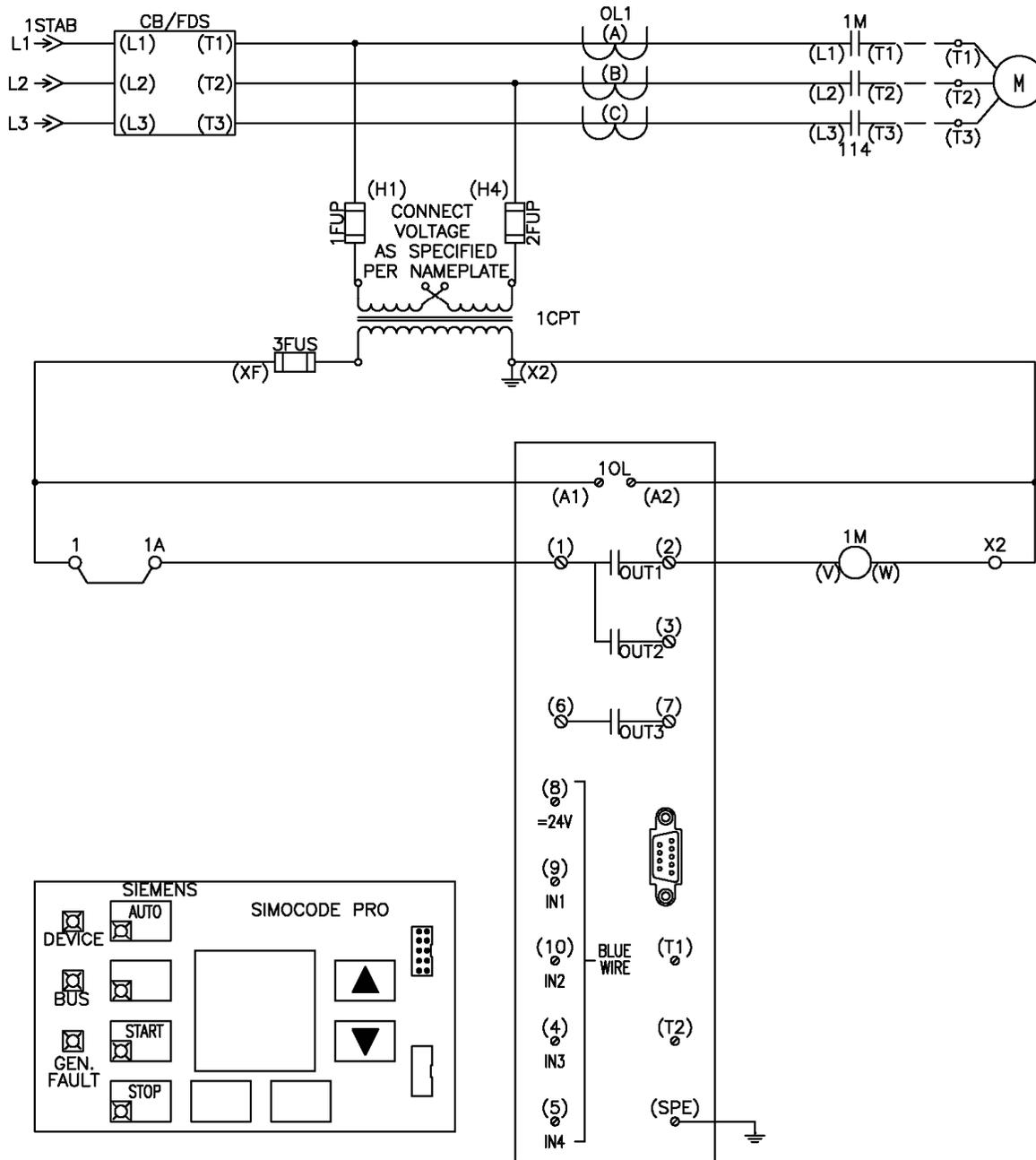


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB14

FVNR – Operator Panel Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB14

### FVNR – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (START) is connected to the ON > Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the 1M Contactor the START Button is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the STOP Operator Panel Button is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB14

FVNR – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector

- Cyclic Receive - Bit 0.5
- Non-Volatile Element 1 - Output

Local Control (LC)

- Not connected
- Not connected
- Not connected
- Not connected

PLC/DCS (DP)

- Not connected
- Not connected
- Signal Conditioner 1 - Output
- Cyclic Receive - Bit 0.2
- Not connected

PC (DPV1)

- Not connected

Operator Panel (OP)

- Not connected
- Not connected
- OP - Button 4
- OP - Button 3
- Not connected

Signal Conditioner 1

- Signal Conditioner - Type: Inverting
- Signal Conditioner - Input: Cyclic Receive - Bit 0.2
- Signal Conditioner - Reset: Not connected

	Local 1	Local 2	Local 3	Remote
Releases				
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Released Control Command

- On<
- On<
- Off
- On>
- On>

Preferred for direct Control of Control Functions

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB14

FVNR – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire

### Parameter Detail

AUTO Toggle Operation

The screenshot displays a configuration interface with three main sections:

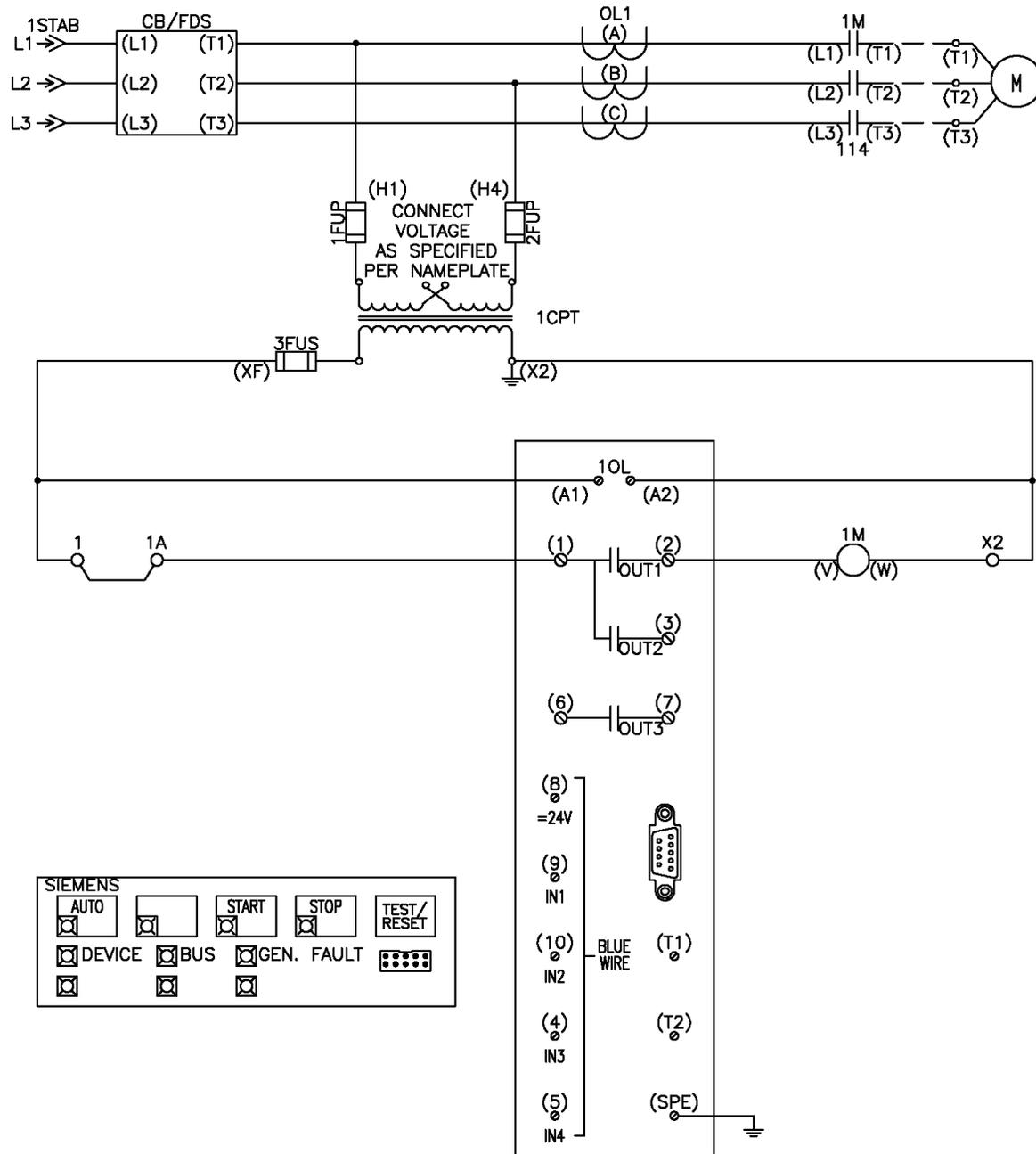
- Non-Volatile Element 1**
  - Non-Volatile Element - Type: edge rising with memory
  - Non-Volatile Element - Input: OP - Button 1
  - Non-Volatile Element - Reset: Non-Volatile Element 2 - Output
- Counter 1**
  - Counter - Limit: 2
  - Counter - Input +: OP - Button 1
  - Counter - Input -: Not connected
  - Counter - Reset: Non-Volatile Element 2 - Output
- Non-Volatile Element 2**
  - Non-Volatile Element - Type: non inverting
  - Non-Volatile Element - Input: Counter 1 - Output
  - Non-Volatile Element - Reset: Not connected

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB15

FVNR – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 3-Wire

### Connection Diagram

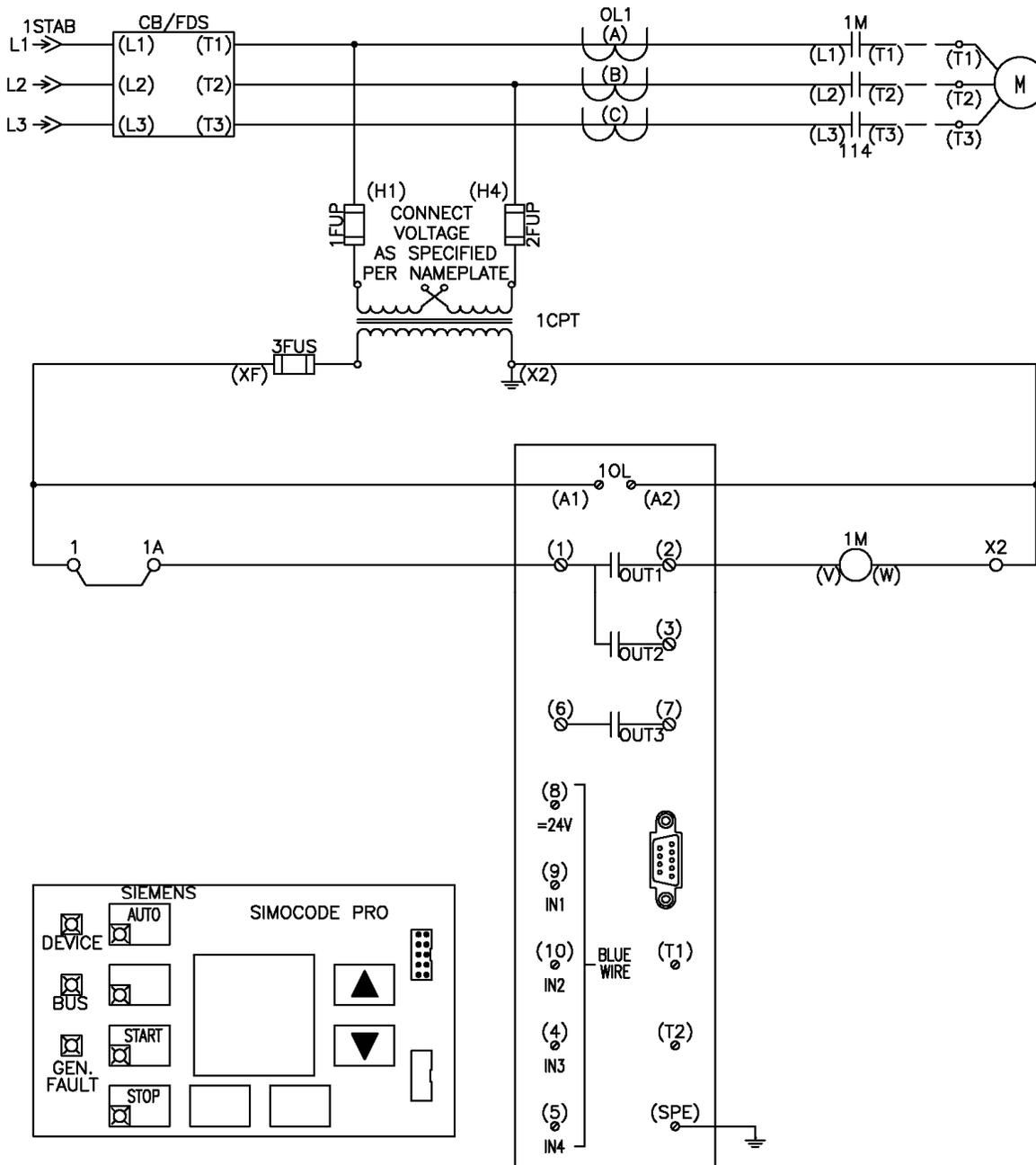


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB15

FVNR – Operator Panel Operation Mode Selection –  
Local 3-Wire OPD – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB15

### FVNR – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (START) is connected to the ON > Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the 1M Contactor the START Button is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the STOP Operator Panel Button is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
4. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the 1M Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To disengage the 1M Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
  - o In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

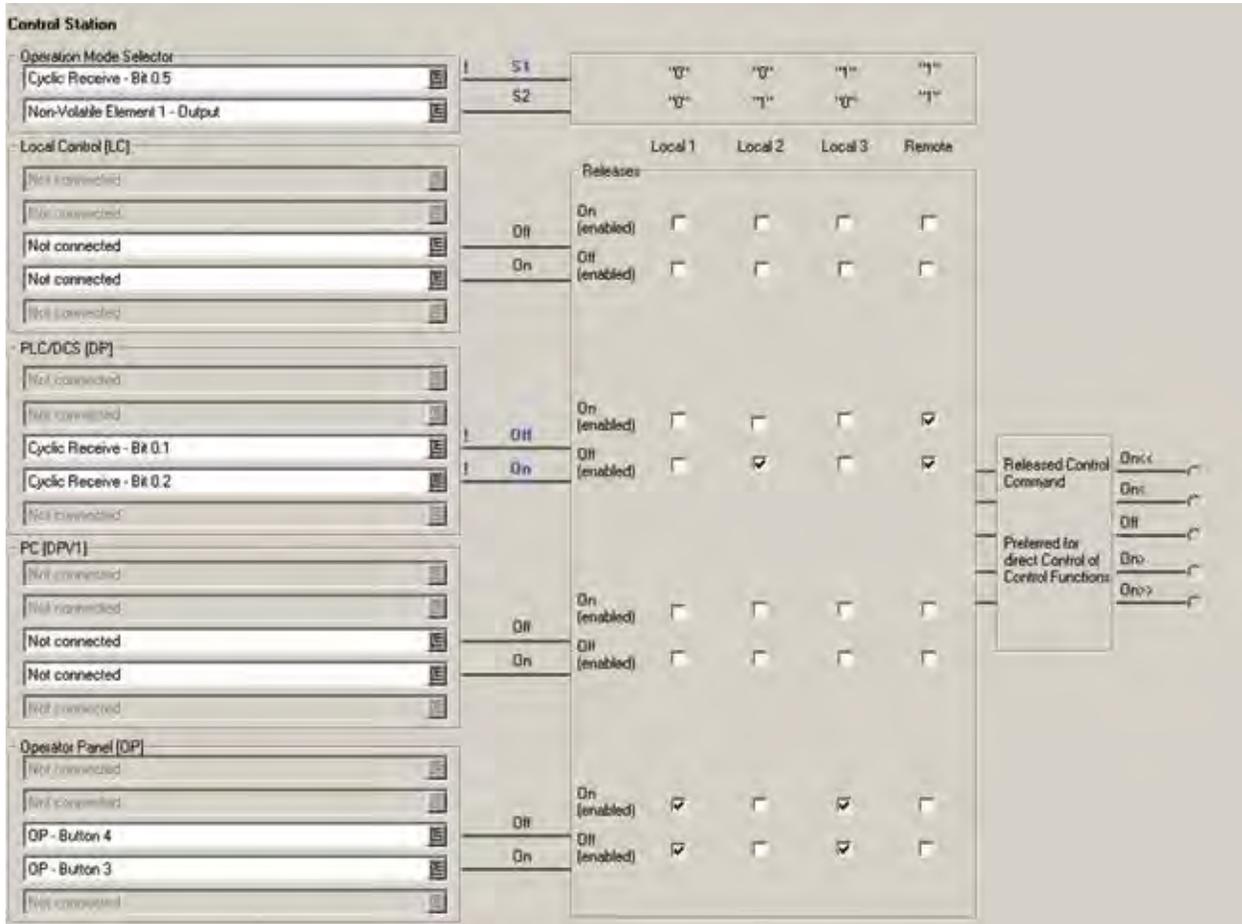
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB15

FVNR – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire

### Parameter Detail

Control Selection and Operation



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB15

FVNR – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire

### Parameter Detail

AUTO Toggle Operation

**Non-Volatile Element 1**

Non-Volatile Element - Type	edge rising with memory
Non-Volatile Element - Input	OP - Button 1
Non-Volatile Element - Reset	Non-Volatile Element 2 - Output

**Counter 1**

Counter - Limit	2
Counter - Input +	OP - Button 1
Counter - Input -	Not connected
Counter - Reset	Non-Volatile Element 2 - Output

**Non-Volatile Element 2**

Non-Volatile Element - Type	non inverting
Non-Volatile Element - Input	Counter 1 - Output
Non-Volatile Element - Reset	Not connected

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## 5. Full voltage reversing

The reversing starter uses the FWD & REV contactors to connect the motor terminals in positive or negative phase sequence for single-speed, dual-direction, full-voltage operation. The FWD & REV contactors are mechanically and intelligently interlocked to prevent short circuiting of the input lines.

### **The basic FORWARD operation of this starter is as follows.**

1. A local or remote FORWARD start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Output 1 closes which energizes the coil of FWD Contactor.
3. A local or remote stop signal is given to the SIMOCODE Pro.
4. The SIMOCODE Pro Output 1 opens which de-energizes the coil of FWD Contactor.
5. If a fault occurs at any time the SIMOCODE Pro will end the starter operation.

### **The basic REVERSE operation of this starter is as follows.**

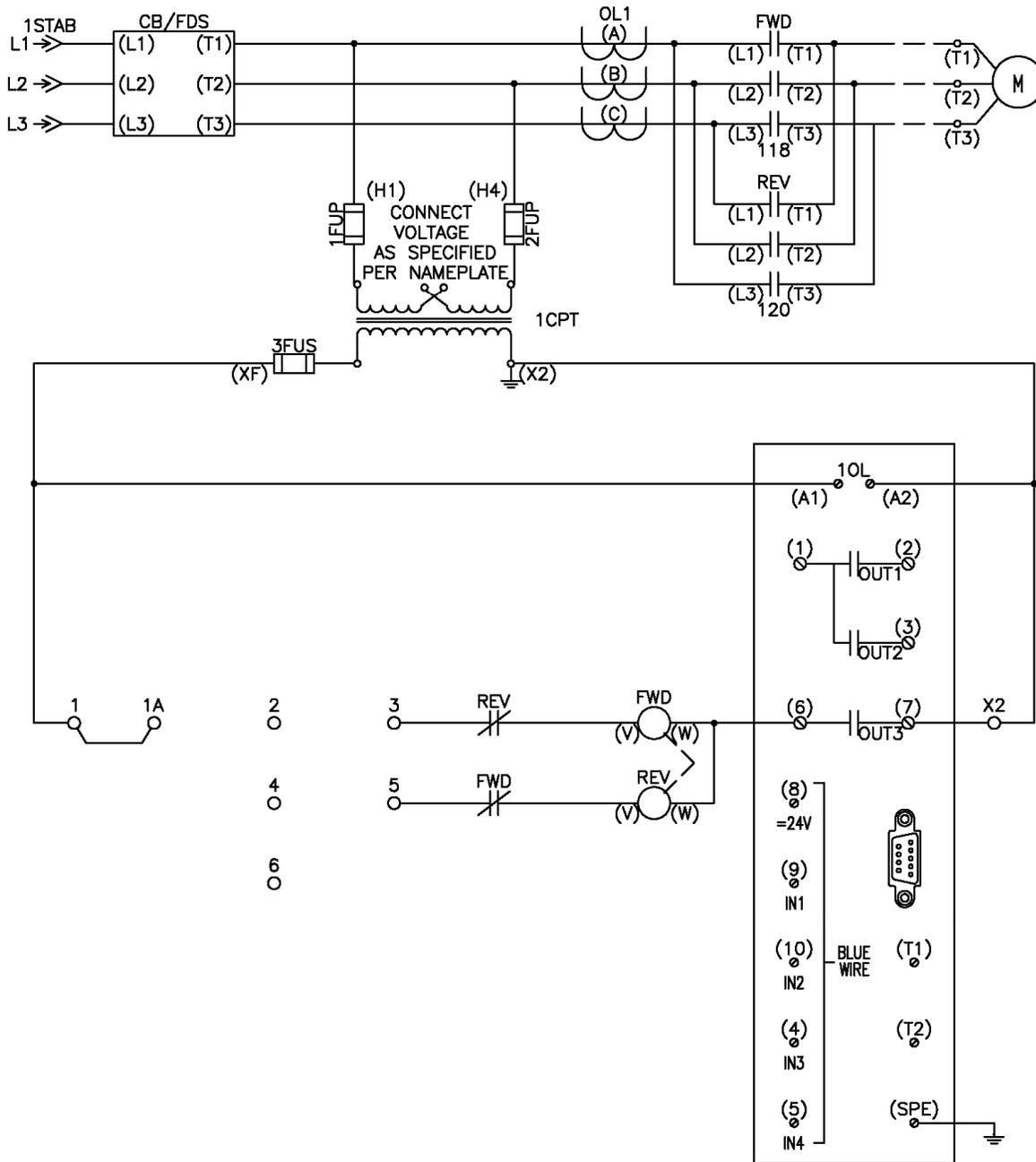
1. A local or remote REVERSE start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Output 2 closes which energizes the coil of REV Contactor.
3. A local or remote stop signal is given to the SIMOCODE Pro.
4. The SIMOCODE Pro Output 2 opens which de-energizes the coil of REV Contactor.
5. If a fault occurs at any time the SIMOCODE Pro will end the starter operation.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB16

OL/ FVR– Fixed Operation Mode –  
Local Overload Operation – Remote Monitoring

Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB16

OL / FVR – Fixed Operation Mode –  
Local Overload Operation – Remote Monitoring

### Operating Instructions

#### Local Control

1. All control external to device.
2. In the event of an Overload or any other General Fault event the SIMOCODE Output 3 will open.

#### Reset Control

3. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

#### Note:

1. This setup is not recommended as its use eliminates local control of the starter via Simocode Pro as well as remote control over Profibus DP network communication.

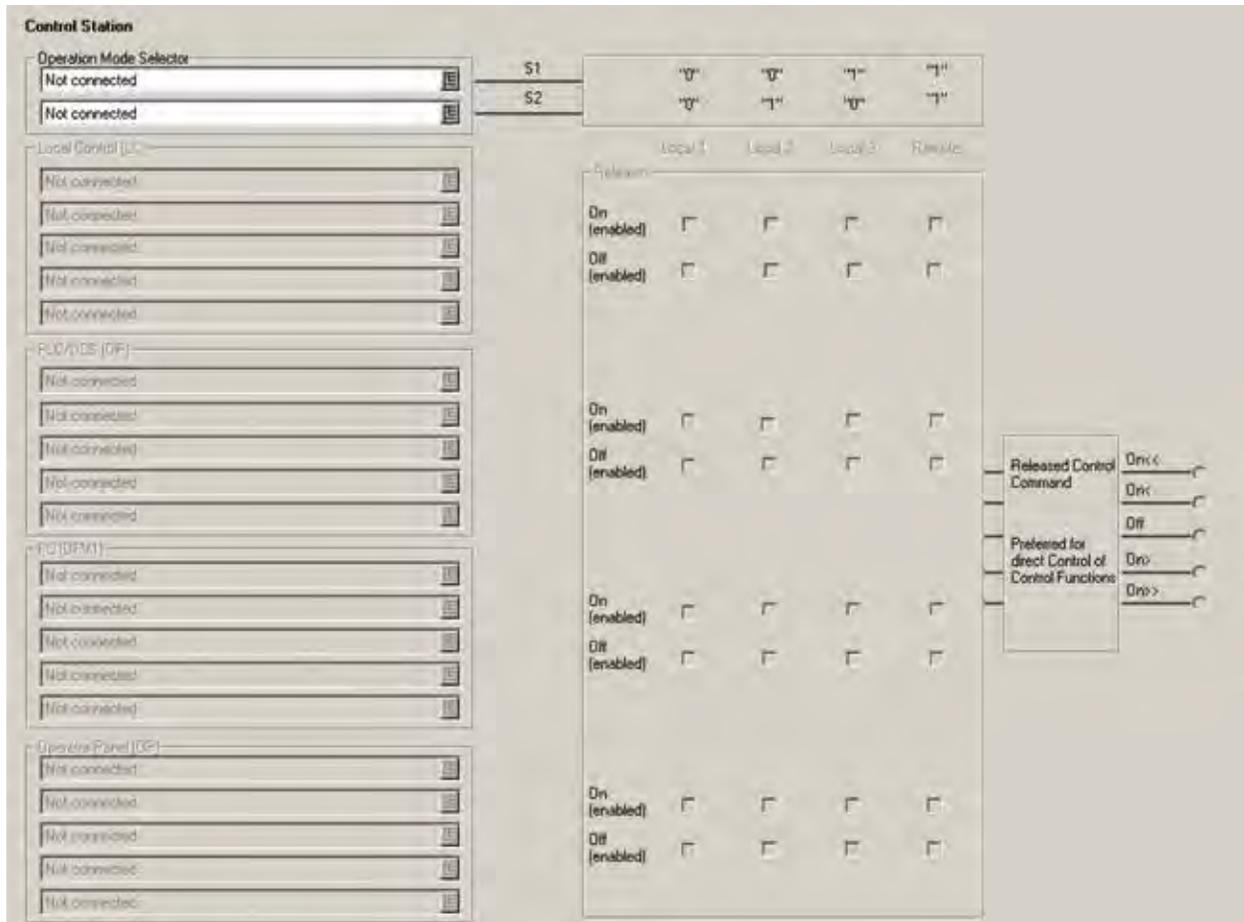
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB16

OL/ FVR – Fixed Operation Mode –  
Local Overload Operation – Remote Monitoring

### Parameter Detail

Control Selection and Operation

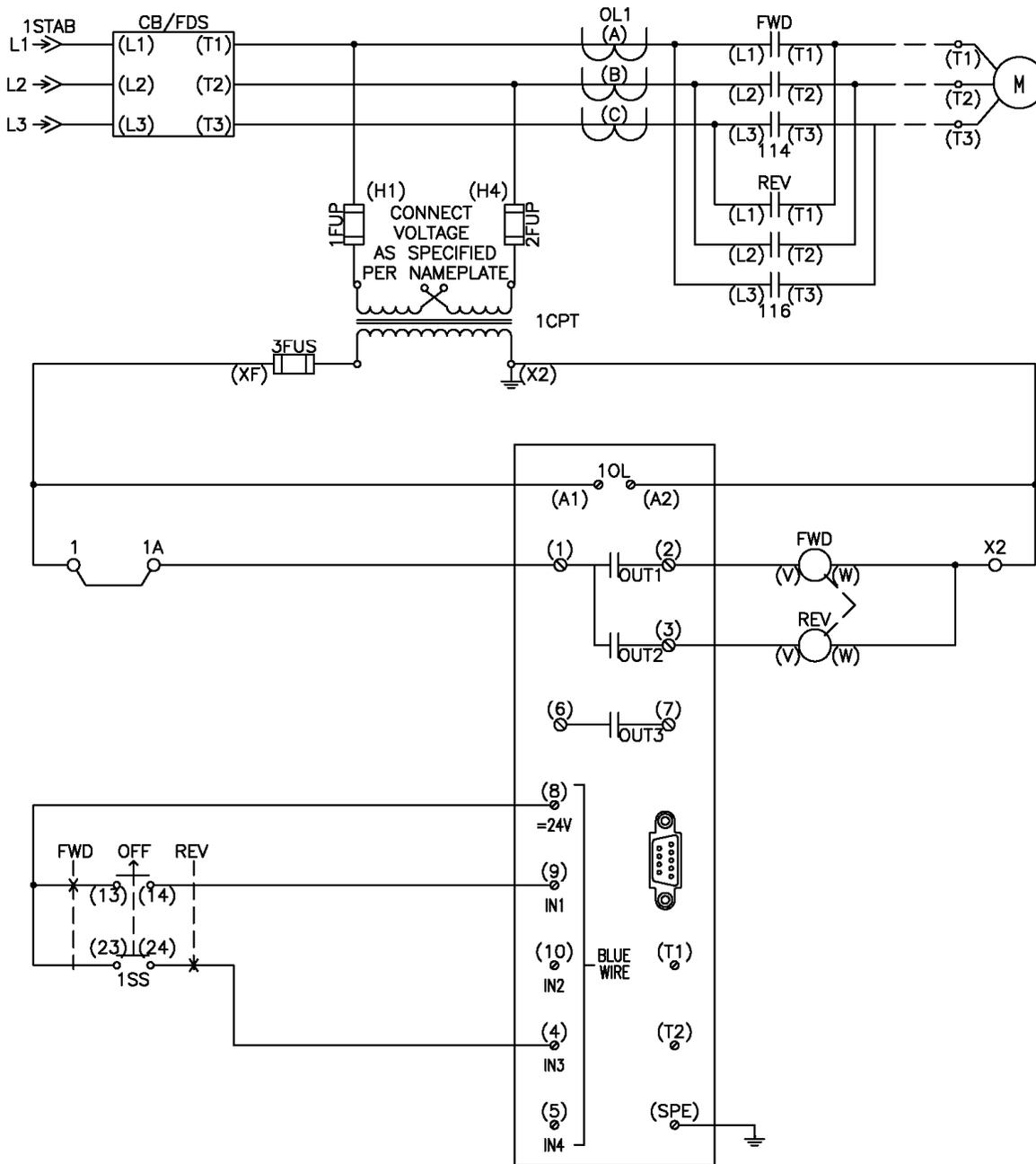


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB17

FVR – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB17

### FVR – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the FWD Contactor the Selector Switch is placed into the FWD position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Selector Switch is placed into the REV position. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD or REV Contactor, the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the FWD Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault , SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB17

FVR – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - "1"

Local Control [LC]  
 Not connected  
 BU - Input 3  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 Not connected

PLC/DCS [DP]  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	Local 1	Local 2	Local 3	Remote
Released				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On<<  
 On<  
 Off  
 On>  
 On>>

Preferred for direct Control of Control Functions

**Truth Table 1 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: BU - Input 1  
 Truth Table - Input 3: BU - Input 3

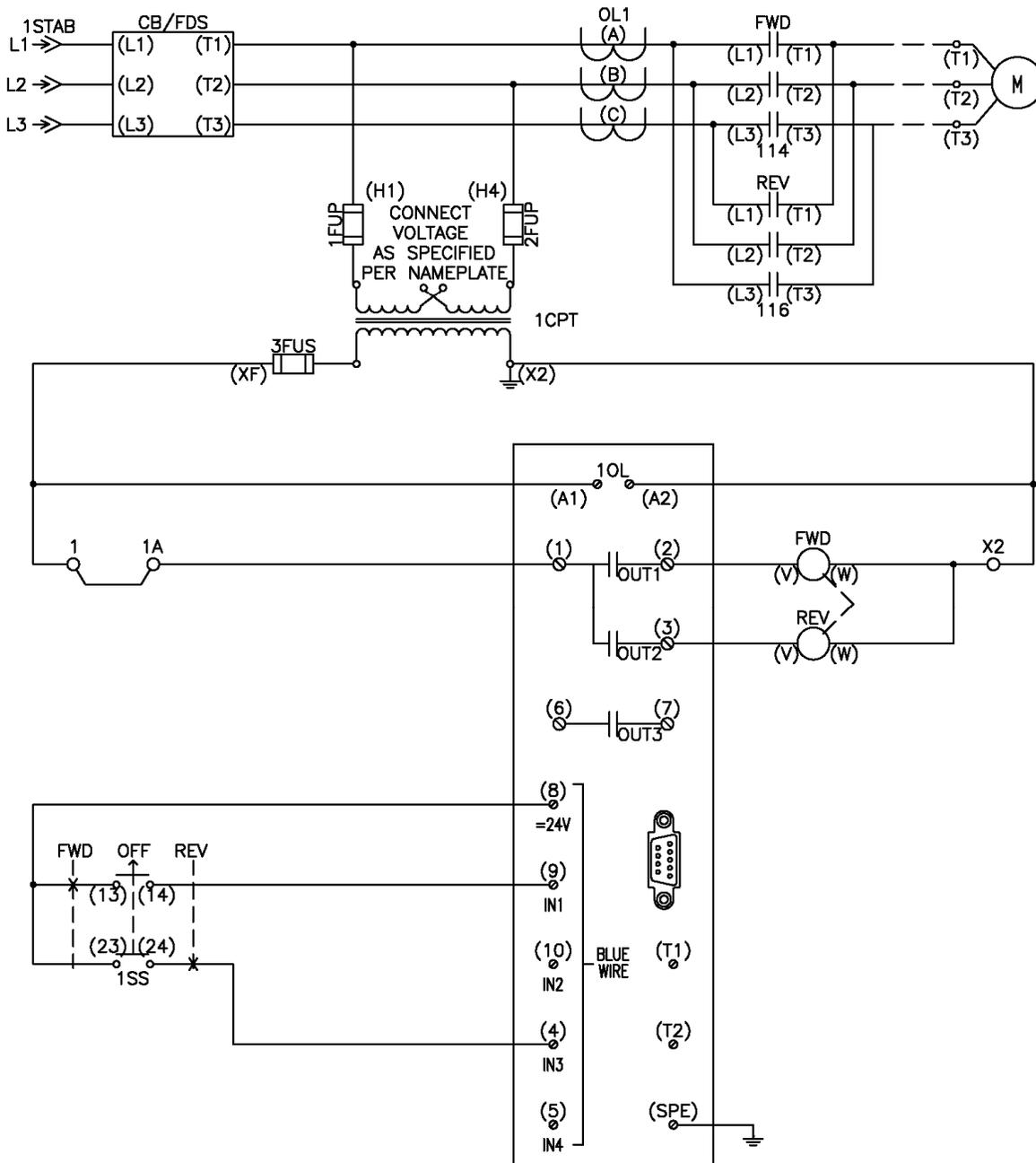
	I1	I2	I3	Q
0	0	0	0	0
0	0	1	1	1
0	1	0	1	1
0	1	1	0	0
1	0	0	0	0
1	0	1	0	0
1	1	0	0	0
1	1	1	0	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB18

FVR – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote-3 Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB18

### FVR – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote-3 Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the FWD Contactor the Selector Switch is placed into the FWD position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Selector Switch is placed into the REV position. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the place the Selector Switch in the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. To switch contactors issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the FWD Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default interlocking time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB18

### FVR – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote-3 Wire

#### Parameter Detail

#### Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:** Includes 'Operation Mode Selector' with 'Cyclic Receive - Bit 0.5' and 'Fixed Level - 1'. Below are 'Local Control (LC)' settings for BU-Input 3, 2, and 1, and 'PLC/DCS (DP)' settings for Cyclic Receive - Bit 0.0 and 0.2.
- PC (DPV1) and Operator Panel (DP):** Both sections show 'Not connected' status for their respective inputs.
- Released Control Command:** A central table with columns for 'Local 1', 'Local 2', 'Local 3', and 'Remote'. It lists 'On (enabled)' and 'Off (enabled)' states for various control functions. The 'Remote' column has several checked boxes.
- Released Control Command and Preferred for direct Control of Control Functions:** A vertical stack of five output terminals labeled Qnc<<, Qnc, Qoff, Qno, and Qno>>.
- Truth Table 2 3/10:** A truth table with inputs I1, I2, I3 and output O. The table shows logic for 'Not connected', 'Cyclic Receive - Bit 0.0', and 'Cyclic Receive - Bit 0.2'.

Control Function	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

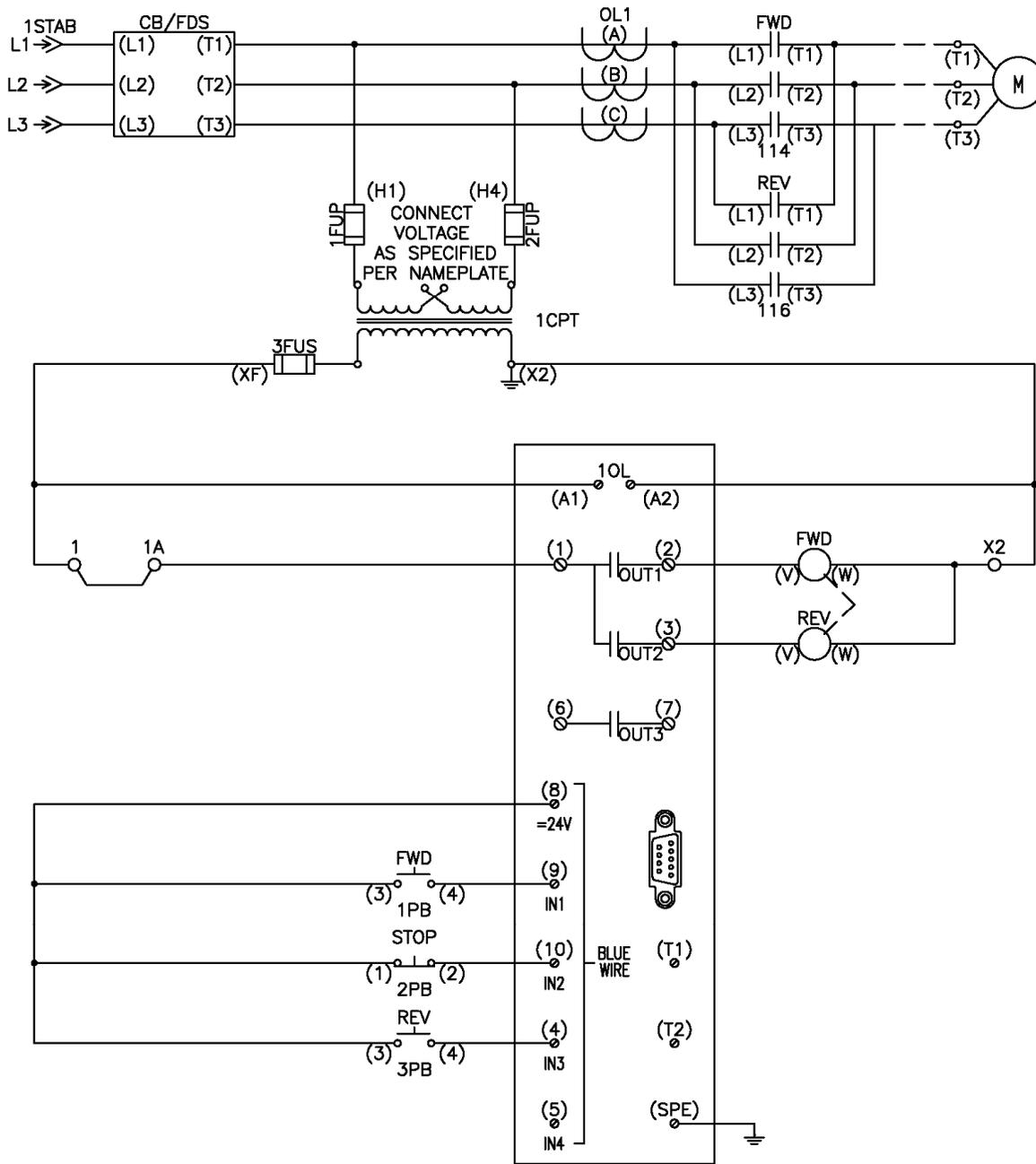
I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB19

FVR – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB19

### FVR – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the FWD Contactor, depress the Forward Pushbutton while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor, depress the Reverse Pushbutton while the Stop Pushbutton is in its normally closed state. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor, depress the Stop Pushbutton. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is necessary to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the FWD Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB19

FVR – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC):  
 Not connected  
 BU - Input 3  
 BU - Input 2  
 BU - Input 1  
 Not connected

PLC/DCS (DP):  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC (DPV1):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	Local 1	Local 2	Local 3	Remote
Released				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command:  
 On<<  
 On<  
 Off  
 On>  
 On>>

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: Cyclic Receive - Bit 0.0  
 Truth Table - Input 3: Cyclic Receive - Bit 0.2

**Truth Table 3/10**

I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB20

### FVR – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the FWD Contactor, depress the Forward Pushbutton while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor, depress the Reverse Pushbutton while the Stop Pushbutton is in its normally closed state. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the FWD Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

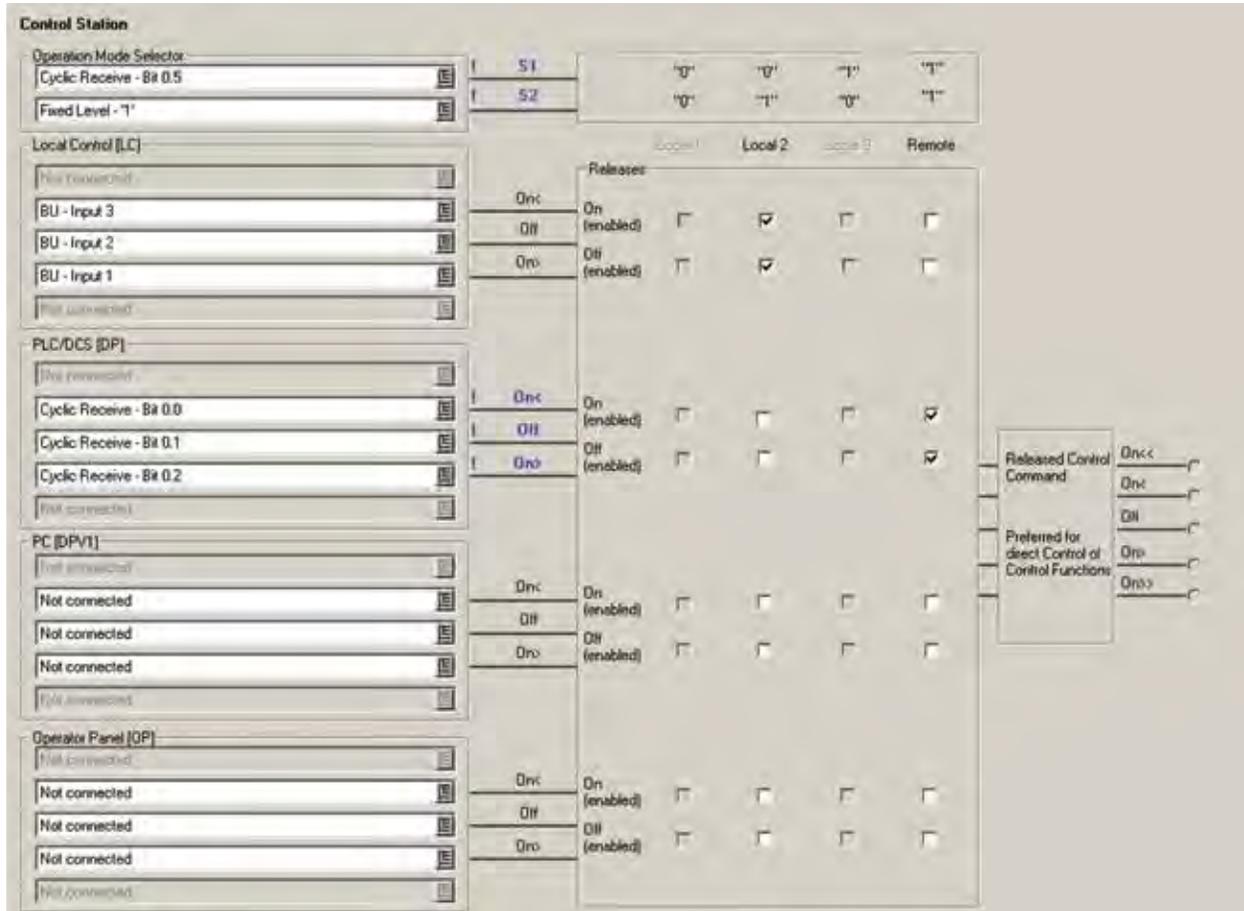
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB20

FVR – Profibus Bit Operation Mode Selection –  
Local 3 Wire PB – Remote 3 Wire

### Parameter Detail

Control Selection and Operation

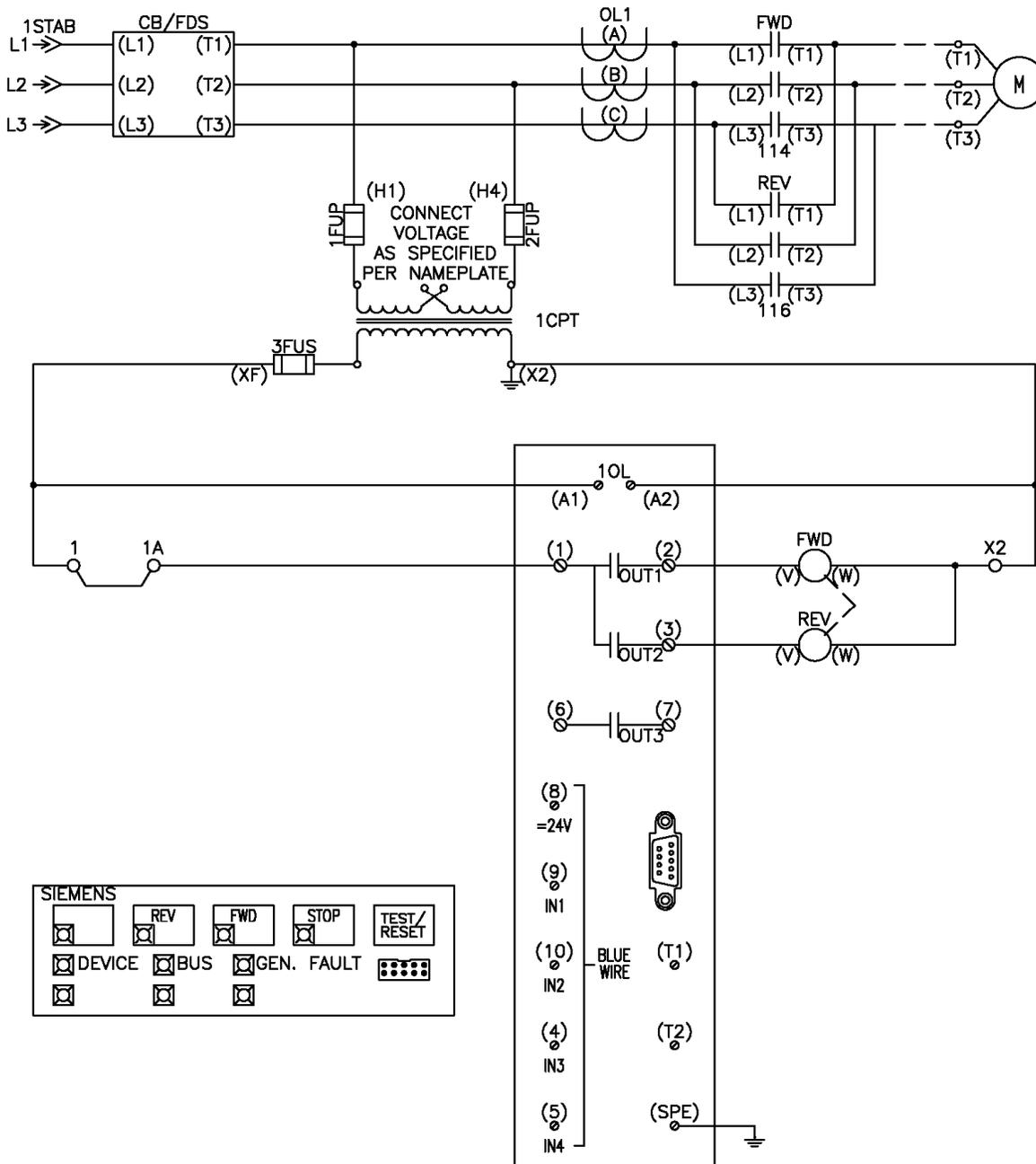


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB21

FVR – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire

### Connection Diagram

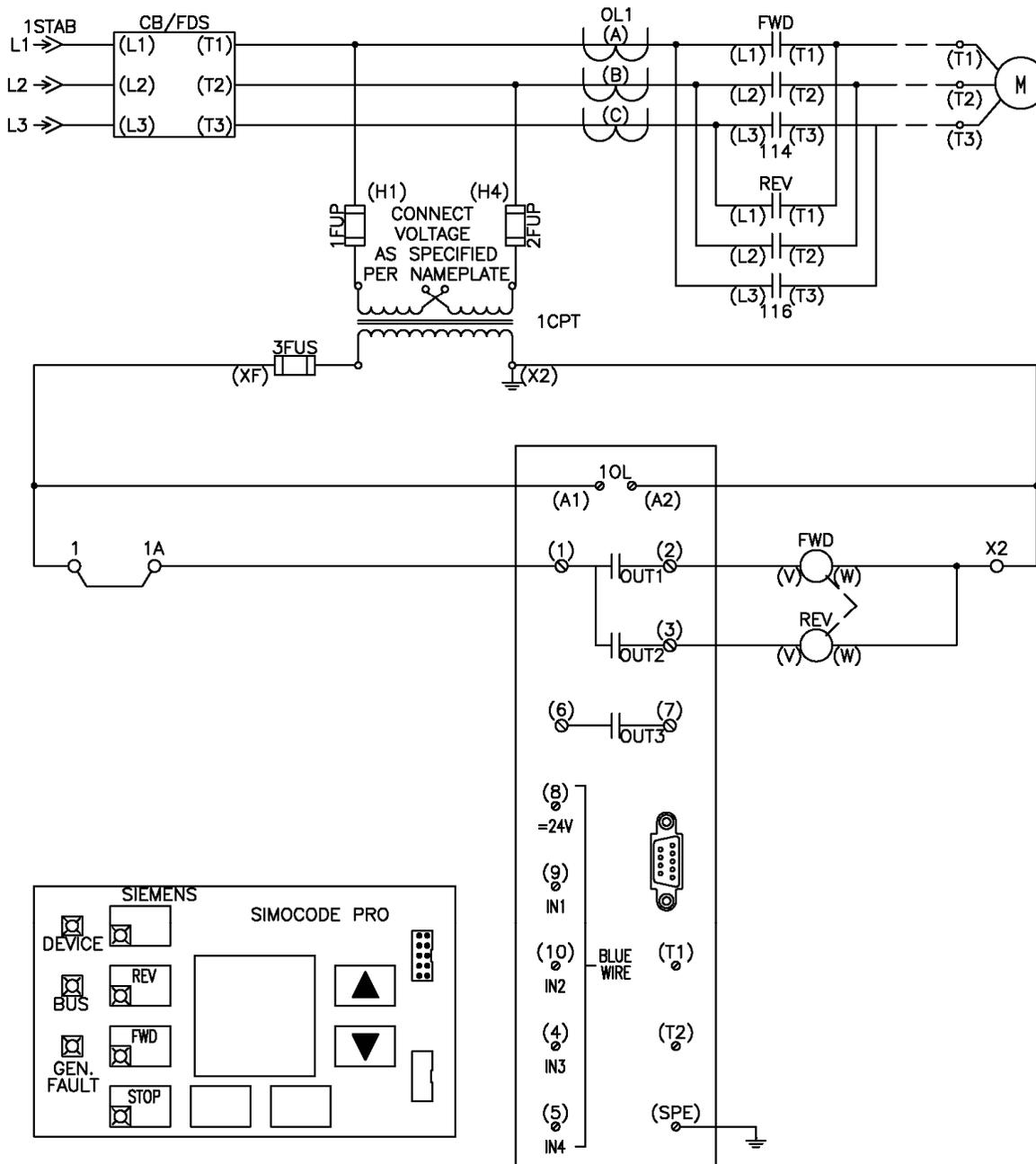


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB21

FVR – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB21

### FVR – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (FWD) is connected to the ON > Control Command, Operator Panel Button 2 (REV) is connected to the ON < Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the FWD Contactor the OP Forward Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the OP Reverse Pushbutton is depressed. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the FWD Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB21

FVR – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

PLC/DCS (DP)  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3I/1O - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 OP - Button 2  
 OP - Button 4  
 OP - Button 3  
 Not connected

Releases	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command:  
 Oncc  
 Onc  
 Off  
 Ono  
 Ono>

Reserved for direct Control of Control Functions:  
 Oncc  
 Onc  
 Off  
 Ono  
 Ono>

**Truth Table 2 3I/1O**

Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	Output
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	0
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	1
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	0
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	1
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	0
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	1
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	0
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	1

**Truth Table 3I/1O**

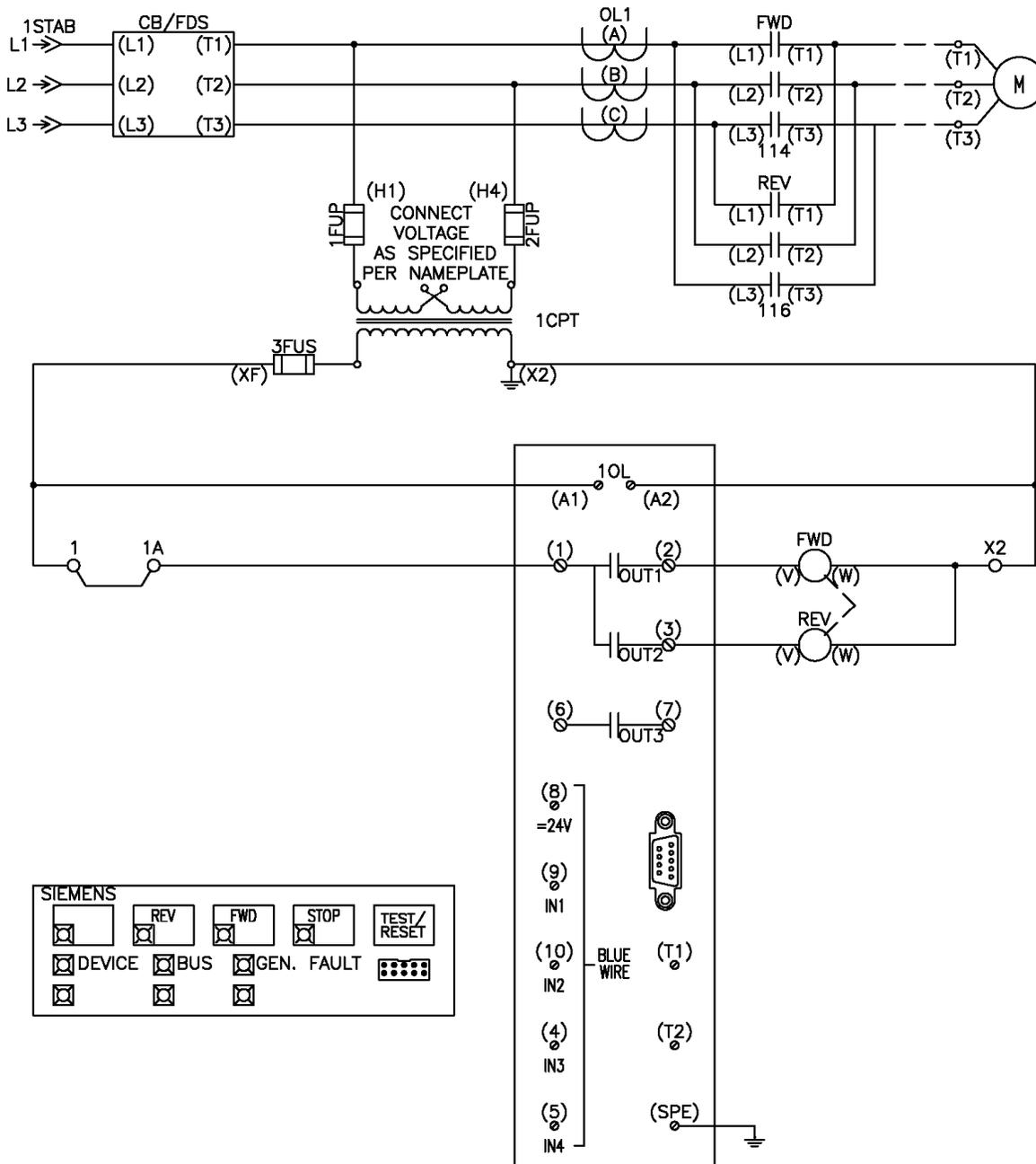
I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB22

FVR – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP – Remote 3-Wire

### Connection Diagram

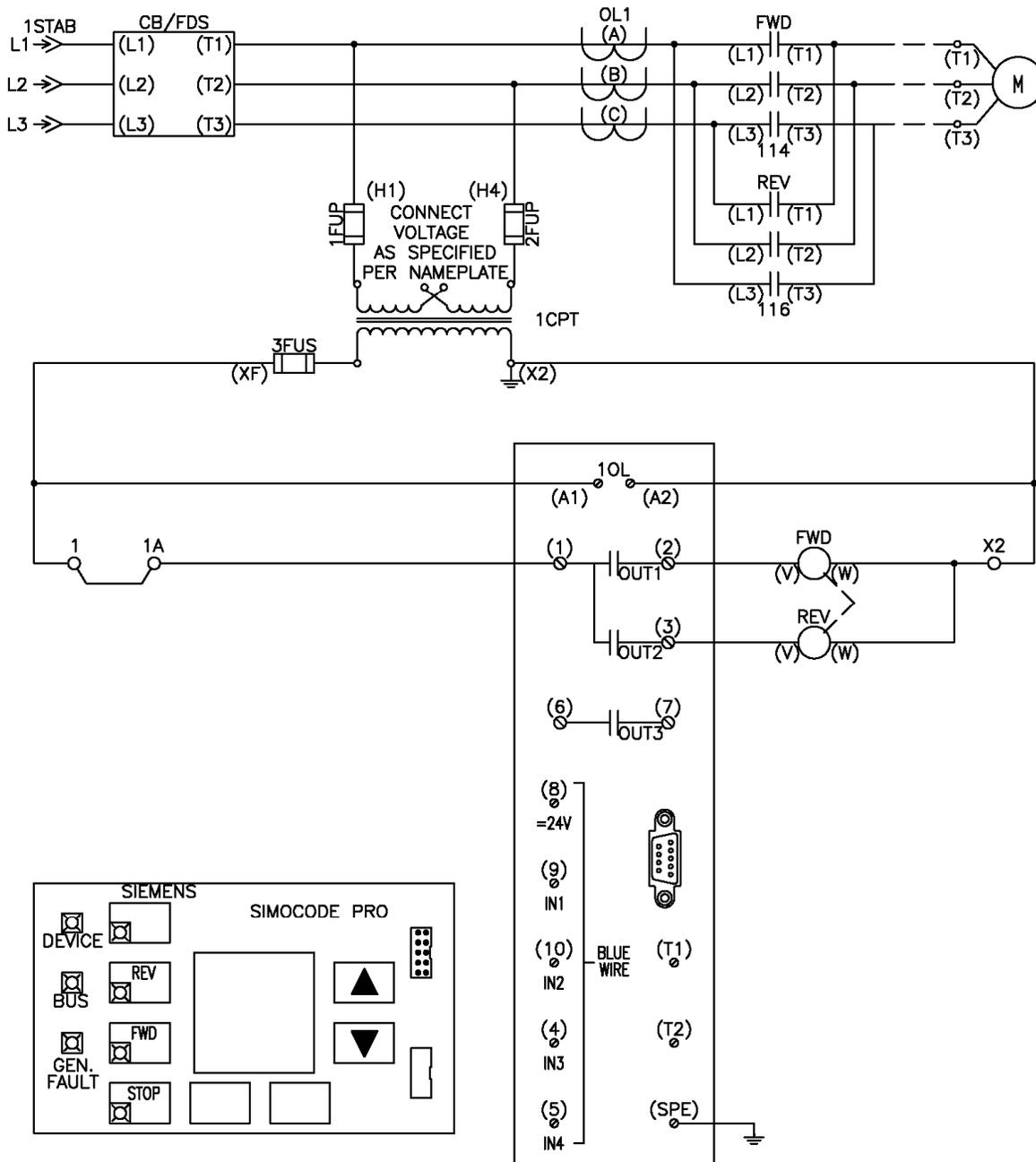


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB22

FVR – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB22

### FVR – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (FWD) is connected to the ON > Control Command, Operator Panel Button 2 (REV) is connected to the ON < Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the FWD Contactor the OP Forward Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the OP Reverse Pushbutton is depressed. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an overload or other general fault event, SIMOCODE outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the FWD Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or other General Fault event, SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

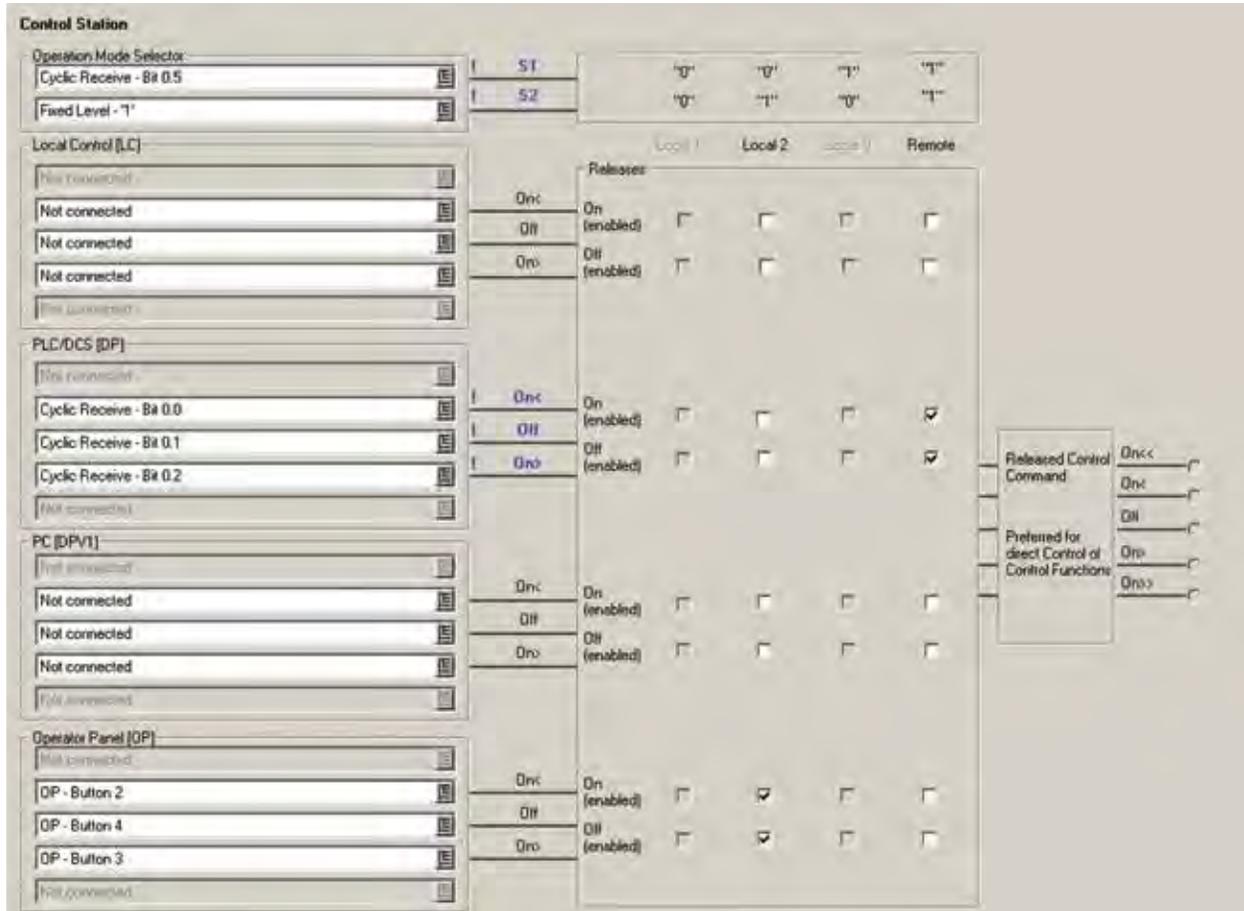
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB22

FVR – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

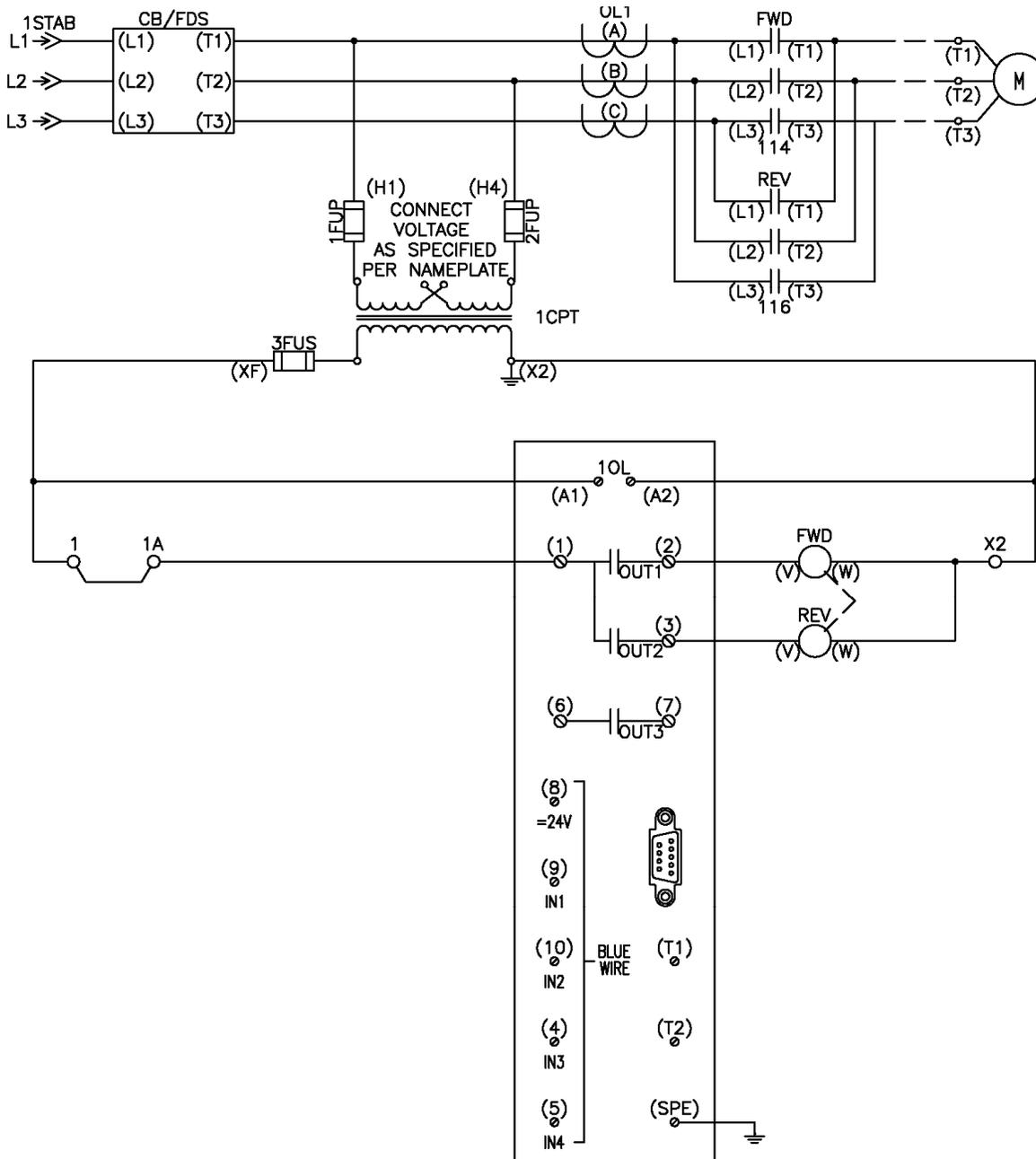


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB23

FVR – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB23

### FVR – Profibus Bit Operation Mode Selection – No Local – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the FWD Contactor SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor SIMOCODE Input 3 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor SIMOCODE Input 1 and SIMOCODE Input 3 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the FWD Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Profibus Cyclic Receive Bits 0.2 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or other General Fault event, SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

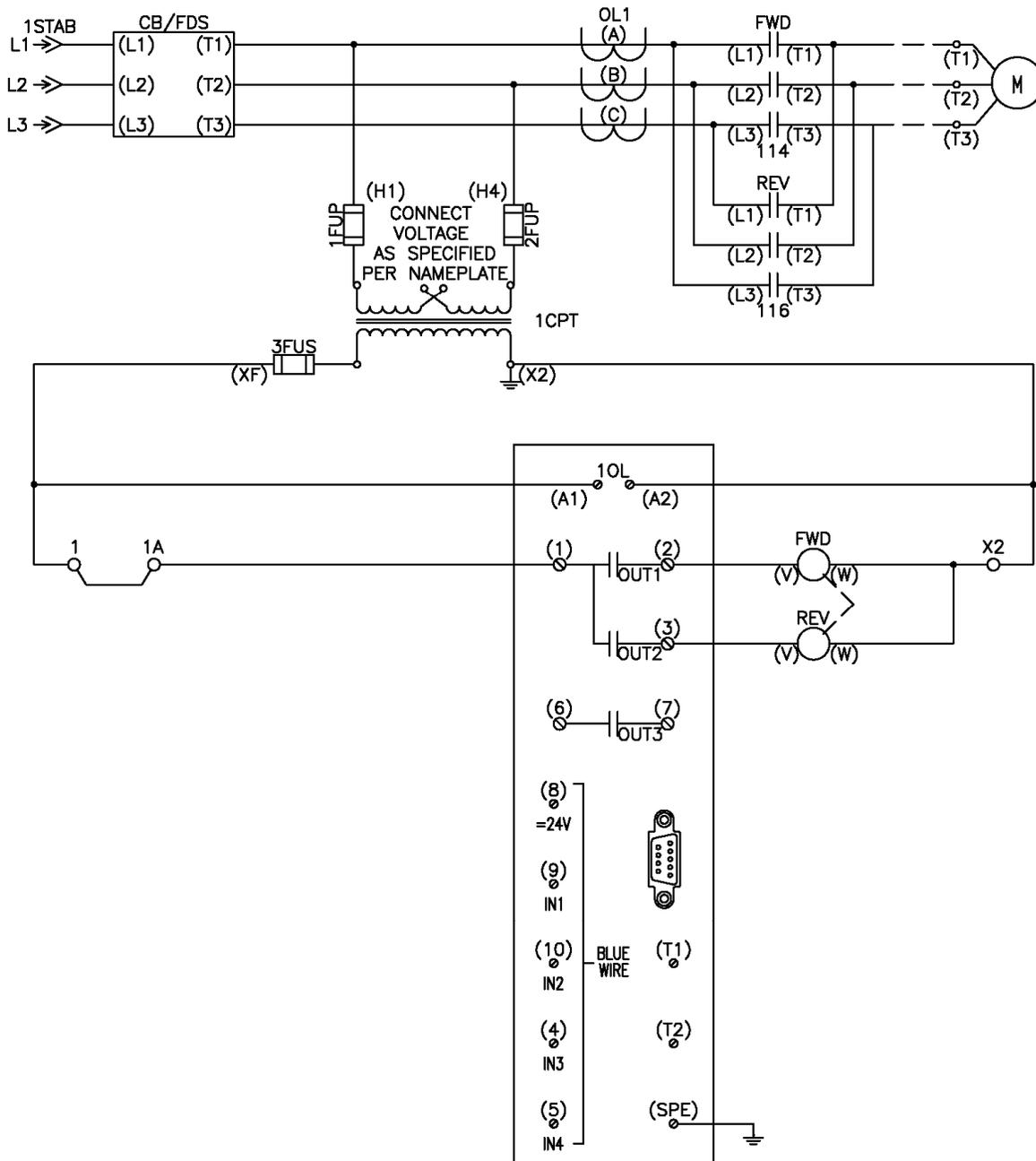


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB24

FVR – Profibus Bit Operation Mode Selection –  
No Local – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB24

### FVR – Profibus Bit Operation Mode Selection – No Local – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### LOCAL CONTROL (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the FWD Contactor SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor SIMOCODE Input 3 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor, SIMOCODE Inputs 1 and 3 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the FWD Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel is so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB24

FVR – Profibus Bit Operation Mode Selection –  
No Local – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - 1'

Local Control (LC)  
 Not connected  
 BU - Input 3  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 Not connected

PLC/DCS (DP)  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	Local 1	Local 2	Local 3	Remote
Released				
On (enabled)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On<>  
 Off<>  
 On<>  
 Off<>  
 On<>

Preferred for direct Control of Control Functions  
 On<>  
 Off<>

**Truth Table 1 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: BU - Input 1  
 Truth Table - Input 3: BU - Input 3

I1	I2	I3	O
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: Cyclic Receive - Bit 0.0  
 Truth Table - Input 3: Cyclic Receive - Bit 0.2

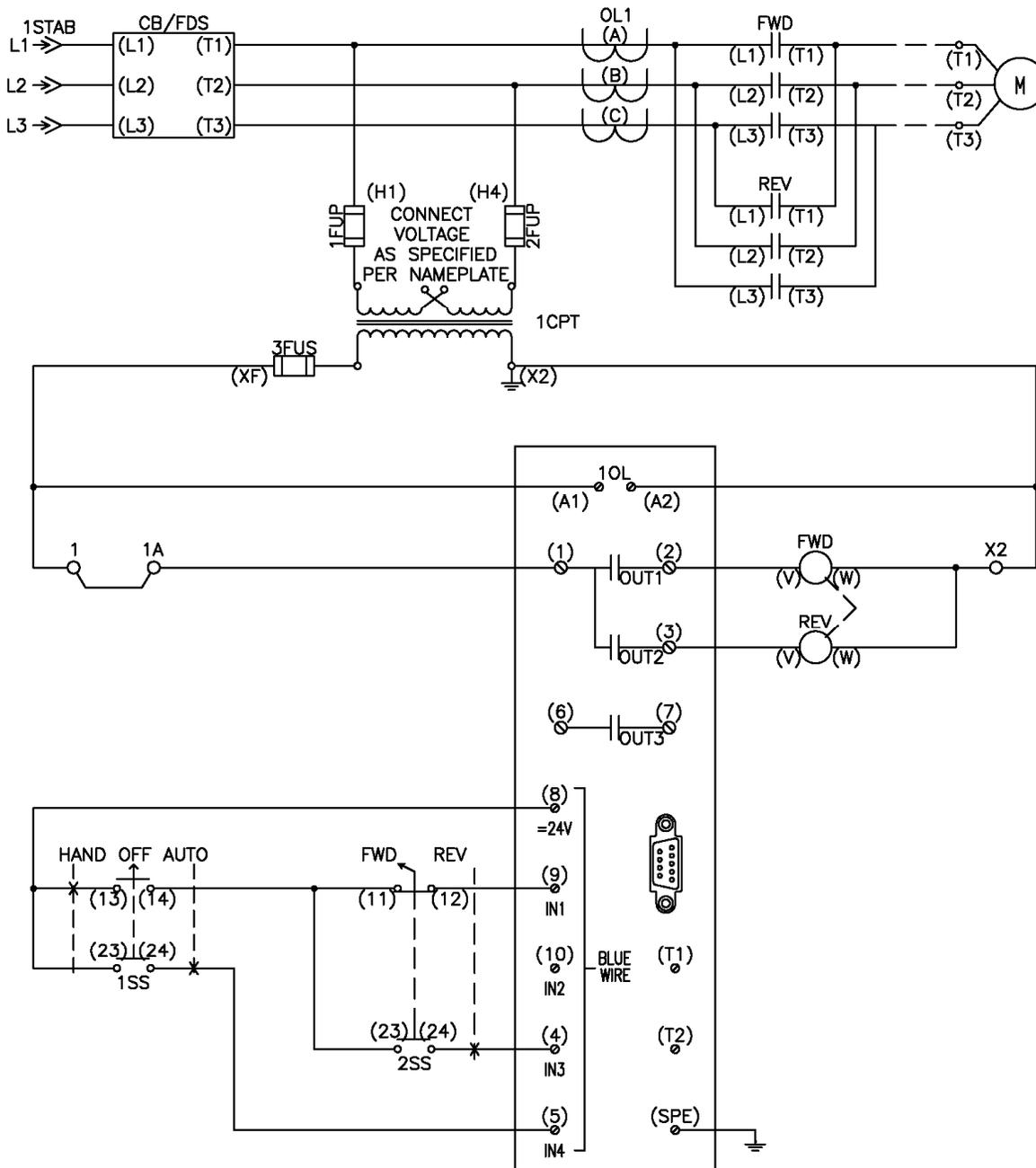
I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB25

FVR – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB25

### FVR – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode, SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Inputs 1 and 3.
2. To engage the FWD Contactor the Selector Switch is placed into the FWD position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Selector Switch is placed into the REV position. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bits 0.2 and 0.0 are connected to Truth Table 2.
2. To engage the FWD Contactor, the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD or REV Contactor, the Profibus Cyclic Receive Bits 0.2 and 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB25

FVR – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 BU - Input 4

Local Control (LC)  
 Not connected  
 BU - Input 3  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 Not connected

PLC/DCS (DP)  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Local 1 Local 2 Local 3 Remote

Releases

On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On<<  
 On<  
 Off  
 On>  
 On>>

Preferred for direct Control of Control Functions

**Truth Table 1 3/10**

Truth Table - Input 1	Not connected	0	0	0	0
Truth Table - Input 2	BU - Input 1	0	0	1	1
Truth Table - Input 3	BU - Input 3	0	1	0	1
		0	1	1	0
		1	0	0	0
		1	0	1	0
		1	1	0	0
		1	1	1	0

**Truth Table 2 3/10**

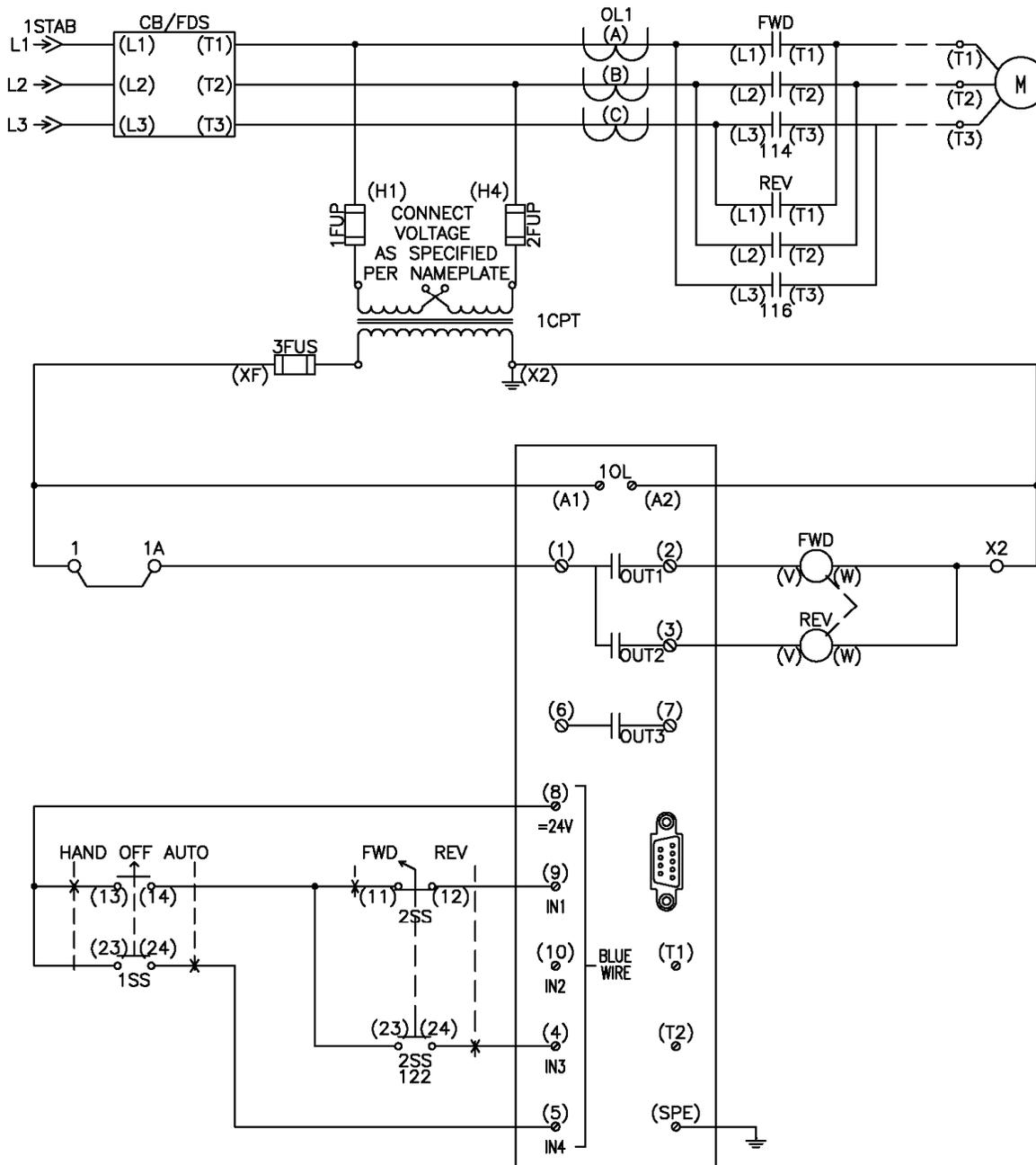
Truth Table - Input 1	Not connected	0	0	0	1
Truth Table - Input 2	Cyclic Receive - Bit 0.0	0	0	1	0
Truth Table - Input 3	Cyclic Receive - Bit 0.2	0	1	0	0
		0	1	1	1
		1	0	0	0
		1	0	1	0
		1	1	0	0
		1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB26

FVR – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire

Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB26

### FVR – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Inputs 1 and 3.
2. To engage the FWD Contactor the Selector Switch is placed into the FWD position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Selector Switch is placed into the REV position. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the FWD Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped..

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB26

FVR – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - Bit 0.5  
 BU - Input 4

Local Control [LC]:  
 (Not connected)  
 BU - Input 3  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 (Not connected)

PLC/DCS [DP]:  
 (Not connected)  
 Cyclic Receive - Bit 0.0  
 Cyclic Receive - Bit 0.1  
 Cyclic Receive - Bit 0.2  
 (Not connected)

PC [DPV1]:  
 (Not connected)  
 Not connected  
 Not connected  
 Not connected  
 (Not connected)

Operator Panel [OP]:  
 (Not connected)  
 Not connected  
 Not connected  
 Not connected  
 (Not connected)

	S1	S2	Local 1	Local 2	Local 3	Remote
Released	0	0	1	1	1	1
On (enabled)	0	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	1	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	1	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command:  
 On<<  
 On<  
 Off  
 On>  
 On>>

Reserved for direct Control of Control Functions:  
 On<  
 On<<  
 Off  
 On>  
 On>>

**Truth Table 1 3/10**

Truth Table - Input 1: Not connected

Truth Table - Input 2: BU - Input 1

Truth Table - Input 3: BU - Input 3

**Truth Table 3/10**

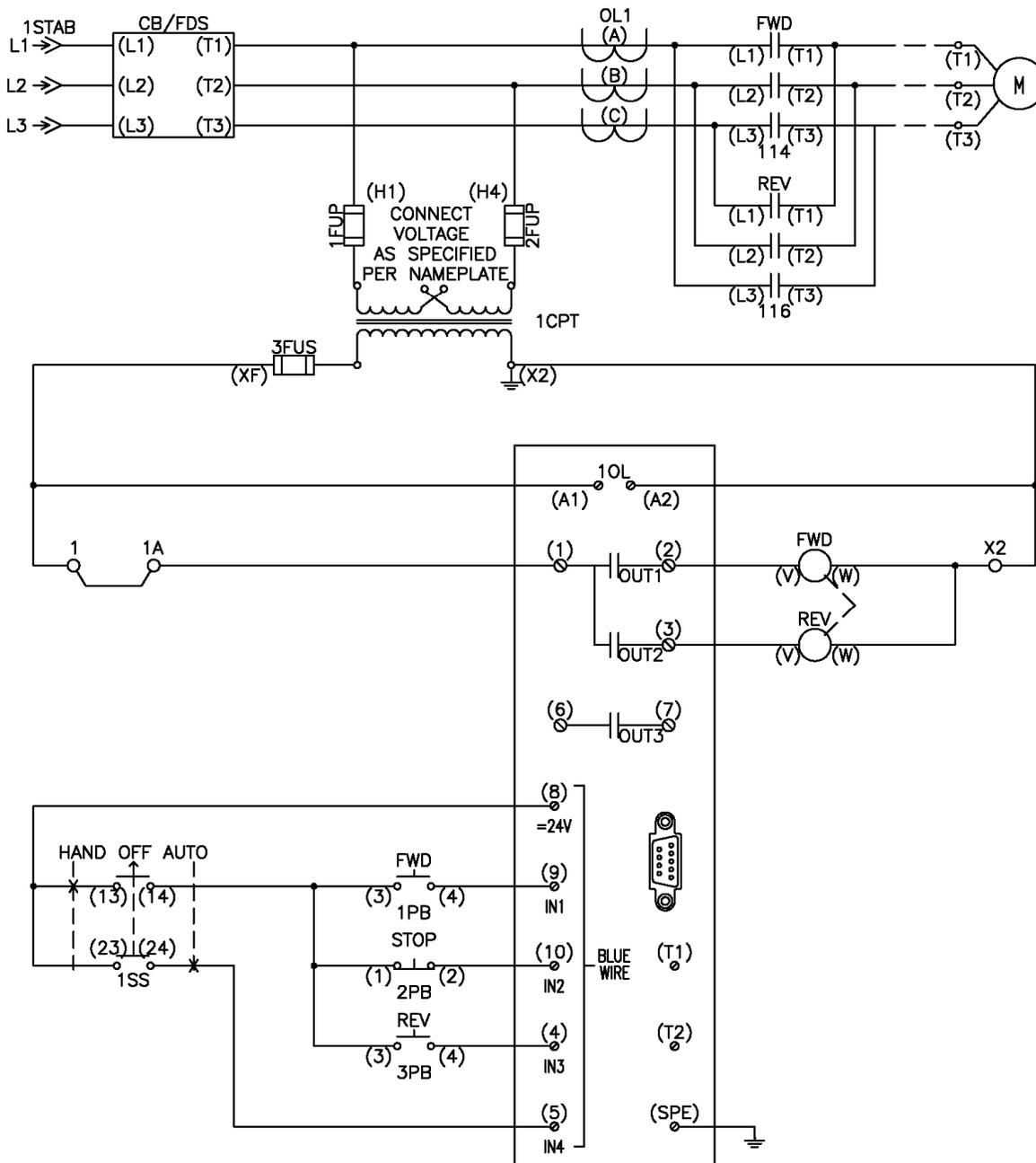
I1	I2	I3	O
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB27

FVR – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB27

### FVR – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the FWD Contactor, depress the Forward Pushbutton while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor, depress the Reverse Pushbutton while the Stop Pushbutton is in its normally closed state. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action the OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the FWD Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB27

FVR – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector:  
Cyclic Receive - Bit 0.5  
BU - Input 4

Local Control [LC]:  
Not connected  
BU - Input 3  
BU - Input 2  
BU - Input 1  
Not connected

PLC/DCS [DP]:  
Not connected  
Cyclic Receive - Bit 0.0  
Truth Table 2 3/10 - Output  
Cyclic Receive - Bit 0.2  
Not connected

PC [DPV1]:  
Not connected  
Not connected  
Not connected  
Not connected  
Not connected

Operator Panel [OP]:  
Not connected  
Not connected  
Not connected  
Not connected  
Not connected

	S1	S2		Local 1	Local 2	Local 3	Remote
Released	0	0	1	1			
Released	0	1	0				1
On (enabled)	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>			<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command: On<, On, Off, On>, On>

Preferred for direct Control of Control Functions: On>, On>

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected  
Truth Table - Input 2: Cyclic Receive - Bit 0.0  
Truth Table - Input 3: Cyclic Receive - Bit 0.2

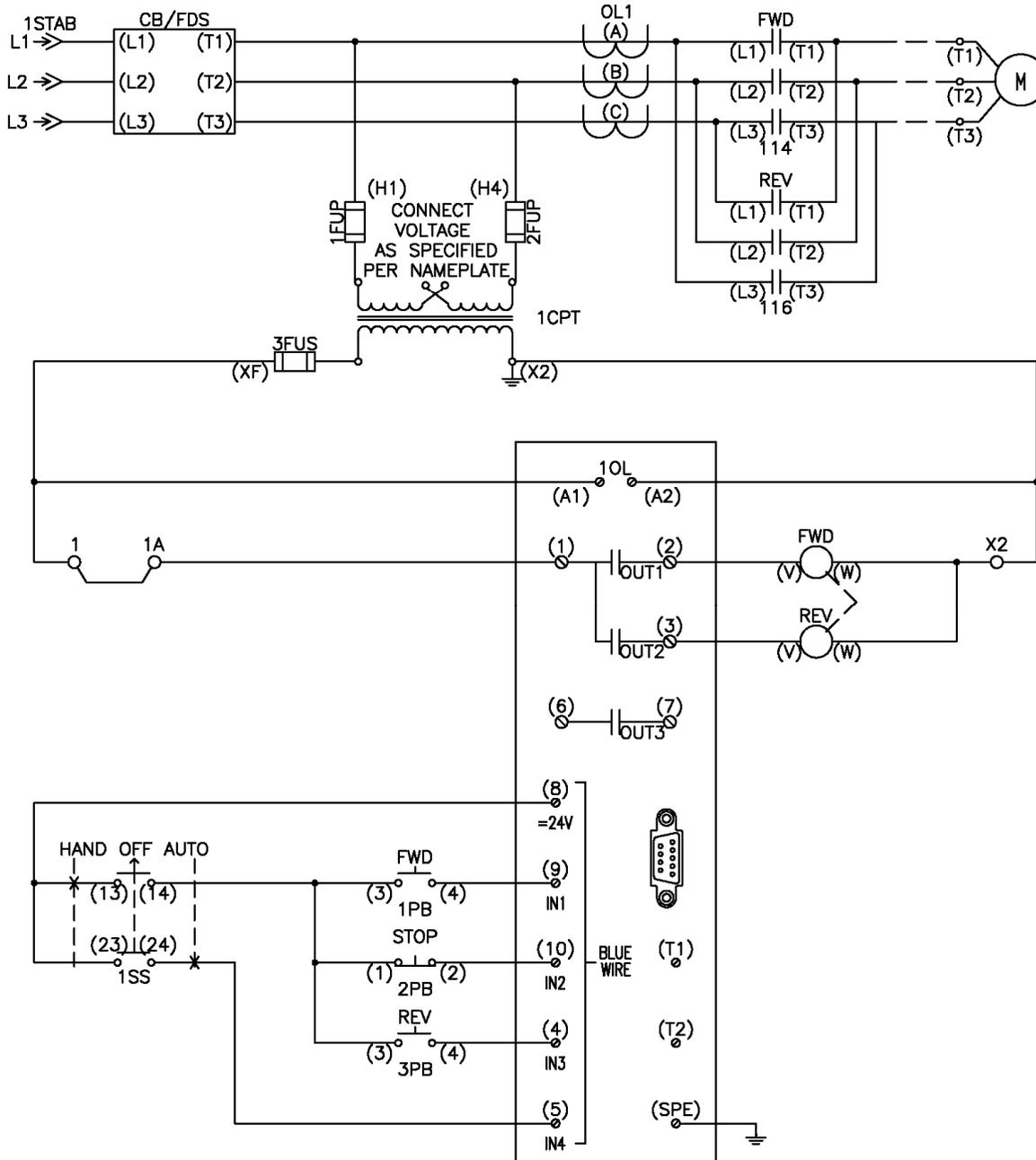
I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB28

FVR – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire

Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB28

FVR – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire

### Operating Instructions

#### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

#### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the FWD Contactor the Forward pushbutton is depressed while the Stop pushbutton is in its normal closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Reverse pushbutton is depressed while the Stop pushbutton is in its normal closed state. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action the OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

#### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the FWD Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

#### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

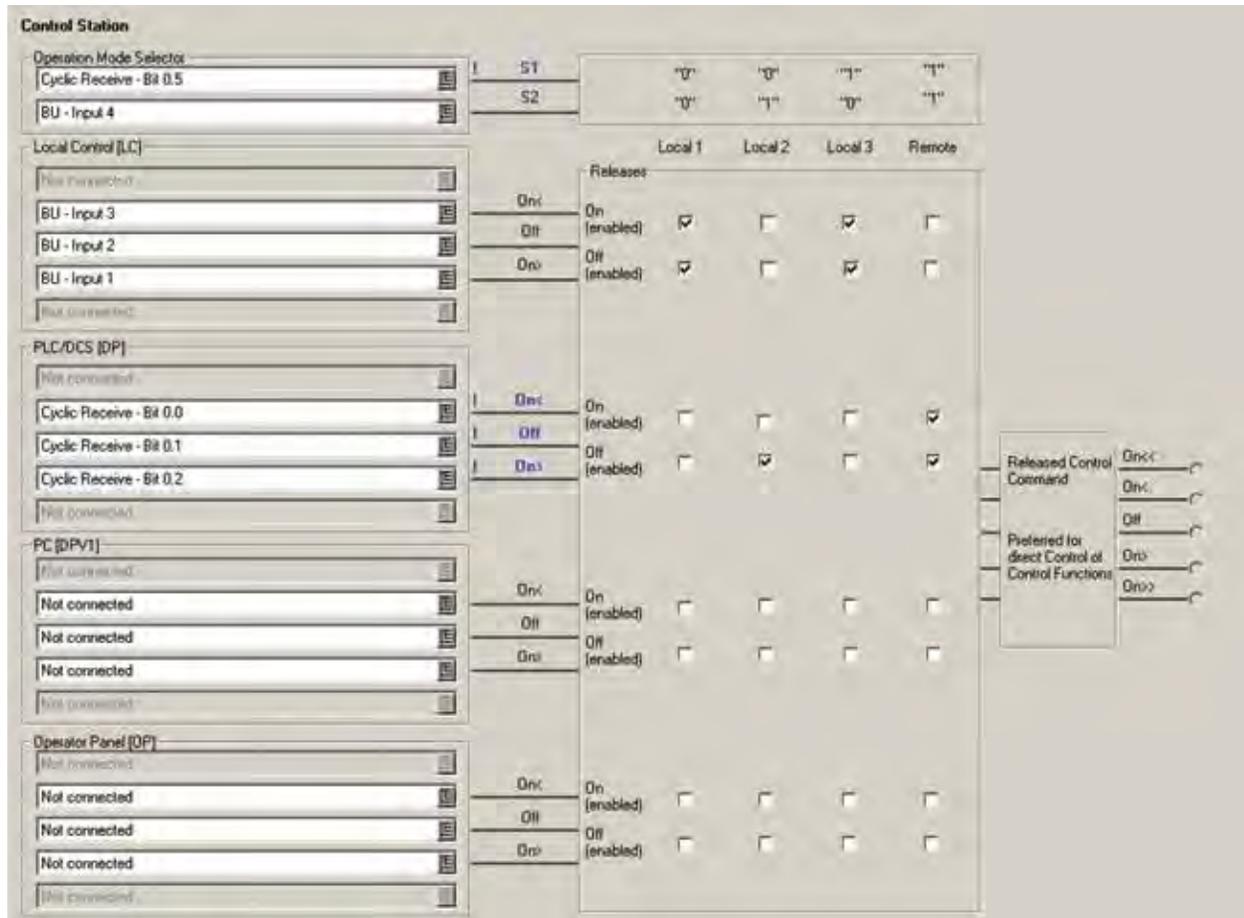
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB28

FVR – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

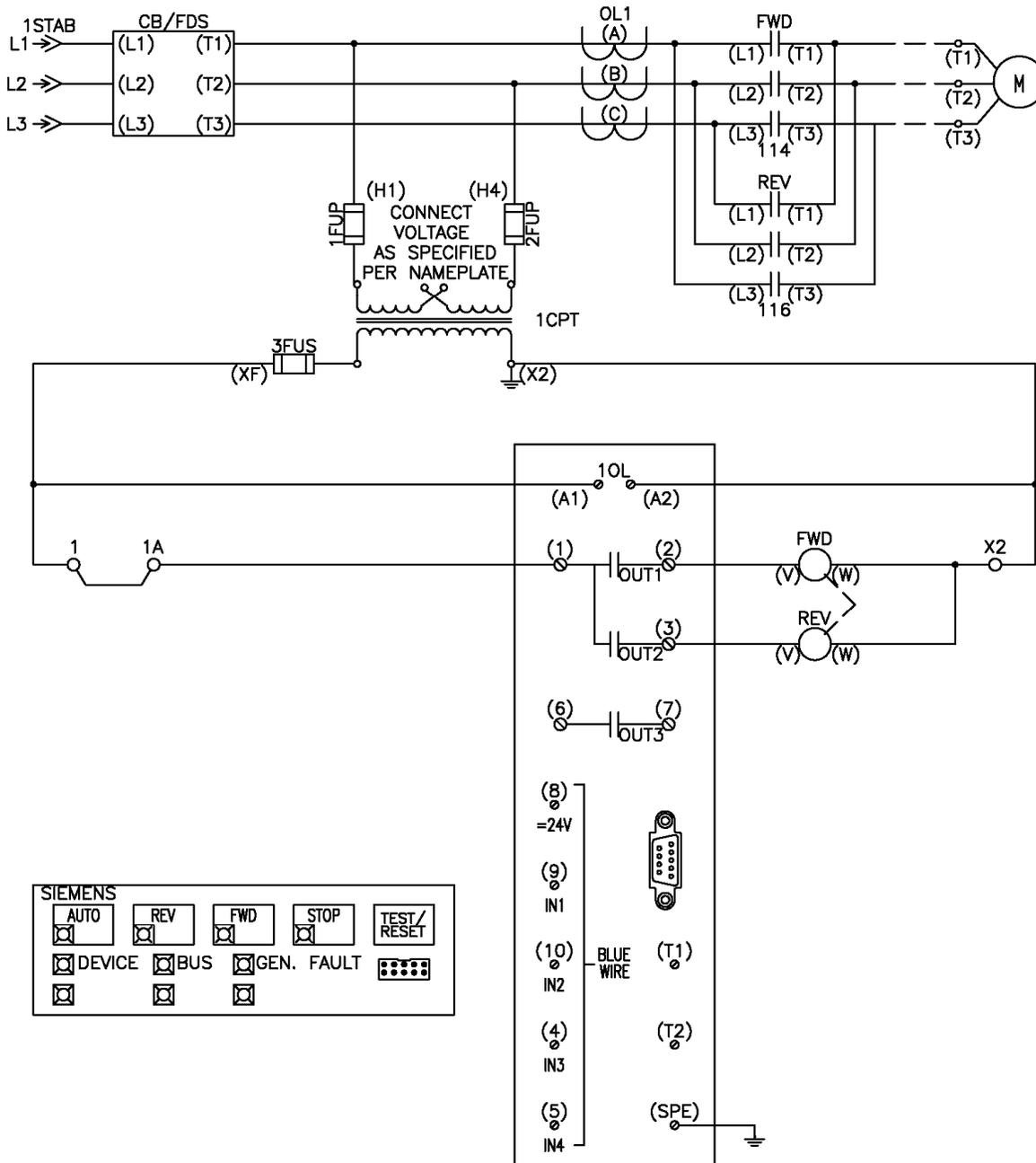


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB29

FVR – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB29

### FVR – Operator Panel Operation Mode Selection – Local 3-Wire OP(OPD) – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active, indication is provided via the LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (FWD) is connected to the ON > Control Command, Operator Panel Button 2 (REV) is connected to the ON < Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the FWD Contactor the OP Forward Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the OP Reverse Pushbutton is depressed. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bits 0.2 and 0.0 are connected to Truth Table 2.
2. To engage the FWD Contactor, Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor, Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD or REV Contactor Profibus Cyclic Receive Bits 0.2 and 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB29

FVR – Operator Panel Operation Mode Selection –  
Local 3-Wire OP(OPD) – Remote 2- Wire

### Parameter Detail

### Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - Bit 0.5  
 Non-Volatile Element 1 - Output

Local Control [LC]:  
 Not connected  
 Not connected  
 Not connected  
 Not connected

PLC/DCS [DP]:  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]:  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]:  
 Not connected  
 OP - Button 2  
 OP - Button 4  
 OP - Button 3  
 Not connected

Released Control Command:  
 Dnc<<  
 Dnc  
 Dff  
 Dno  
 Dno>

Released for direct Control of Control Functions:  
 Dnc<<  
 Dnc  
 Dff  
 Dno  
 Dno>

	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected

Truth Table - Input 2: Cyclic Receive - Bit 0.0

Truth Table - Input 3: Cyclic Receive - Bit 0.2

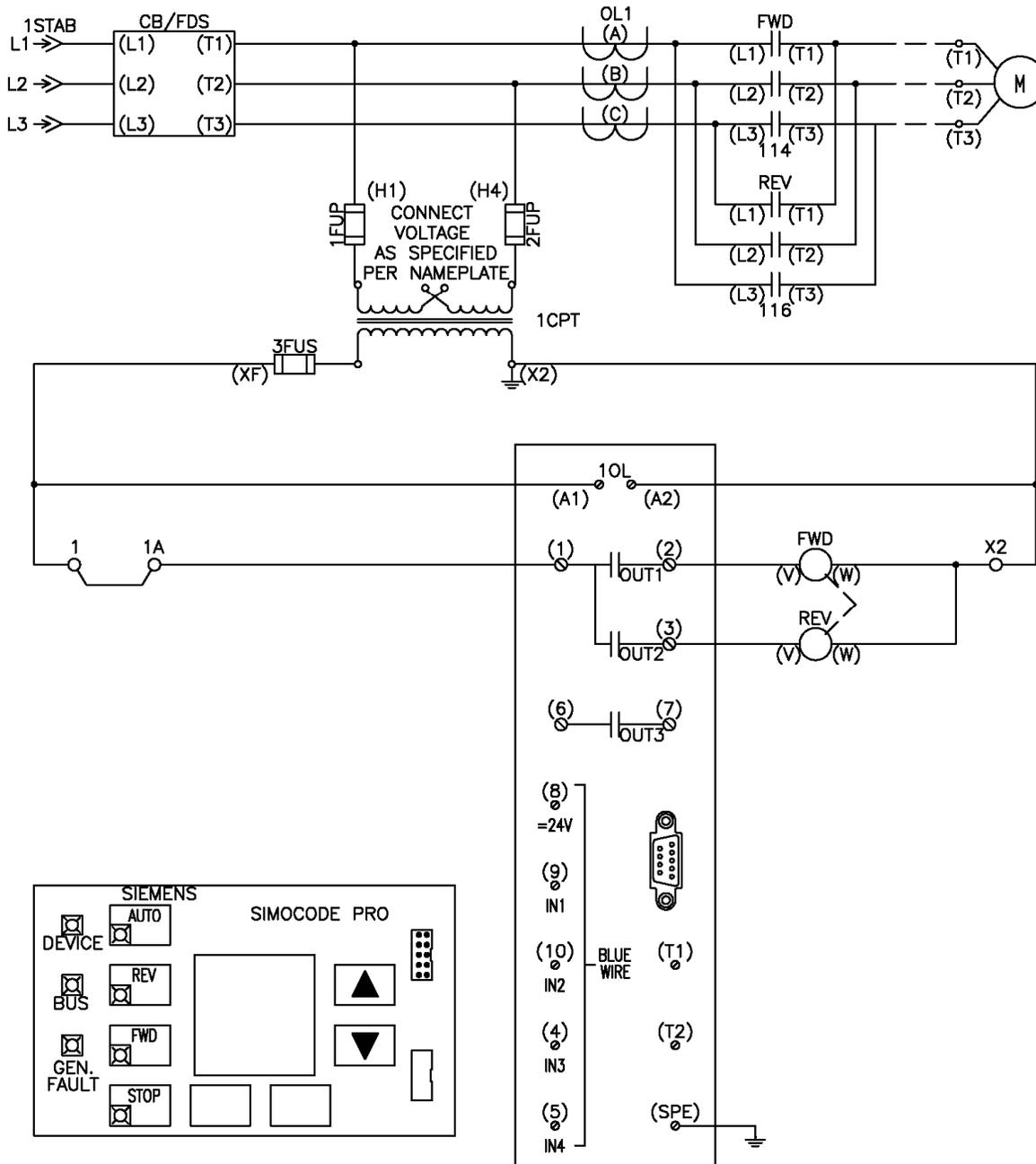
I1	I2	I3	Q
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB29

FVR – Operator Panel Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB29

FVR – Operator Panel Operation Mode Selection –  
Local 3-Wire OP(OPD) – Remote 2-Wire

### Parameter Detail

#### AUTO Toggle Operation

The screenshot displays a configuration interface with three sections:

- Non-Volatile Element 1**
  - Non-Volatile Element - Type: edge rising with memory
  - Non-Volatile Element - Input: OP - Button 1
  - Non-Volatile Element - Reset: Non-Volatile Element 2 - Output
- Counter 1**
  - Counter - Limit: 2
  - Counter - Input +: OP - Button 1
  - Counter - Input -: Not connected
  - Counter - Reset: Non-Volatile Element 2 - Output
- Non-Volatile Element 2**
  - Non-Volatile Element - Type: non inverting
  - Non-Volatile Element - Input: Counter 1 - Output
  - Non-Volatile Element - Reset: Not connected

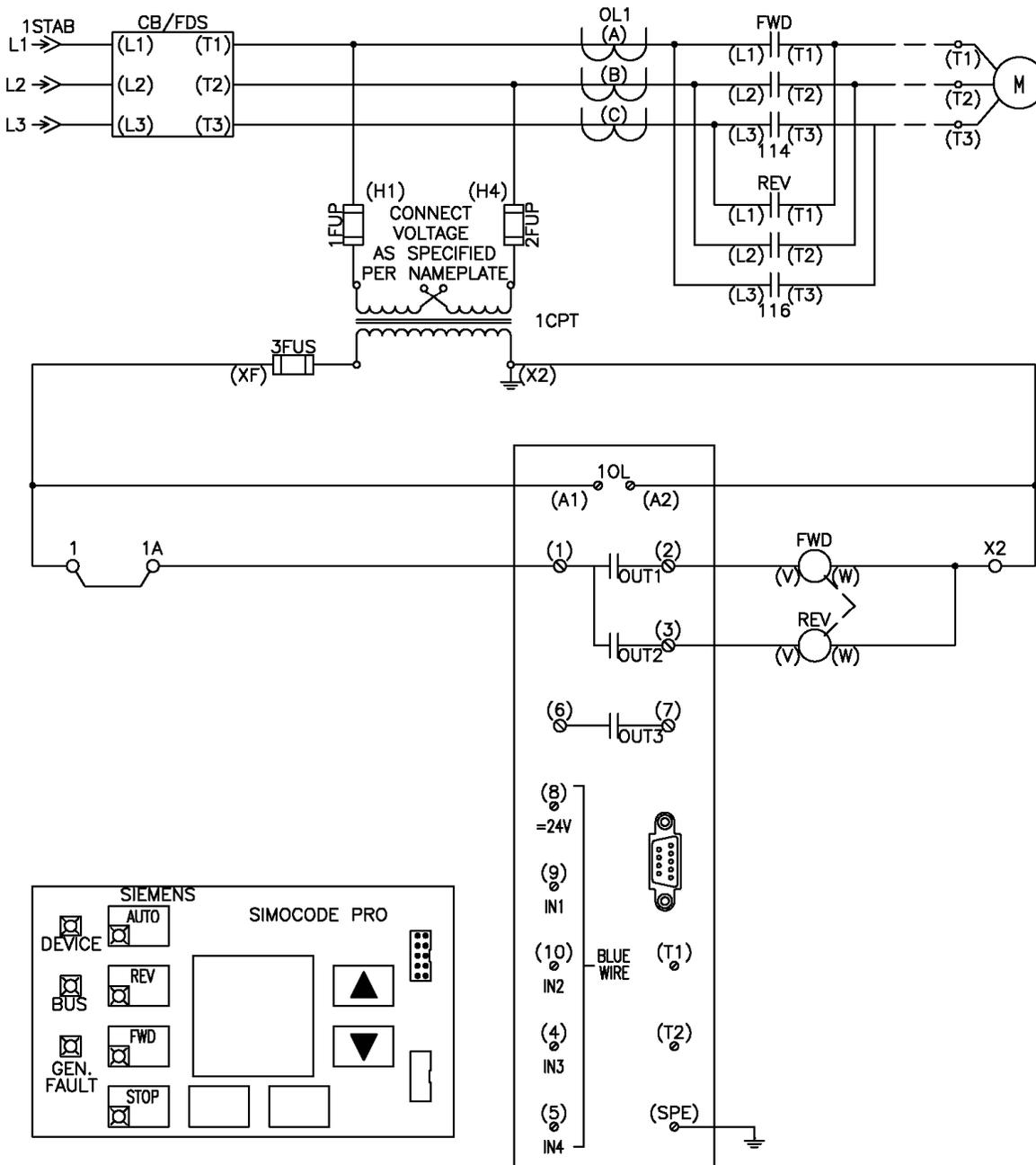


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB30

FVR – Operator Panel Operation Mode Selection –  
Local 3-Wire OPD – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB30

### FVR – Operator Panel Operation Mode Selection – Local 3-Wire OP(OPD) – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button.

##### Local Control

1. Operator Panel Button 3 (FWD) is connected to the ON > Control Command, Operator Panel Button 2 (REV) is connected to the ON < Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the FWD Contactor the OP Forward Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the OP Reverse Pushbutton is depressed. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the FWD Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close.
3. To engage the REV Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
4. To disengage the FWD Contactor or the REV Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite direction. The default Interlocking Time for changing direction is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

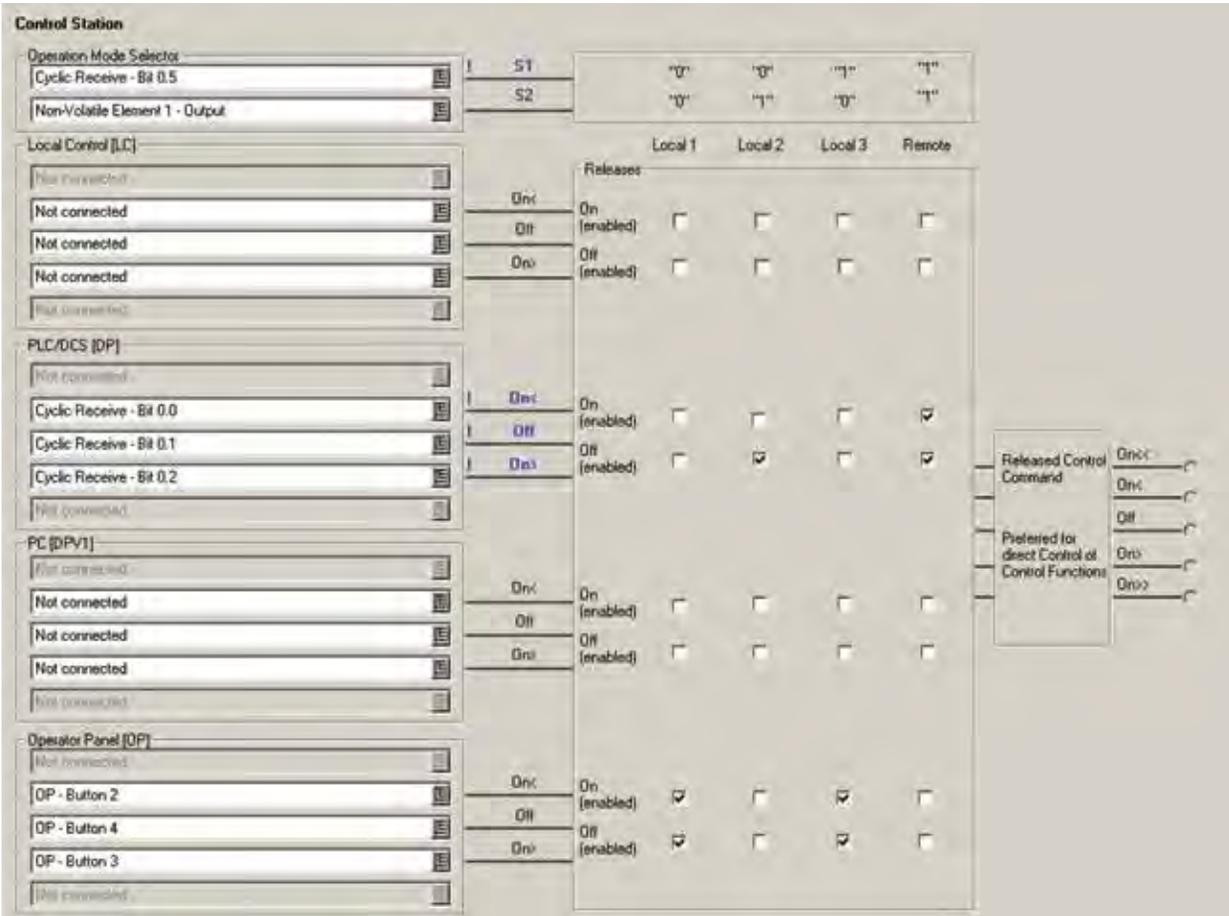
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB30

FVR – Operator Panel Operation Mode Selection –  
Local 3-Wire OP(OPD) – Remote 3-Wire

### Parameter Detail

### Control Selection and Operation



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB30

FVR – Operator Panel Operation Mode Selection –  
Local 3-Wire OP(OPD) – Remote 3-Wire

### Parameter Detail

#### AUTO Toggle Operation

The screenshot displays the configuration interface for the AUTO Toggle Operation. It is organized into three main sections: Non-Volatile Element 1, Counter 1, and Non-Volatile Element 2. Each section contains several parameters with their respective values and selection options.

Section	Parameter	Value
Non-Volatile Element 1	Non-Volatile Element - Type	edge rising with memory
	Non-Volatile Element - Input	OP - Button 1
	Non-Volatile Element - Reset	Non-Volatile Element 2 - Output
Counter 1	Counter - Limit	2
	Counter - Input +	OP - Button 1
	Counter - Input -	Not connected
	Counter - Reset	Non-Volatile Element 2 - Output
Non-Volatile Element 2	Non-Volatile Element - Type	non inverting
	Non-Volatile Element - Input	Counter 1 - Output
	Non-Volatile Element - Reset	Not connected

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## 6. Two speed one winding

The two-speed one-winding starter uses the SLOW contactor to select low-speed and the FAST & SHORT contactors to select high-speed for dual-speed, single-direction, full-voltage operation. The SLOW and SHORT contactors are mechanically and intelligently interlocked to prevent short circuiting of the input lines.

The basic SLOW operation of this starter is as follows.

1. A local or remote SLOW start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Output 2 closes which energizes the coil of SLOW Contactor.
3. A local or remote stop signal is given to the SIMOCODE Pro.
4. The SIMOCODE Pro Output 2 opens which de-energizes the coil of SLOW Contactor.
5. If a fault occurs at any time the SIMOCODE Pro will end the starter operation.

The basic FAST operation of this starter is as follows.

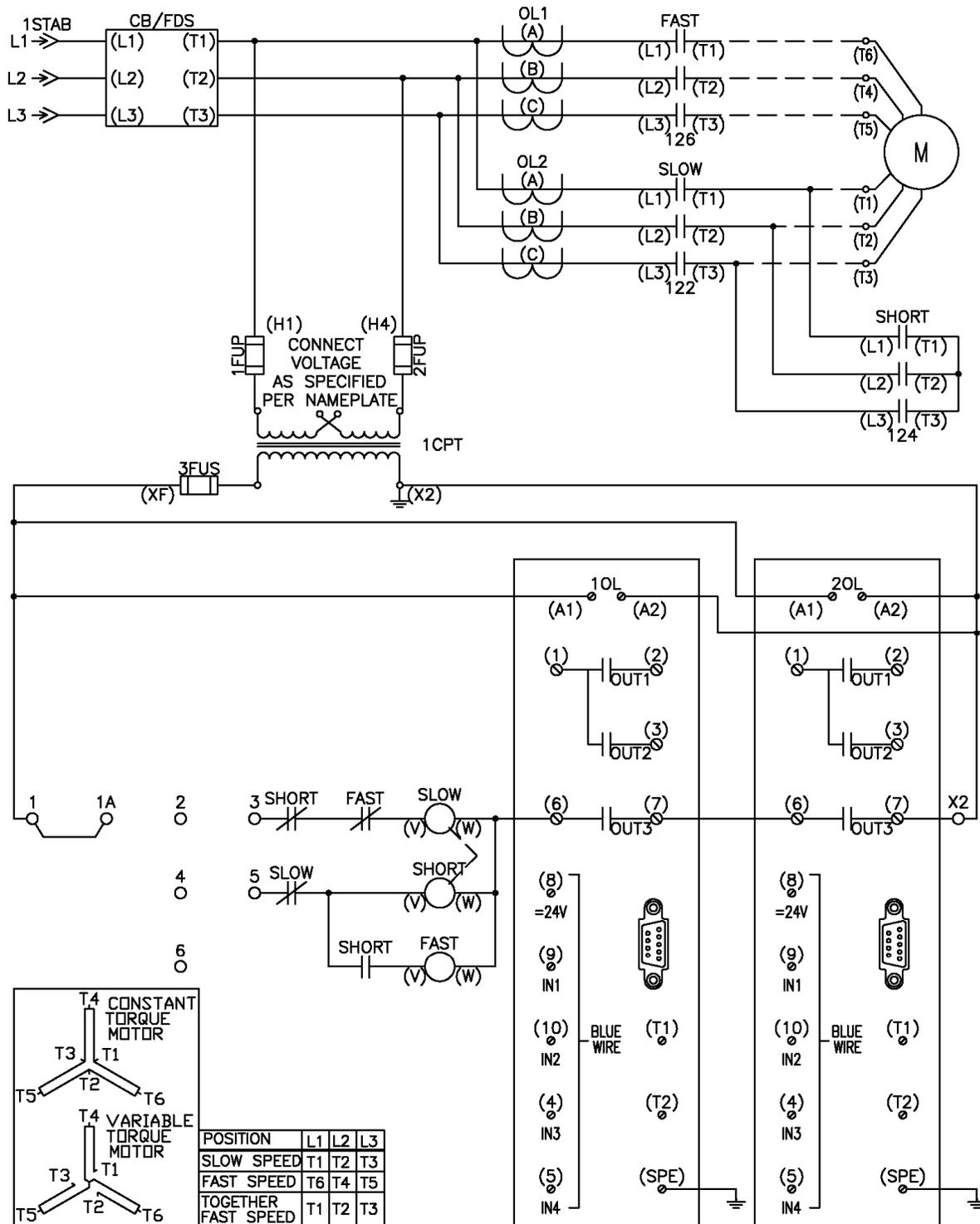
1. A local or remote FAST start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Output 1 and SIMOCODE Pro Output 3 close which energizes the coils of the FAST Contactor and SHORT Contactor.
3. A local or remote stop signal is given to the SIMOCODE Pro.
4. The SIMOCODE Pro Output 1 and SIMOCODE Pro Output 3 open which de-energizes the coils of the FAST Contactor and SHORT Contactor.
5. If a fault occurs at any time the SIMOCODE Pro will end the starter operation.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB31

OL / 2S1W – Fixed Operation Mode –  
Local Overload Operation – Remote Monitoring

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB31

OL / 2S1W – Fixed Operation Mode –  
Local Overload Operation – Remote Monitoring

### Operating Instructions

#### Local Control

1. All control external to device.
2. In the event of an Overload or any other General Fault event the SIMOCODE Output 3 will open.

#### Reset Control

3. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

#### NOTE:

1. This setup is not recommended as its use eliminates local control of the starter via Simocode Pro as well as remote control over Profibus DP network communication.
2. Two Simocode Pro devices are required to utilize a 2S1W starter in this fashion.

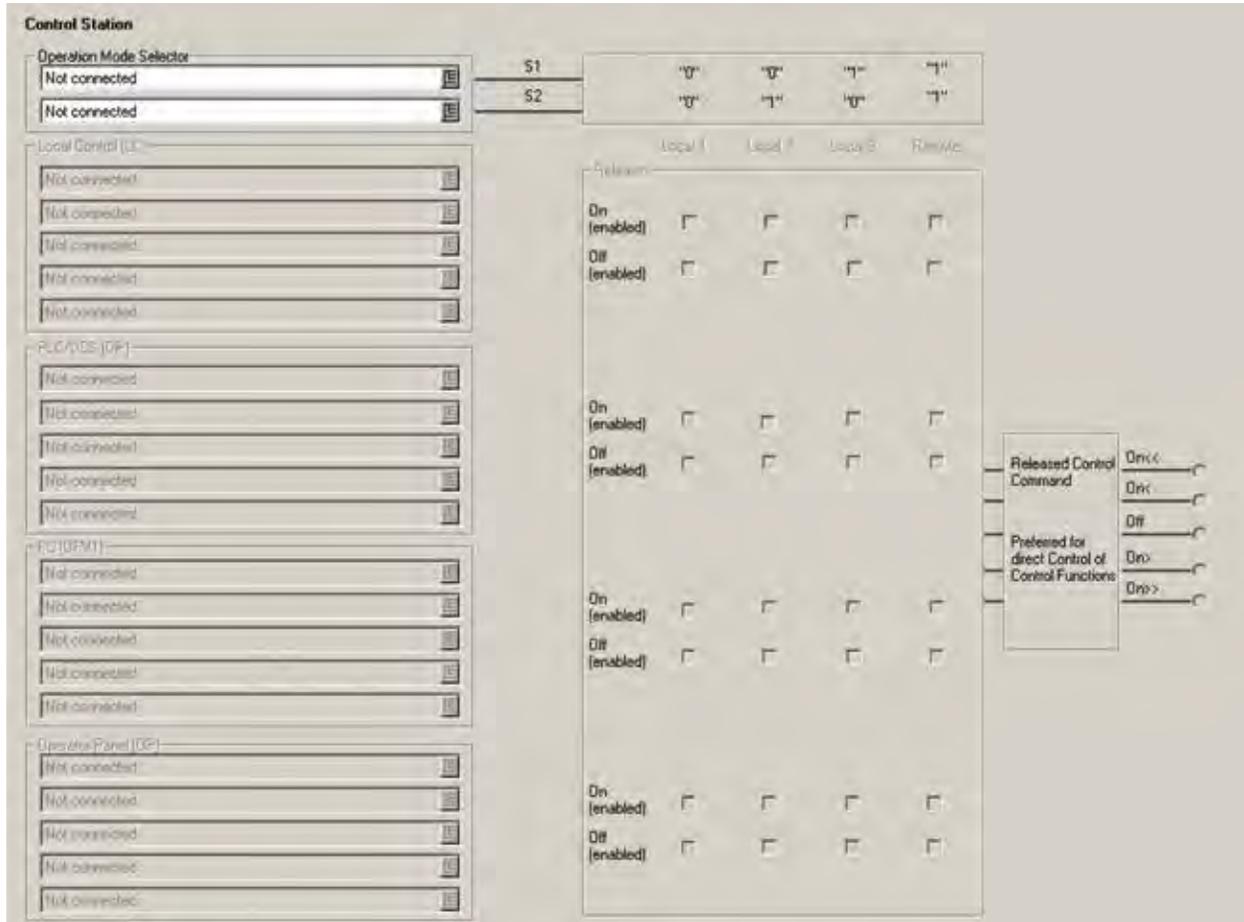
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB31

OL / FVNR – Fixed Operation Mode –  
Local Overload Operation – Remote Monitoring

### Parameter Detail

Control Selection and Operation

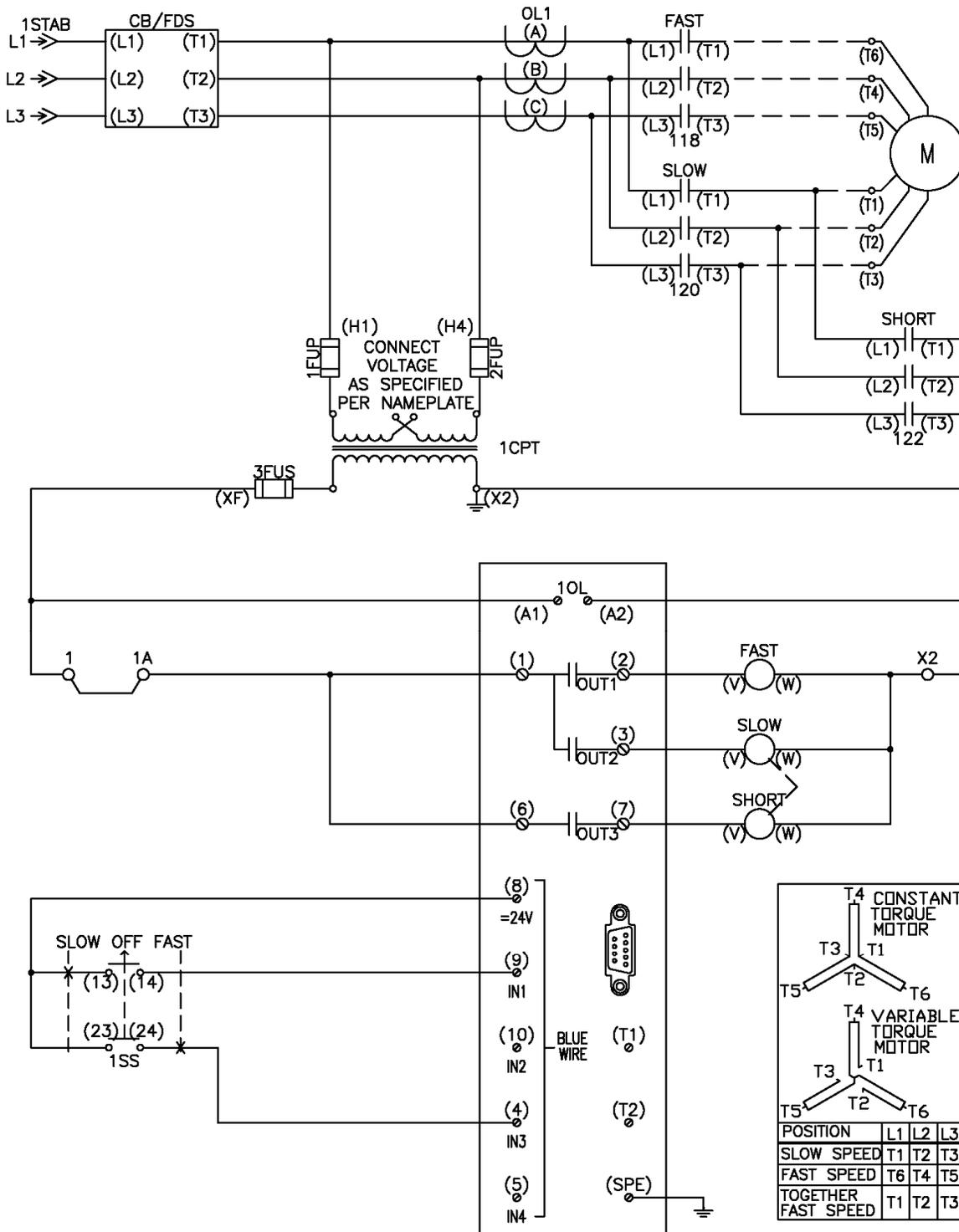


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB32

2S1W – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS– Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB32

### 2S1W – Profibus Bit Operation Mode Selection – Local 2-Wire SS– Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Inputs 1 and 3.
2. To engage the SLOW Contactor the Selector Switch is placed into the SLOW position. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Selector Switch is placed into the FAST position. The ON >> Control Command is then triggered, causing SIMOCODE Outputs 1 and 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB32

### 2S1W – Profibus Bit Operation Mode Selection – Local 2-Wire SS– Remote 2-Wire

#### Parameter Detail

#### Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC)  
 Release  
 On (enabled)  
 Off (enabled)  
 On  
 On

PLC/DCS (DP)  
 On (enabled)  
 Off (enabled)  
 On  
 On

PC (DPV1)  
 On (enabled)  
 Off (enabled)  
 On  
 On

Operator Panel (OP)  
 On (enabled)  
 Off (enabled)  
 On  
 On

Local 1 Local 2 Local 3 Remote

Released Control Command  
 On  
 On  
 Off  
 On  
 On

Reserved for Direct Control of Control Functions  
 On  
 On

**Truth Table 1 3I/1O**

Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	I1	I2	I3	O
Not connected	BU - Input 1	BU - Input 3	0	0	0	0
			0	0	1	1
			0	1	0	1
			0	1	1	0
			1	0	0	0
			1	0	1	0
			1	1	0	0
			1	1	1	0

**Truth Table 2 3I/1O**

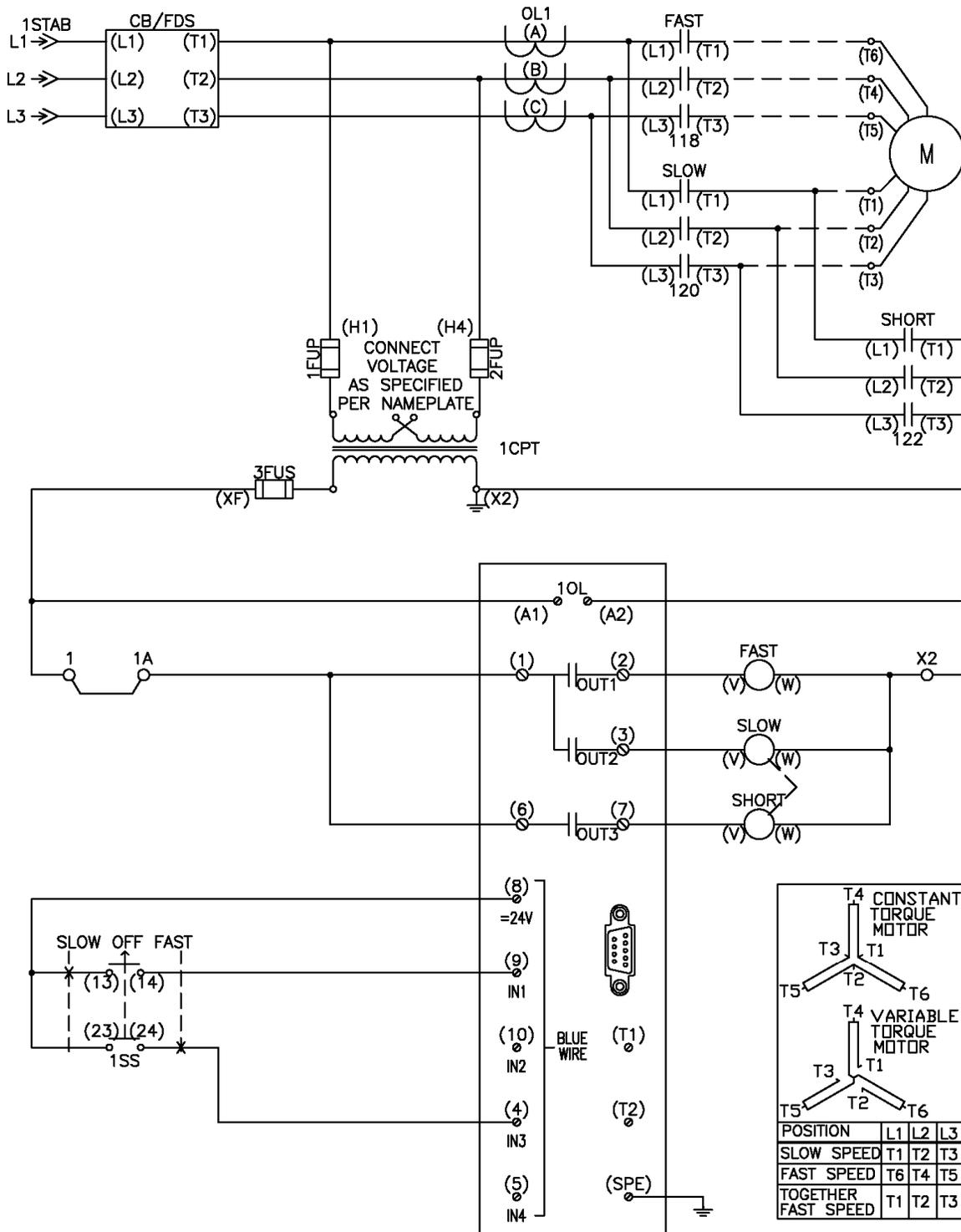
Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	I1	I2	I3	O
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	0	0	0	1
			0	0	1	0
			0	1	0	0
			0	1	1	1
			1	0	0	0
			1	0	1	0
			1	1	0	0
			1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB33

2S1W – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS– Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB33

### 2S1W – Profibus Bit Operation Mode Selection – Local 2 Wire SS– Remote 3 Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the SLOW Contactor the Selector Switch is placed into the SLOW position. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Selector Switch is placed into the FAST position. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB33

2S1W – Profibus Bit Operation Mode Selection – Local 2-Wire SS– Remote 3-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC):  
 Not connected  
 Not connected  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 BU - Input 3

PLC/DCS (DP):  
 Not connected  
 Not connected  
 Cyclic Receive - Bit 0.1  
 Cyclic Receive - Bit 0.2  
 Cyclic Receive - Bit 0.0

PC (DPV1):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Releasees	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command:  
 On<<<  
 On<  
 Off  
 On>  
 On>>

Preferred for direct Control of Control Functions:  
 On>>

**Truth Table 1 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: BU - Input 1  
 Truth Table - Input 3: BU - Input 3

**Truth Table 3/10**

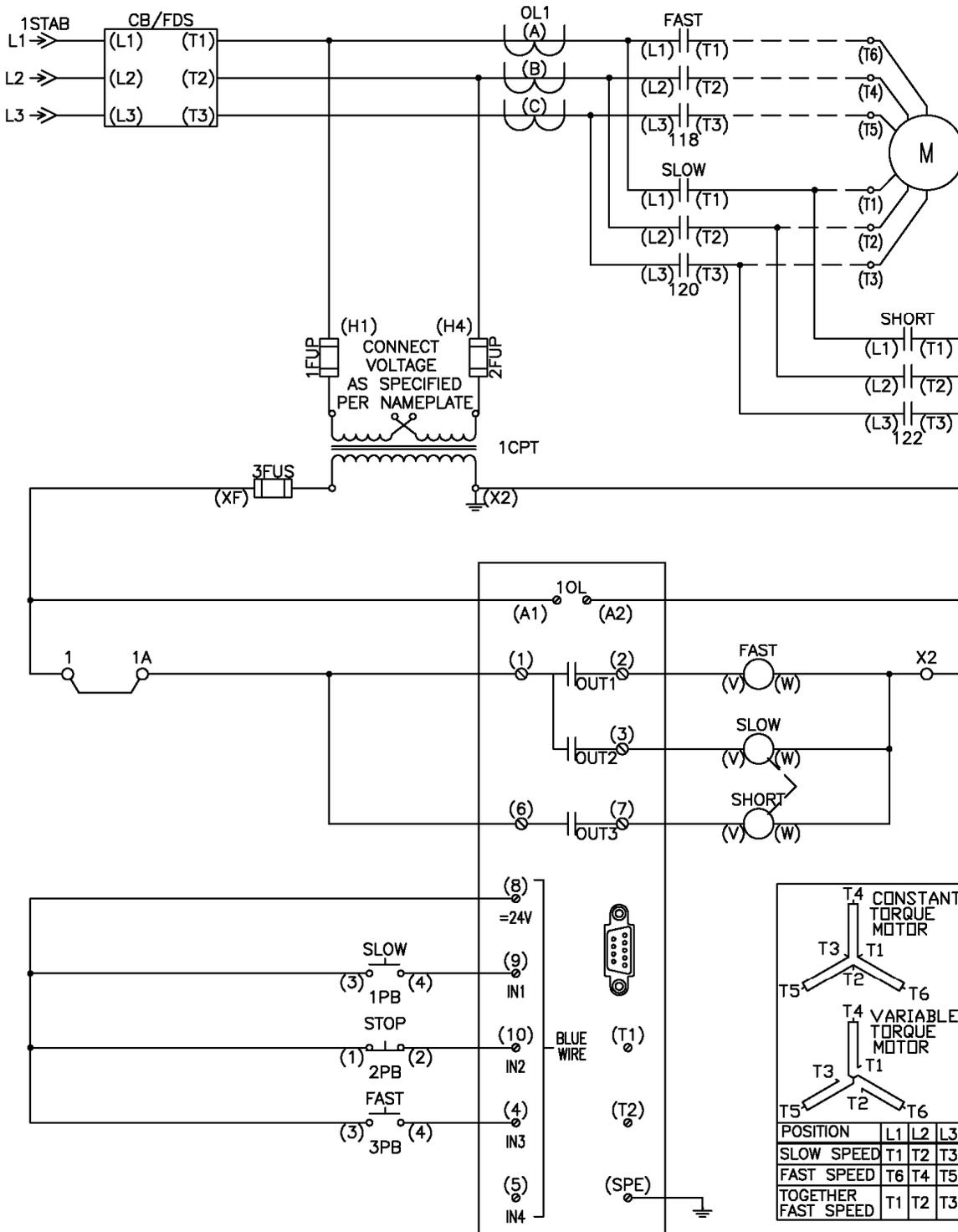
I1	I2	I3	Q
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB34

2S1W – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB– Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB34

### 2S1W – Profibus Bit Operation Mode Selection – Local 3 Wire PB– Remote 2 Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the SLOW Contactor, the Slow Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Fast Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 | to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing the SIMOCODE Outputs 1 and 3 to close.
4. To disengage the SLOW Contactor, or the FAST & SHORT Contactors, Profibus Cyclic Receive Bits 0.2 and 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB34

2S1W – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:** Shows 'Operation Mode Selector' with 'Cyclic Receive - Bit 0.5' and 'Fixed Level - 1'. It includes a 4x4 bit matrix for Local 1, Local 2, and Remote.
- Local Control (LC):** Lists 'No threshold', 'Not connected', and 'BU - Input 2', 'BU - Input 1', 'BU - Input 3'. It features a 'Released' control matrix with 'On (enabled)' and 'Off (enabled)' states for Local 1, Local 2, and Remote.
- PLC/DCS (DP):** Lists 'No threshold', 'Not connected', 'Truth Table 2 3/10 - Output', 'Cyclic Receive - Bit 0.2', and 'Cyclic Receive - Bit 0.0'.
- PC (DPV1):** Lists 'Not connected', 'Not connected', 'Not connected', and 'Not connected'.
- Operator Panel (OP):** Lists 'Not connected', 'Not connected', 'Not connected', and 'Not connected'.
- Released Control Command:** A vertical stack of five buttons labeled 'On<<', 'On<', 'Off', 'On>', and 'On>>'.
- Truth Table 2 3/10:** A table with inputs I1, I2, I3 and output Q.
- Truth Table 3/10:** A table with inputs I1, I2, I3 and output Q.

**Truth Table 2 3/10**

I1	I2	I3	Q
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

**Truth Table 3/10**

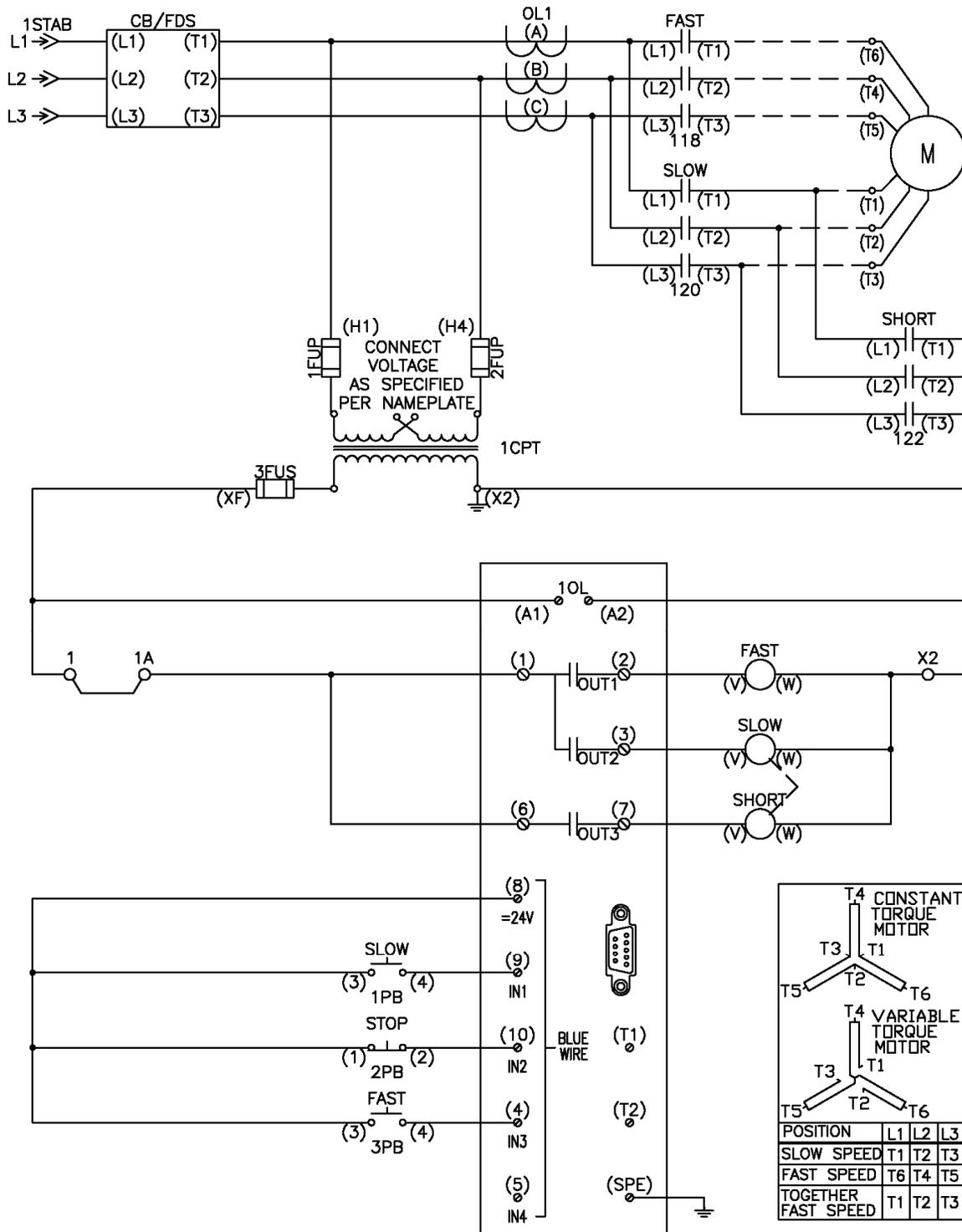
I1	I2	I3	Q
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB35

2S1W – Profibus Bit Operation Mode Selection – Local 3-Wire PB– Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB35

### 2S1W – Profibus Bit Operation Mode Selection – Local 3-Wire PB– Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode. Local Control (LC).
2. To engage the SLOW Contactor the Slow Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Fast Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB35

2S1W – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB– Remote 3-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

**Operation Mode Selector:**  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

**Local Control (LC):**  
 Not connected  
 Not connected  
 BU - Input 2  
 BU - Input 1  
 BU - Input 3

**PLC/DCS (DP):**  
 Not connected  
 Not connected  
 Cyclic Receive - Bit 0.1  
 Cyclic Receive - Bit 0.2  
 Cyclic Receive - Bit 0.0

**PC (DPV1):**  
 Not connected  
 Not connected  
 Not connected  
 Not connected

**Operator Panel (OP):**  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	Local 1	Local 2	Remote
Released			
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Released Control Command:**  
 On<<  
 On<  
 Off  
 On>  
 On>>

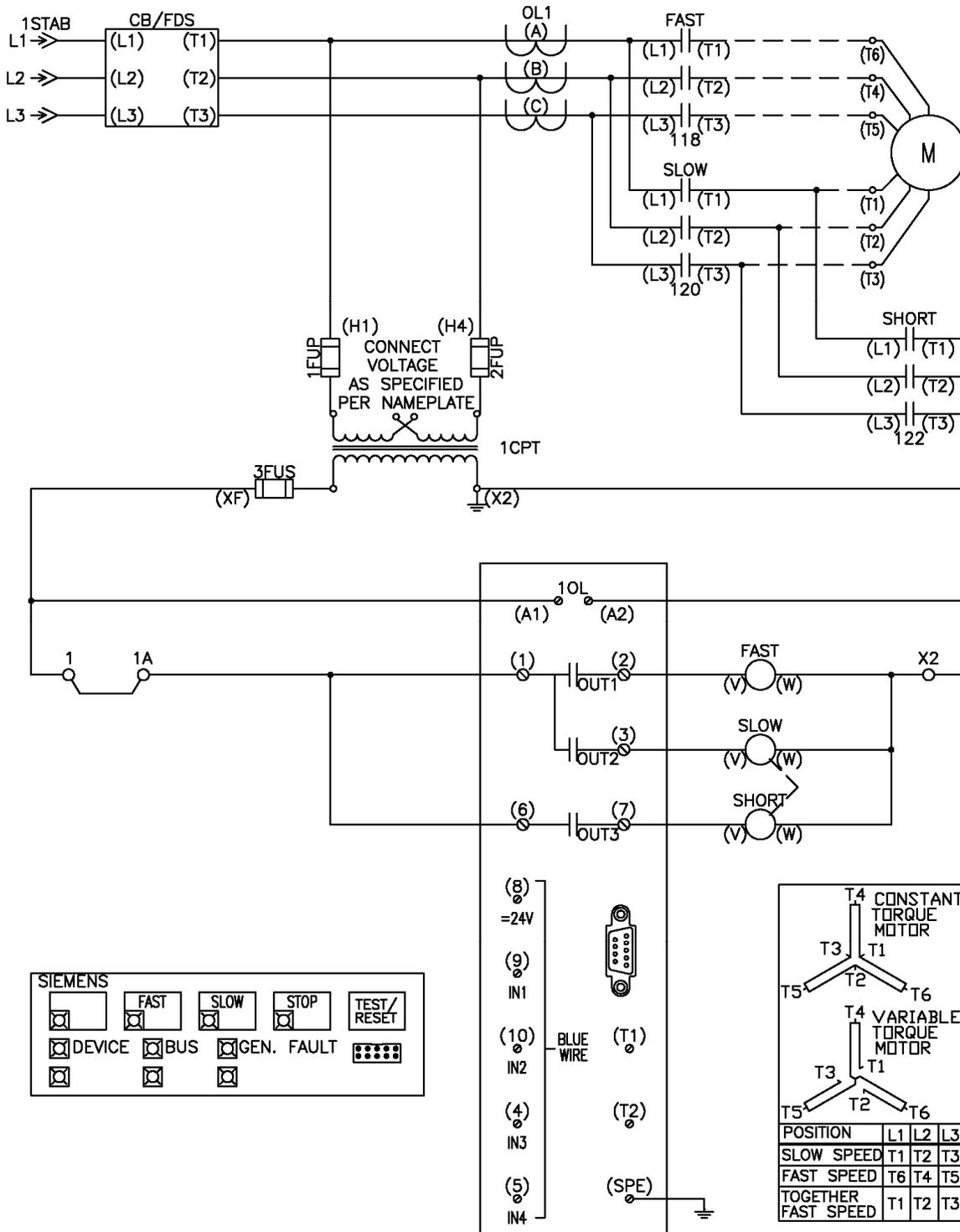
**Preferred for direct Control of Control Functions:**  
 On<<  
 On<  
 Off  
 On>  
 On>>

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB36

2S1W – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire

### Connection Diagram

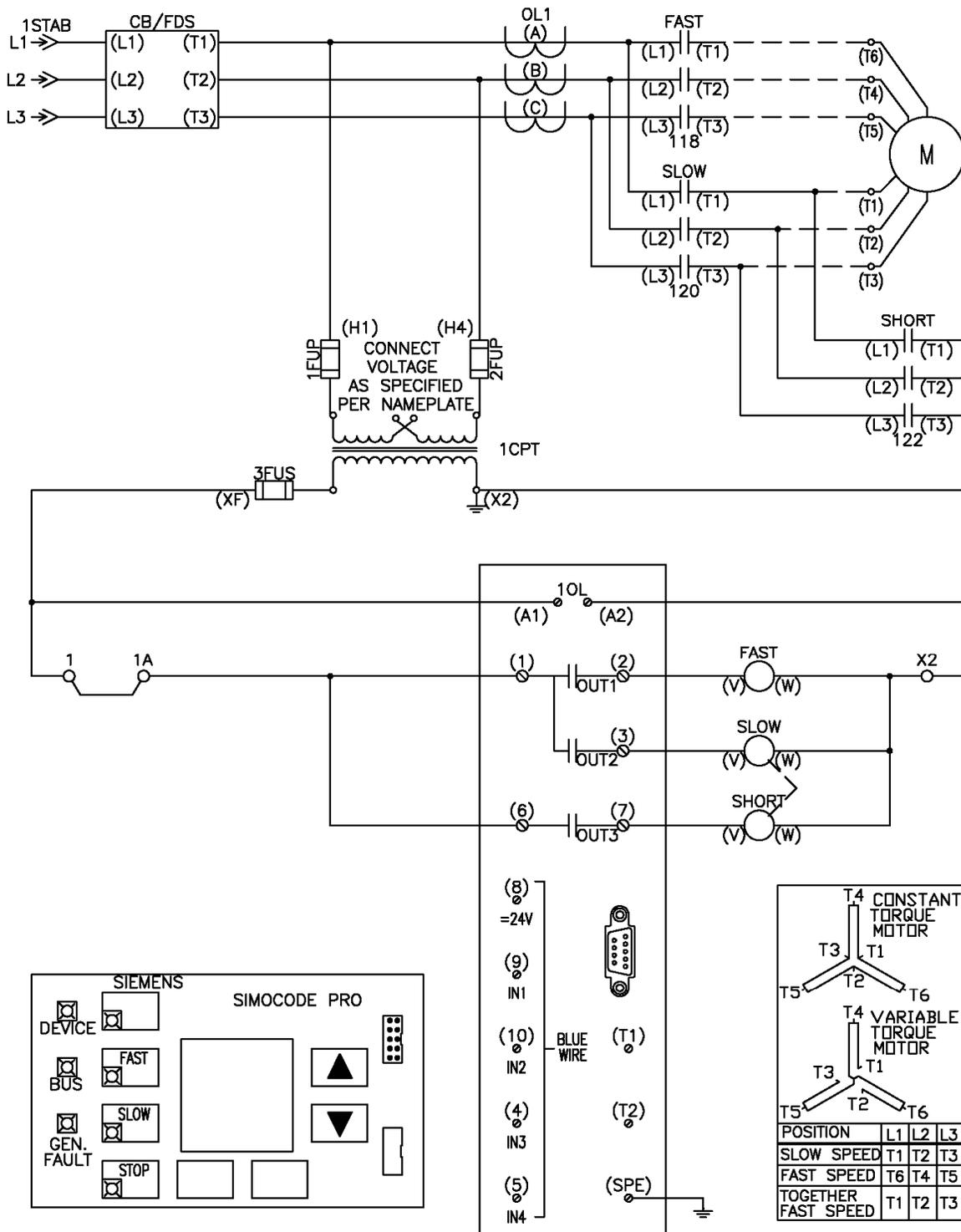


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB36

2S1W – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB36

### 2S1W – Profibus Bit Operation Mode Selection – Local 3 Wire OP(OPD) – Remote 2 Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (SLOW) is connected to the ON > Control Command, Operator Panel Button 2 (FAST) is connected to the ON >> Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the SLOW Contactor the OP Slow Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the OP Fast Pushbutton is depressed. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB36

2S1W – Profibus Bit Operation Mode Selection – Local 3-Wire OP(OPD) – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:** Includes 'Operation Mode Selector' with 'Cyclic Receive - Bit 0.5' and 'Fixed Level - 1'. It also shows bit status for S1 and S2.
- Local Control (LC):** Lists connection status for various components, mostly 'Not connected'.
- PLC/DCS (DP):** Shows 'Truth Table 2 3/10 - Output' and 'Cyclic Receive - Bit 0.2' and '0.0'.
- PC (DPV1):** Lists connection status for various components, mostly 'Not connected'.
- Operator Panel (OP):** Shows 'Not connected' and 'OP - Button 4', 'OP - Button 3', and 'OP - Button 2'.
- Released Control Command:** A section with five input lines labeled 'On<<', 'On<', 'On', 'On>', and 'On>>'.
- Preferred for direct Control of Control Functions:** A section with five input lines labeled 'On<<', 'On<', 'On', 'On>', and 'On>>'.
- Truth Table 2 3/10:** A table with 3 inputs and 1 output.
- Truth Table 3/10:** A table with 3 inputs and 1 output.

**Truth Table 2 3/10**

Input 1	Input 2	Input 3	Output
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	0

**Truth Table 3/10**

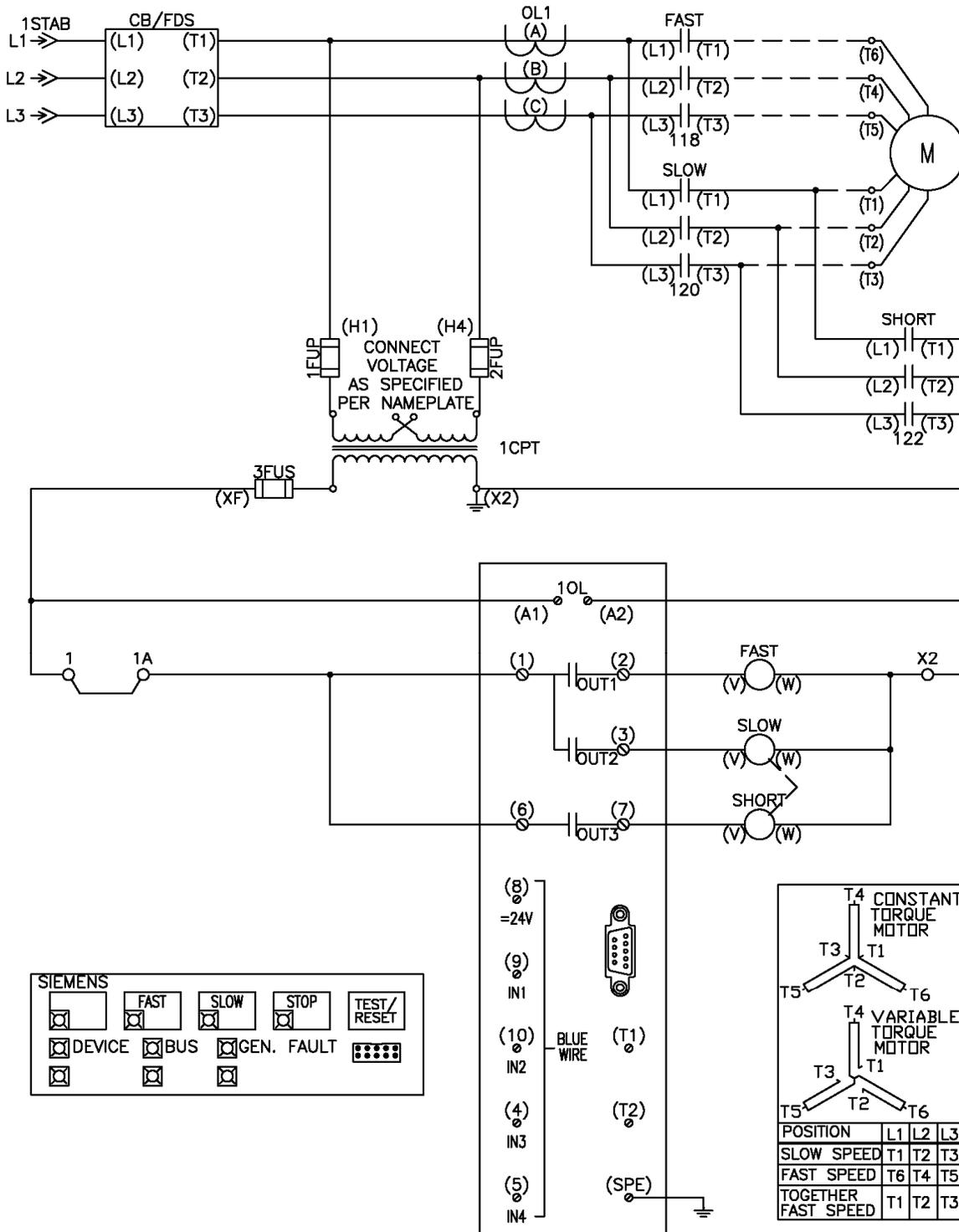
I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB37

2S1W – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP – Remote 3-Wire

### Connection Diagram

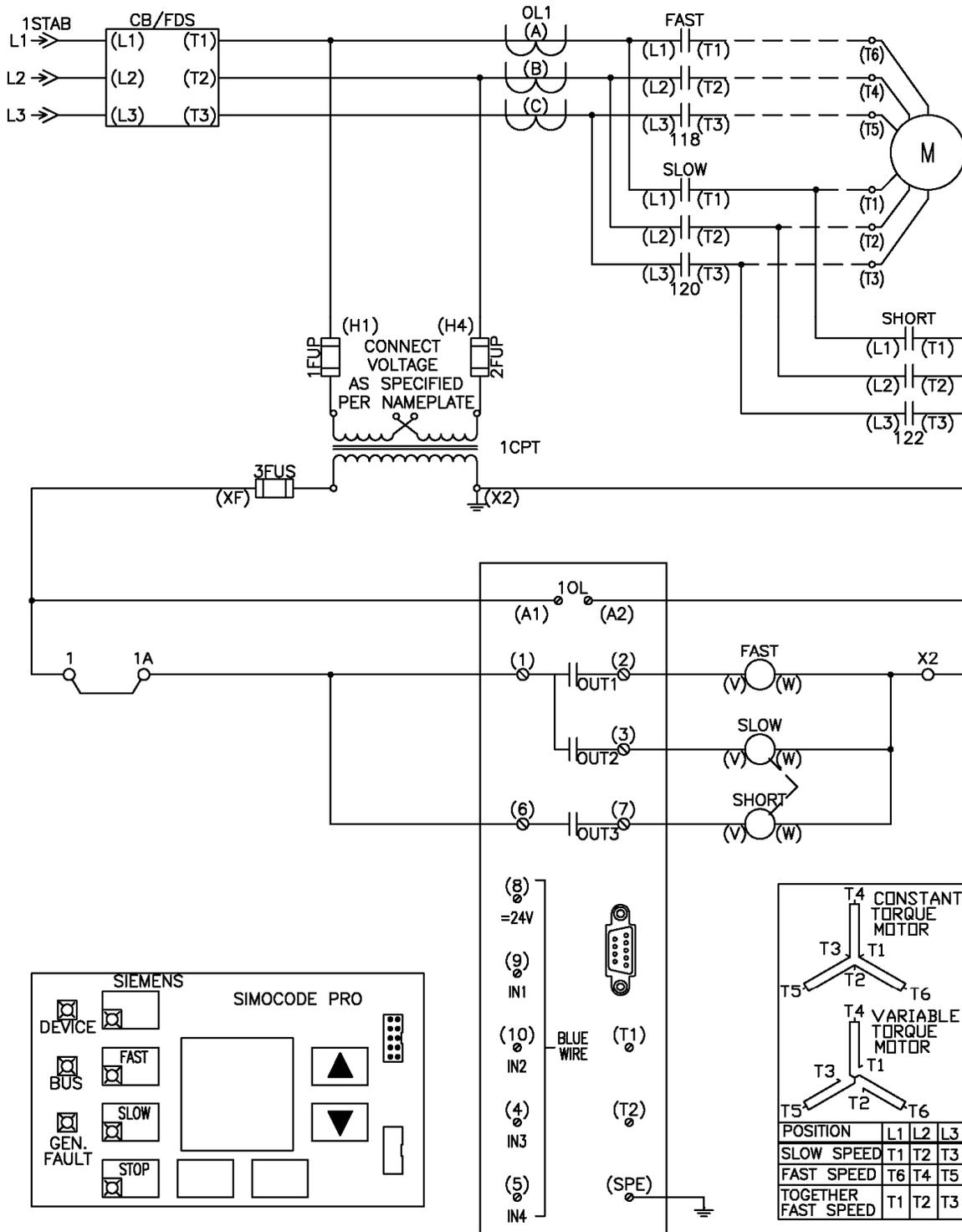


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB37

2S1W – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB37

### 2S1W – Profibus Bit Operation Mode Selection – Local 3 Wire OP(OPD) – Remote 2 Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (SLOW) is connected to the ON > Control Command, Operator Panel Button 2 (FAST) is connected to the ON >> Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the SLOW Contactor the OP Slow Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the OP Fast Pushbutton is depressed. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB37

2S1W – Profibus Bit Operation Mode Selection – Local 3-Wire OP(OPD) – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

The screenshot displays the 'Control Station' configuration interface. It is organized into several sections, each with a list of parameters and their current values. To the right of these sections is a 'Releases' table with columns for 'Local 1', 'Local 2', and 'Remote'. Below the table are two groups of terminal connections: 'Released Control Command' and 'Preferred for direct Control of Control Functions'.

Section	Parameter	Value
Operation Mode Selector	Cyclic Receive - Bit 0.5	S1
	Fixed Level - T1	S2
Local Control (LC)	Not connected	Off
	Not connected	On
	Not connected	On>
	Not connected	On>
PLC/DCS (DP)	Not connected	Off
	Not connected	On
	Cyclic Receive - Bit 0.1	On
	Cyclic Receive - Bit 0.2	On
	Cyclic Receive - Bit 0.0	On>
PC (DPV1)	Not connected	Off
	Not connected	On
	Not connected	On
	Not connected	On>
Operator Panel (OP)	Not connected	OP-Button 4
	Not connected	OP-Button 3
	Not connected	OP-Button 2
	Not connected	OP-Button 2

Releases	Local 1	Local 2	Remote
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Released Control Command terminals: On<<, On<, On, On>, On>>

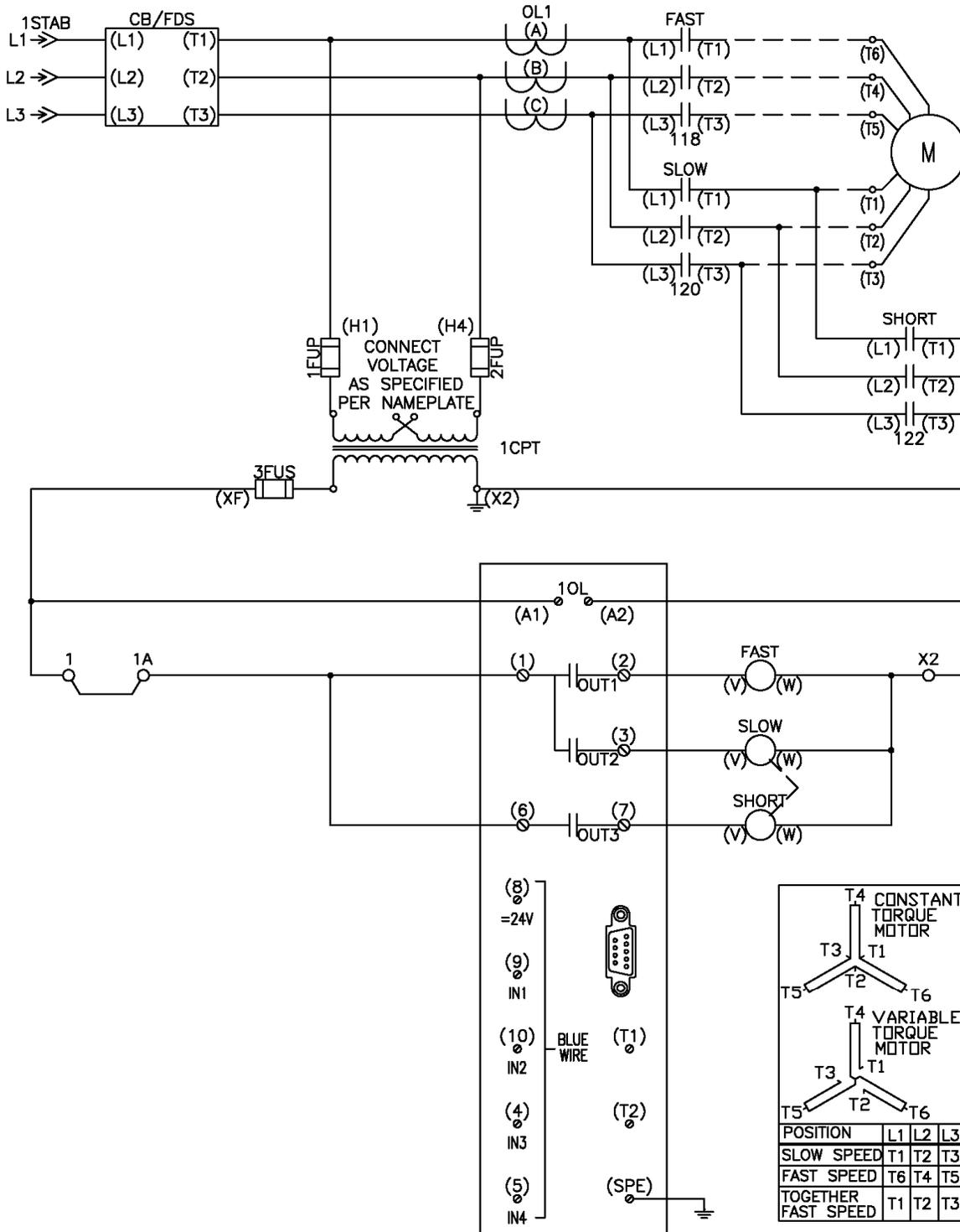
Preferred for direct Control of Control Functions terminals: On<<, On<, On, On>, On>>

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB38

2S1W – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB38

### 2S1W – Profibus Bit Operation Mode Selection – No Local – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the SLOW Contactor SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors SIMOCODE Input 3 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the SIMOCODE Input 1 and SIMOCODE Input 3 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.





# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB39

### 2S1W – Profibus Bit Operation Mode Selection – No Local – Remote 3 Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the SLOW Contactor SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors SIMOCODE Input 3 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the SIMOCODE Input 1 and SIMOCODE Input 3 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB39

2S1W – Profibus Bit Operation Mode Selection – No Local – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC):  
 Not connected  
 Not connected  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 BU - Input 3

PLC/DCS (DP):  
 Not connected  
 Not connected  
 Cyclic Receive - Bit 0.1  
 Cyclic Receive - Bit 0.2  
 Cyclic Receive - Bit 0.0

PC (DPV1):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

**Released Control Command**  
 On<<  
 On  
 Off  
 On  
 On>>

**Preferred for direct Control of Control Functions**

**Truth Table 1 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: BU - Input 1  
 Truth Table - Input 3: BU - Input 3

**Truth Table 3/10**

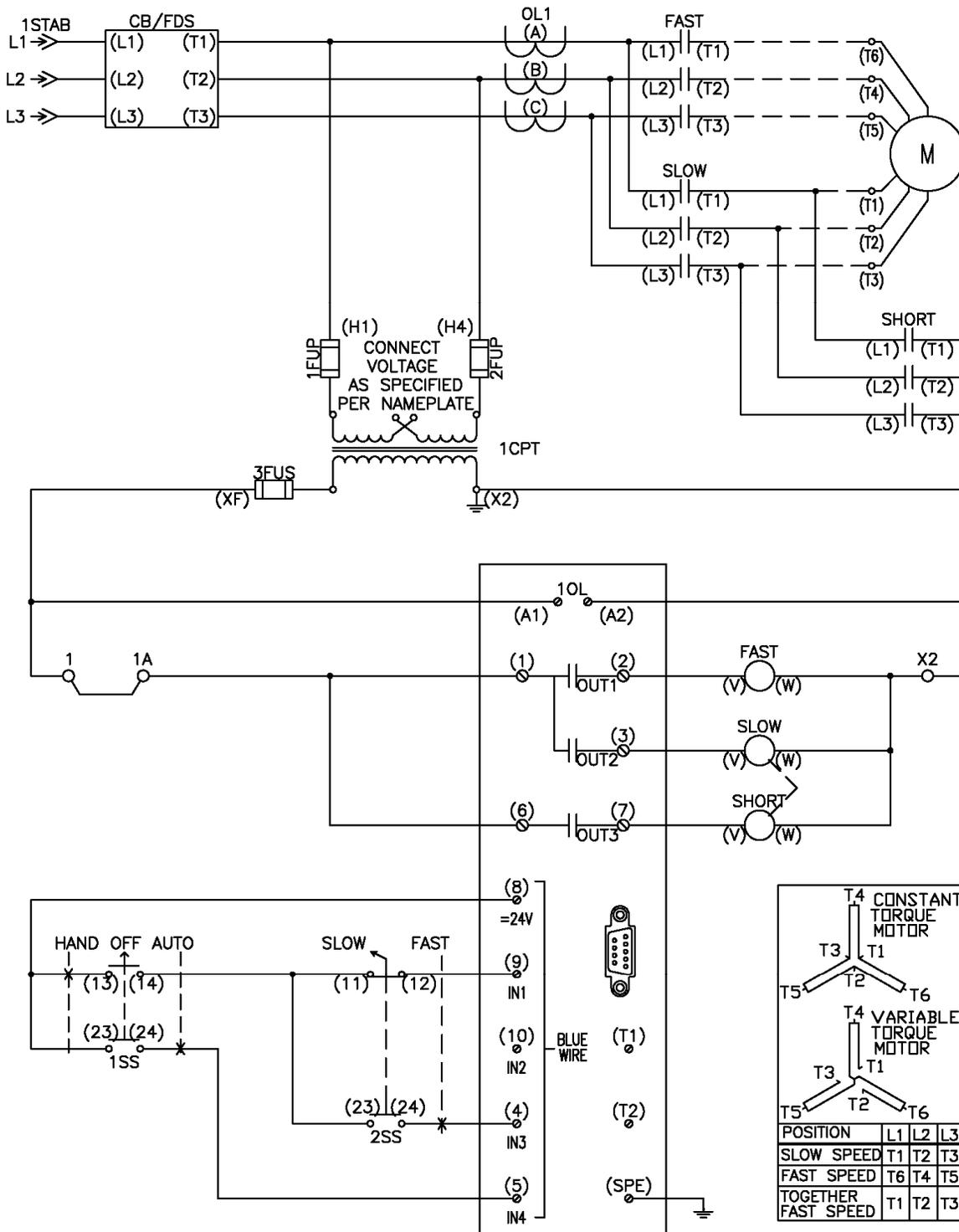
I1	I2	I3	Q
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB40

2S1W – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB40

### 2S1W – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the SLOW Contactor the Selector Switch is placed into the SLOW position. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Selector Switch is placed into the FAST position. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors, you must issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB40

2S1W – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

<b>Operation Mode Selector</b>		51	'0'	'0'	'1'	'1'
Cyclic Receive - Bit 0.5		52	'0'	'1'	'0'	'1'
BU - Input 4						

Local Control (LC)				Local 1	Local 2	Local 3	Remote
On (connected)			Releases				
Off (connected)		Off	On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Truth Table 1 3/10 - Output		On	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
BU - Input 1		On					
BU - Input 3		On					

PLC/OCS (DP)				Local 1	Local 2	Local 3	Remote
On (connected)			On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (connected)		Off	Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Truth Table 2 3/10 - Output		On					
Cyclic Receive - Bit 0.2		On					
Cyclic Receive - Bit 0.0		On					

PC (DPV1)				Local 1	Local 2	Local 3	Remote
On (connected)			On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (connected)		Off	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected		On					
Not connected		On					
Not connected		On					
Not connected		On					

Operator Panel (OP)				Local 1	Local 2	Local 3	Remote
Not connected		<>Acc>	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (connected)		Off	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected		On					
Not connected		On					
Not connected		On					

Released Control Command: On, Off, On, On

Preferred for direct Control of Control Functions: On, On

**Truth Table 1 3/10**

Truth Table - Input 1	Not connected
Truth Table - Input 2	BU - Input 1
Truth Table - Input 3	BU - Input 3

**Truth Table 3/10**

I1	I2	I3	O
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

**Truth Table 2 3/10**

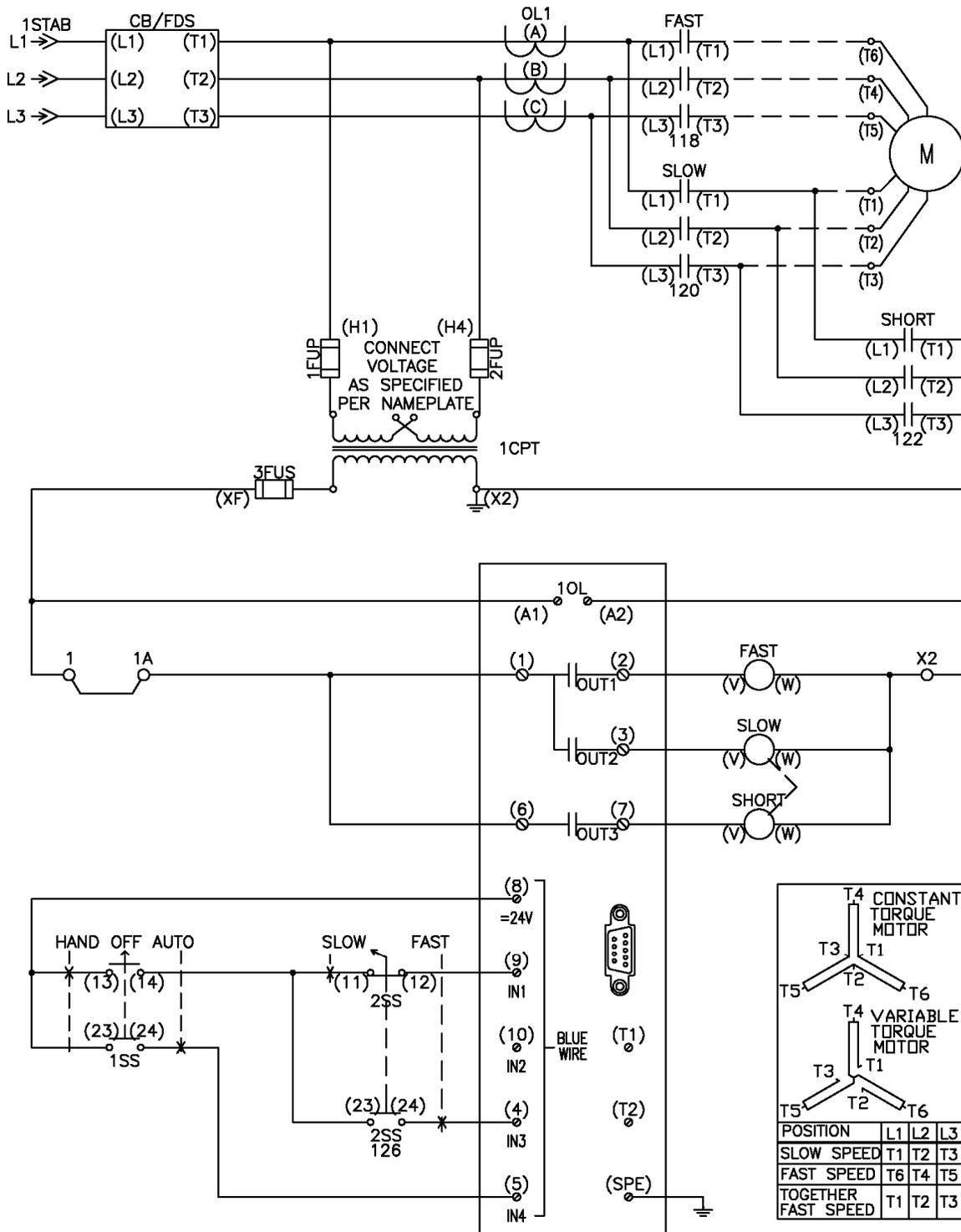
Truth Table 3/10

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB41

2S1W – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB41

### 2S1W – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire

#### Operating Instructions

##### Control Selection

2. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
3. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
4. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
5. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the SLOW Contactor the Selector Switch is placed into the SLOW position. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Selector Switch is placed into the FAST position. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB41

2S1W – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - B# 0.5  
 BU - Input 4

Local Control (LC)  
 Not connected  
 Not connected  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 BU - Input 3

PLC/DCS (DP)  
 Not connected  
 Not connected  
 Cyclic Receive - B# 0.1  
 Cyclic Receive - B# 0.2  
 Cyclic Receive - B# 0.0

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
On (enabled)	0	0	1	1	1	1
Off (enabled)	0	1	0	0	0	0
On (enabled)	1	0	0	0	0	0
Off (enabled)	1	1	0	1	0	0
On (enabled)	0	0	0	0	0	1
Off (enabled)	0	1	0	1	0	1
On (enabled)	1	0	0	0	0	0
Off (enabled)	1	1	0	1	0	0

Released Control Command  
 On<<  
 On<  
 Off  
 On>  
 On>>

Preferred for direct Control of Control Functions  
 On<<  
 On<  
 Off  
 On>  
 On>>

**Truth Table 1 3/10**

Truth Table - Input 1: Not connected

Truth Table - Input 2: BU - Input 1

Truth Table - Input 3: BU - Input 3

**Truth Table 3/10**

I1	I2	I3	O
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB42

### 2S1W – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the SLOW Contactor the Slow Pushbutton is depressed while the Stop Pushbutton is in its normal closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Fast Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action the OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel, if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB42

2S1W – Selector Switch Operation Mode Selection –  
Local 2-Wire SS/PB – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

The screenshot displays the 'Control Station' configuration interface. It is organized into several sections on the left, each with a dropdown menu and a status indicator:

- Operation Mode Selector:** Includes 'Cyclic Receive - Bit 0.5' and 'BU - Input 4'.
- Local Control [LC]:** Includes 'Not connected', 'Not connected', 'BU - Input 2', 'BU - Input 1', and 'BU - Input 3'.
- PLC/DCS [DP]:** Includes 'Not connected', 'Not connected', 'Truth Table 2 3/10 - Output', 'Cyclic Receive - Bit 0.2', and 'Cyclic Receive - Bit 0.0'.
- PC [DPV1]:** Includes 'Not connected', 'Not connected', 'Not connected', 'Not connected', and 'Not connected'.
- Operator Panel [OP]:** Includes 'Not connected', 'Not connected', 'Not connected', 'Not connected', and 'Not connected'.

On the right, there is a 'Releases' table with columns for 'Local 1', 'Local 2', 'Local 3', and 'Remote'. The table contains 'On (enabled)' and 'Off (enabled)' rows for various inputs. Below this is a 'Released Control Command' section with four output indicators: 'On<<', 'On<', 'Off', and 'On>', and a 'Preferred for direct Control of Control Functions' section with two output indicators: 'On>' and 'On>>'.

At the bottom, there are two truth tables:

**Truth Table 2 3/10**

Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	Output
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	1
			0
			0
			1
			0
			0
			0
			0

**Truth Table 3/10**

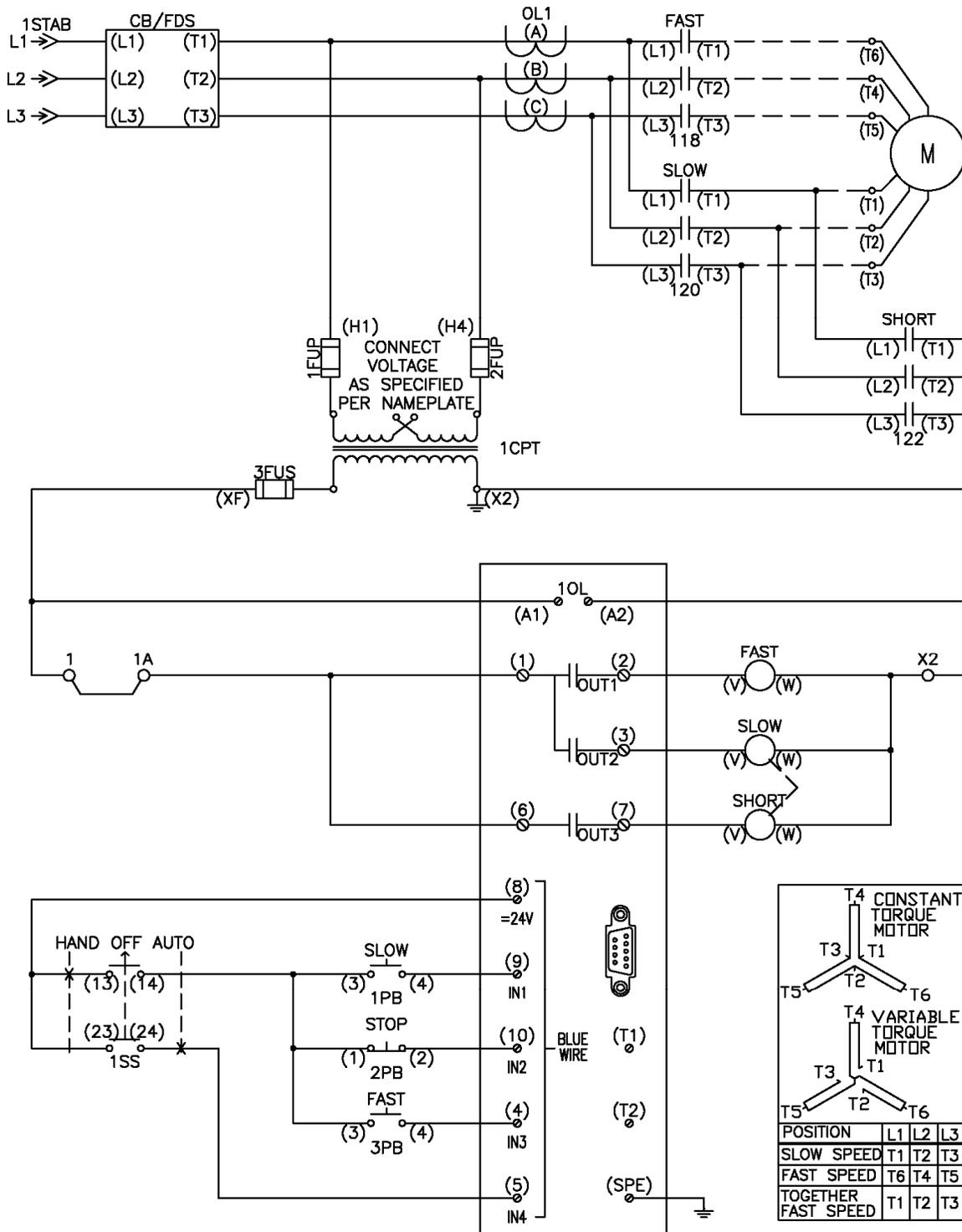
I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB43

2S1W – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB43

### 2S1W – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire

#### Operating Instructions

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

#### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the SLOW Contactor, the Slow Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Fast Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action the OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

#### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

#### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB43

2S1W – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

**Operation Mode Selector**

Cyclic Receive - Bit 0.5  S1 "0" "0" "1" "1"

Non-Volatile Element 1 - Output  S2 "0" "1" "0" "1"

**Local Control (LC)**

Not connected

Not connected

BU - Input 2  Off

BU - Input 1  On

BU - Input 3  On

**PLC/DCS (DP)**

Not connected

Not connected

Cyclic Receive - Bit 0.1  Off

Cyclic Receive - Bit 0.2  On

Cyclic Receive - Bit 0.0  On

**PC (DPV1)**

Not connected

Not connected

Not connected

Not connected

Not connected

**Operator Panel (OP)**

Not connected

Not connected

Not connected

Not connected

Not connected

	Local 1	Local 2	Local 3	Remote
<b>Releases</b>				
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command

On <

On <

Off

On >

On >

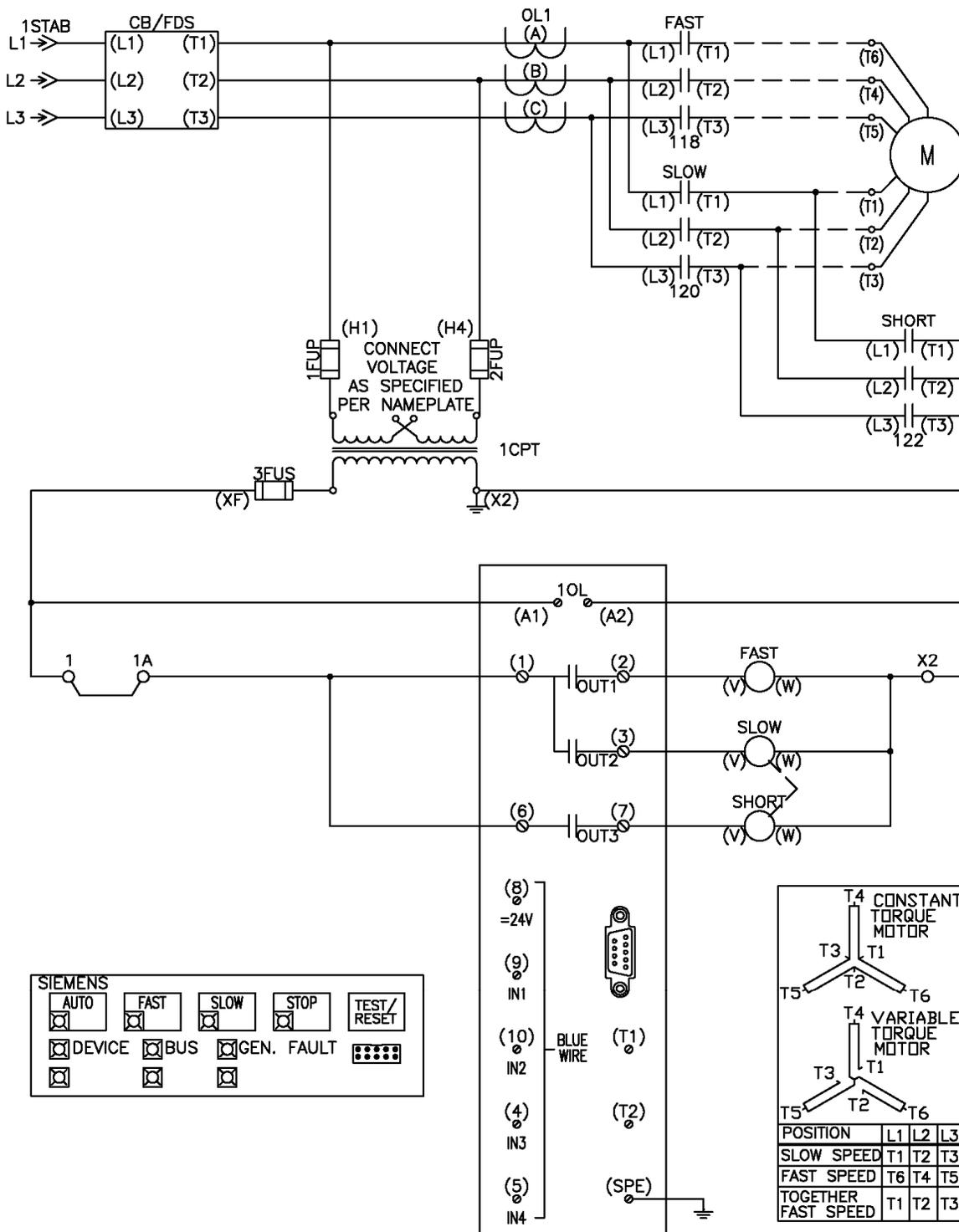
Preferred for direct Control of Control Functions

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB44

2S1W – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire

### Connection Diagram





# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB44

### 2S1W – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When remote operation mode is active, indication is provided via the LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (SLOW) is connected to the ON > Control Command, Operator Panel Button 2 (FAST) is connected to the ON >> Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the SLOW Contactor the OP Slow Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the OP Fast Pushbutton is depressed. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions is reset using the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB44

2S1W – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

**Operation Mode Selector**

- Cyclic Receive - Bit 0.5
- Non-Volatile Element 1 - Output

**Local Control (LC)**

- Not connected
- Not connected
- Not connected
- Not connected

**PLC/DCS (DP)**

- Not connected
- Not connected
- Truth Table 2 3/10 - Output
- Cyclic Receive - Bit 0.2
- Cyclic Receive - Bit 0.0

**PC (DPV1)**

- Not connected
- Not connected
- Not connected
- Not connected

**Operator Panel (OP)**

- Not connected
- Not connected
- OP - Button 4
- OP - Button 3
- OP - Button 2

**Releases**

	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Released Control Command**

- On<<
- On<
- Off
- On>
- On>>

**Preferred for direct Control of Control Functions**

- On<<
- On<
- On>
- On>>

**Truth Table 2 3/10**

Input 1	Input 2	Input 3	Output
Not connected			1
			0
			0
			1
			0
			0
			0
			0
			0

**Truth Table 3/10**

I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB44

2S1W – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire

### Parameter Detail

AUTO Toggle Operation

The screenshot displays a configuration window with three main sections:

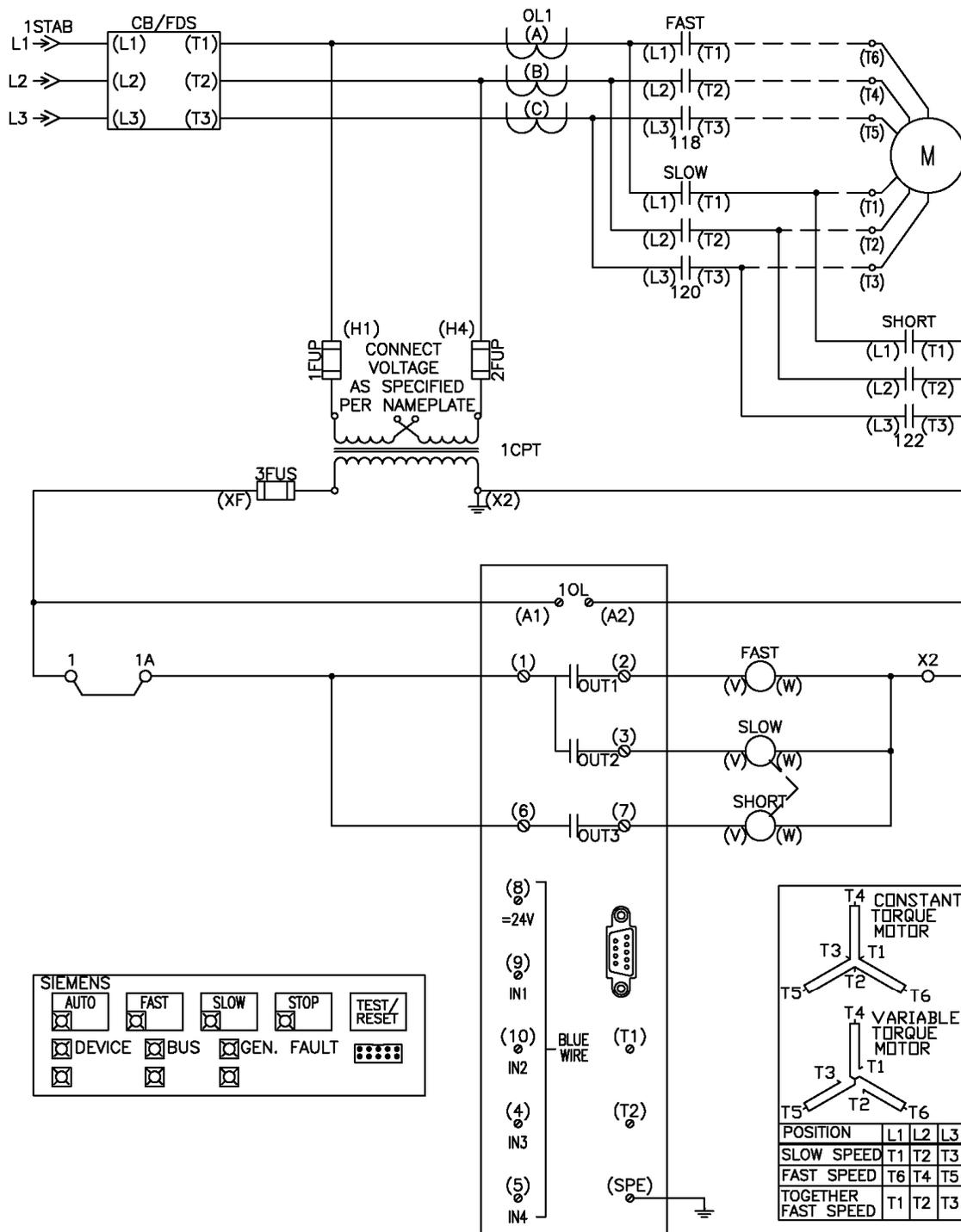
- Non-Volatile Element 1**
  - Non-Volatile Element - Type: edge rising with memory
  - Non-Volatile Element - Input: OP - Button 1
  - Non-Volatile Element - Reset: Non-Volatile Element 2 - Output
- Counter 1**
  - Counter - Limit: 2
  - Counter - Input +: OP - Button 1
  - Counter - Input -: Not connected
  - Counter - Reset: Non-Volatile Element 2 - Output
- Non-Volatile Element 2**
  - Non-Volatile Element - Type: non inverting
  - Non-Volatile Element - Input: Counter 1 - Output
  - Non-Volatile Element - Reset: Not connected

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB45

2S1W – Profibus Bit Operation Mode Selection – Local 3-Wire OP – Remote 3-Wire

### Connection Diagram

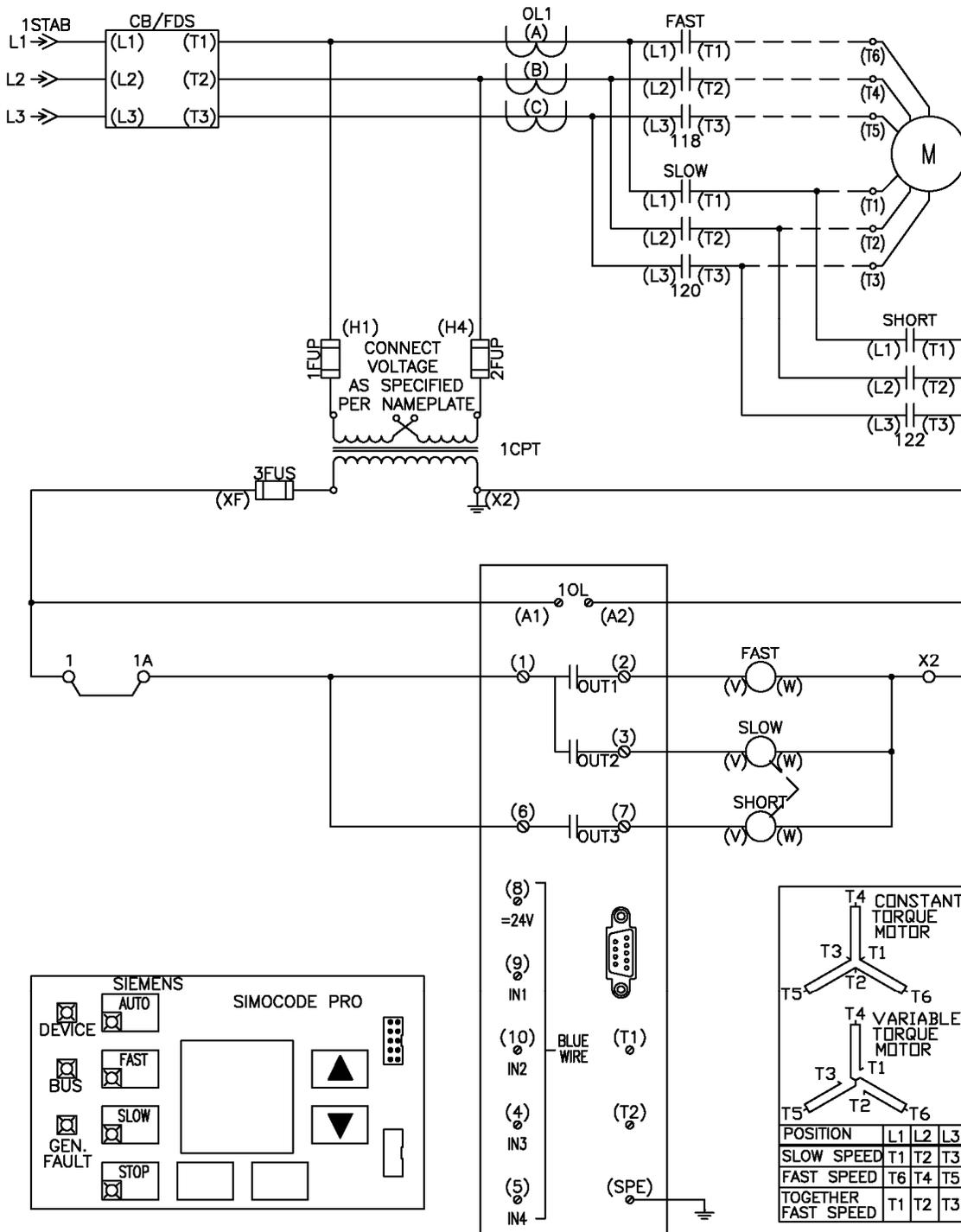


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB45

2S1W – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB45

### 2S1W – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (SLOW) is connected to the ON > Control Command, Operator Panel Button 2 (FAST) is connected to the ON >> Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the SLOW Contactor the OP Slow Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the OP Fast Pushbutton is depressed. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 and SIMOCODE Output 3 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1, 2 and 3 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1, 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB45

2S1W – Selector Switch Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector	Bit	Local 1	Local 2	Local 3	Remote
Cyclic Receive - Bit 0.5	S1	"0"	"0"	"1"	"1"
Non-Volatile Element 1 - Output	S2	"0"	"1"	"0"	"1"

**Local Control (LC)**

Control	Bit	Local 1	Local 2	Local 3	Remote
Not connected					
Not connected					
Not connected	Off				
Not connected	On				
Not connected	On>				

**PLC/DCS (DP)**

Control	Bit	Local 1	Local 2	Local 3	Remote
Not connected					
Not connected					
Cyclic Receive - Bit 0.1	Off				<input checked="" type="checkbox"/>
Cyclic Receive - Bit 0.2	On		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Cyclic Receive - Bit 0.0	On>				

**PC (DPV1)**

Control	Bit	Local 1	Local 2	Local 3	Remote
Not connected					
Not connected					
Not connected	Off				
Not connected	On				
Not connected	On>				

**Operator Panel (OP)**

Control	Bit	Local 1	Local 2	Local 3	Remote
Not connected					
Not connected					
OP - Button 4	Off	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
OP - Button 3	On	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
OP - Button 2	On>				

**Released Control Command**

- On<<
- On<
- Off
- On
- On>

**Preferred for direct Control of Control Functions**

- On<<
- On<
- Off
- On
- On>

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB45

2S1W – Selector Switch Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire

### Parameter Detail

AUTO Toggle Operation

The screenshot displays a configuration interface with three main sections:

- Non-Volatile Element 1**
  - Non-Volatile Element - Type: edge rising with memory
  - Non-Volatile Element - Input: OP - Button 1
  - Non-Volatile Element - Reset: Non-Volatile Element 2 - Output
- Counter 1**
  - Counter - Limit: 2
  - Counter - Input +: OP - Button 1
  - Counter - Input -: Not connected
  - Counter - Reset: Non-Volatile Element 2 - Output
- Non-Volatile Element 2**
  - Non-Volatile Element - Type: non inverting
  - Non-Volatile Element - Input: Counter 1 - Output
  - Non-Volatile Element - Reset: Not connected

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## 7. Two speed two winding

The two-speed two-winding starter uses the SLOW contactor to select low-speed and the FAST contactor to select high-speed for dual-speed, single-direction, full-voltage operation. The SLOW and FAST contactors are mechanically and intelligently interlocked to prevent short circuiting of the input lines.

The basic SLOW operation of this starter is as follows.

1. A local or remote SLOW start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Output 2 closes which energizes the coil of SLOW Contactor.
3. A local or remote stop signal is given to the SIMOCODE Pro.
4. The SIMOCODE Pro Output 2 opens which de-energizes the coil of SLOW Contactor.
5. If a fault occurs at any time the SIMOCODE Pro will end the starter operation.

The basic FAST operation of this starter is as follows.

1. A local or remote FAST start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Output 1 closes which energizes the coil of the FAST Contactor.
3. A local or remote stop signal is given to the SIMOCODE Pro.
4. The SIMOCODE Pro Output 1 opens which de-energizes the coil of the FAST.
5. If a fault occurs at any time the SIMOCODE Pro will end the starter operation.



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB46

OL / 2S2W – Fixed Operation Mode –  
Local Overload Operation – Remote Monitoring

### Operating Instructions

#### Local Control

1. All control external to device.
2. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open, which in turn de-energizes the SLOW & FAST Contactor Coils thus disengaging the SLOW & FAST Contactors ceasing current flow to the motor.

#### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

#### NOTE:

1. This setup is not recommended as its use eliminates local control of the starter via Simocode Pro as well as remote control over Profibus DP network communication.
2. Two Simocode Pro devices are required to utilize a 2S2W starter in this fashion.

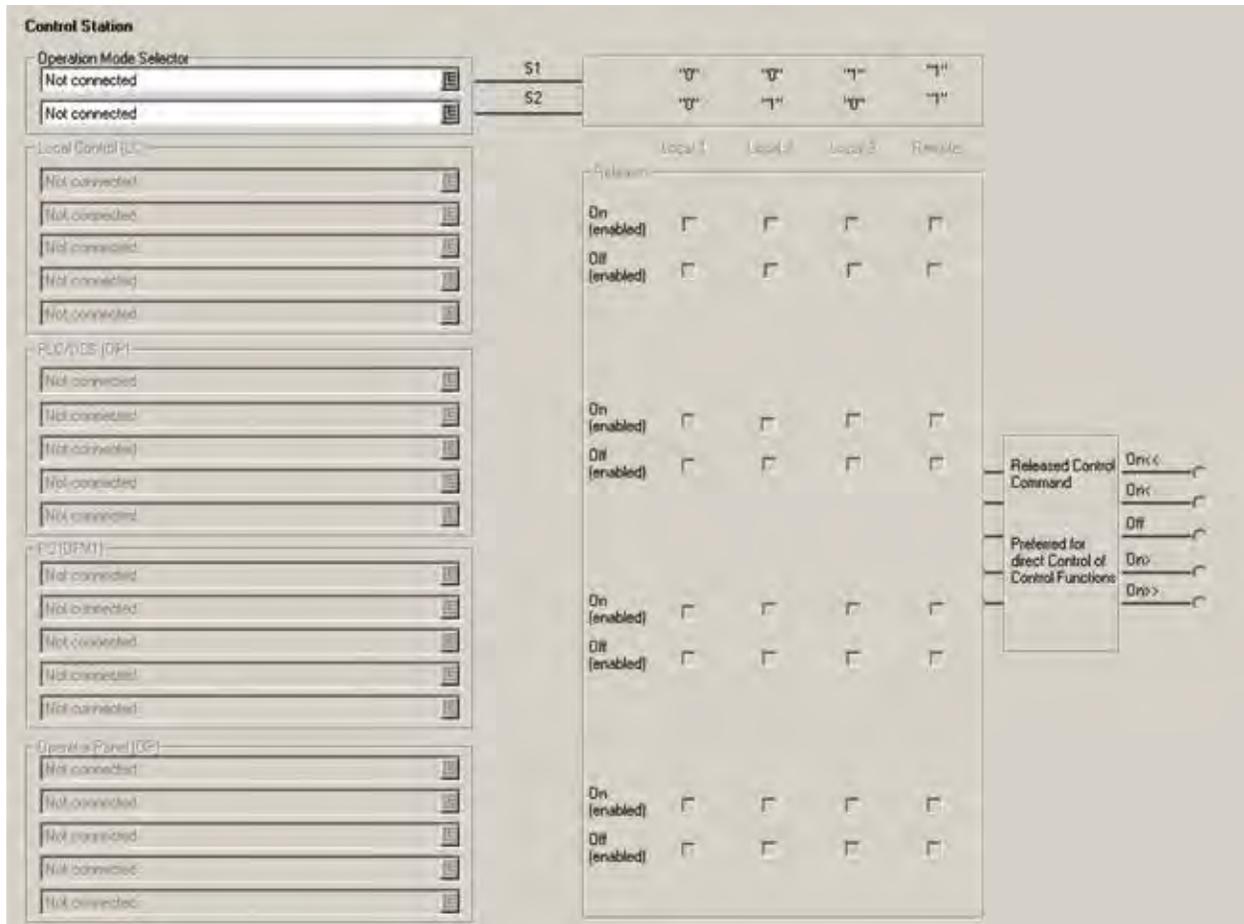
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB46

OL / 2S2W – Fixed Operation Mode –  
Local Overload Operation – Remote Monitoring

### Parameter Detail

Control Selection and Operation

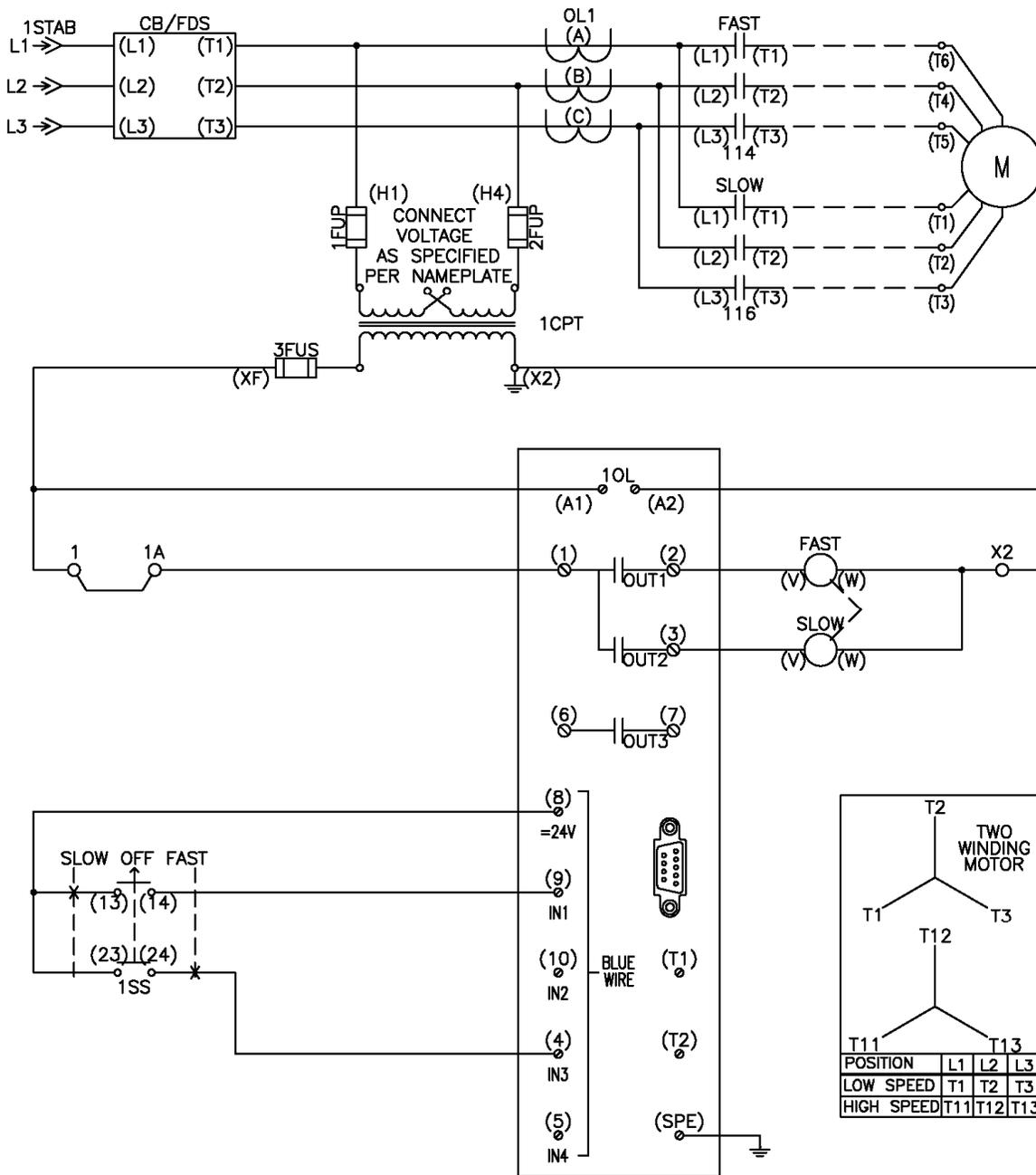


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB47

2S2W – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB47

### 2S2W – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the SLOW Contactor, place the Selector Switch in the SLOW position. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor, place the Selector Switch in the FAST position. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default changeover pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default changeover pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB47

### 2S2W – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire

#### Parameter Detail

#### Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC)  
 Not connected  
 Not connected  
 Truth Table 1 3I/1O - Output  
 BU - Input 1  
 BU - Input 3

PLC/DCS (DP)  
 Not connected  
 Not connected  
 Truth Table 2 3I/1O - Output  
 Cyclic Receive - Bit 0.2  
 Cyclic Receive - Bit 0.0

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Control Selection Matrix:

Control Station	Local 1	Local 2	Local 3	Remote
Released	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On<>  
 Off<>  
 On<>  
 Off<>  
 On<>  
 Off<>

Reserved for Direct Control of Control Functions  
 On<>  
 Off<>  
 On<>  
 Off<>

**Truth Table 1 3I/1O**

Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	I1	I2	I3	O
Not connected	BU - Input 1	BU - Input 3	0	0	0	0
			0	0	1	1
			0	1	0	1
			0	1	1	0
			1	0	0	0
			1	0	1	0
			1	1	0	0
			1	1	1	0

**Truth Table 2 3I/1O**

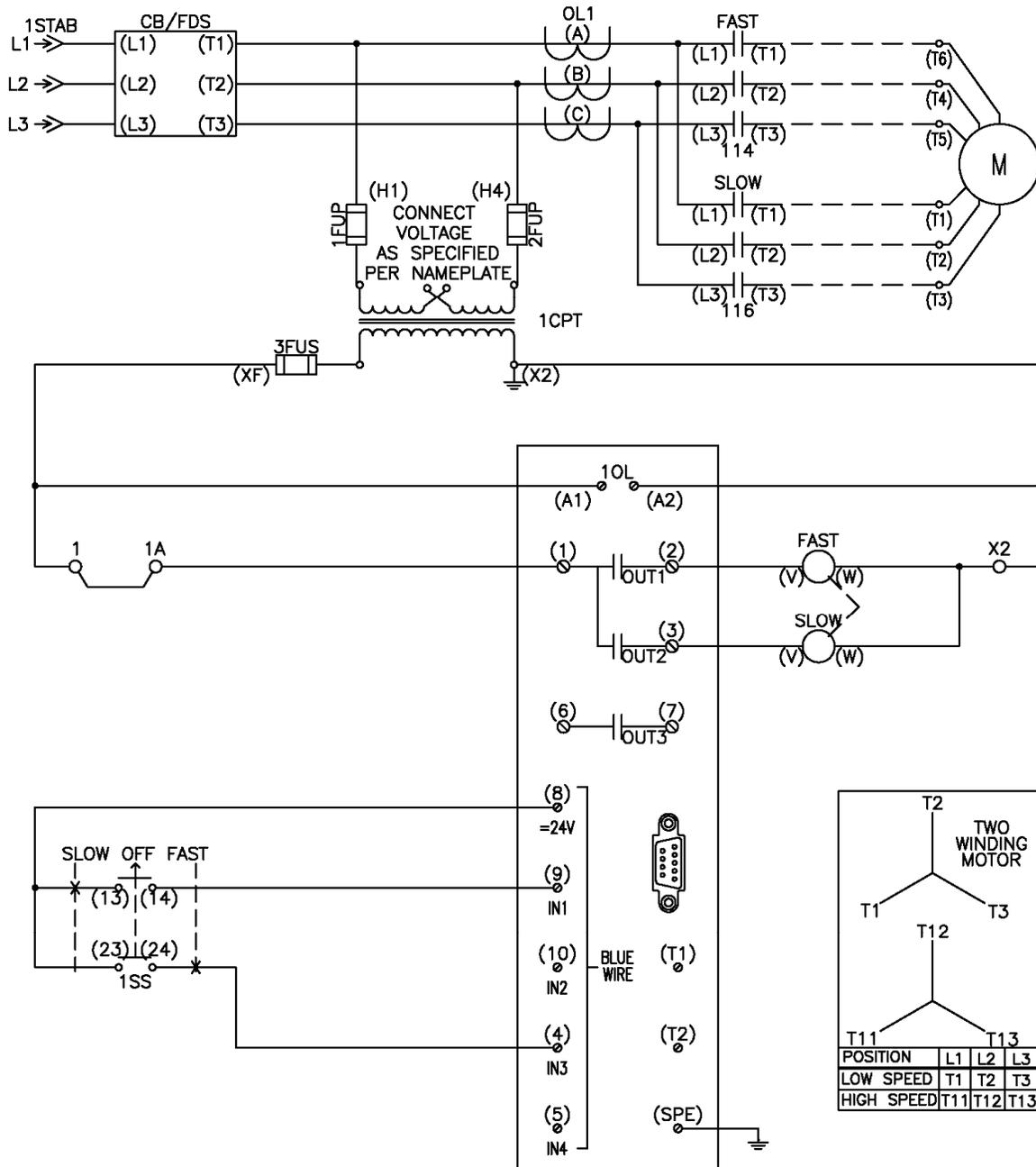
Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	I1	I2	I3	O
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	0	0	0	1
			0	0	1	0
			0	1	0	0
			0	1	1	1
			1	0	0	0
			1	0	1	0
			1	1	0	0
			1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB48

2S2W – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB48

### 2S2W – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the SLOW Contactor the Selector Switch is placed into the SLOW position. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Selector Switch is placed into the FAST position. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to close
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB48

2S2W – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire

### Parameter Detail

#### Control Selection and Operation

The screenshot displays the 'Control Station' configuration window. It is divided into several sections for parameter selection:

- Operation Mode Selector:** Includes 'Cyclic Receive - Bit 0.5' and 'Fixed Level - 1'.
- Local Control (LC):** Includes 'Not connected', 'Not connected', 'Truth Table 1 3/10 - Output', 'BU - Input 1', and 'BU - Input 3'.
- PLC/DCS (DP):** Includes 'Not connected', 'Not connected', 'Cyclic Receive - Bit 0.1', 'Cyclic Receive - Bit 0.2', and 'Cyclic Receive - Bit 0.0'.
- PC (DPV1):** Includes 'Not connected', 'Not connected', 'Not connected', and 'Not connected'.
- Operator Panel (OP):** Includes 'Not connected', 'Not connected', 'Not connected', and 'Not connected'.

Below these sections is a table for 'Released Control Command' and 'Preferred for direct Control of Control Functions'. The table has columns for 'Local 1', 'Local 2', 'Local 3', and 'Remote'. The 'Released Control Command' section has four rows: 'On (enabled)', 'Off (enabled)', 'On (enabled)', and 'Off (enabled)'. The 'Preferred for direct Control of Control Functions' section has four rows: 'On (enabled)', 'Off (enabled)', 'On (enabled)', and 'Off (enabled)'. The 'On (enabled)' rows have a checked box in the 'Local 2' column. The 'Off (enabled)' rows have a checked box in the 'Remote' column.

At the bottom, there are two truth tables:

**Truth Table 1 3/10**

Input 1	Input 2	Input 3	Output
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

**Truth Table 3/10**

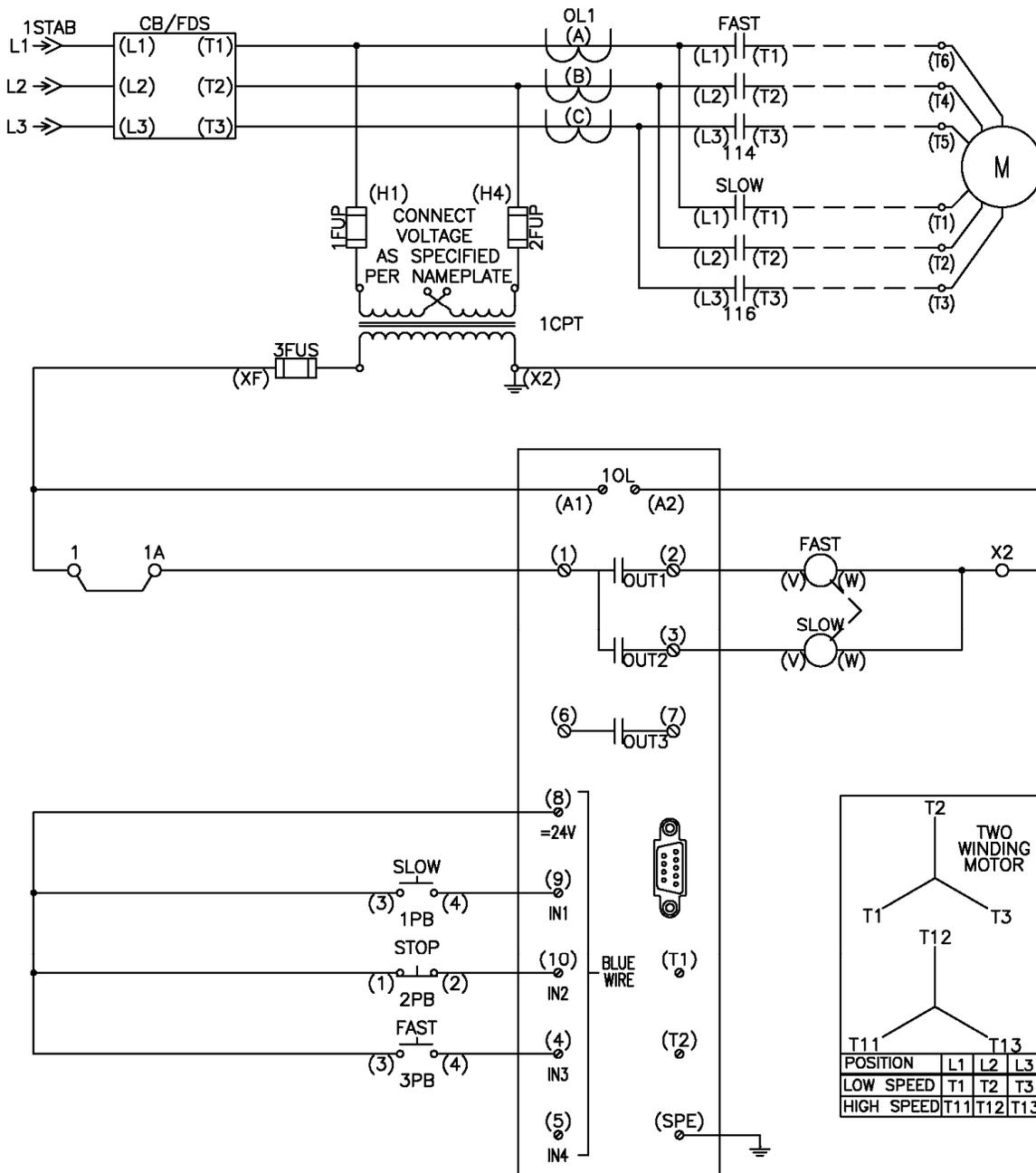
I1	I2	I3	Q
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB49

2S2W – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB49

### 2S2W – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the SLOW Contactor the Slow Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is triggered causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Fast Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW or FAST Contactor the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB49

2S2W – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire

### Parameter Detail

#### Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC):  
 Not connected  
 Not connected  
 BU - Input 2  
 BU - Input 1  
 BU - Input 3

PLC/DCS (DP):  
 Not connected  
 Not connected  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Cyclic Receive - Bit 0.0

PC (DPV1):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Local 1	Local 2	Local 3	Remote
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command:  
 On<<  
 On<  
 Off  
 On>  
 On>>

Preferred for direct Control of Control Functions:  
 On<<  
 On<  
 Off  
 On>  
 On>>

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: Cyclic Receive - Bit 0.0  
 Truth Table - Input 3: Cyclic Receive - Bit 0.2

**Truth Table 3/10**

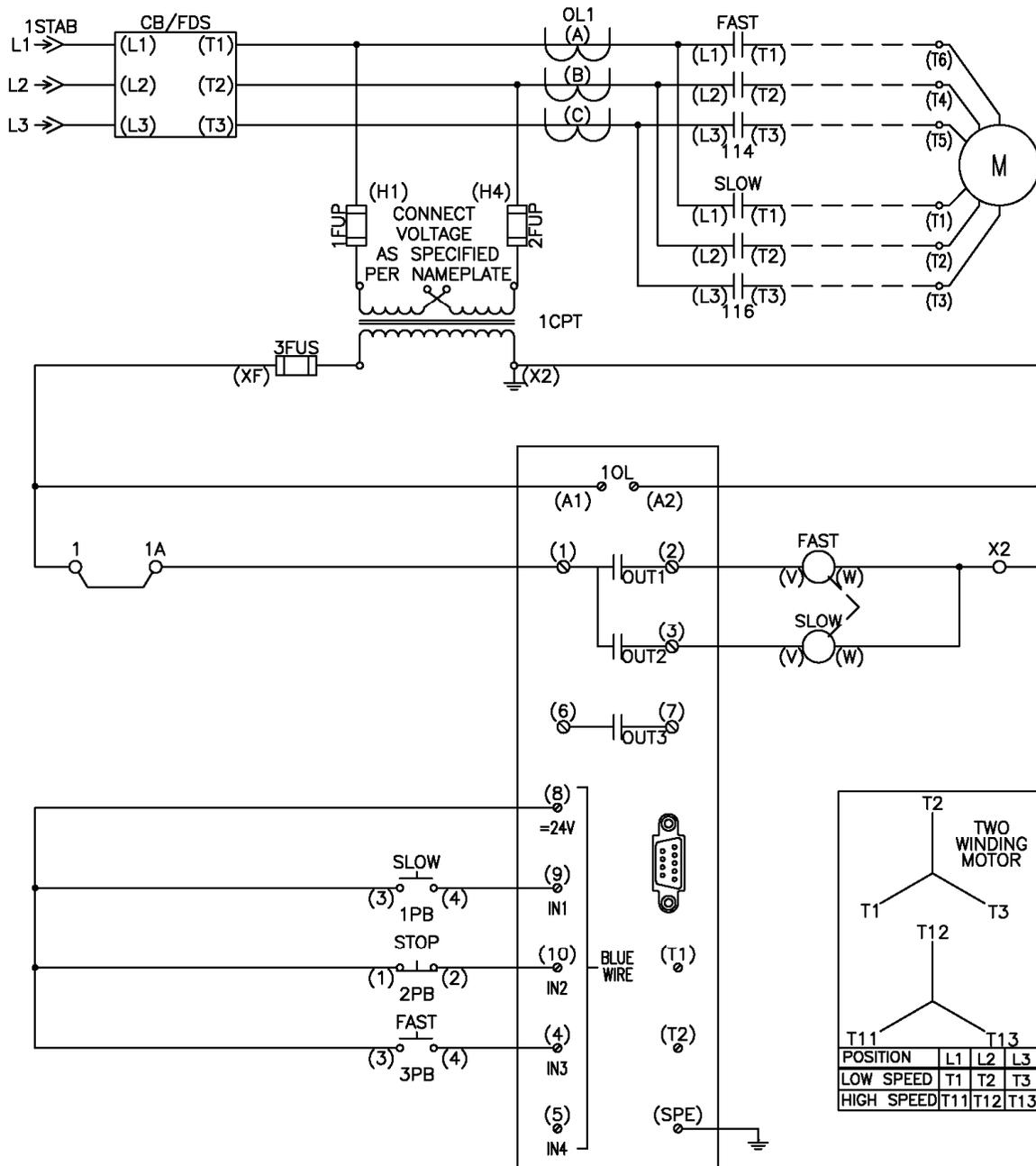
I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB50

2S2W – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB50

### 2S2W – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the SLOW Contactor the Slow Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Fast Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW or FAST Contactor the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB50

2S2W – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire

### Parameter Detail

#### Control Selection and Operation



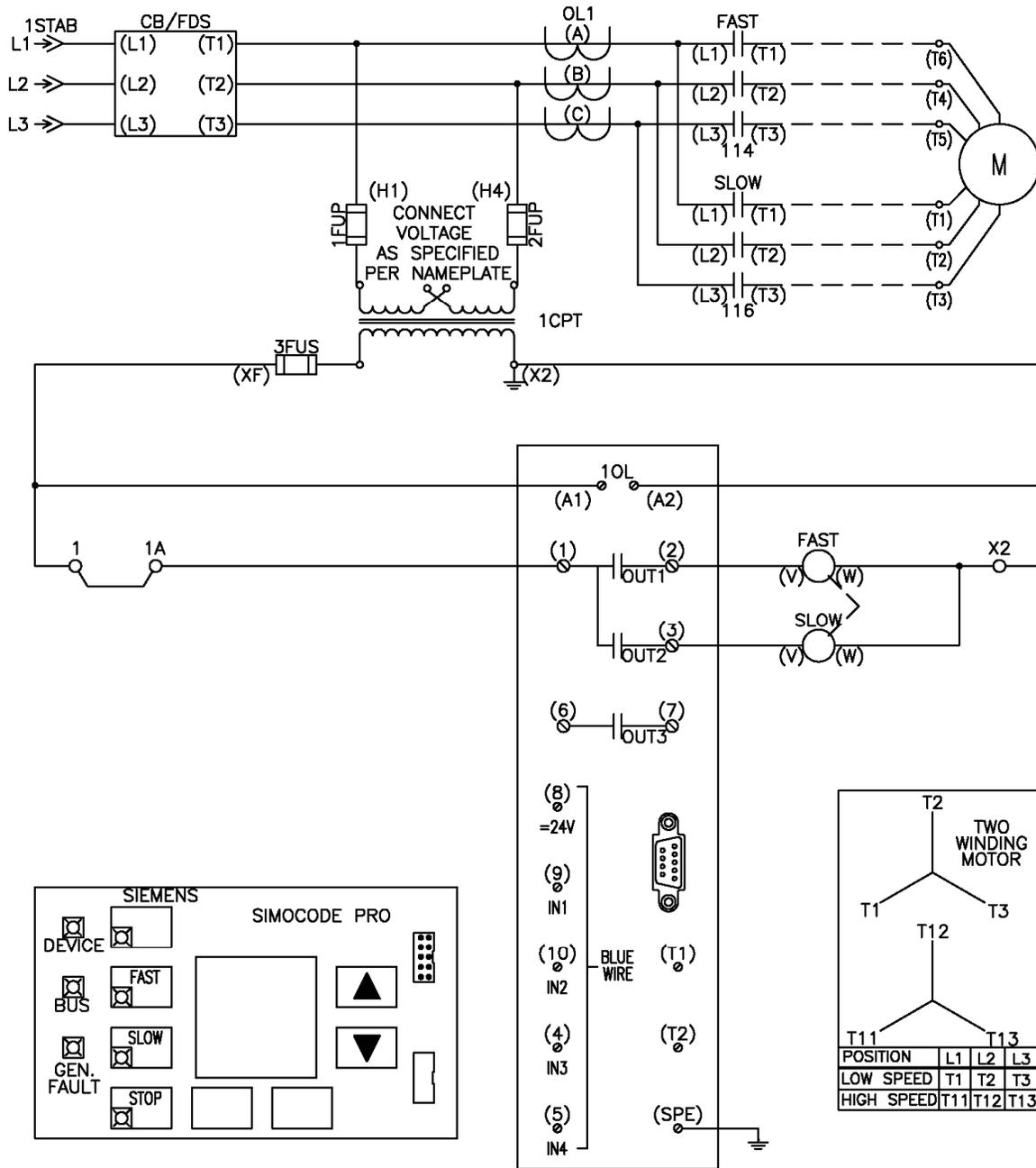


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB51

2S2W – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB51

### 2S2W – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (SLOW) is connected to the ON > Control Command, Operator Panel Button 2 (FAST) is connected to the ON >> Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the SLOW Contactor the OP Slow Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the OP Fast Pushbutton is depressed. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB51

2S2W – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

PLC/DCS (DP):  
 Not connected  
 Not connected  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Cyclic Receive - Bit 0.0

PC (DPV1):  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP):  
 Not connected  
 Not connected  
 OP - Button 4  
 OP - Button 3  
 OP - Button 2

**Released Control Command**  
 On<<  
 On<  
 On  
 On>  
 On>>

**Preferred for direct Control of Control Functions**  
 On<<  
 On<  
 On  
 On>  
 On>>

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: Cyclic Receive - Bit 0.0  
 Truth Table - Input 3: Cyclic Receive - Bit 0.2

**Truth Table 3/10**

I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

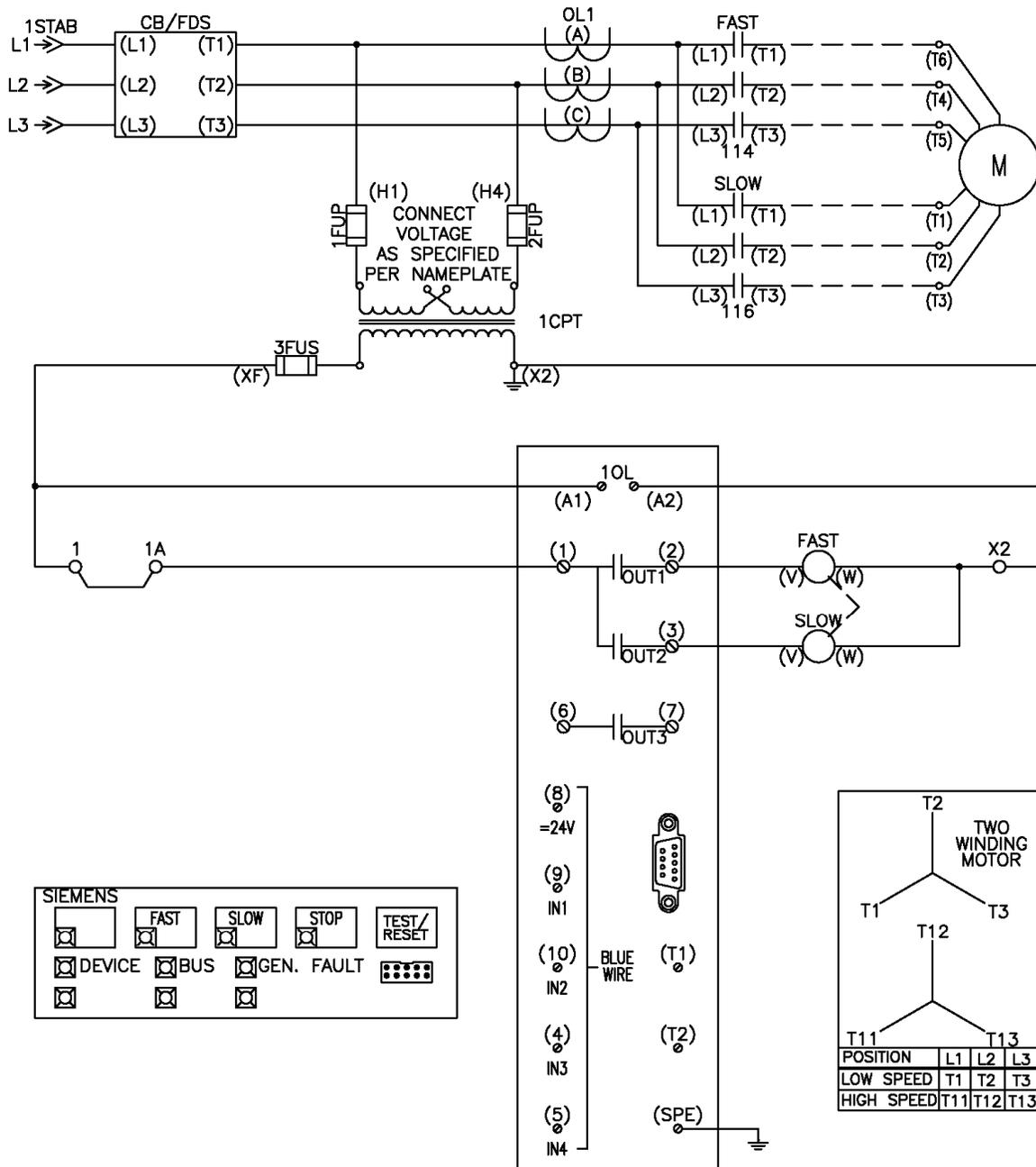


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB52

2S2W – Profibus Bit Operation Mode Selection – Local 3-Wire OPD – Remote 3-Wire

### Connection Diagram



Section 7

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB52

### 2S2W – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (SLOW) is connected to the ON > Control Command, Operator Panel Button 2 (FAST) is connected to the ON >> Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the SLOW Contactor the OP Slow Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the OP Fast Pushbutton is depressed. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

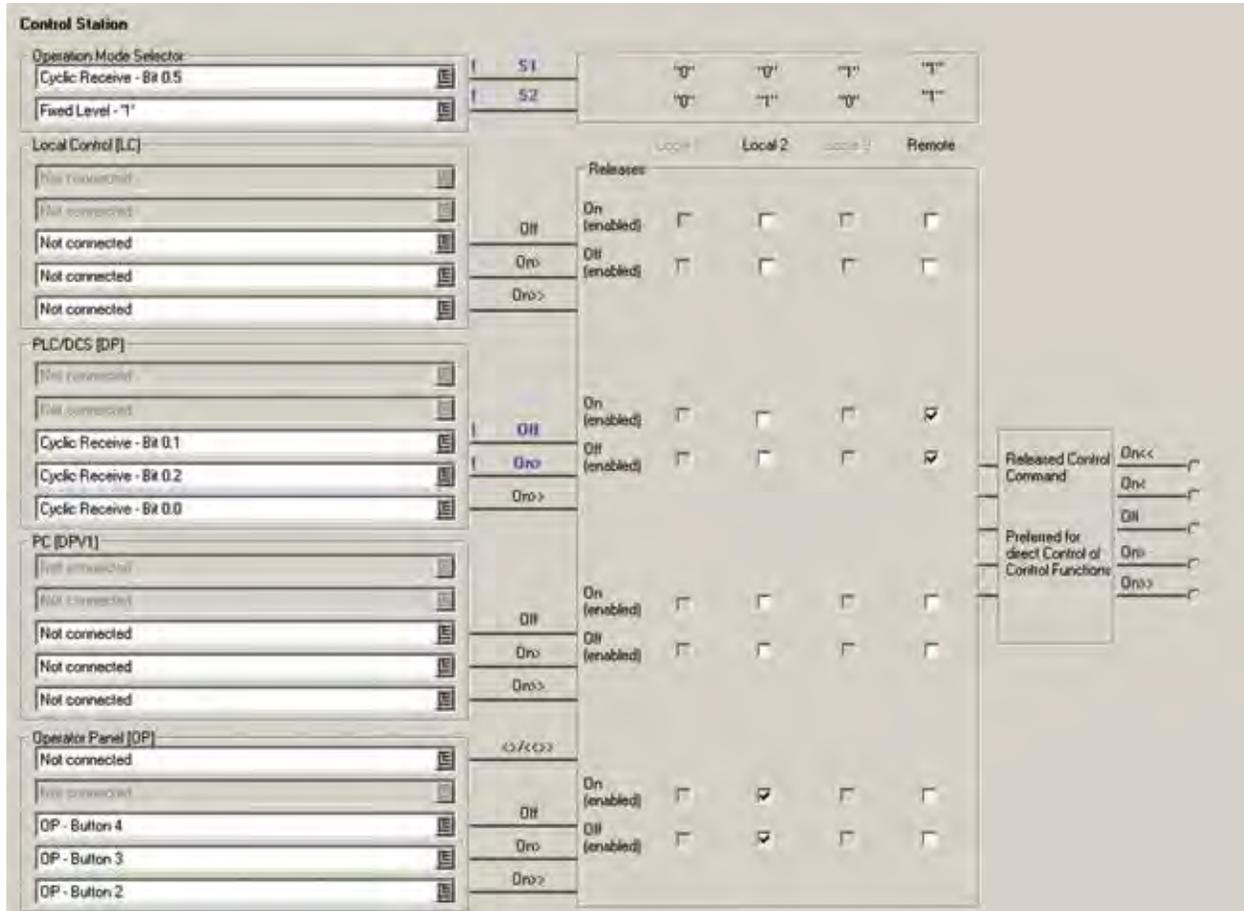
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB52

2S2W – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

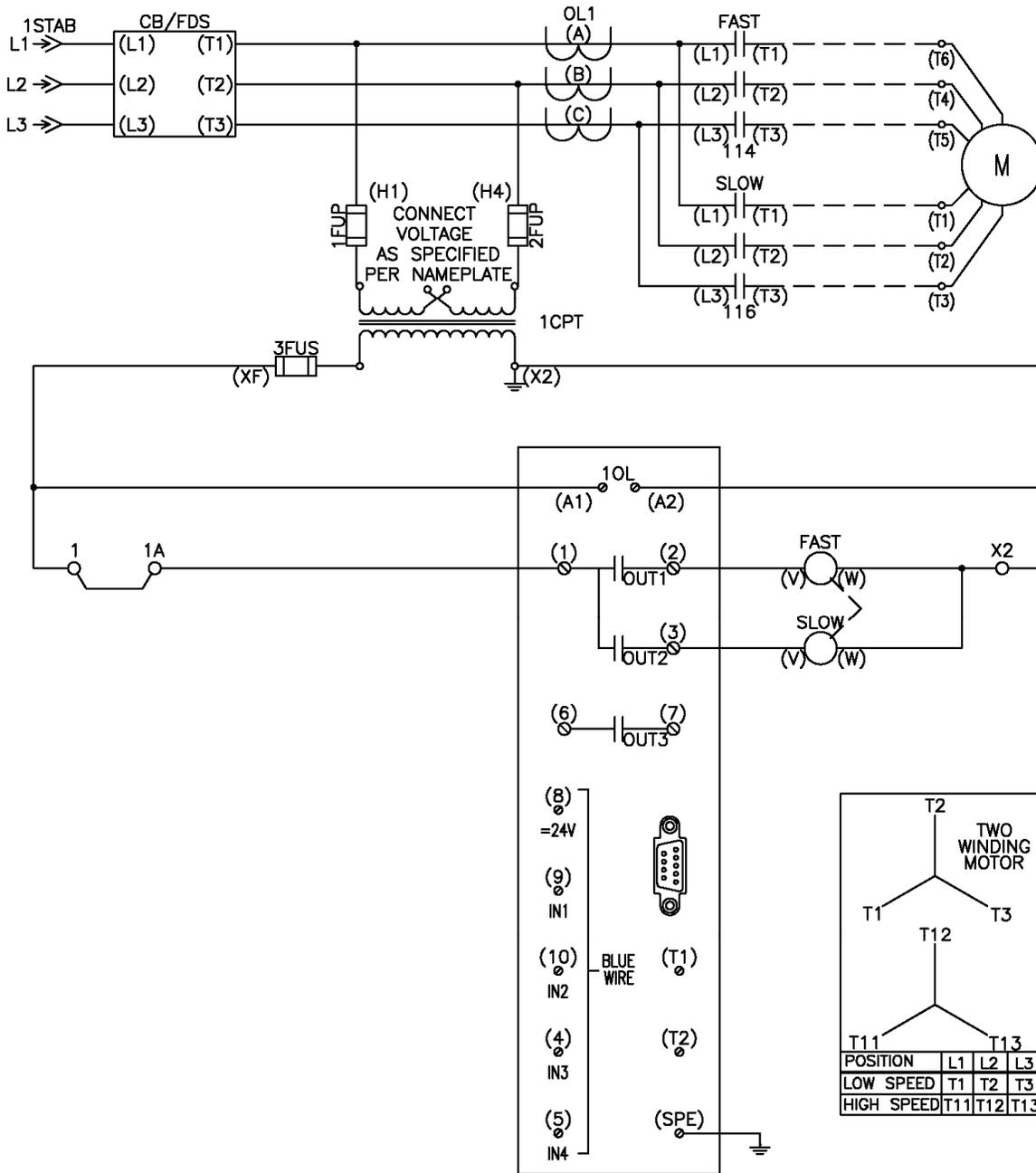


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB53

2S2W – Fixed Operation Mode –  
No Local – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB53

### 2S2W – Fixed Operation Mode – No Local – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Inputs 1 and 3.
2. To engage the SLOW Contactor SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor SIMOCODE Input 3 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the SIMOCODE Input1 and SIMOCODE Input 3 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remotel Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB53

2S2W – Fixed Operation Mode –  
No Local – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control [LC]  
 Not connected  
 Not connected  
 Truth Table 1 3I/1O - Output  
 BU - Input 1  
 BU - Input 3

PLC/DCS [DP]  
 Not connected  
 Not connected  
 Truth Table 2 3I/1O - Output  
 Cyclic Receive - Bit 0.2  
 Cyclic Receive - Bit 0.0

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Released Control Command  
 Preferred for direct Control of Control Functions

Released Control Command  
 On<>  
 On<  
 Off  
 On>  
 On>>

Local 1 Local 2 Local 3 Remote

On (enabled)  
 Off (enabled)  
 On (enabled)  
 Off (enabled)  
 On (enabled)  
 Off (enabled)  
 On (enabled)  
 Off (enabled)

**Truth Table 1 3I/1O**

Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	Q
Not connected	BU - Input 1	BU - Input 3	0
			1
			1
			0
			0
			0
			0
			0

**Truth Table 2 3I/1O**

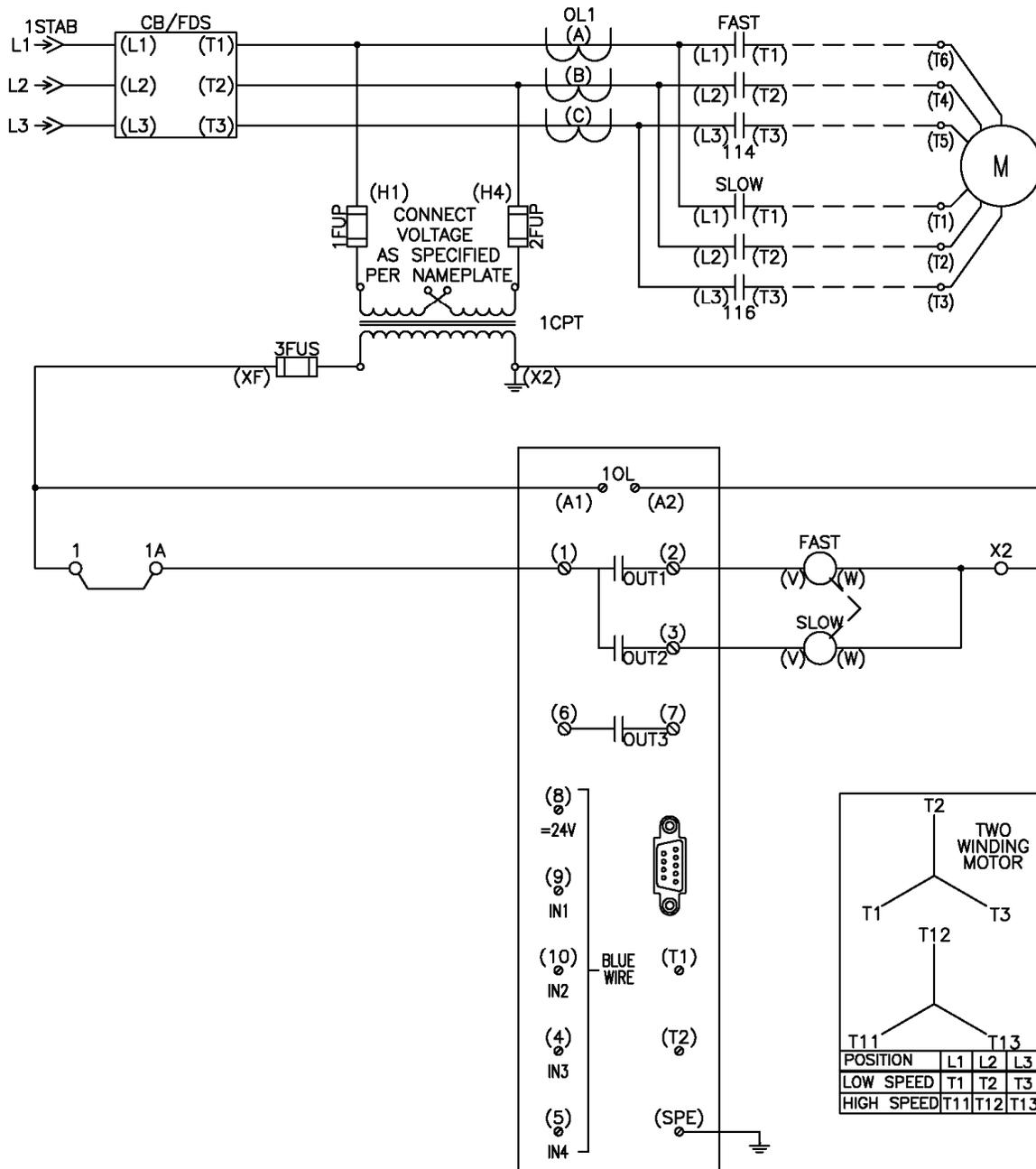
Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	Q
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	1
			0
			0
			1
			0
			0
			0
			0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB54

2S2W – Profibus Bit Operation Mode Selection –  
No Load – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB54

### 2S2W – Profibus Bit Operation Mode Selection – No Load – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Inputs 1 and 3.
2. To engage the SLOW Contactor, SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor SIMOCODE Input 3 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor SIMOCODE Inputs 1 and 3 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB54

2S2W – Profibus Bit Operation Mode Selection – No Load – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:** Includes 'Operation Mode Selector' with 'Cyclic Receive - Bx 0.5' and 'Fixed Level - 1'. It also shows 'Local Control (LC)' with 'Not connected' and 'Not connected'.
- PLC/DCS (DP):** Includes 'Not connected', 'Not connected', 'Cyclic Receive - Bx 0.1', 'Cyclic Receive - Bx 0.2', and 'Cyclic Receive - Bx 0.0'.
- PC (DPV1):** Includes 'Not connected', 'Not connected', 'Not connected', and 'Not connected'.
- Operator Panel (OP):** Includes 'Not connected', 'Not connected', 'Not connected', and 'Not connected'.
- Released Control Command:** A section with five terminals labeled 'On<<', 'On<', 'Off', 'On>', and 'On>>'.
- Preferred for direct Control of Control Functions:** A section with five terminals labeled 'On<<', 'On<', 'Off', 'On>', and 'On>>'.
- Released Control Command Matrix:** A table with columns 'Local 1', 'Local 2', 'Local 3', and 'Remote'. It shows 'On (enabled)' and 'Off (enabled)' states for various control functions.
- Truth Table 1 3/10:** A truth table with inputs I1, I2, I3, and output Q. The table shows the relationship between the three inputs and the output state.

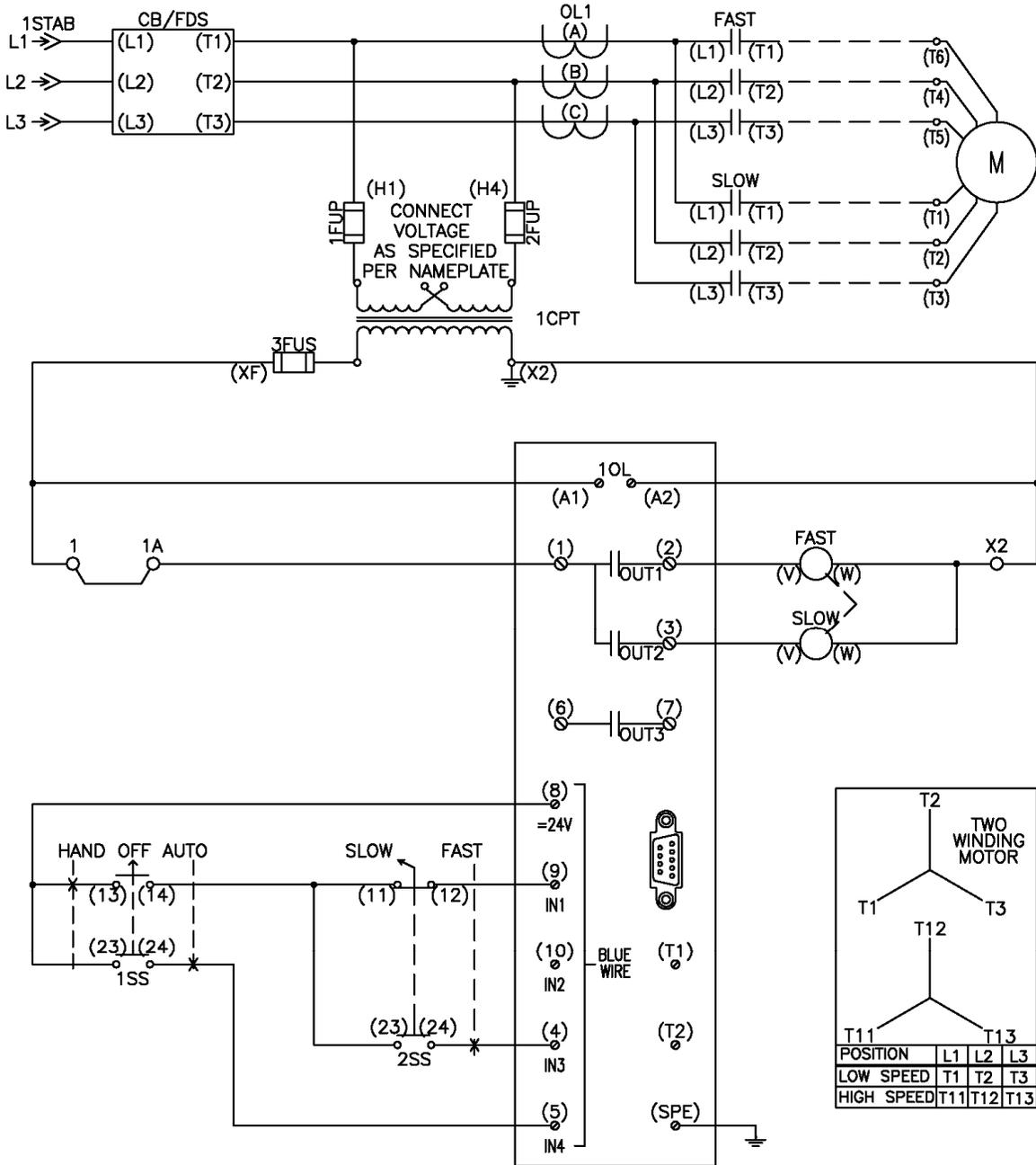
I1	I2	I3	Q
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB55

2S2W – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB55

### 2S2W – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Inputs 1 3.
2. To engage the SLOW Contactor the Selector Switch is placed into the SLOW position. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Selector Switch is placed into the FAST position. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactors the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset using the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB55

2S2W – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 BU - Input 4

Local Control (LC)  
 Not connected  
 Not connected  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 BU - Input 3

PLC/DCS (DP)  
 Not connected  
 Not connected  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Cyclic Receive - Bit 0.0

PC (DPV)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	Local 1	Local 2	Local 3	Remote
Released				
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On <<  
 On <  
 Off  
 On >  
 On >>

Preferred for direct Control of Control Functions

**Truth Table 1 3/10**

Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	I1	I2	I3	O
Not connected	BU - Input 1	BU - Input 3	0	0	0	0
			0	0	1	1
			0	1	0	1
			0	1	1	0
			1	0	0	0
			1	0	1	0
			1	1	0	0
			1	1	1	0

**Truth Table 2 3/10**

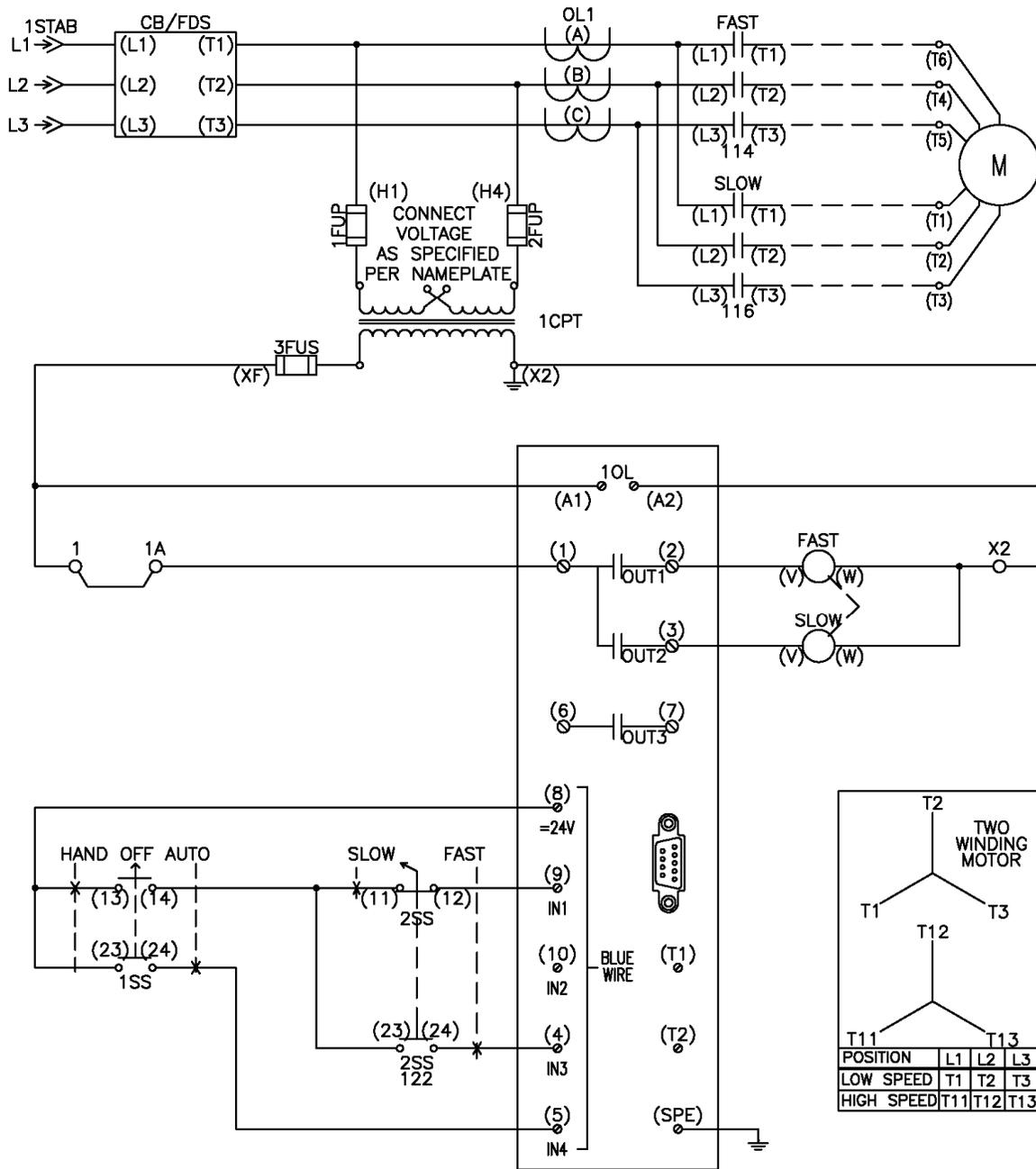
Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	I1	I2	I3	O
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	0	0	0	1
			0	0	1	0
			0	1	0	0
			0	1	1	1
			1	0	0	0
			1	0	1	0
			1	1	0	0
			1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB56

2S2W – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB56

### 2S2W – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Inputs 1 and 3.
2. To engage the SLOW Contactor the Selector Switch is placed into the SLOW position. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Selector Switch is placed into the FAST position. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST & SHORT Contactors the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions are reset using the TEST/RESET button on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB56

2S2W – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector

Cyclic Receive - Bit 0.5  
BU - Input 4

Local Control [LC]

Not connected  
Not connected  
Truth Table 1 3/10 - Output  
BU - Input 1  
BU - Input 3

PLC/DCS [DP]

Not connected  
Not connected  
Cyclic Receive - Bit 0.1  
Cyclic Receive - Bit 0.2  
Cyclic Receive - Bit 0.0

PC [DPV1]

Not connected  
Not connected  
Not connected  
Not connected  
Not connected

Operator Panel [OP]

Not connected  
Not connected  
Not connected  
Not connected

	S1	S2	'0'	'0'	'1'	'1'
			'0'	'1'	'0'	'1'

	Local 1	Local 2	Local 3	Remote
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
Preferred for direct Control of Control Functions

Released Control Command  
On<<  
On  
Off  
On>>  
On>>

**Truth Table 1 3/10**

Truth Table - Input 1: Not connected

Truth Table - Input 2: BU - Input 1

Truth Table - Input 3: BU - Input 3

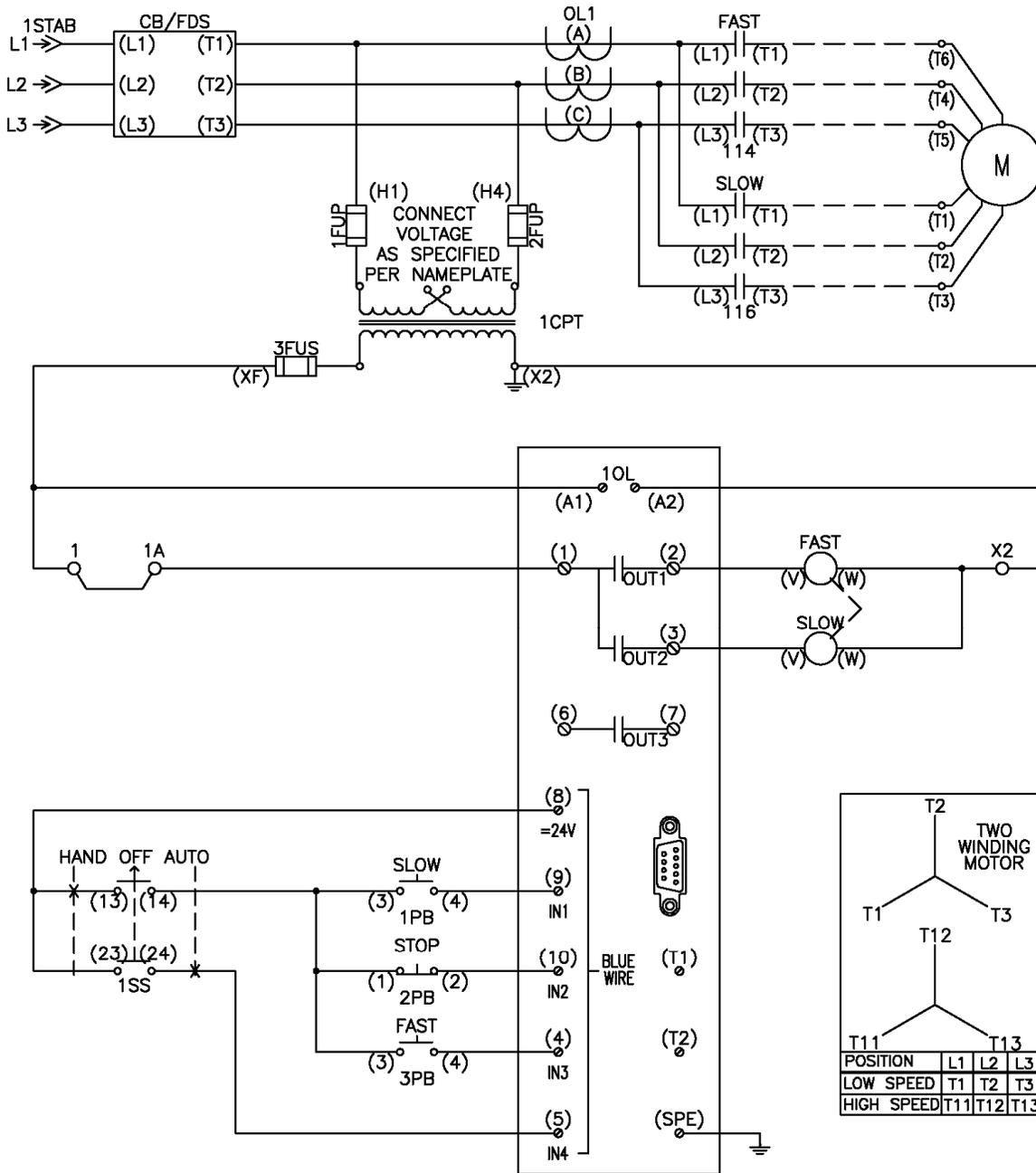
I1	I2	I3	O
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB57

2S2W – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB57

### 2S2W – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the SLOW Contactor the Slow Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Fast Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action the OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB57

2S2W – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 BU - Input 4

Local Control (LC)  
 Not connected  
 Not connected  
 BU - Input 2  
 BU - Input 1  
 BU - Input 3

PLC/DCS (DP)  
 Not connected  
 Not connected  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Cyclic Receive - Bit 0.0

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
Released	On (enabled)	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	Off	On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	On	Off	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	Off	On	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	On	Off	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	Off	On	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	On	Off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	Off	On	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	On	Off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 Preferred for direct Control of Control Functions

Released Control Command  
 On<<  
 On<  
 Off  
 On>  
 On>>

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected

Truth Table - Input 2: Cyclic Receive - Bit 0.0

Truth Table - Input 3: Cyclic Receive - Bit 0.2

**Truth Table 3/10**

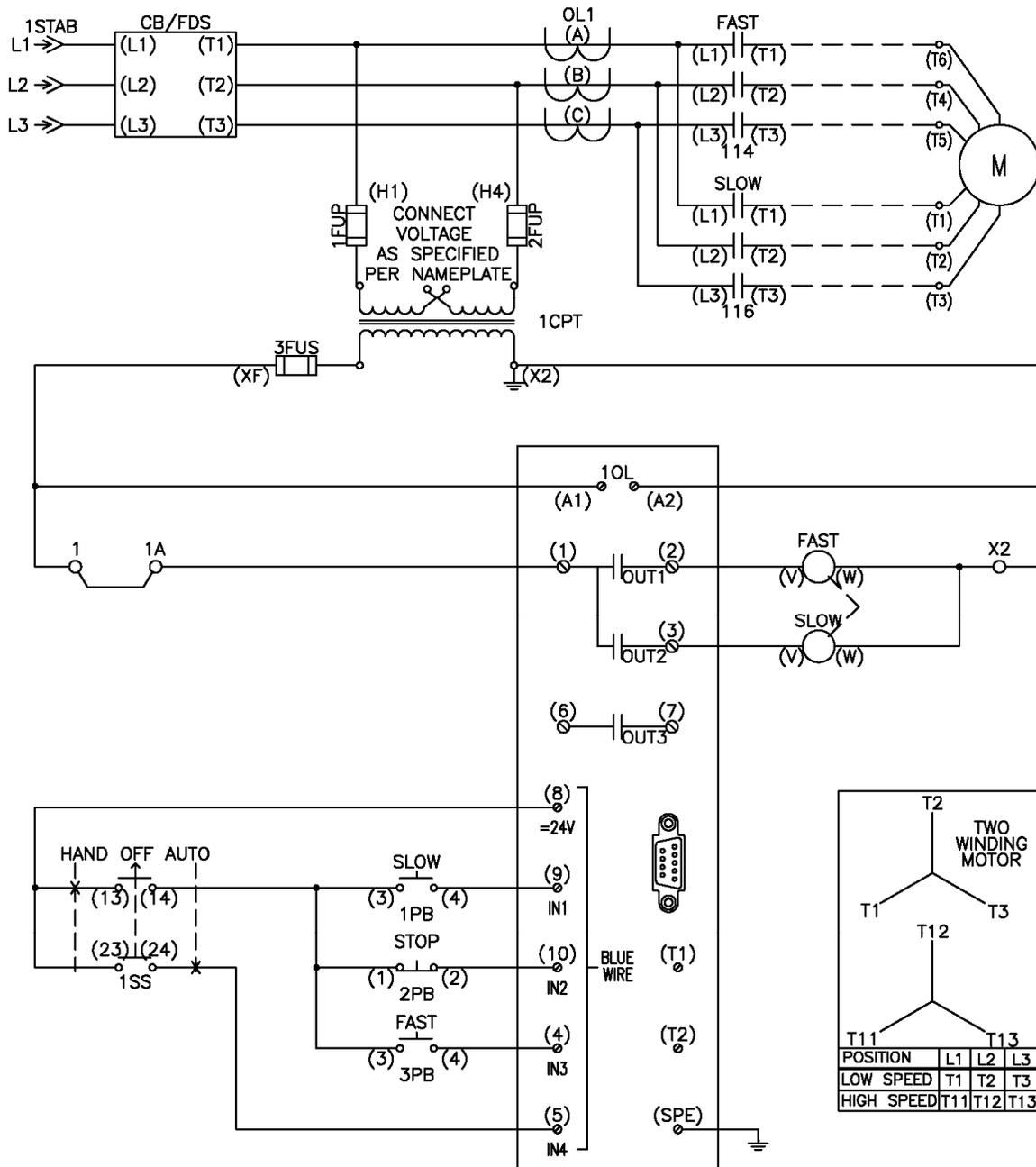
I1	I2	I3	Q
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB58

2S2W – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB58

### 2S2W – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON >> Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the SLOW Contactor the Slow Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Fast Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action the OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB58

2S2W – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector	Local 1	Local 2	Local 3	Remote
Cyclic Receive - Bit 0.5				
BU - Input 4				
<b>Local Control (LC)</b>				
Not connected				
Not connected				
BU - Input 2				
BU - Input 1				
BU - Input 3				
<b>PLC/DCS (DP)</b>				
Not connected				
Not connected				
Cyclic Receive - Bit 0.1				
Cyclic Receive - Bit 0.2				
Cyclic Receive - Bit 0.0				
<b>PC (DPV1)</b>				
Not connected				
<b>Operator Panel (OP)</b>				
Not connected				

Release	Local 1	Local 2	Local 3	Remote
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

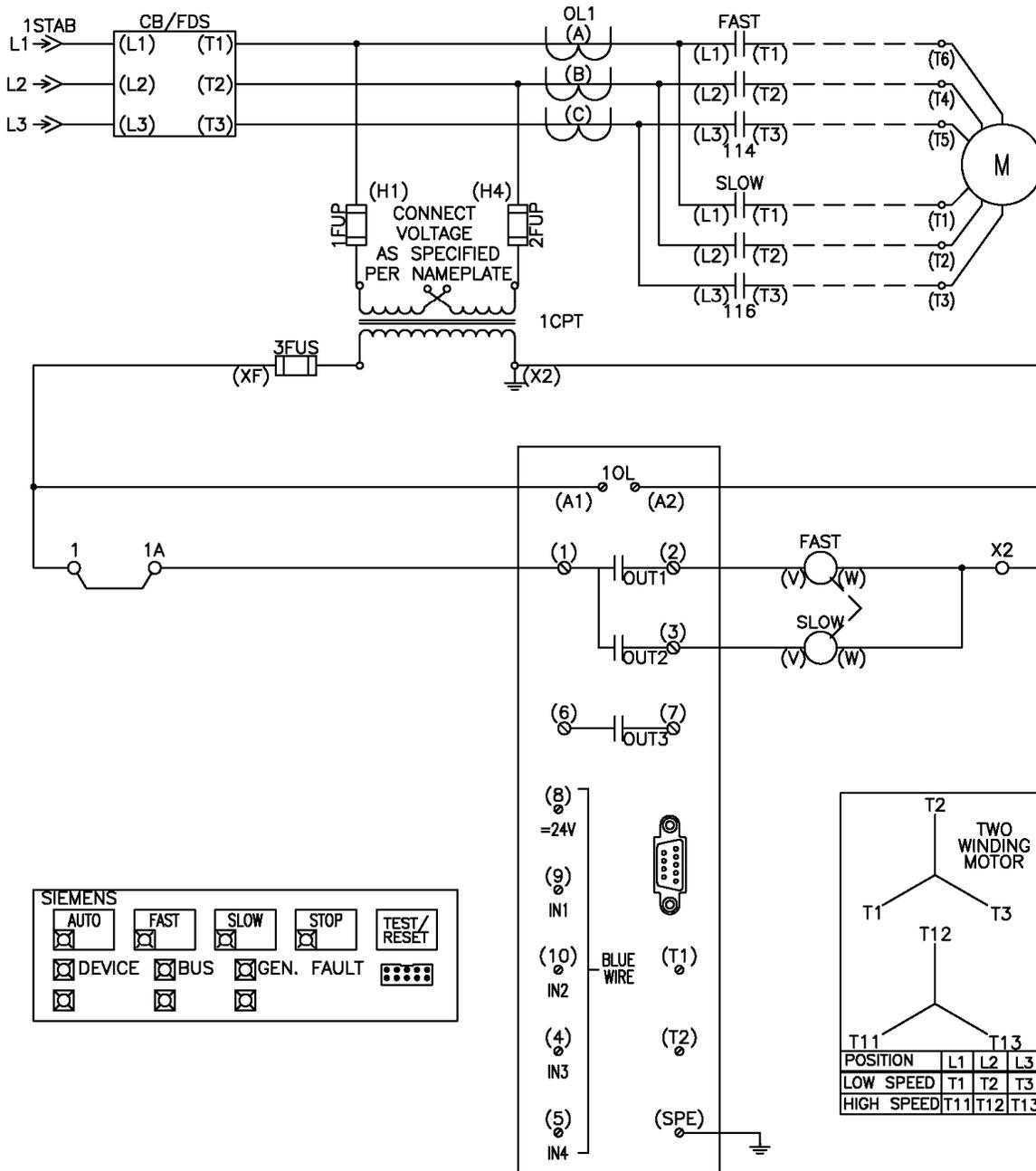
Released Control Command	On	Off
Released Control Command	<input type="checkbox"/>	<input type="checkbox"/>
Preferred for direct Control of Control Functions	<input type="checkbox"/>	<input type="checkbox"/>

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB59

2S2W – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire

### Connection Diagram

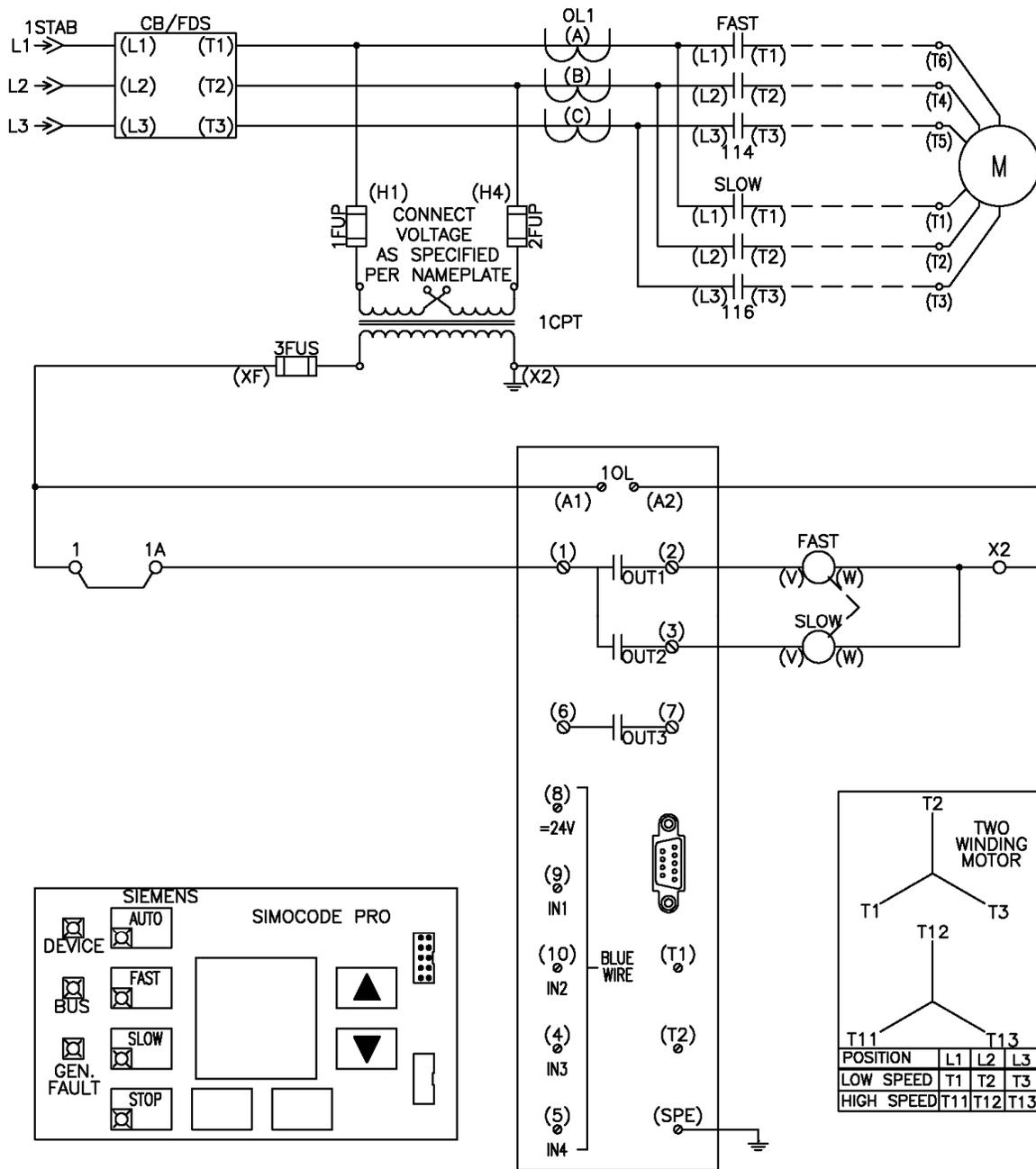


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB59

2S2W – Operator Panel Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire

### Connection Diagram



Section 7

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB59

### 2S2W – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (SLOW) is connected to the ON > Control Command, Operator Panel Button 2 (FAST) is connected to the ON >> Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the SLOW Contactor the OP Slow Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the OP Fast Pushbutton is depressed. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default changeover Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB59

2S2W – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Non-Volatile Element 1 - Output

Local Control (LC)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

PLC/DCS (DP)  
 Not connected  
 Not connected  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Cyclic Receive - Bit 0.0

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 OP - Button 4  
 OP - Button 3  
 OP - Button 2

	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 Preferred for direct Control of Control Functions

Released Control Command  
 On<<  
 On<  
 Off  
 On>  
 On>>

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected

Truth Table - Input 2: Cyclic Receive - Bit 0.0

Truth Table - Input 3: Cyclic Receive - Bit 0.2

**Truth Table 3/10**

I1	I2	I3	Q
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB59

2S2W – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire

### Parameter Detail

AUTO Toggle Operation

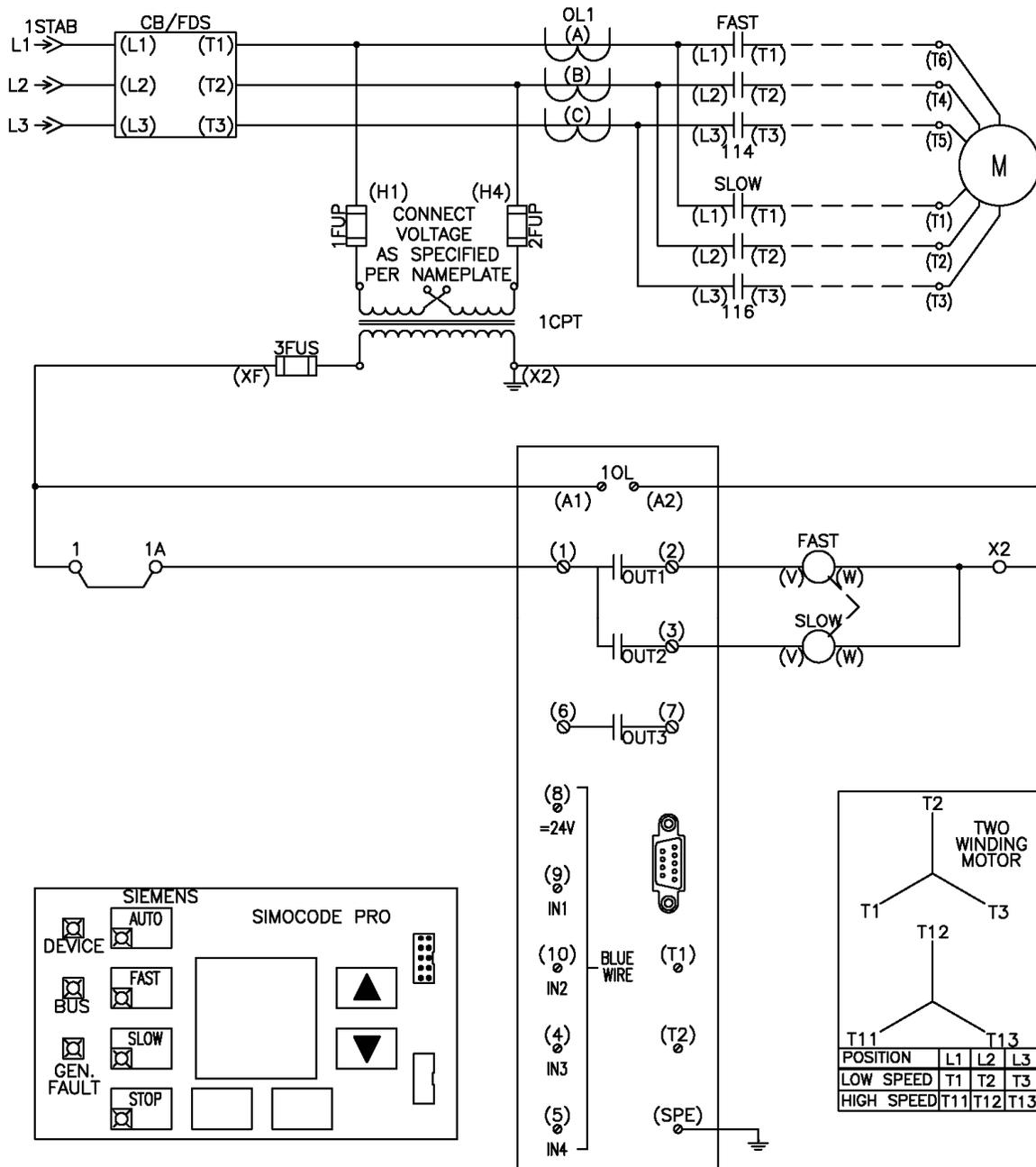
<b>Non-Volatile Element 1</b>	
Non-Volatile Element - Type	edge rising with memory
Non-Volatile Element - Input	OP - Button 1
Non-Volatile Element - Reset	Non-Volatile Element 2 - Output
<b>Counter 1</b>	
Counter - Limit	2
Counter - Input +	OP - Button 1
Counter - Input -	Not connected
Counter - Reset	Non-Volatile Element 2 - Output
<b>Non-Volatile Element 2</b>	
Non-Volatile Element - Type	non inverting
Non-Volatile Element - Input	Counter 1 - Output
Non-Volatile Element - Reset	Not connected

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB60

2S2W – Profibus Bit Operation Mode Selection – Local 3-Wire OP – Remote 3-Wire

### Connection Diagram

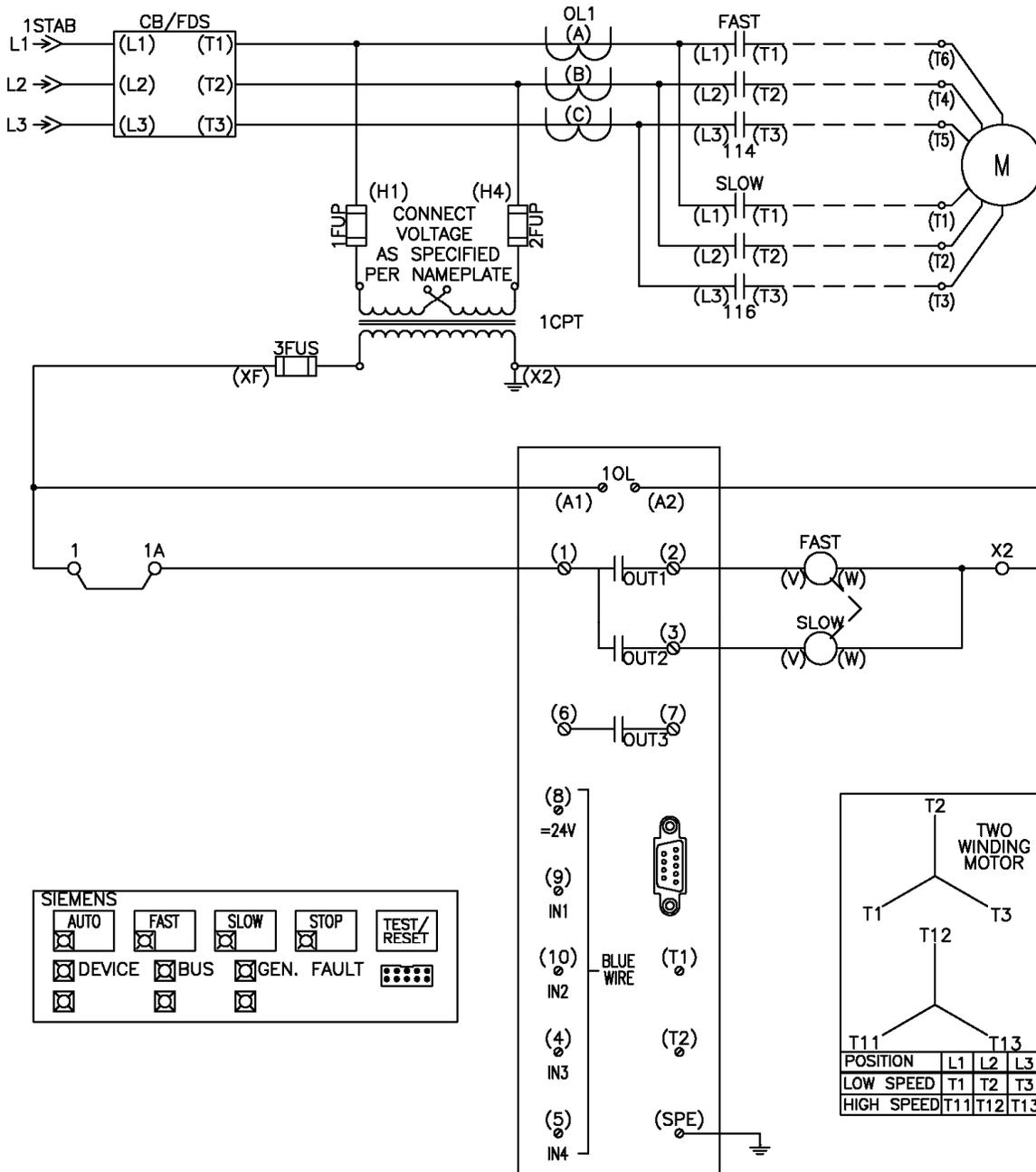


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB60

2S2W – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 3-Wire

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB60

### 2S2W – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (SLOW) is connected to the ON > Control Command, Operator Panel Button 2 (FAST) is connected to the ON >> Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the SLOW Contactor the OP Slow Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the OP Fast Pushbutton is depressed. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON >> Control Command and Profibus Cyclic Receive Bit 0.1 is connected to OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the SLOW Contactor the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 2 to close.
3. To engage the FAST Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON >> Control Command is then triggered, causing SIMOCODE Output 1 to close.
4. To disengage the SLOW Contactor or the FAST Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Outputs 1 and 2 to open.
5. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation. The default Change-over Pause for changing speed from FAST operation to SLOW operation is 0 seconds.
6. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB60

2S2W – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire

### Parameter Detail

Control Selection and Operation

**Control Station**

Control Station	Address	Bit	Local 1	Local 2	Local 3	Remote
Operation Mode Selector	S1	'0'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	S2	'0'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local Control (LC)						
Not connected						
Not connected						
Not connected						
Not connected						
PLC/DCS (DP)						
Not connected						
Not connected						
Cyclic Receive - Bit 0.1	Off		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cyclic Receive - Bit 0.2	On		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cyclic Receive - Bit 0.0	On		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PC (DPV1)						
Not connected						
Not connected						
Not connected						
Not connected						
Operator Panel (OP)	<>/<<>					
Not connected						
OP - Button 4	Off		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OP - Button 3	On		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OP - Button 2	On		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command	Bit
Released Control Command	On
Released Control Command	On
Released Control Command	Off
Released Control Command	On
Released Control Command	On

Preferred for direct Control of Control Functions	Bit
Preferred for direct Control of Control Functions	On
Preferred for direct Control of Control Functions	On
Preferred for direct Control of Control Functions	On

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB60

2S2W – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire

### Parameter Detail

Auto Toggle Detail

The screenshot displays a configuration interface with three main sections:

- Non-Volatile Element 1**
  - Non-Volatile Element - Type: edge rising with memory
  - Non-Volatile Element - Input: DP - Button 1
  - Non-Volatile Element - Reset: Non-Volatile Element 2 - Output
- Counter 1**
  - Counter - Limit: 2
  - Counter - Input +: DP - Button 1
  - Counter - Input -: Not connected
  - Counter - Reset: Non-Volatile Element 2 - Output
- Non-Volatile Element 2**
  - Non-Volatile Element - Type: non inverting
  - Non-Volatile Element - Input: Counter 1 - Output
  - Non-Volatile Element - Reset: Not connected

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## 8. 3RW40 Reduced Voltage Soft Starter with Input Isolation Contactor

The reduced voltage soft starter uses an SCR equipped solid state controller to provide smooth, stepless acceleration by controlling the applied voltage, current, and torque to the motor terminals for single-speed, full-voltage operation. An input isolation contactor is integrated into the design to provide complete voltage removal to the motor windings.

The basic operation of this starter is as follows.

1. A local or remote start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Output 3 closes giving the RVSS a signal to begin operation.
3. The RVSS RUN contact closes relaying the SIMOCODE Pro to close Output 1 which energizes the coil of Input Isolation Contactor 3M.
4. With the Input Isolation Contactor 3M closed the RVSS follows its settings for ramp-up, run, and internal bypass.
5. A local or remote stop signal is given to the SIMOCODE Pro.
6. The SIMOCODE Pro Output 3 opens giving the RVSS a signal to stop operation.
7. The RVSS follows its settings for ramp-down opening the RVSS RUN contact when the designated time has elapsed.
8. With the RVSS RUN contact open the SIMOCODE Pro opens its Output 1 which de-energizes the coil of Input Isolation Contactor 3M.
9. If a fault occurs at any time the SIMOCODE Pro will end the starter operation.

The RVSS auxiliary contacts are connected to the SIMOCODE Pro inputs to provide starter control as well as operation feedback over Profibus-DP.

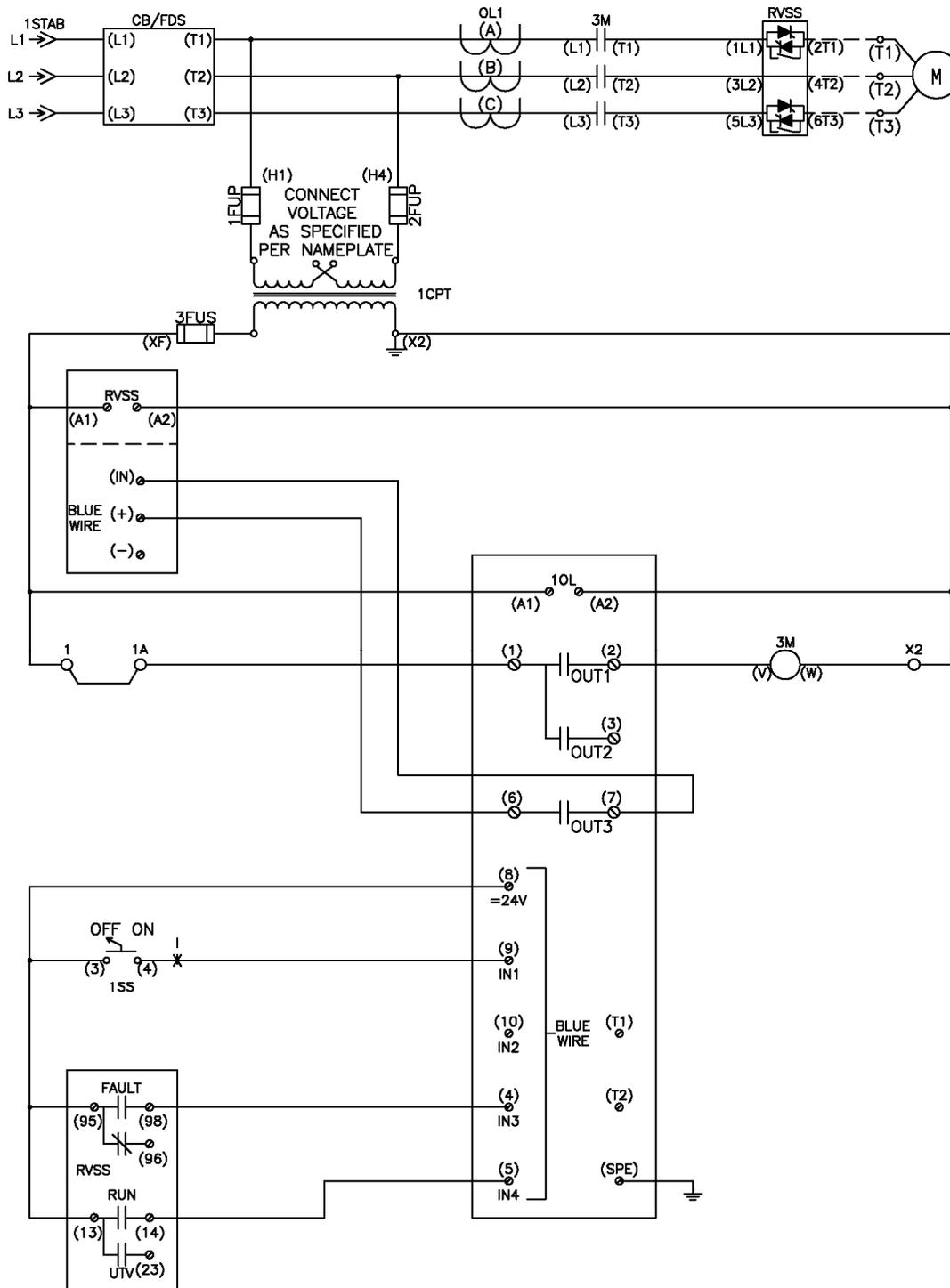
- o The RVSS RUN contact provides direct control over the 3M input isolation contactor and starter condition feedback. When active the contact will signal the SIMOCODE Pro to close Output 1 to energize the 3M Isolation Contactor coil. This contact will switch states during ramp-up, internal bypass, and ramp-down.
- o The RVSS FAULT contact provides starter condition feedback. When active the contact will signal the SIMOCODE Pro to trigger an external fault command. This contact will switch states during thyristor thermal overload, phase failure, no load voltage, mains under-voltage, mains over-voltage, or equipment error.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB62

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB62

### RVSS – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the ON position. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault, SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB62

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW40 w/ Input Isolation

### Parameter Detail

Control Selection and Operation

**Basic Unit**

BU - Output 1	BU - Input 4
BU - Output 2	Not connected
BU - Output 3	Contactor Control - 1 GE1

**External Fault 1**

External Fault - Input	BU - Input 3
External Fault - Reset	Not connected
Response	tripping

**Type**

<input checked="" type="radio"/> normally open (NO)	<input type="radio"/> normally closed (NC)
---	--

**Activity**

<input checked="" type="radio"/> always	<input type="radio"/> only if motor runs
---	--

**External Fault - Reset also by**

<input checked="" type="checkbox"/> Test/Reset Button, RS232 (Panel Reset)	<input type="checkbox"/> Auto-Reset
<input checked="" type="checkbox"/> Remote Reset, Reset 1,2,3	<input type="checkbox"/> Off Command-Reset

**Naming**

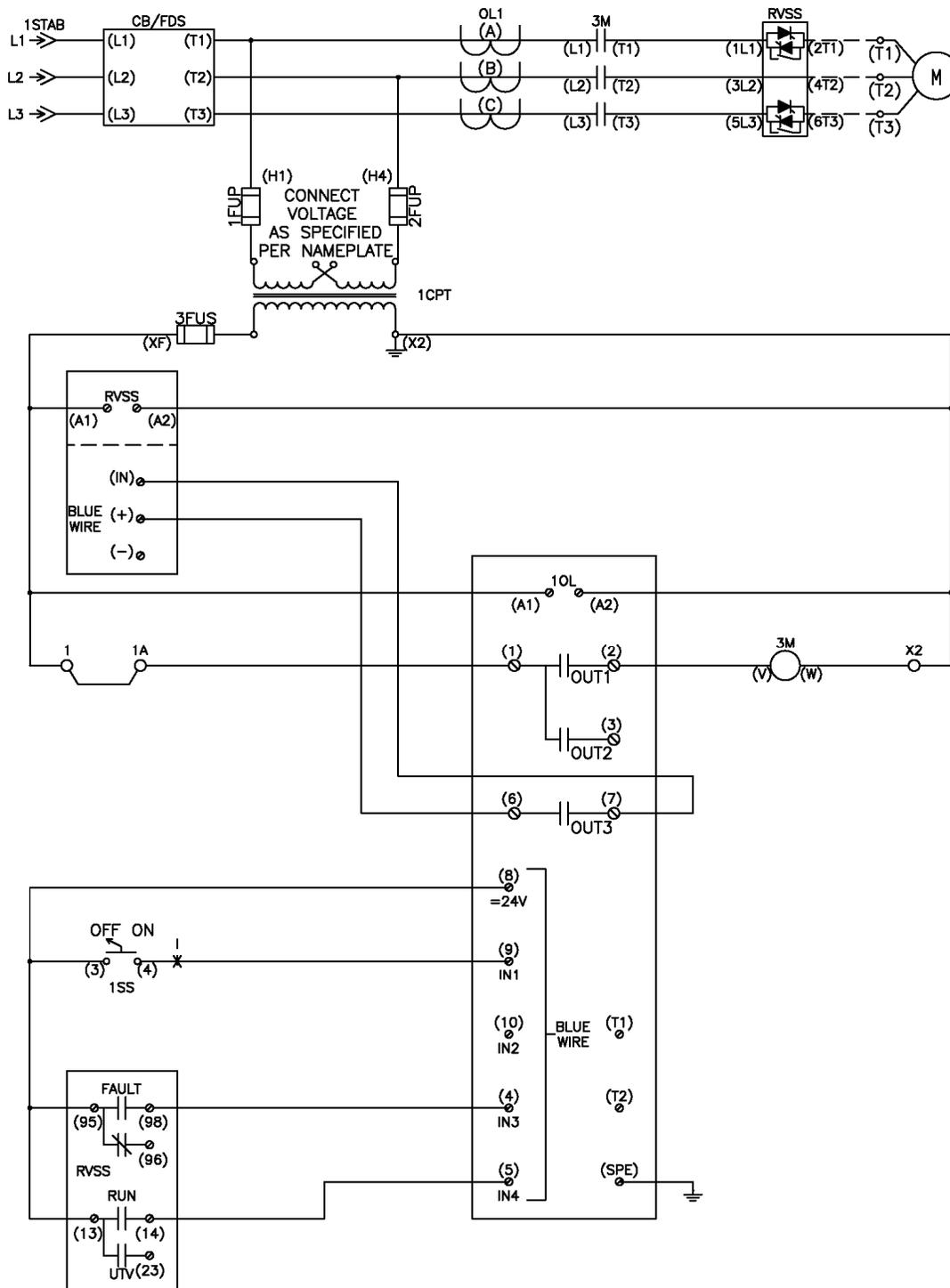
Making	RVSS FAULT
--------	------------

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB63

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation

Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB63

### RVSS – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the ON position. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault, SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB63

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

**Operation Mode Selector**

- Cyclic Receive - Bit 0.5
- Fixed Level - 1'

**Local Control (LC)**

- Not connected
- Not connected
- BU - Input 1
- BU - Input 1
- Not connected

**PLC/DCS (DP)**

- Not connected
- Not connected
- Cyclic Receive - Bit 0.1
- Cyclic Receive - Bit 0.2
- Not connected

**PC (DPV1)**

- Not connected

**Operator Panel (OP)**

- Not connected

	Local 1	Local 2	Local 3	Remote
<b>Releases</b>				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Released Control Command**

- On <<
- On <
- Off

**Preferred for direct Control of Control Functions**

- On >
- On >>

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB63

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

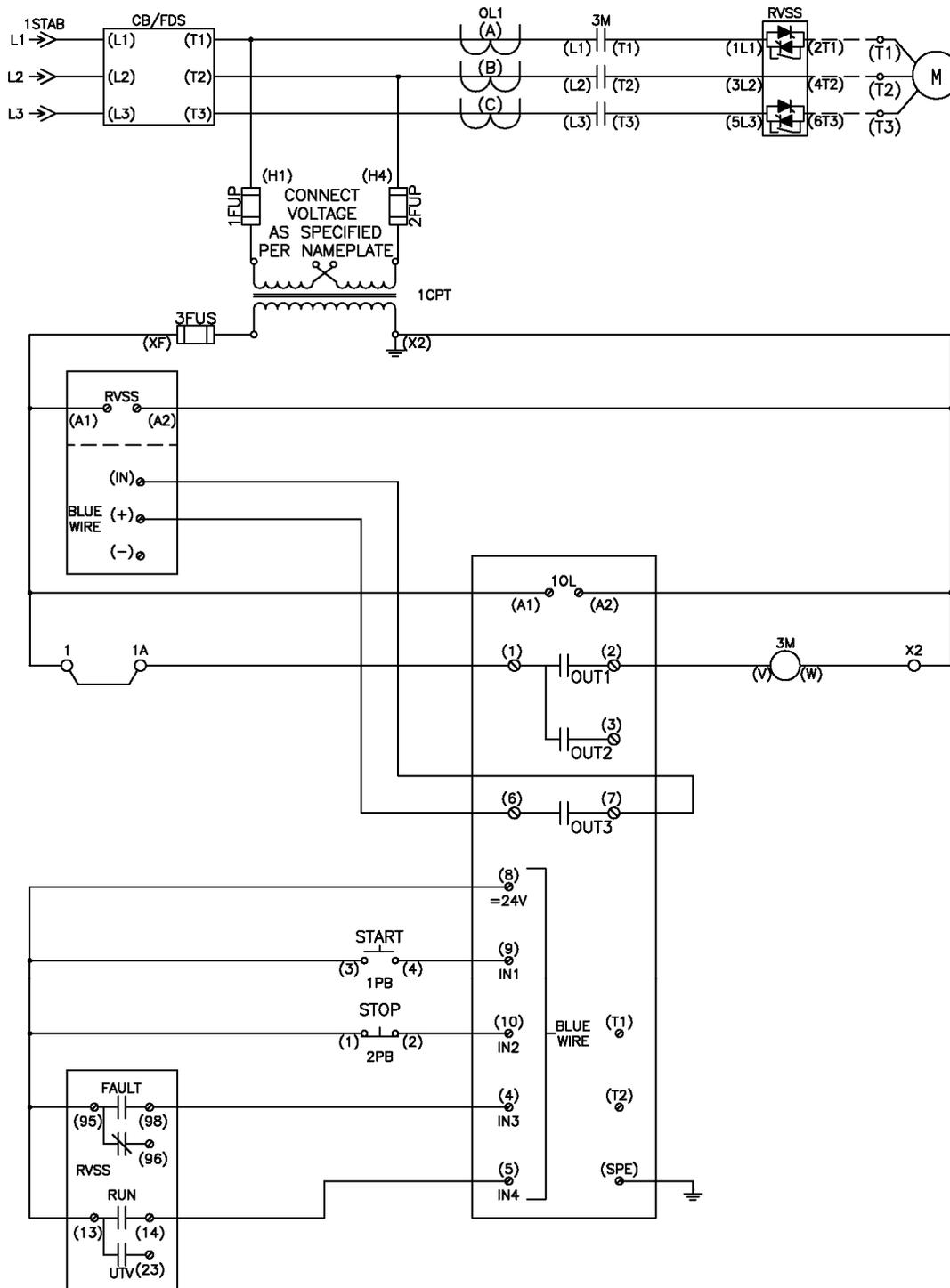
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to BU - Input 4), BU - Output 2 (set to Not connected), and BU - Output 3 (set to Contactor Control - 1 GE1).
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to BU - Input 3), External Fault - Reset (set to Not connected), and Response (set to tripping).
- Type:** A group box with two radio buttons: normally open (NO) (selected) and normally closed (NC).
- Activity:** A group box with two radio buttons: always (selected) and only if motor runs.
- External Fault - Reset also by:** A group box with four checkboxes: Test/Reset Button, RS232 (Panel Reset) (checked), Remote Reset, Reset 1,2,3 (checked), Auto-Reset (unchecked), and Off Command Reset (unchecked).
- Masking:** A text field containing the value RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB64

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire 3RW40 w/Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB64

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 2-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Start Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open..

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB64

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire 3RW40 w/Input Isolation

### Parameter Detail

Control Selection and Operation

The screenshot displays the 'Control Station' configuration window. It is organized into several sections:

- Operation Mode Selector:** Includes 'Cyclic Receive - Bit 0.5' and 'Fixed Level - 1'.
- Local Control (LC):** Lists 'Not connected', 'Not connected', 'BU - Input 2', 'BU - Input 1', and 'Not connected'.
- PLC/DCS (DP):** Lists 'Not connected', 'Not connected', 'Signal Conditioner 1 - Output', 'Cyclic Receive - Bit 0.2', and 'Not connected'.
- PC (DPV1):** Lists 'Not connected', 'Not connected', 'Not connected', and 'Not connected'.
- Operator Panel (OP):** Lists 'Not connected', 'Not connected', 'Not connected', and 'Not connected'.

Below these sections is a table for 'Releases' with columns for 'Local 1', 'Local 2', 'Local 3', and 'Remote'. The table contains rows for 'On (enabled)' and 'Off (enabled)' states for various inputs. For example, 'On (enabled)' for 'BU - Input 2' is checked in the 'Local 2' column.

At the bottom, the 'Signal Conditioner 1' section shows:
 

- Signal Conditioner - Type: Inverting
- Signal Conditioner - Input: Cyclic Receive - Bit 0.2
- Signal Conditioner - Reset: Not connected

On the right side of the interface, there are two groups of terminals: 'Released Control Command' (On<sup>+</sup>, On<sup>-</sup>, Off) and 'Preferred for direct Control of Control Functions' (On<sup>-</sup>, On<sup>+</sup>).

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB64

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire 3RW40 w/Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

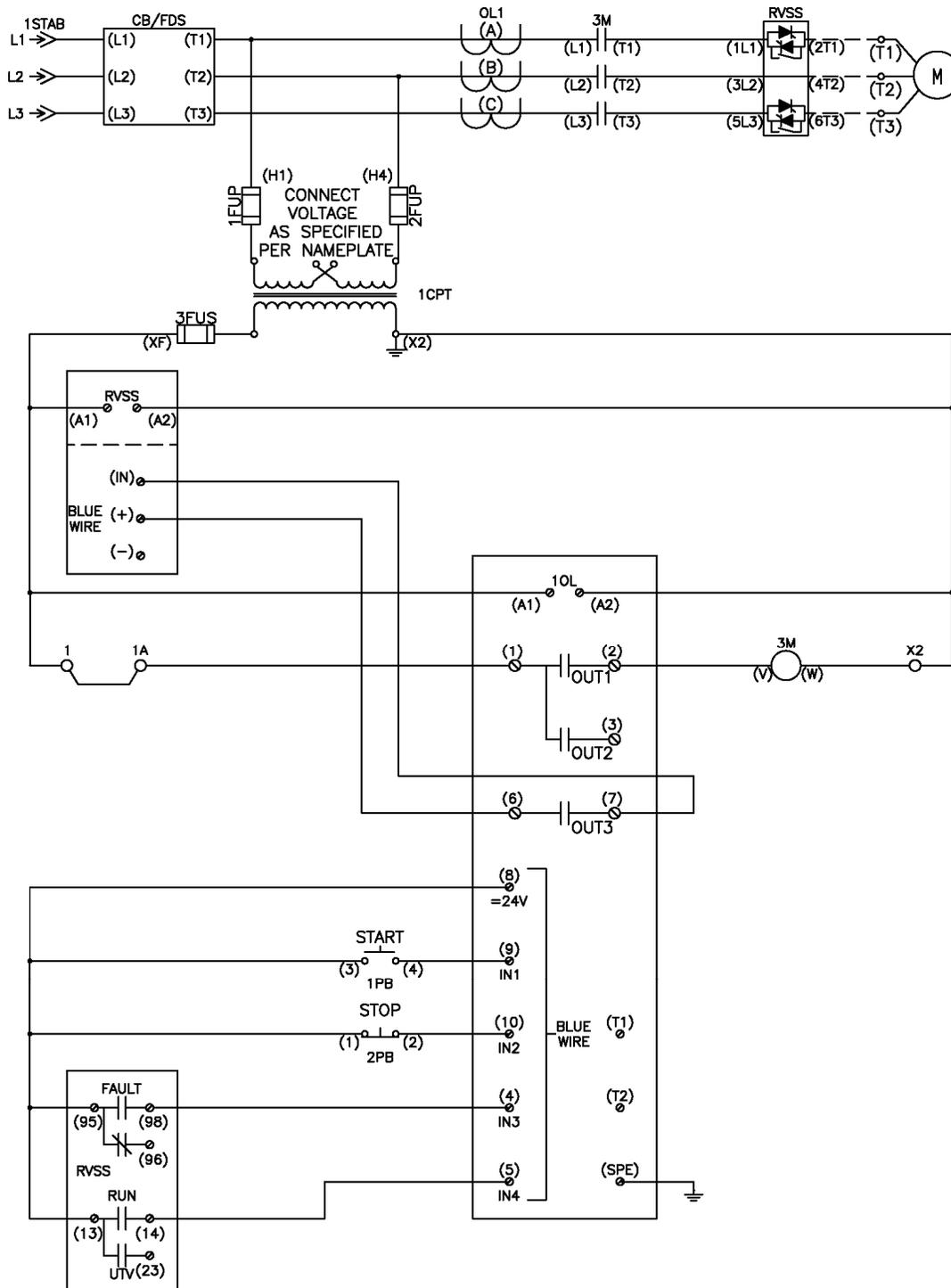
- Basic Unit:**
  - BU - Output 1: BU - Input 4
  - BU - Output 2: Not connected
  - BU - Output 3: Contactor Control - 1 GE1
- External Fault 1:**
  - External Fault - Input: BU - Input 3
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)
  - normally closed (NC)
- Activity:**
  - always
  - only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)
  - Auto-Reset
  - Remote Reset, Reset 1,2,3
  - Off Command-Reset
- Makeing:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB65

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire 3RW40 w/Input Isolation

Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB65

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 3-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (START) is connected to the ON > Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS the OP Start Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault, SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB65

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

**Operation Mode Selector**

Cyclic Receive - Bx 0.5	51	"0"	"1"	"1"	"1"
Fixed Level - 1'	52	"0"	"1"	"0"	"1"

**Local Control (LC)**

Not connected					
Not connected					
BU - Input 2	Off	On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BU - Input 1	On	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected					

**PLC/DCS (DP)**

Not connected					
Not connected					
Cyclic Receive - Bx 0.1	Off	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cyclic Receive - Bx 0.2	On	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Not connected					

**PC (DPV1)**

Not connected					
Not connected					
Not connected	Off	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected	On	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected					

**Operator Panel (OP)**

Not connected					
Not connected					
Not connected	Off	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected	On	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected					

**Releases**

	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Released Control Command**

- Dnc<<
- Dnc
- Off
- Dnc>
- Dnc>>

**Preferred for direct Control of Control Functions**

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB65

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

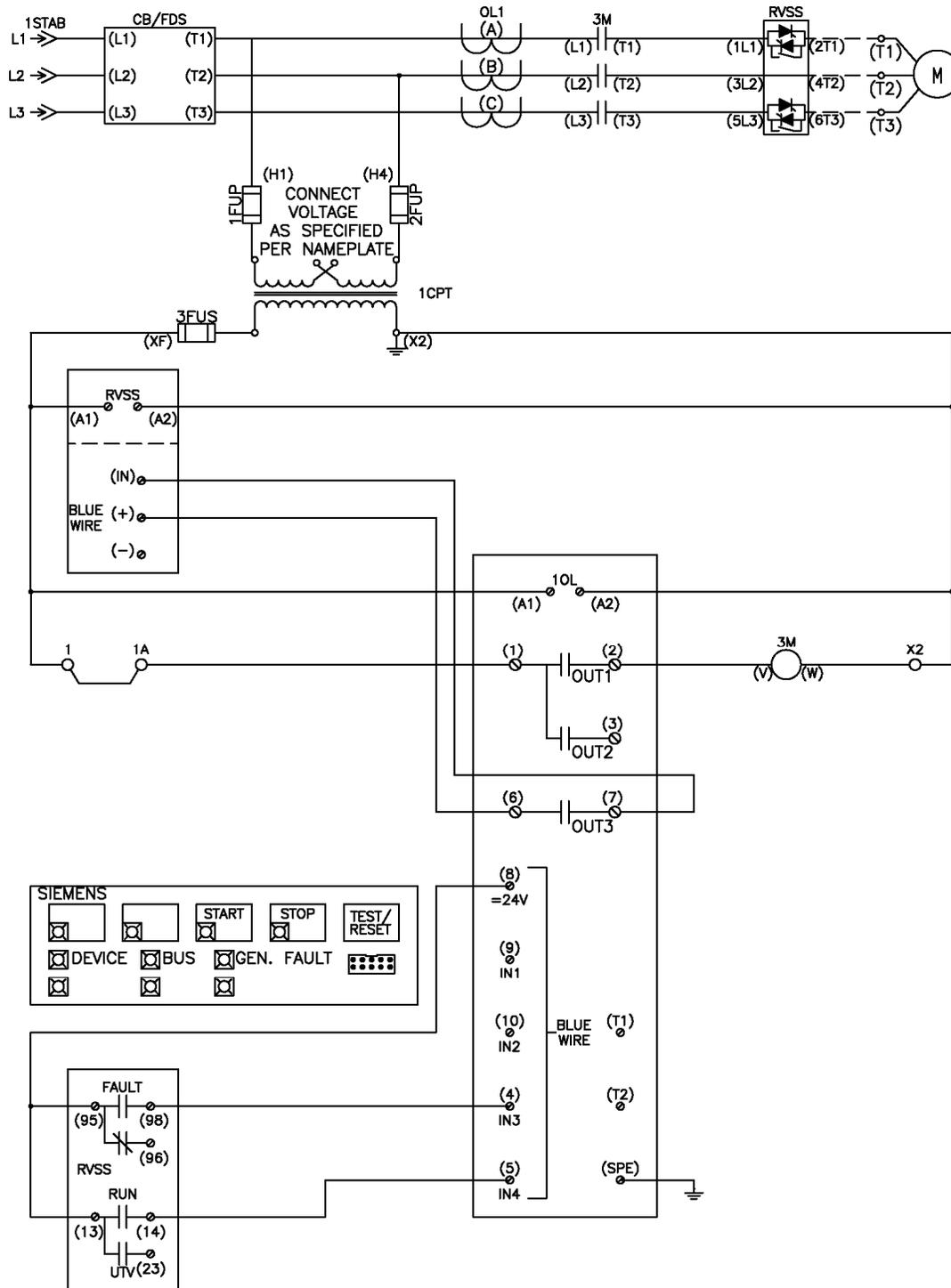
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to BU - Input 4), BU - Output 2 (set to Not connected), and BU - Output 3 (set to Contactor Control - 1 GE1).
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to BU - Input 3), External Fault - Reset (set to Not connected), and Response (set to tripping).
- Type:** A group box with two radio buttons: normally open (NO) (selected) and normally closed (NC).
- Activity:** A group box with two radio buttons: always (selected) and only if motor runs.
- External Fault - Reset also by:** A group box with four checkboxes: Test/Reset Button, RS232 (Panel Reset) (checked), Remote Reset, Reset 1,2,3 (checked), Auto-Reset (unchecked), and Off Command-Reset (unchecked).
- Masking:** A text field containing the value RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB66

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP – Remote 3-Wire 3RW40 w/Input Isolation

Connection Diagram

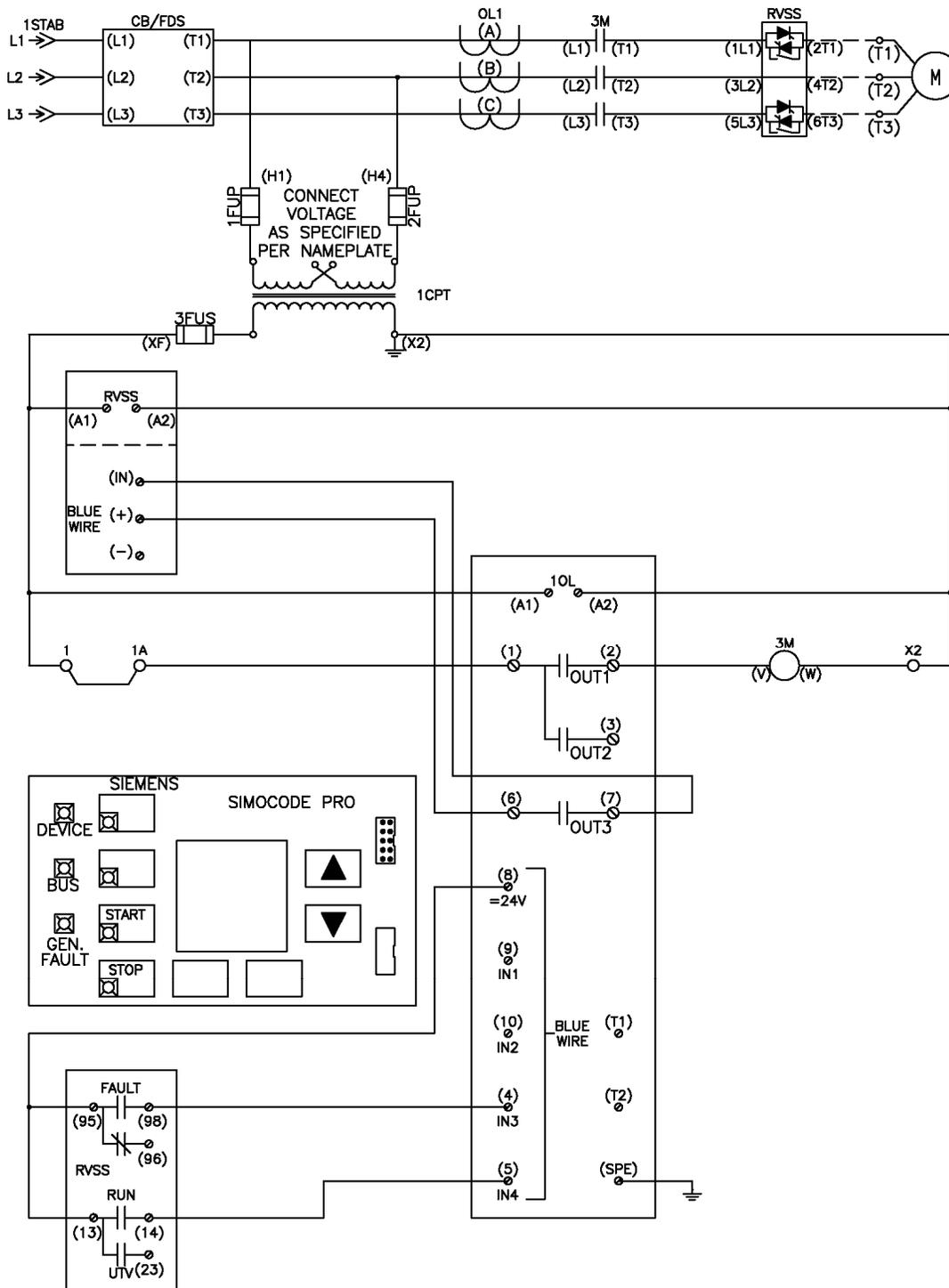


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB66

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 3-Wire 3RW40 w/Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB66

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (START) is connected to the ON > Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS the OP Start Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB66

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control [LC]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

PLC/DCS [DP]  
 Not connected  
 Not connected  
 Signal Conditioner 1 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]  
 Not connected  
 Not connected  
 OP - Button 4  
 OP - Button 3  
 Not connected

	Local 1	Local 2	Local 3	Remote
Releases				
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On< />  
 On< />  
 Off< />  
 On< />  
 On> />

Preferred for direct Control of Control Functions

**Signal Conditioner 1**  
 Signal Conditioner - Type: Inverting  
 Signal Conditioner - Input: Cyclic Receive - Bit 0.2  
 Signal Conditioner - Reset: Not connected

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB66

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

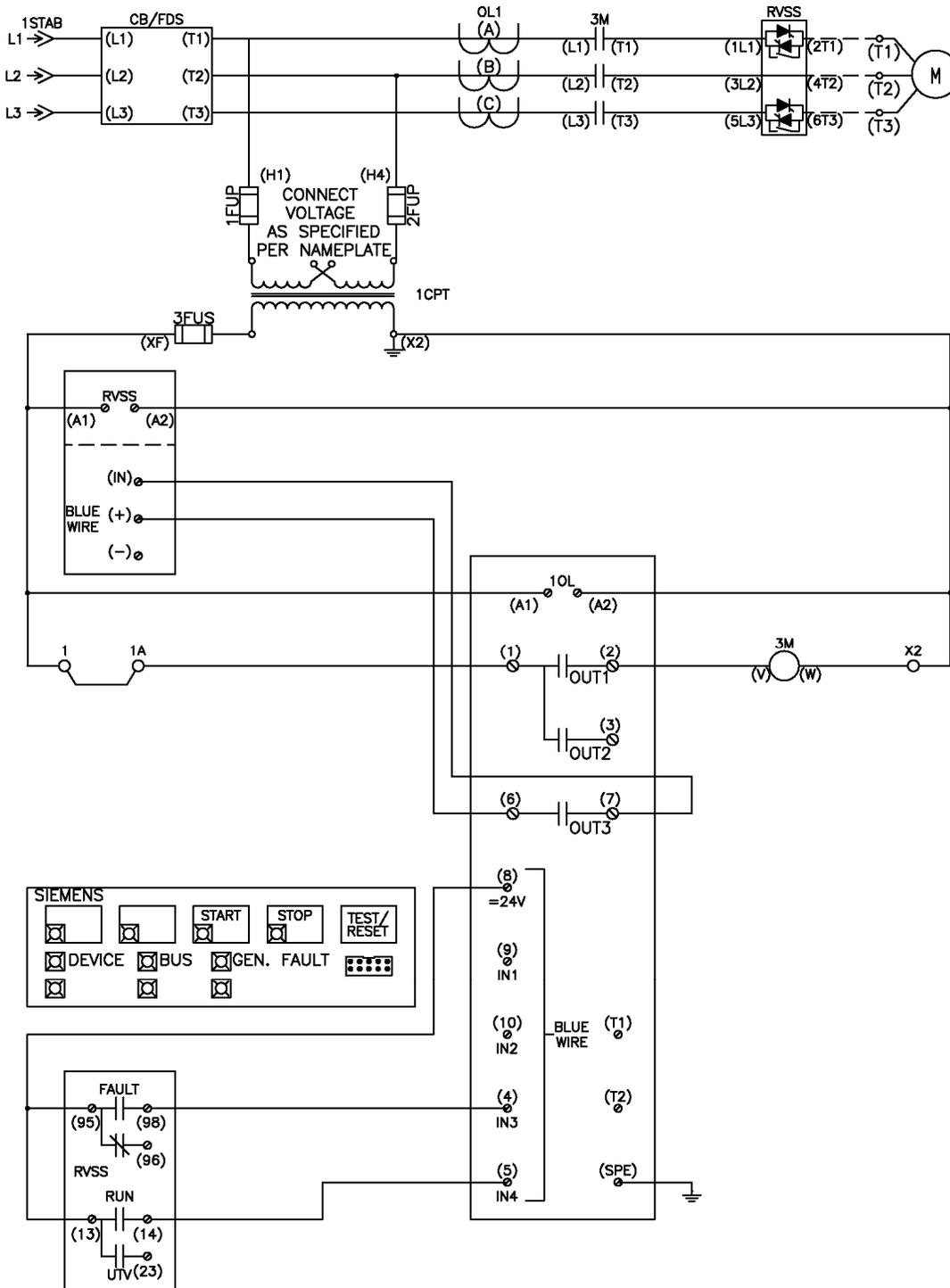
- Basic Unit:**
  - BU - Output 1: BU - Input 4
  - BU - Output 2: Not connected
  - BU - Output 3: Contactor Control - 1 GE1
- External Fault 1:**
  - External Fault - Input: BU - Input 3
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)
  - normally closed (NC)
- Activity:**
  - always
  - only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)
  - Auto-Reset
  - Remote Reset, Reset 1,2,3
  - Off Command-Reset
- Masking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB67

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW40 w/Input Isolation

### Connection Diagram

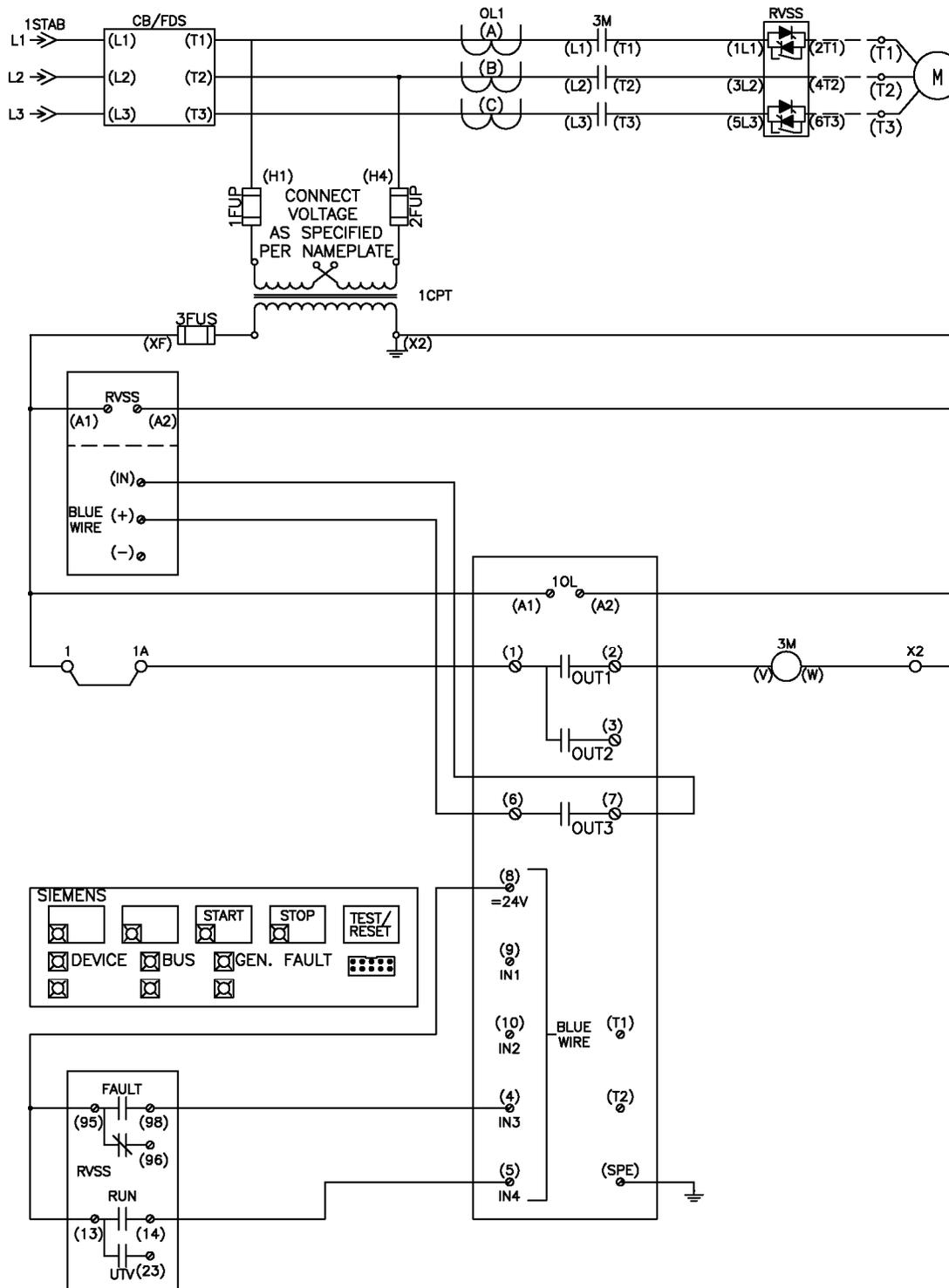


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB67

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW40 w/Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB67

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 2-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the HAND position. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB67

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW40 w/Input Isolation

### Parameter Detail

Control Selection and Operation

The screenshot displays the 'Control Station' configuration window. It is organized into several sections on the left, each with a list of control stations and their current status. To the right, a table shows the 'Releases' for each station across four modes: Local 1, Local 2, Local 3, and Remote. Further right, there are two groups of control function outputs: 'Released Control Command' and 'Preferred for direct Control of Control Functions'.

Control Station	Local 1	Local 2	Local 3	Remote
51	0	0	1	1
52	0	1	0	1
Released Control Command	On (enabled)			
Released Control Command	On (enabled)			
Released Control Command	On (enabled)			<input checked="" type="checkbox"/>
Released Control Command	On (enabled)			<input checked="" type="checkbox"/>
Preferred for direct Control of Control Functions	On (enabled)			
Preferred for direct Control of Control Functions	On (enabled)			
Operator Panel (OP) - Button 4	On (enabled)	<input checked="" type="checkbox"/>		
Operator Panel (OP) - Button 3	On (enabled)	<input checked="" type="checkbox"/>		

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB67

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW40 w/Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for the RVSS Control and Operation. It is organized into several sections:

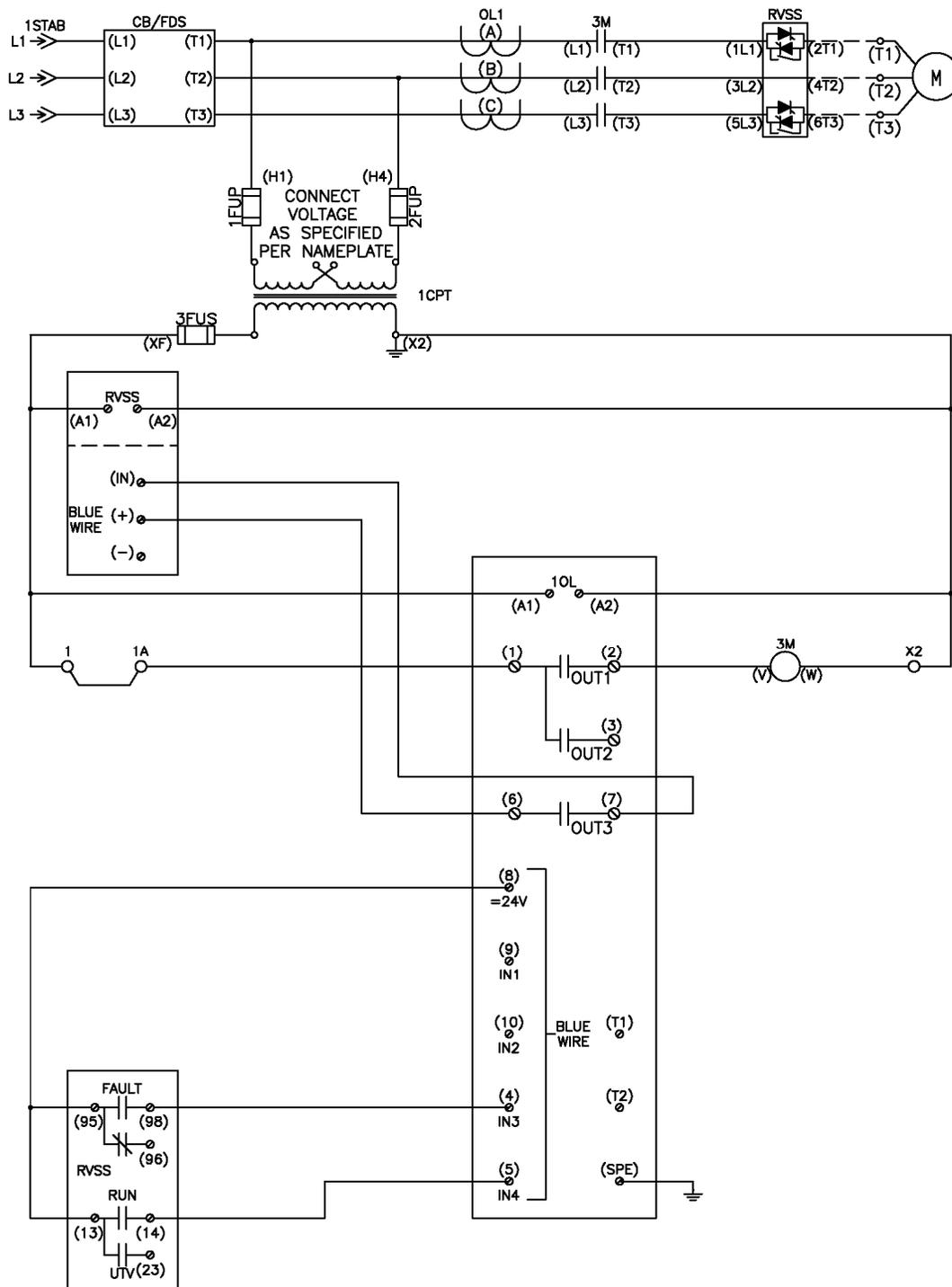
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to BU - Input 4), BU - Output 2 (set to Not connected), and BU - Output 3 (set to Contactor Control - 1 GE1).
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to BU - Input 3), External Fault - Reset (set to Not connected), and Response (set to tripping).
- Type:** A group box with two radio buttons:  normally open (NO) and  normally closed (NC).
- Activity:** A group box with two radio buttons:  always and  only if motor runs.
- External Fault - Reset also by:** A group box with four checkboxes:  Test/Reset Button, RS232 (Panel Reset),  Auto-Reset,  Remote Reset, Reset 1,2,3, and  Off Command/Reset.
- Makeing:** A dropdown menu set to RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB68

RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 2 Wire  
3RW40 w/ Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB68

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 2 Wire 3RW40 w/ Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the SIMOCODE Input 1 is activated. The ON > Control Command is then triggered causing the SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Input 4 is then activated causing the SIMOCODE Output 1 to close.
4. To disengage the RVSS the SIMOCODE Input 1 is deactivated. The OFF Control Command is then triggered causing the SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Input 4 is deactivated causing the SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault event the SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered causing the SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Input 4 is then activated causing the SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered causing the SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Input 4 is deactivated causing the SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault event the SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB68

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2 Wire 3RW40 w/ Input Isolation

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:**
  - Operation Mode Selector:**
    - Cyclic Receive - Bit 0.5
    - Fixed Level - '1'
  - Local Control (LC):**
    - Not connected
    - Not connected
    - BU - Input 1
    - BU - Input 1
    - Not connected
  - PLC/DCS (DP):**
    - Not connected
    - Not connected
    - Signal Conditioner 1 - Output
    - Cyclic Receive - Bit 0.2
    - Not connected
  - PC (DPV1):**
    - Not connected
    - Not connected
    - Not connected
    - Not connected
    - Not connected
  - Operator Panel (OP):**
    - Not connected
    - Not connected
    - Not connected
    - Not connected
    - Not connected
- Signal Conditioner 1:**
  - Signal Conditioner - Type: Inverting
  - Signal Conditioner - Input: Cyclic Receive - Bit 0.2
  - Signal Conditioner - Reset: Not connected

The central part of the interface features a table for 'Releases' with columns for Local 1, Local 2, Local 3, and Remote. The table includes rows for 'On (enabled)' and 'Off (enabled)' states, with checkboxes indicating the selected mode. To the right of the table, there are two sections for control commands: 'Released Control Command' and 'Preferred for direct Control of Control Functions', each with associated input terminals.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB68

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW40 w/Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for the RVSS Control and Operation. It is organized into several sections:

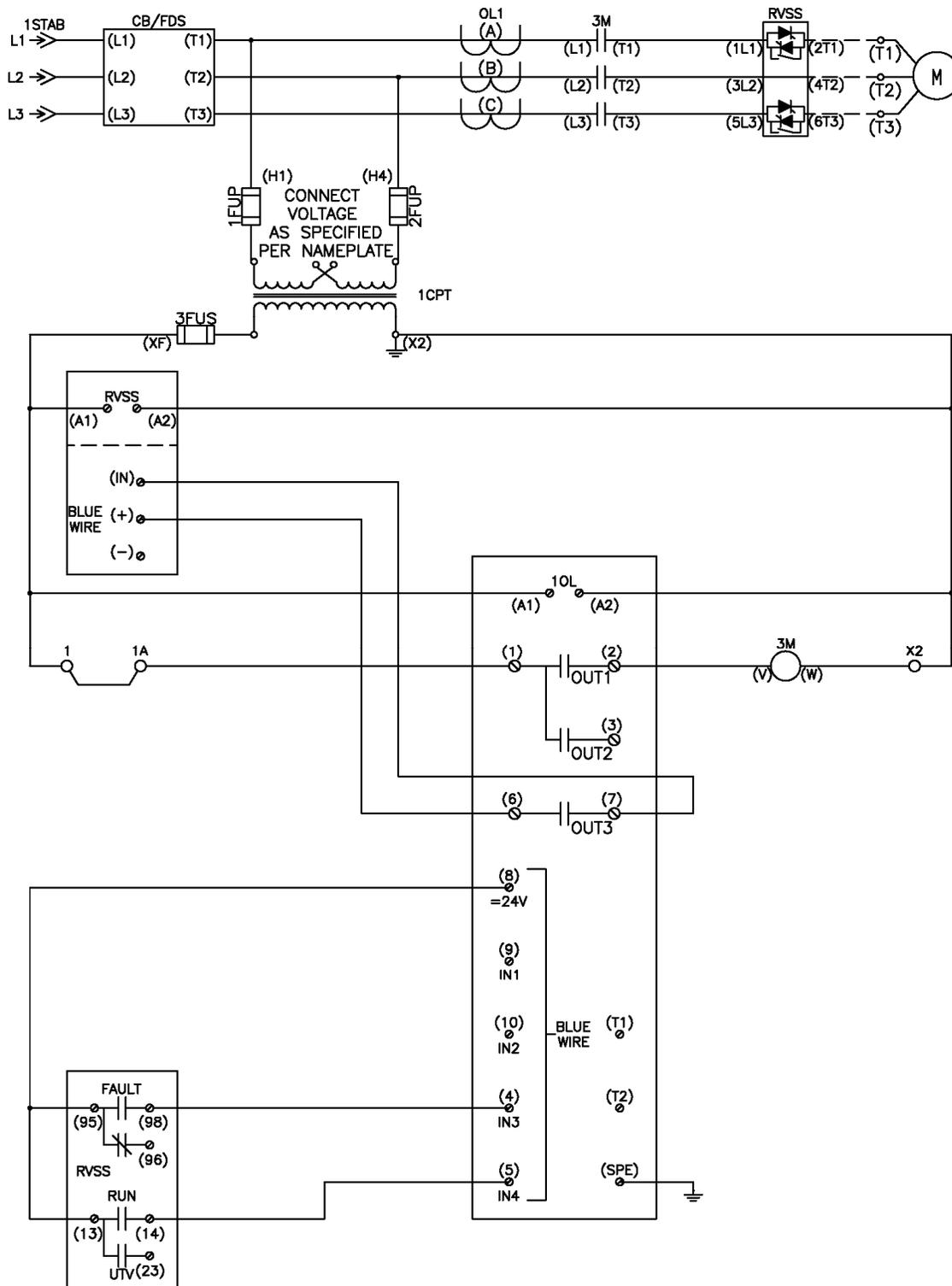
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to BU - Input 4), BU - Output 2 (set to Not connected), and BU - Output 3 (set to Contactor Control - 1 GE1).
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to BU - Input 3), External Fault - Reset (set to Not connected), and Response (set to tripping).
- Type:** A group box with two radio buttons:  normally open (NO) and  normally closed (NC).
- Activity:** A group box with two radio buttons:  always and  only if motor runs.
- External Fault - Reset also by:** A group box with four checkboxes:  Test/Reset Button, RS232 (Panel Reset),  Auto-Reset,  Remote Reset, Reset 1,2,3, and  Off Command Reset.
- Making:** A dropdown menu set to RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB69

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 3-Wire 3RW40 w/Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB69

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 3-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS SIMOCODE Input 1 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB69

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

**Operation Mode Selector**

- Cyclic Receive - Bit 0.5
- Fixed Level - 1'

**Local Control (LC)**

- Not connected
- Not connected
- BU - Input 1
- BU - Input 1
- Not connected

**PLC/DCS (DP)**

- Not connected
- Not connected
- Cyclic Receive - Bit 0.1
- Cyclic Receive - Bit 0.2
- Not connected

**PC (DPV1)**

- Not connected

**Operator Panel (OP)**

- Not connected

	Local 1	Local 2	Local 3	Remote
<b>Releases:</b>				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command: On<<, On<, Off, On>, On>>

Preferred for direct Control of Control Functions

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB69

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for the RVSS Control and Operation parameters. It is organized into several sections:

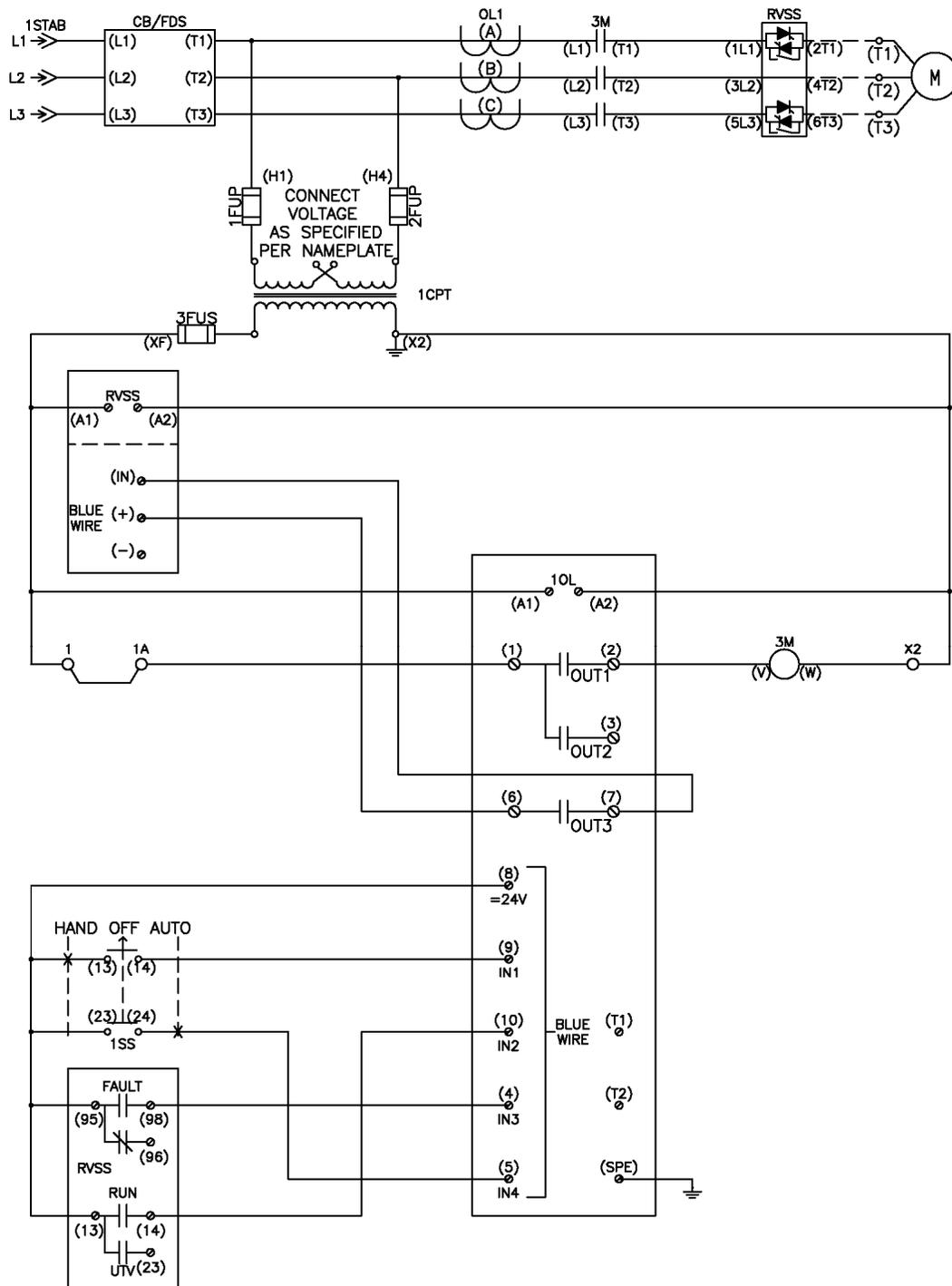
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to BU - Input 4), BU - Output 2 (set to Not connected), and BU - Output 3 (set to Contactor Control - 1 GE1).
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to BU - Input 3), External Fault - Reset (set to Not connected), and Response (set to tripping).
- Type:** A group box with two radio buttons: normally open (NO) (selected) and normally closed (NC).
- Activity:** A group box with two radio buttons: always (selected) and only if motor runs.
- External Fault - Reset also by:** A group box with four checkboxes: Test/Reset Button, RS232 (Panel Reset) (checked), Remote Reset, Reset 1,2,3 (checked), Auto-Reset (unchecked), and Off Command/Reset (unchecked).
- Masking:** A dropdown menu set to RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB70

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB70

### RVSS – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the HAND position. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB70

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector

- Cyclic Receive - Bit 0.5
- BU - Input 4

Local Control (LC)

- Not connected
- Not connected
- BU - Input 1
- BU - Input 1
- Not connected

PLC/OCS (DP)

- Not connected
- Not connected
- Signal Conditioner 1 - Output
- Cyclic Receive - Bit 0.2
- Not connected

PC (DPV1)

- Not connected

Operator Panel (OP)

- Not connected

Signal Conditioner 1

- Signal Conditioner - Type: Inverting
- Signal Conditioner - Input: Cyclic Receive - Bit 0.2
- Signal Conditioner - Reset: Not connected

	Local 1	Local 2	Local 3	Remote
Release:				
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command

- On<
- On
- Off
- On>
- On>>

Preferred for direct Control of Control Functions

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB70

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for the RVSS Control and Operation. It is organized into several sections:

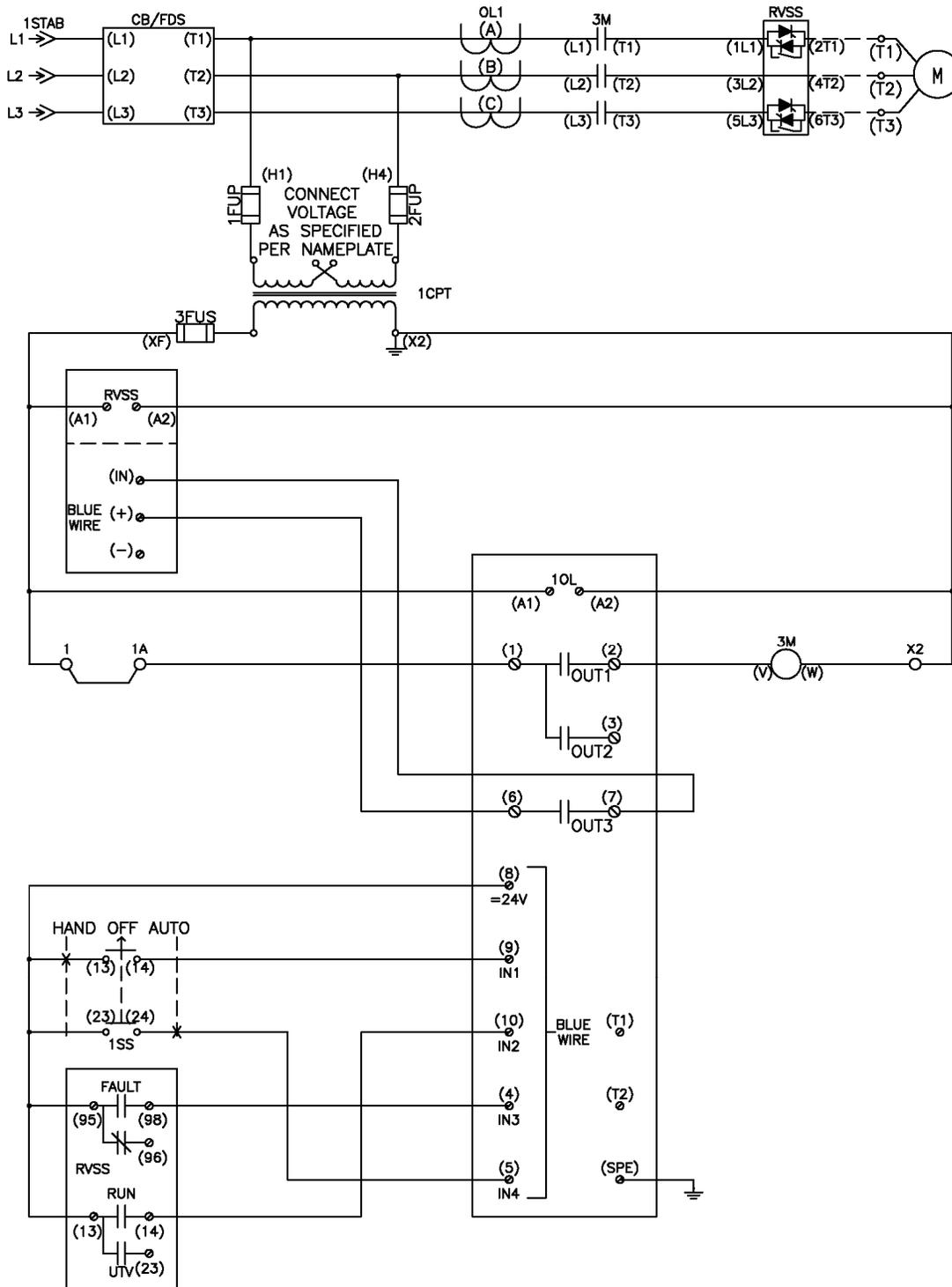
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to BU - Input 2), BU - Output 2 (set to Not connected), and BU - Output 3 (set to Contactor Control - 1 QE1).
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to BU - Input 3), External Fault - Reset (set to Not connected), and Response (set to tripping).
- Type:** A group box with two radio buttons: normally open (NO) (selected) and normally closed (NC).
- Activity:** A group box with two radio buttons: always (selected) and only if motor runs.
- External Fault - Reset also by:** A group box with four checkboxes: Test/Reset Button, RS232 (Panel Reset) (checked), Auto-Reset (unchecked), Remote Reset, Reset 1,2,3 (checked), and Dll Command-Reset (unchecked).
- Marking:** A text field containing the value RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB71

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB71

### RVSS – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the HAND position. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event, SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 2 is deactivated, causing Output 1 to open. (RVSS Ramp-down time must be less than or equal to SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

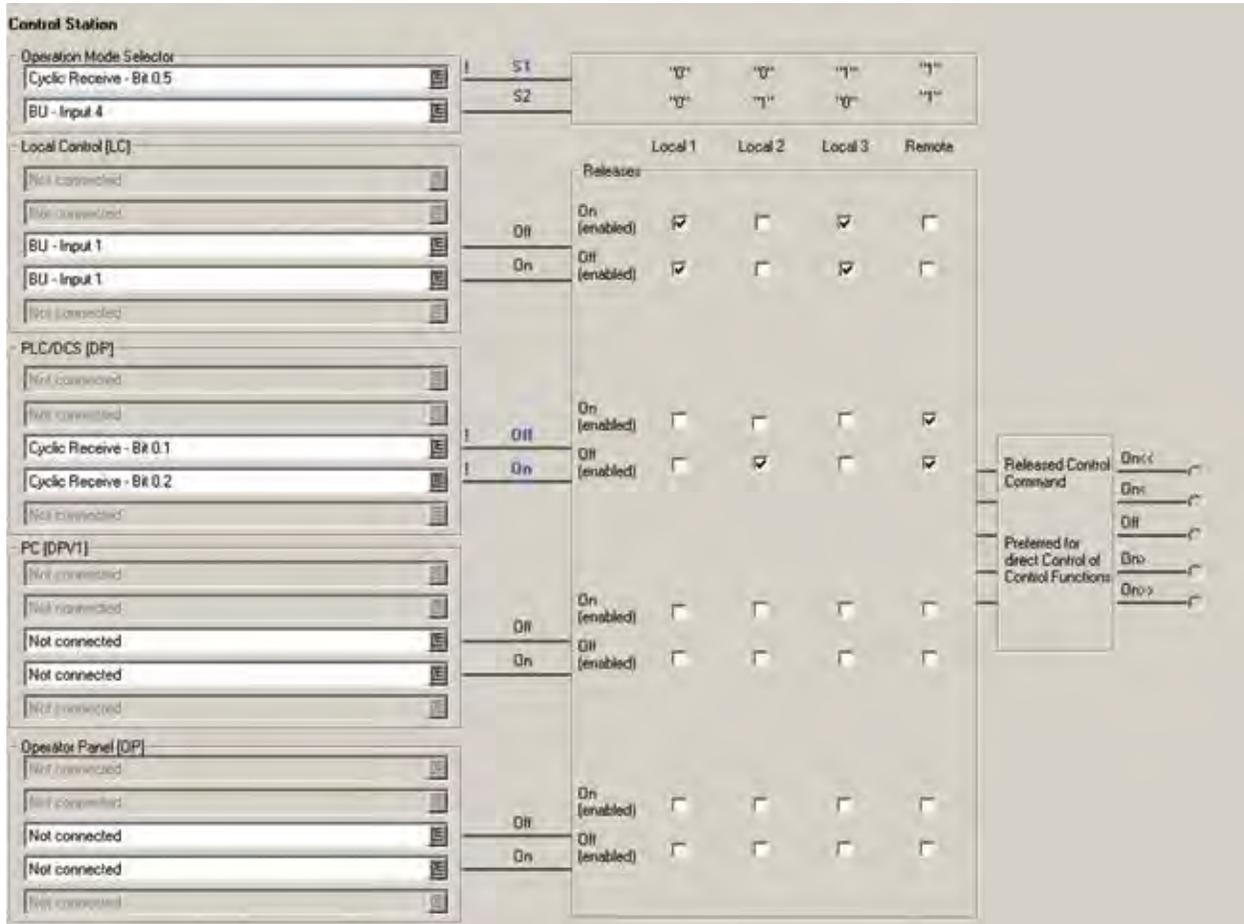
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB71

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

Control Selection and Operation



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB71

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

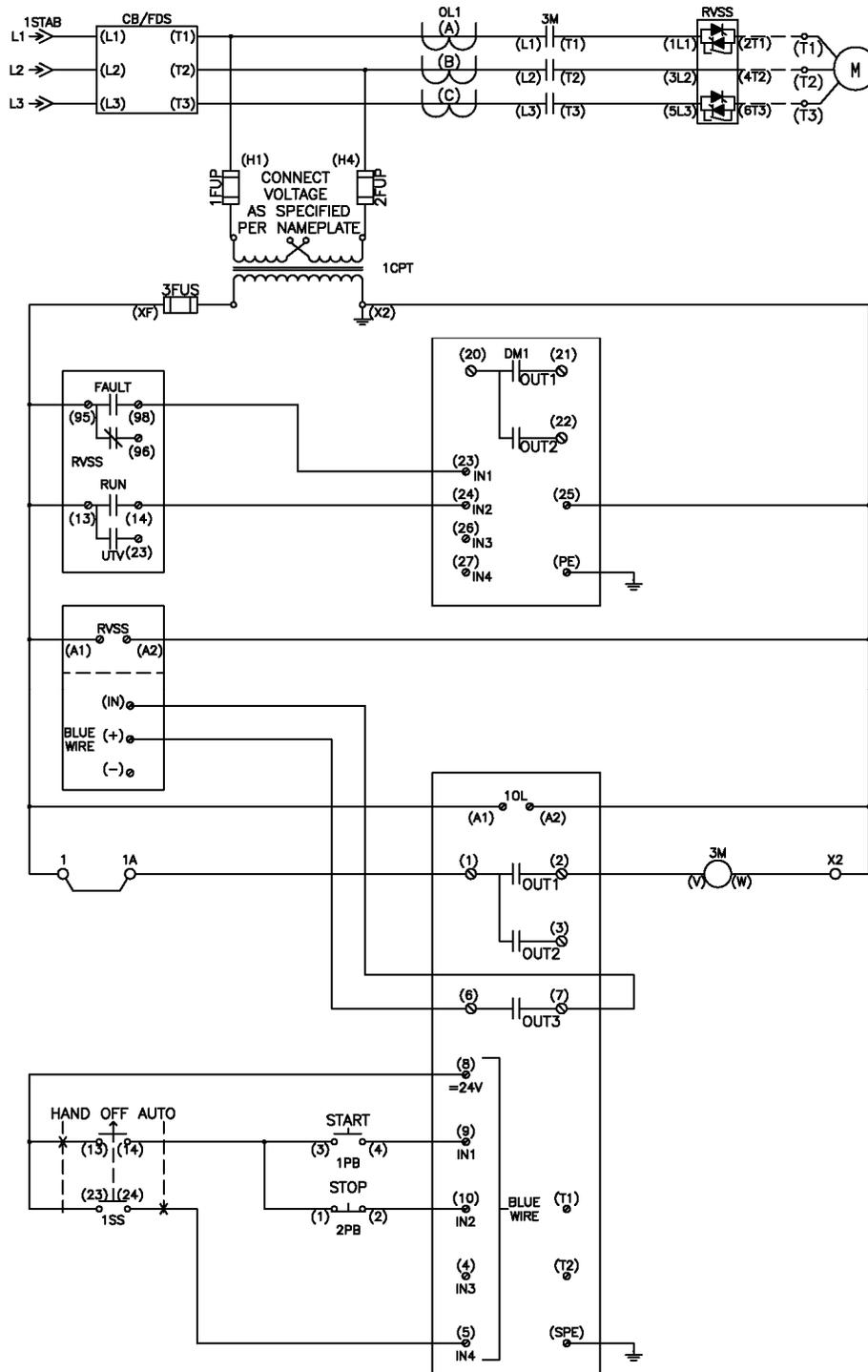
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to BU - Input 2), BU - Output 2 (set to Not connected), and BU - Output 3 (set to Contactor Control - 1 QE1).
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to BU - Input 3), External Fault - Reset (set to Not connected), and Response (set to tripping).
- Type:** A group box with two radio buttons: normally open (NO) (selected) and normally closed (NC).
- Activity:** A group box with two radio buttons: always (selected) and only if motor runs.
- External Fault - Reset also by:** A group box with four checkboxes: Test/Reset Button, RS232 (Panel Reset) (checked), Remote Reset, Reset 1,2,3 (checked), Auto-Reset (unchecked), and Dll Command-Reset (unchecked).
- Marking:** A text field containing the value RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB72

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire 3RW40 w/Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB72

### RVSS – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the HAND position and the Start Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS two methods are available. 1: while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. 2: the Selector Switch is placed into the OFF position. For either action the OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Digital module Input 1 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB72

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire 3RW40 w/Input Isolation

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:**
  - Operation Mode Selector:** Includes 'Cyclic Receive - Bit 0.5' and 'BU - Input 4'.
  - Local Control (LC):** Includes 'Not connected', 'BU - Input 2', and 'BU - Input 1'.
  - PLC/DCS (DP):** Includes 'Signal Conditioner 1 - Output', 'Cyclic Receive - Bit 0.2', and 'Not connected'.
  - PC (DPV1):** Includes 'Not connected' and 'Not connected'.
  - Operator Panel (OP):** Includes 'Not connected' and 'Not connected'.
- Signal Conditioner 1:**
  - Signal Conditioner - Type: Inverting
  - Signal Conditioner - Input: Cyclic Receive - Bit 0.2
  - Signal Conditioner - Reset: Not connected
- Release Matrix:** A table defining release conditions for Local 1, Local 2, Local 3, and Remote.

Release	Local 1	Local 2	Local 3	Remote
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Released Control Command:** Includes 'On<<', 'On', 'Off', 'On>', and 'On>>'.
- Preferred for direct Control of Control Functions:** Includes 'On>>'.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB72

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire 3RW40 w/Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

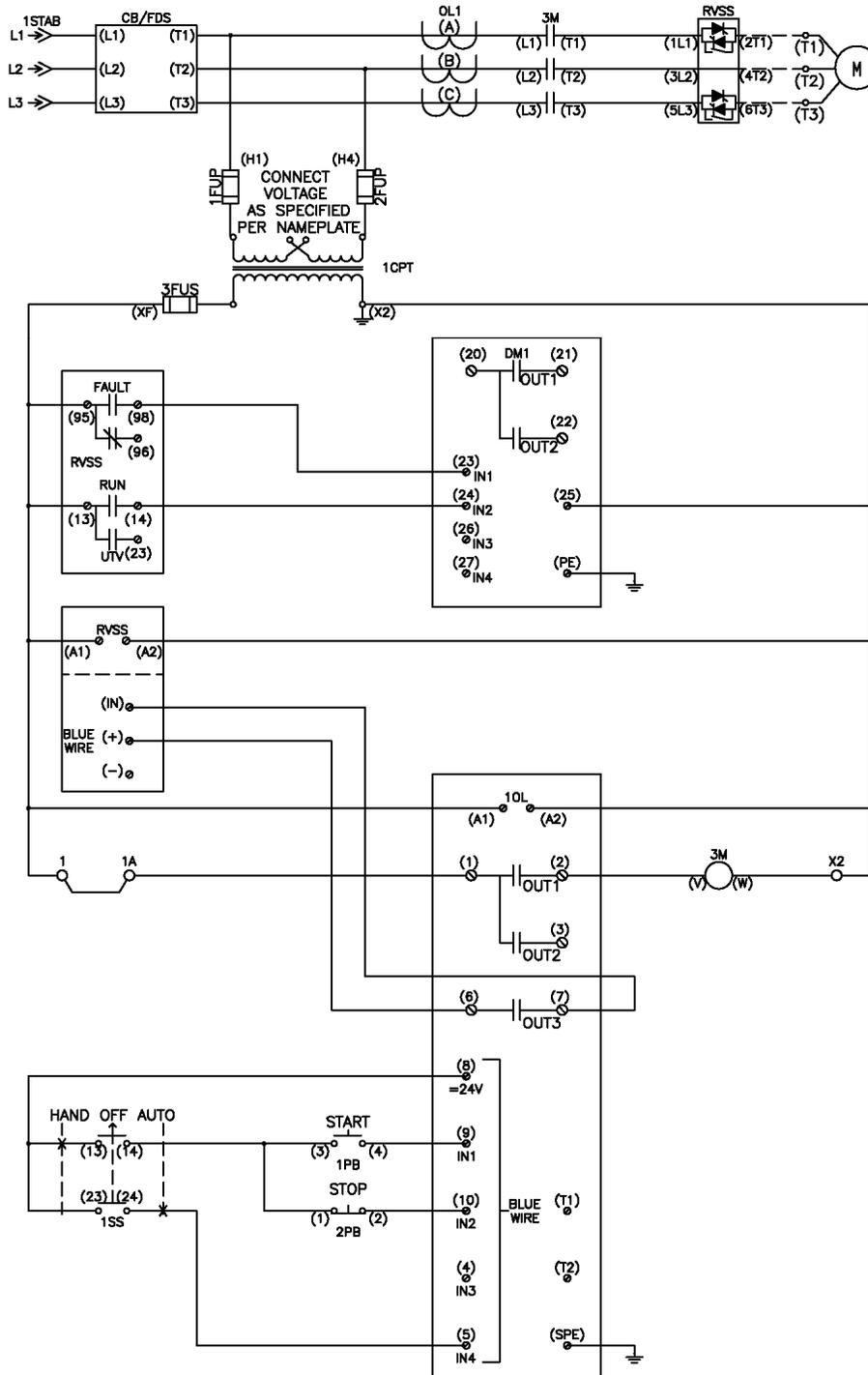
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (DM1 - Input 2), BU - Output 2 (Not connected), and BU - Output 3 (Contactor Control - 1 QE1).
- External Fault 1:** Includes dropdowns for External Fault - Input (DM1 - Input 1) and External Fault - Reset (Not connected), and a dropdown for Response (tripping).
- Type:** Radio buttons for normally open (NO) (selected) and normally closed (NC).
- Activity:** Radio buttons for always (selected) and only if motor runs.
- External Fault - Reset also by:** Checkboxes for Test/Reset Button, RS232 (Panel Reset) (checked), Remote Reset, Reset 1,2,3 (checked), Auto-Reset, and Off Command-Reset.
- Marking:** A text field containing RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB73

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire 3RW40 w/Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB73

### RVSS – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 3-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to Operation Mode Selector S2.
2. To engage Local Operation Mode, SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode, SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode, SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the HAND position and the Start Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action the OFF Control Command is triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault, SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault, SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB73

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

Control Selection and Operation



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB73

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation, organized into several sections:

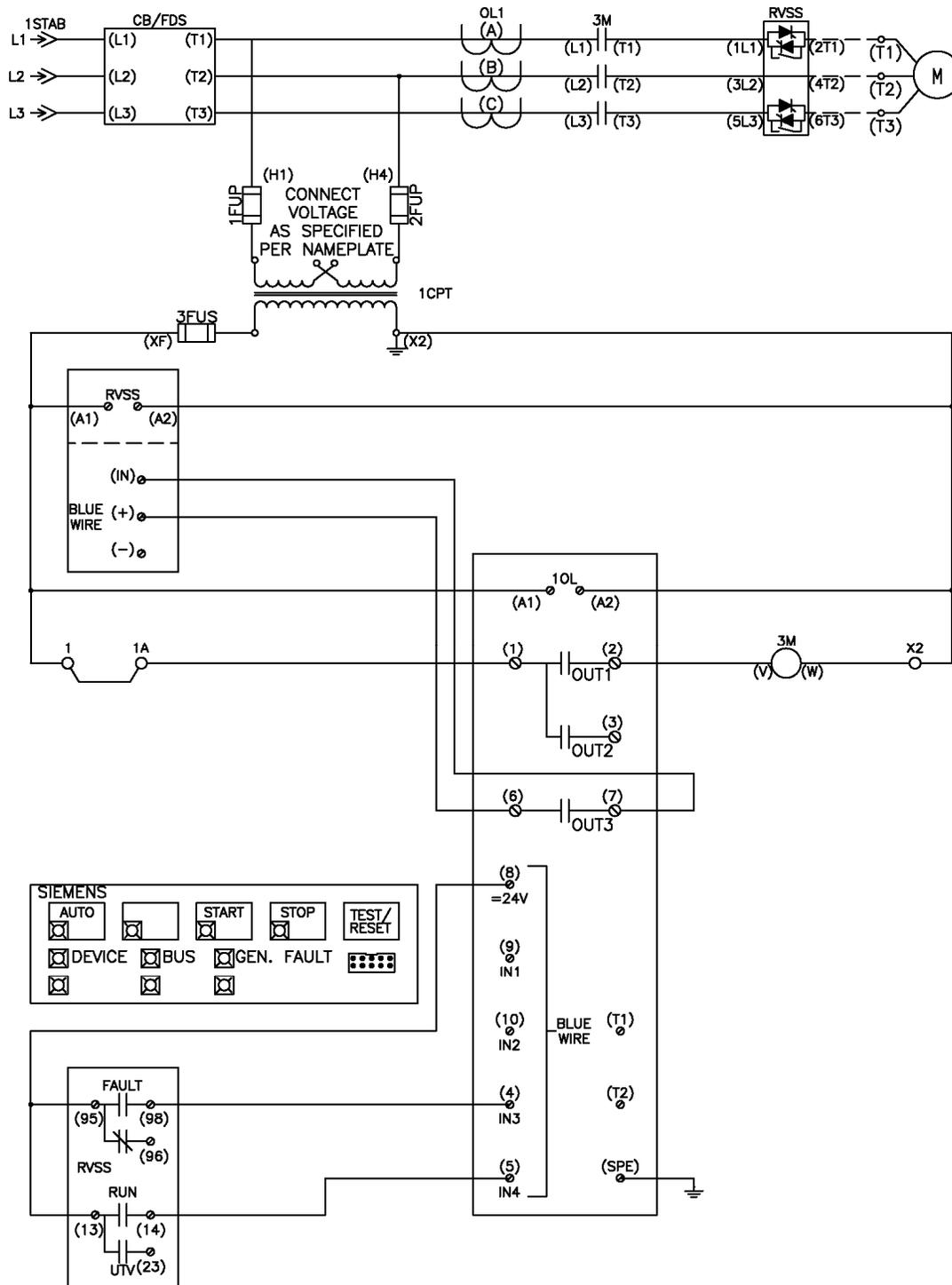
- Basic Unit:** Three dropdown menus for BU - Output 1 (DM1 - Input 2), BU - Output 2 (Not connected), and BU - Output 3 (Contactor Control - 1 QE1).
- External Fault 1:** External Fault - Input (DM1 - Input 1), External Fault - Reset (Not connected), and Response (tripping).
- Type:** Radio buttons for normally open (NO) (selected) and normally closed (NC).
- Activity:** Radio buttons for always (selected) and only if motor runs.
- External Fault - Reset also by:** Checkboxes for Test/Reset Button, RS232 (Panel Reset) (checked), Remote Reset, Reset 1,2,3 (checked), Auto-Reset, and Off Command-Reset.
- Marking:** A text field containing RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB74

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire 3RW40 w/Input Isolation

Connection Diagram

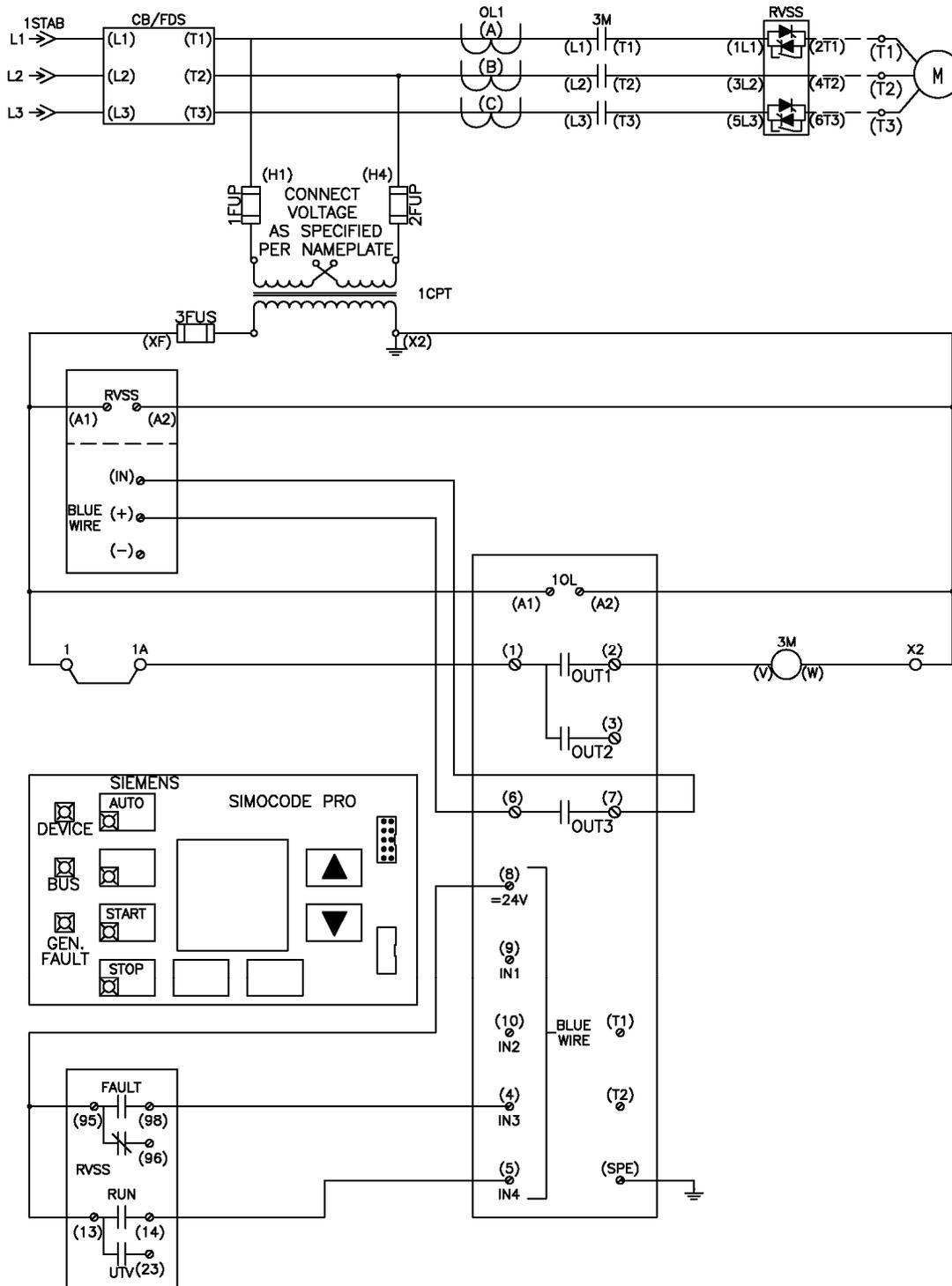


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB74

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire 3RW40 w/Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB74

### RVSS – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

5. Operator Panel Button 3 (START) is connected to the ON > Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
6. To engage the RVSS the OP Start Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
7. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
8. To disengage the RVSS the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
9. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
10. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, | causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB74

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW40 w/Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector

Cyclic Receive - Bit 0.5

Non-Volatile Element 1 - Output

Local Control [LC]

Not connected

Not connected

Not connected

Not connected

Not connected

PLC/DCS [DP]

Not connected

Not connected

Signal Conditioner 1 - Output

Cyclic Receive - Bit 0.2

Not connected

PC [DPV1]

Not connected

Not connected

Not connected

Not connected

Not connected

Operator Panel [OP]

Not connected

Not connected

OP - Button 4

OP - Button 3

Not connected

Signal Conditioner 1

Signal Conditioner - Type: inverting

Signal Conditioner - Input: Cyclic Receive - Bit 0.2

Signal Conditioner - Reset: Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote	
Released	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Released	Off (enabled)	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Released	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Released Control Command
Released	Off (enabled)	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preferred for direct Control of Control Functions
Released	On (enabled)	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Released	Off (enabled)	On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Released Control Command: Dn<<, Dn<, Off, On, Dn>>

Preferred for direct Control of Control Functions: Dn<<, Dn<, Off, On, Dn>>

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB74

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW40 w/Input Isolation

### Parameter Detail

AUTO Toggle Operation

The screenshot shows a configuration window with three sections:

- Non-Volatile Element 1**
  - Non-Volatile Element - Type: edge rising with memory
  - Non-Volatile Element - Input: OP - Button 1
  - Non-Volatile Element - Reset: Non-Volatile Element 2 - Output
- Counter 1**
  - Counter - Limit: 2
  - Counter - Input +: OP - Button 1
  - Counter - Input -: Not connected
  - Counter - Reset: Non-Volatile Element 2 - Output
- Non-Volatile Element 2**
  - Non-Volatile Element - Type: non inverting
  - Non-Volatile Element - Input: Counter 1 - Output
  - Non-Volatile Element - Reset: Not connected

RVSS Control and Operation

The screenshot shows a configuration window for RVSS Control and Operation with the following sections:

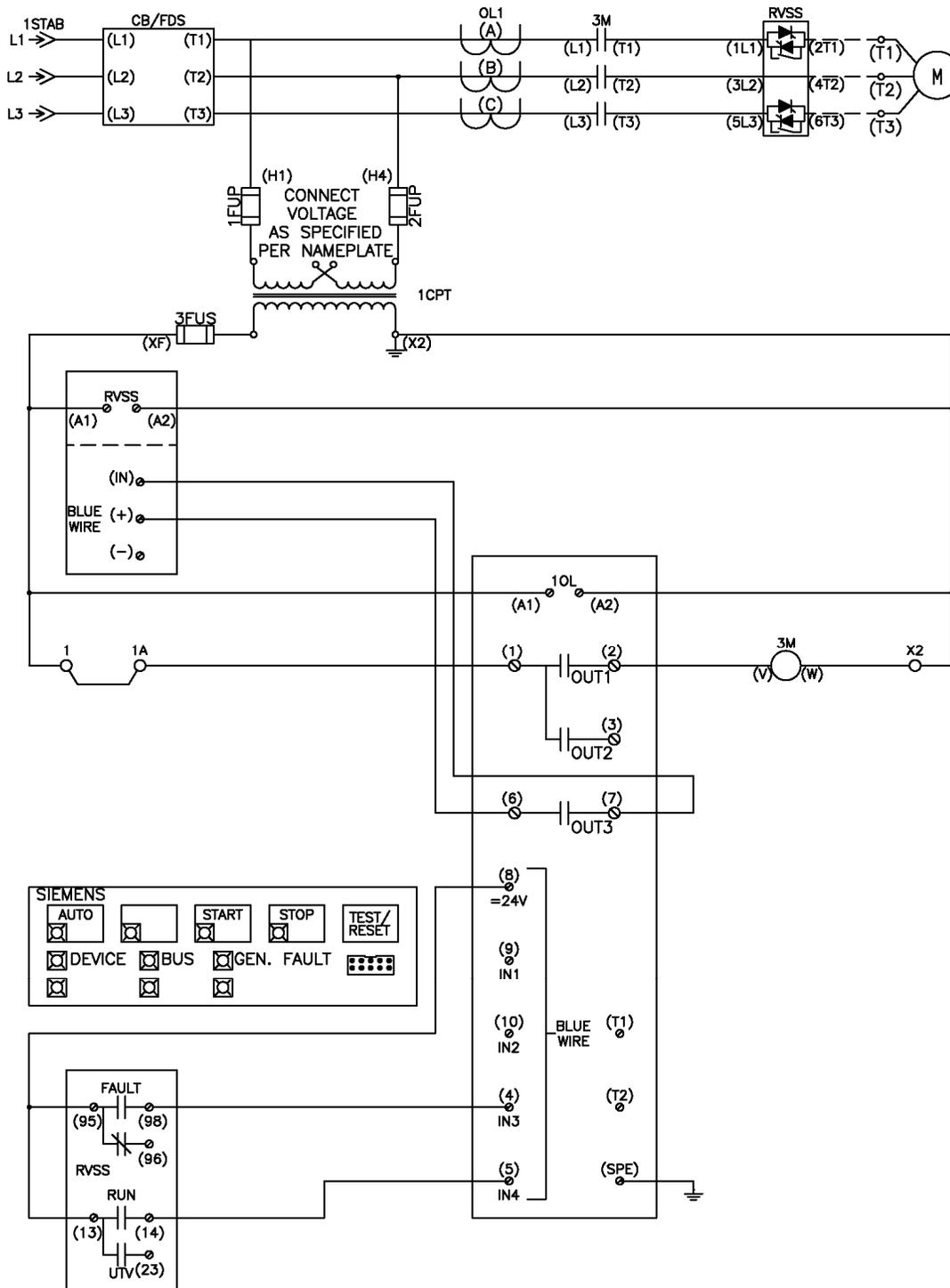
- Basic Unit**
  - BU - Output 1: BU - Input 4
  - BU - Output 2: Not connected
  - BU - Output 3: Contactor Control - 1 QE1
- External Fault 1**
  - External Fault - Input: BU - Input 3
  - External Fault - Reset: Not connected
  - Response: tripping
  - Type:  normally open (NO)  normally closed (NC)
  - Activity:  always  only if motor runs
  - External Fault - Reset also by:
    - Test/Reset Button, R5232 (Panel Reset)  Auto-Reset
    - Remote Reset, Reset 1,2,3  Off Command-Reset
  - Making: RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB75

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 3-Wire 3RW40 w/Input Isolation

### Connection Diagram

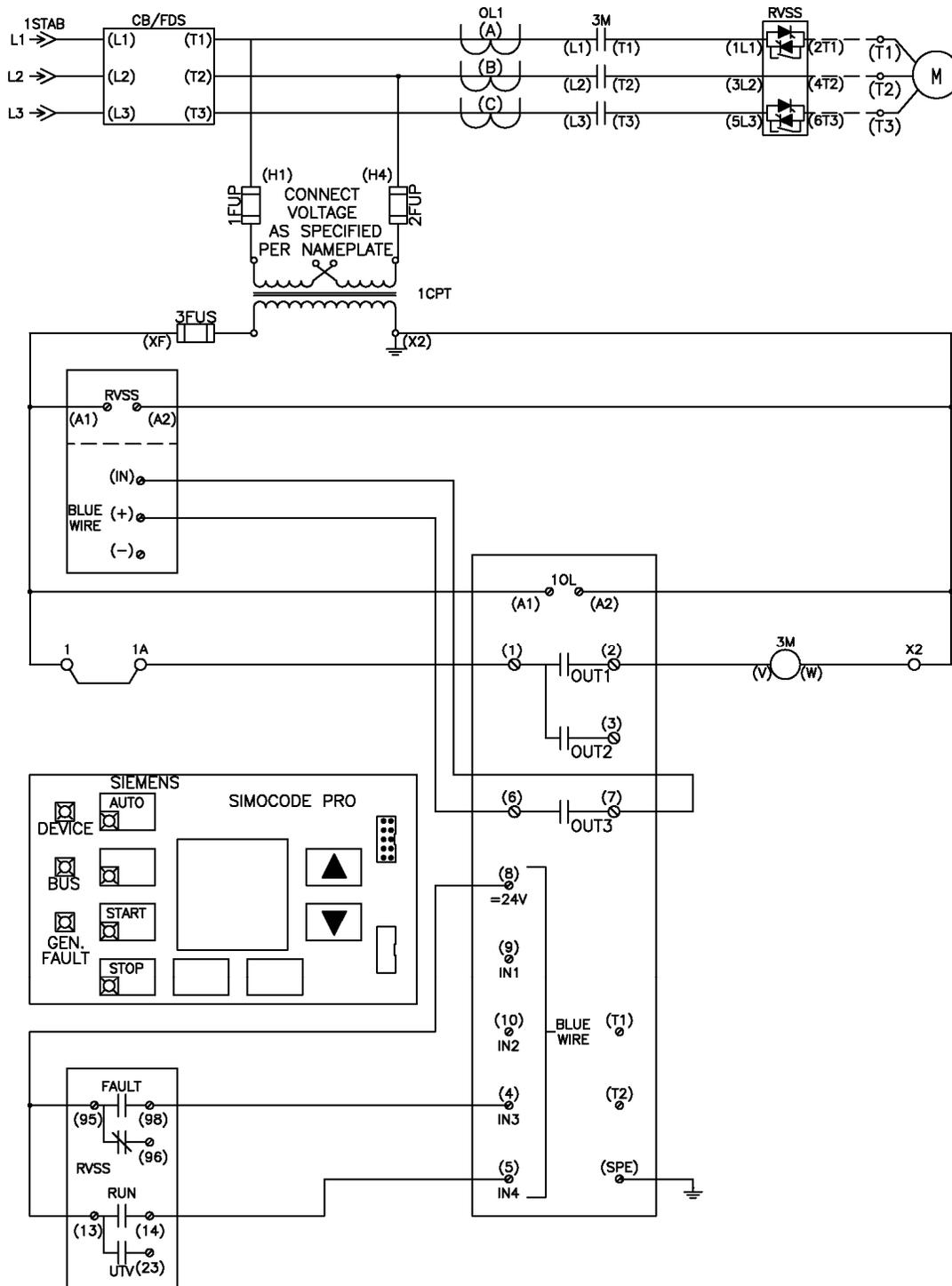


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB75

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OPD – Remote 3-Wire 3RW40 w/Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB75

### RVSS – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode, Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via the LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (START) is connected to the ON > Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS the OP Start Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 3 to open.
5. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing Output 1 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time)
6. In the event of an Overload or any other General Fault event SIMOCODE Output 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB75

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

The interface is divided into several sections:

- Operation Mode Selector:**
  - Cyclic Receive - Bit 0.5
  - Non-Volatile Element 1 - Output
- Local Control (LC):**
  - Not connected
  - Not connected
  - Not connected
  - Not connected
- PLC/OCS (DP):**
  - Not connected
  - Not connected
  - Cyclic Receive - Bit 0.1
  - Cyclic Receive - Bit 0.2
  - Not connected
- PC (DPV1):**
  - Not connected
  - Not connected
  - Not connected
  - Not connected
  - Not connected
- Operator Panel (OP):**
  - Not connected
  - Not connected
  - OP - Button 4
  - OP - Button 3
  - Not connected

**Release Matrix:**

	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Released Control Command:** On<<, On, Off, On>, On>>

**Preferred for direct Control of Control Functions:** On>, On>>

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB75

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation

### Parameter Detail

AUTO Toggle Operation

**Non-Volatile Element 1**

Non-Volatile Element - Type: edge rising with memory

Non-Volatile Element - Input: OP - Button 1

Non-Volatile Element - Reset: Non-Volatile Element 2 - Output

**Counter 1**

Counter - Limit: 2

Counter - Input +: OP - Button 1

Counter - Input -: Not connected

Counter - Reset: Non-Volatile Element 2 - Output

**Non-Volatile Element 2**

Non-Volatile Element - Type: non inverting

Non-Volatile Element - Input: Counter 1 - Output

Non-Volatile Element - Reset: Not connected

RVSS Control and Operation

**Basic Unit**

BU - Output 1: BU - Input 4

BU - Output 2: Not connected

BU - Output 3: Contactor Control - 1 QE1

**External Fault 1**

External Fault - Input: BU - Input 3

External Fault - Reset: Not connected

Response: tripping

Type

normally open (NO)  normally closed (NC)

Activity

always  only if motor runs

External Fault - Reset also by

Test/Reset Button, RS232 (Panel Reset)  Auto-Reset

Remote Reset, Reset 1,2,3  Off Command Reset

Making: RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## 9. 3RW40 Reduced Voltage Soft Starter with Input Isolation and Bypass Contactors

The reduced voltage soft starter uses an SCR equipped solid state controller to provide smooth, stepless acceleration by controlling the applied voltage, current, and torque to the motor terminals for single-speed, full-voltage operation. An input isolation contactor is integrated into the design to provide complete voltage removal to the motor windings. A bypass contactor is integrated into the design to provide selectable direct across the line, single- speed, single-direction, full-voltage operation.

### The basic RVSS operation of this starter is as follows:

1. A local or remote RVSS start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Output 3 closes giving the RVSS a signal to begin operation.
3. The RVSS RUN contact closes relaying the SIMOCODE Pro to close Output 1 which energizes the coil of Input Isolation Contactor 3M.
4. With the Input Isolation Contactor 3M closed the RVSS follows its settings for ramp-up, run, and internal bypass.
5. A local or remote stop signal is given to the SIMOCODE Pro.
6. The SIMOCODE Pro Output 3 opens giving the RVSS a signal to stop operation.
7. The RVSS follows its settings for ramp-down opening the RVSS RUN contact when the designated time has elapsed.
8. With the RVSS RUN contact open the SIMOCODE Pro opens its Output 1 which de-energizes the coil of Input Isolation Contactor 3M.
9. If a fault occurs at any time the SIMOCODE Pro will end the starter operation.

### The basic BYPASS operation of this starter is as follows:

1. A local or remote BYPASS start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Output 2 closes which energizes the coil of Bypass Contactor 2M.
3. A local or remote stop signal is given to the SIMOCODE Pro.
4. The SIMOCODE Pro Output 2 opens which de-energizes the coil of Bypass Contactor 2M.
5. If a fault occurs at any time the SIMOCODE Pro will end the starter operation.

The RVSS auxiliary contacts are connected to the SIMOCODE Pro inputs to provide starter control as well as operation feedback over Profibus-DP.

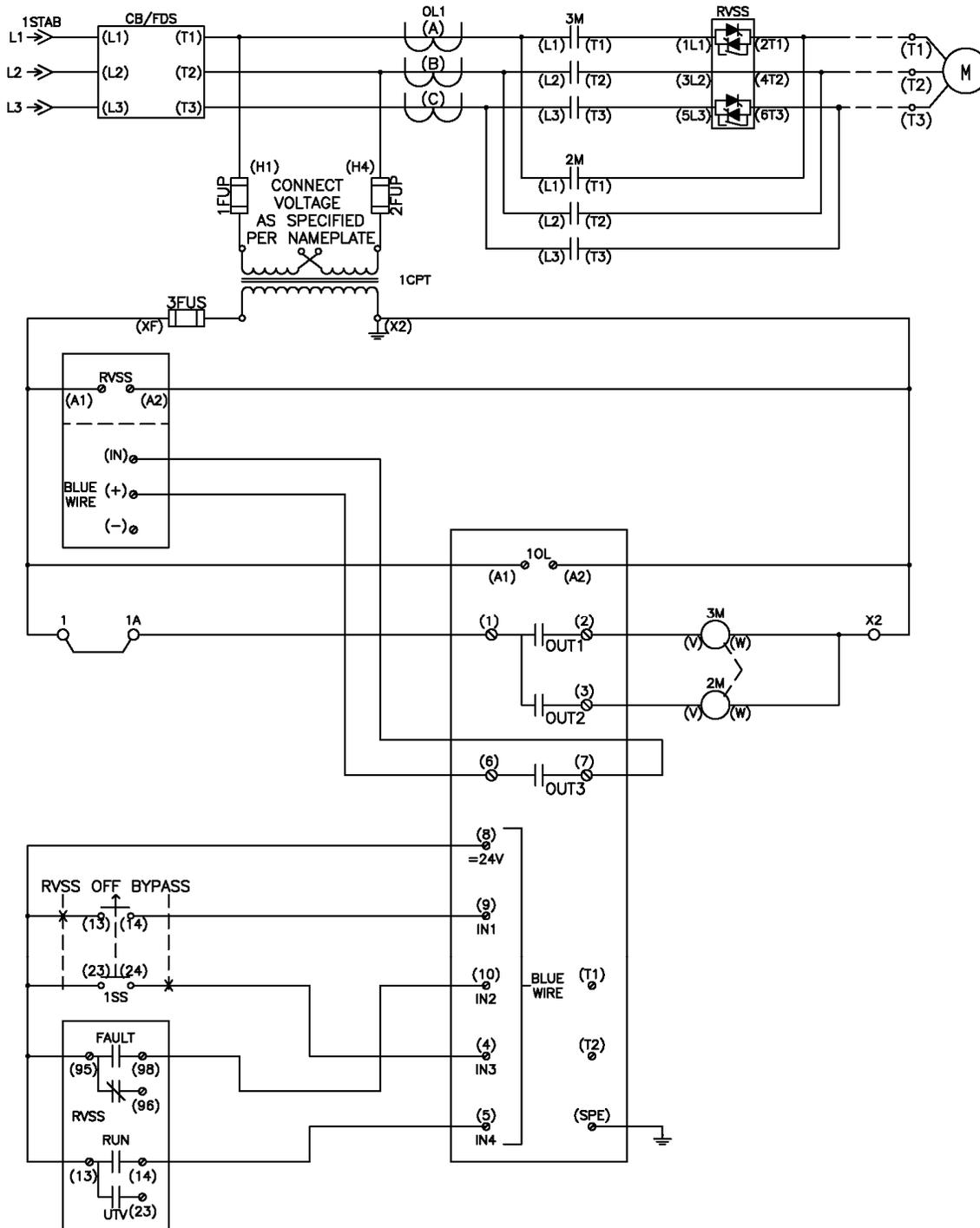
- o The RVSS RUN contact provides direct control over the 3M input isolation contactor and starter condition feedback. When active the contact will signal the SIMOCODE Pro to close Output 1 to energize the 3M contactor coil. This contact will switch states during ramp-up, internal bypass, and ramp-down.
- o The RVSS FAULT contact provides starter condition feedback. When active, the contact will signal the SIMOCODE Pro to trigger an external fault command. This contact will change states during thyristor thermal overload, phase failure, no load voltage, mains under-voltage, mains over-voltage, or equipment error.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB77

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB77

### RVSS – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the RVSS the Selector Switch is placed into the RVSS position. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Selector Switch is placed into the BYPASS position. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB77

### RVSS – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 2 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB77

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:** This section contains multiple parameter groups:
  - Operation Mode Selector:** Includes 'Cyclic Receive - Bit 0.5' (set to 51) and 'Fixed Level - 1' (set to 52).
  - Local Control (LC):** Includes 'Not connected', 'BU - Input 3', 'Truth Table 1 3/10 - Output', and 'BU - Input 1'.
  - PLC/DCS (DP):** Includes 'Not connected', 'Cyclic Receive - Bit 0.0', 'Truth Table 2 3/10 - Output', and 'Cyclic Receive - Bit 0.2'.
  - PC (DPV1):** All four inputs are set to 'Not connected'.
  - Operator Panel (OP):** All four inputs are set to 'Not connected'.
- Releases:** A table defining the states for 'On (enabled)' and 'Off (enabled)' across four modes: Local 1, Local 2, Local 3, and Remote.
 

	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Released Control Command:** A box with four output lines: Oncc, Ono, Off, and Ono.
- Preferred for direct Control of Control Functions:** A box with four output lines: Ono, Ono, Ono, and Ono.
- Truth Table 1 3/10:**
  - Inputs: Truth Table - Input 1 (Not connected), Truth Table - Input 2 (BU - Input 1), Truth Table - Input 3 (BU - Input 3).
  - Truth Table:

I1	I2	I3	Q
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0
- Truth Table 2 3/10:**
  - Inputs: Truth Table - Input 1 (Not connected), Truth Table - Input 2 (Cyclic Receive - Bit 0.0), Truth Table - Input 3 (Cyclic Receive - Bit 0.2).
  - Truth Table:

I1	I2	I3	Q
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB77

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

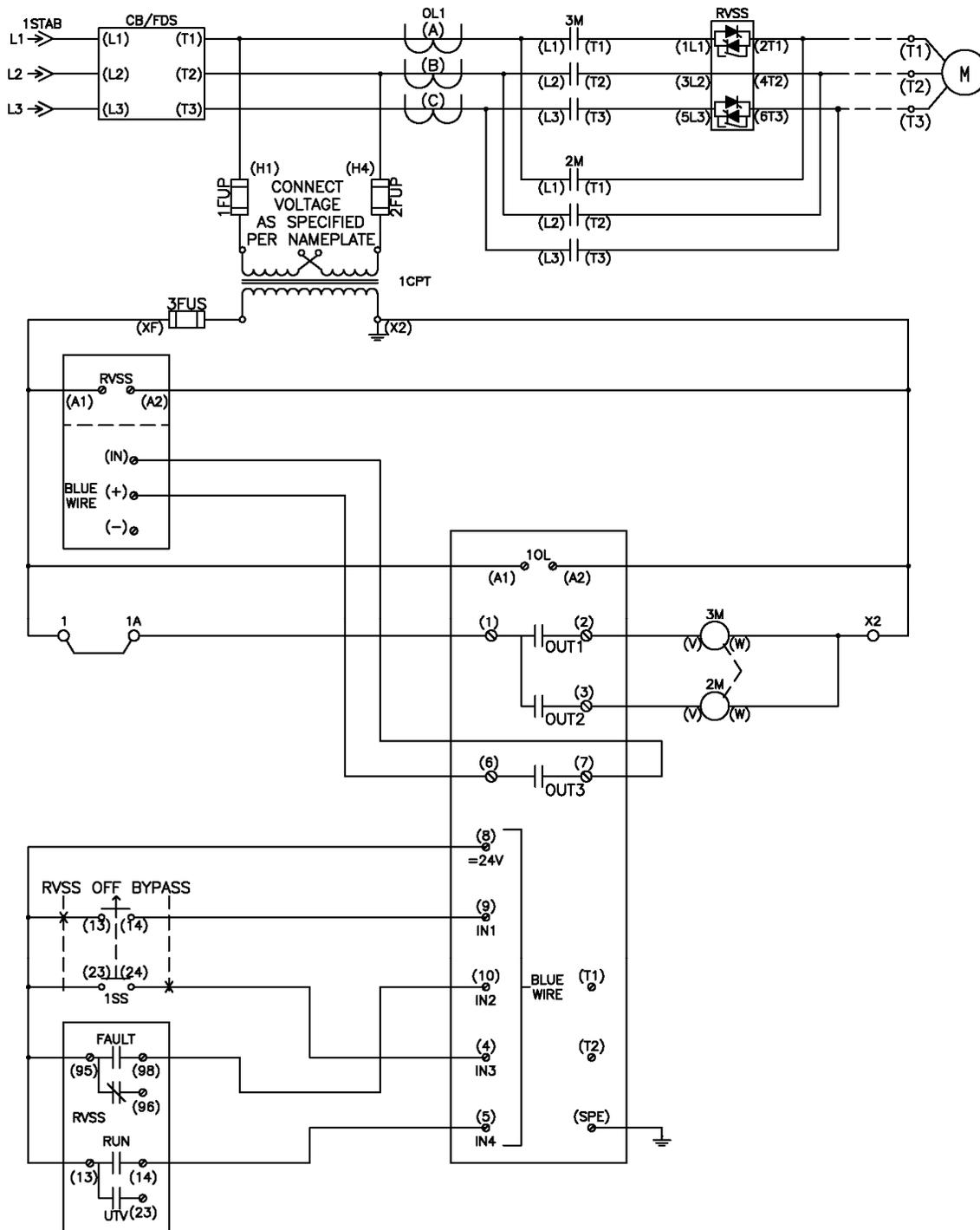
- Basic Unit:**
  - BU - Output 1: BU - Input 4
  - BU - Output 2: Contactor Control - 2 OE2
  - BU - Output 3: Contactor Control - 1 QE1
- External Fault 1:**
  - External Fault - Input: BU - Input 2
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)
  - normally closed (NC)
- Activity:**
  - always
  - only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)
  - Auto-Reset
  - Remote Reset, Reset 1,2,3
  - Off Command-Reset
- Marking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB78

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB78

### RVSS – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the RVSS the Selector Switch is placed into the RVSS position. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Selector Switch is placed into the BYPASS position. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB78

### RVSS – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 2 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB78

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - B# 0.5  
 Fixed Level - '1'

Local Control [LC]:  
 Not connected  
 BU - Input 3  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 Not connected

PLC/DCS [DP]:  
 Not connected  
 Cyclic Receive - B# 0.0  
 Cyclic Receive - B# 0.1  
 Cyclic Receive - B# 0.2  
 Not connected

PC [DPV1]:  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Full connected

Operator Panel [OP]:  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Released Control Command:  
 Dnc<<  
 Dnc  
 Oil  
 On<  
 On>>

**Truth Table 1 3/10**

I1	I2	I3	Q
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB78

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

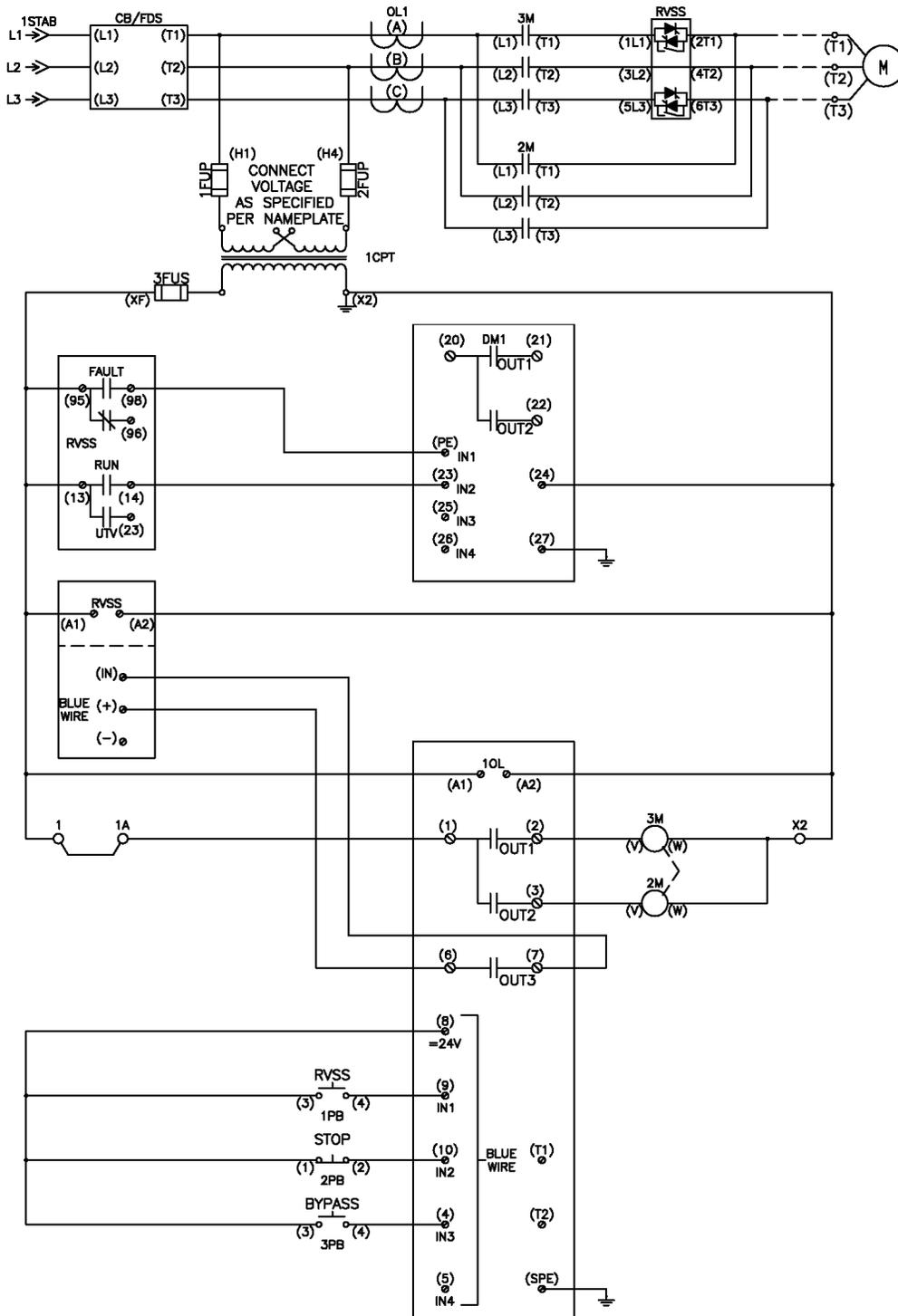
The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

- Basic Unit:** Three dropdown menus for BU - Output 1 (BU - Input 4), BU - Output 2 (Contactor Control - 2 OE2), and BU - Output 3 (Contactor Control - 1 QE1).
- External Fault 1:** External Fault - Input (BU - Input 2), External Fault - Reset (Not connected), and Response (tripping).
- Type:** Radio buttons for normally open (NO) (selected) and normally closed (NC).
- Activity:** Radio buttons for always (selected) and only if motor runs.
- External Fault - Reset also by:** Checkboxes for Test/Reset Button, RS232 (Panel Reset) (checked), Remote Reset, Reset 1,2,3 (checked), Auto-Reset, and Diff Command/Reset.
- Marking:** A text field containing RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB79

RVSS – Profibus Bit Operation Mode Selection –  
 Local 3-Wire PB – Remote 2-Wire 3RW40 w/Input Isolation and Bypass  
 Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB79

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the RVSS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the BYPASS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON< Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB79

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB79

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:** Includes 'Operation Mode Selector' with 'Cyclic Receive - Bit 0.5' and 'Fixed Level - 1'. It also shows bit status for S1 and S2.
- Local Control (LC):** Lists 'BU - Input 3', 'BU - Input 2', and 'BU - Input 1' with their respective 'On' and 'Off' states and 'Released' status.
- PLC/DCS (DP):** Includes 'Cyclic Receive - Bit 0.0', 'Truth Table 2 3/10 - Output', and 'Cyclic Receive - Bit 0.2'.
- PC (DPV1):** Shows four 'Not connected' status indicators.
- Operator Panel (OP):** Shows four 'Not connected' status indicators.
- Released Control Command:** A vertical stack of four 'On' status indicators.
- Released for direct Control of Control Functions:** A vertical stack of four 'On' status indicators.
- Truth Table 2 3/10:** A table with inputs I1, I2, I3 and output O.
- Truth Table 3/10:** A table with inputs I1, I2, I3 and output O.

**Truth Table 2 3/10**

Input	I1	I2	I3	O
Truth Table - Input 1	0	0	0	1
Truth Table - Input 2	0	0	1	0
Truth Table - Input 3	0	1	0	0
	0	1	1	1
	1	0	0	0
	1	0	1	0
	1	1	0	0
	1	1	1	0

**Truth Table 3/10**

Input	I1	I2	I3	O
Truth Table - Input 1	0	0	0	1
Truth Table - Input 2	0	0	1	0
Truth Table - Input 3	0	1	0	0
	0	1	1	1
	1	0	0	0
	1	0	1	0
	1	1	0	0
	1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB79

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

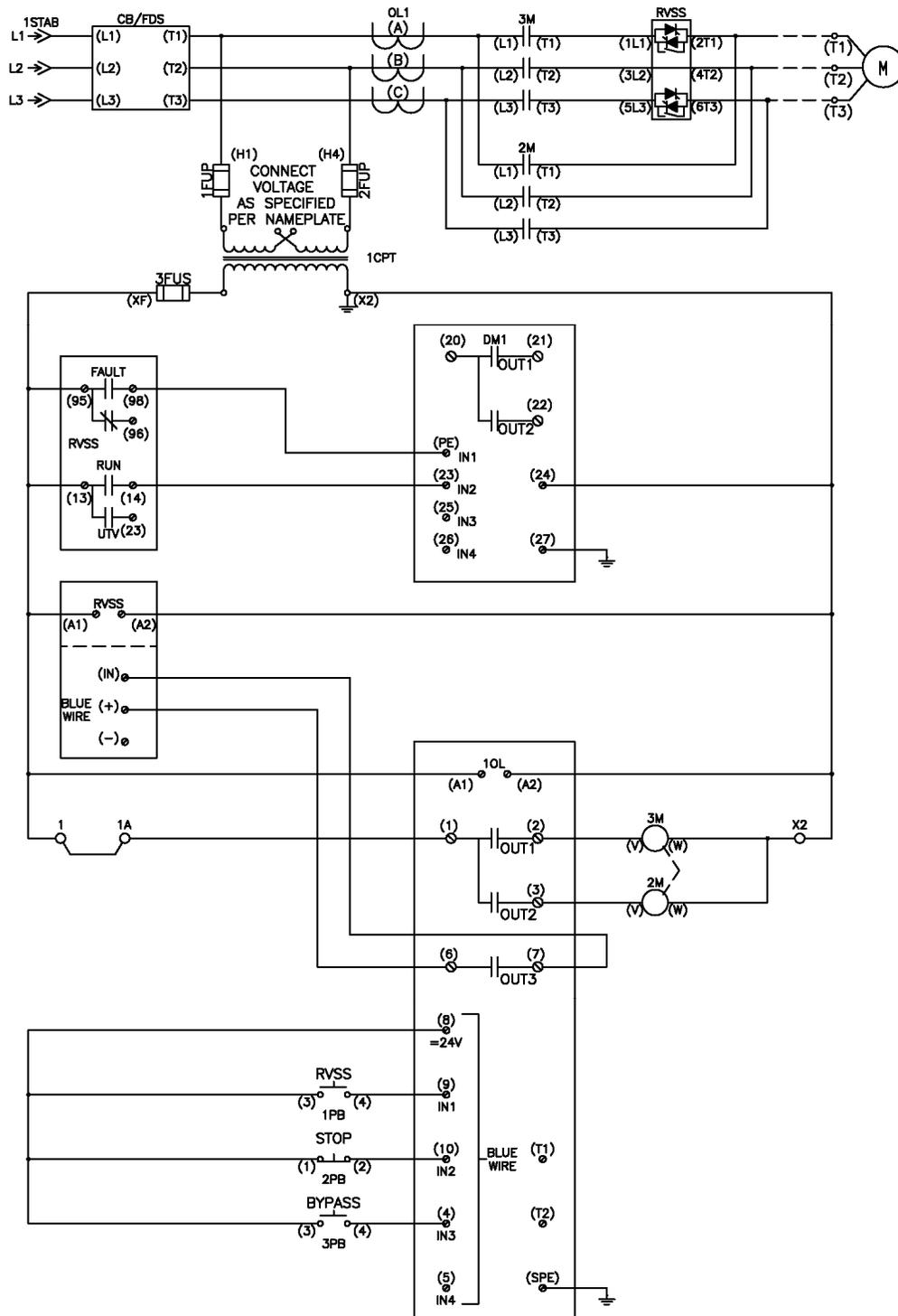
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (DM1 - Input 2), BU - Output 2 (Contactor Control - 2 OE2), and BU - Output 3 (Contactor Control - 1 QE1).
- External Fault 1:** Includes dropdowns for External Fault - Input (DM1 - Input 1) and External Fault - Reset (Not connected), along with a Response dropdown set to tripping.
- Type:** Radio buttons for normally open (NO) (selected) and normally closed (NC).
- Activity:** Radio buttons for always (selected) and only if motor runs.
- External Fault - Reset also by:** Checkboxes for Test/Reset Button, RS232 (Panel Reset) (checked), Remote Reset, Reset 1,2,3 (checked), Auto-Reset, and DfI Command-Reset.
- Masking:** A text field containing the value RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB80

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB80

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the RVSS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the BYPASS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON< Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB80

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB80

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB80

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

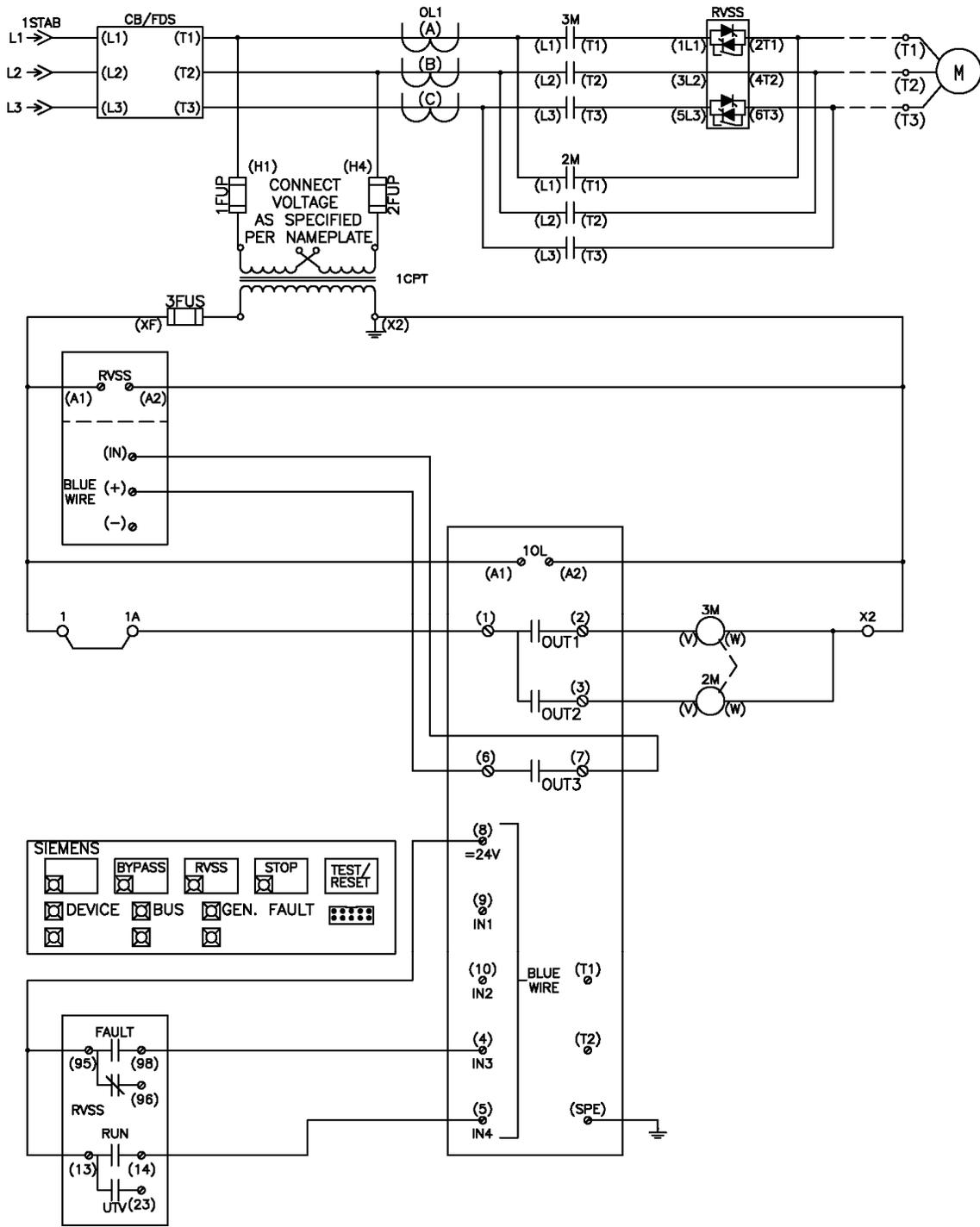
- Basic Unit:**
  - BU - Output 1: DM1 - Input 2
  - BU - Output 2: Contactor Control - 2 OE2
  - BU - Output 3: Contactor Control - 1 QE1
- External Fault 1:**
  - External Fault - Input: DM1 - Input 1
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)
  - normally closed (NC)
- Activity:**
  - always
  - only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)
  - Auto-Reset
  - Remote Reset, Reset 1,2,3
  - DfI Command-Reset
- Masking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB81

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram

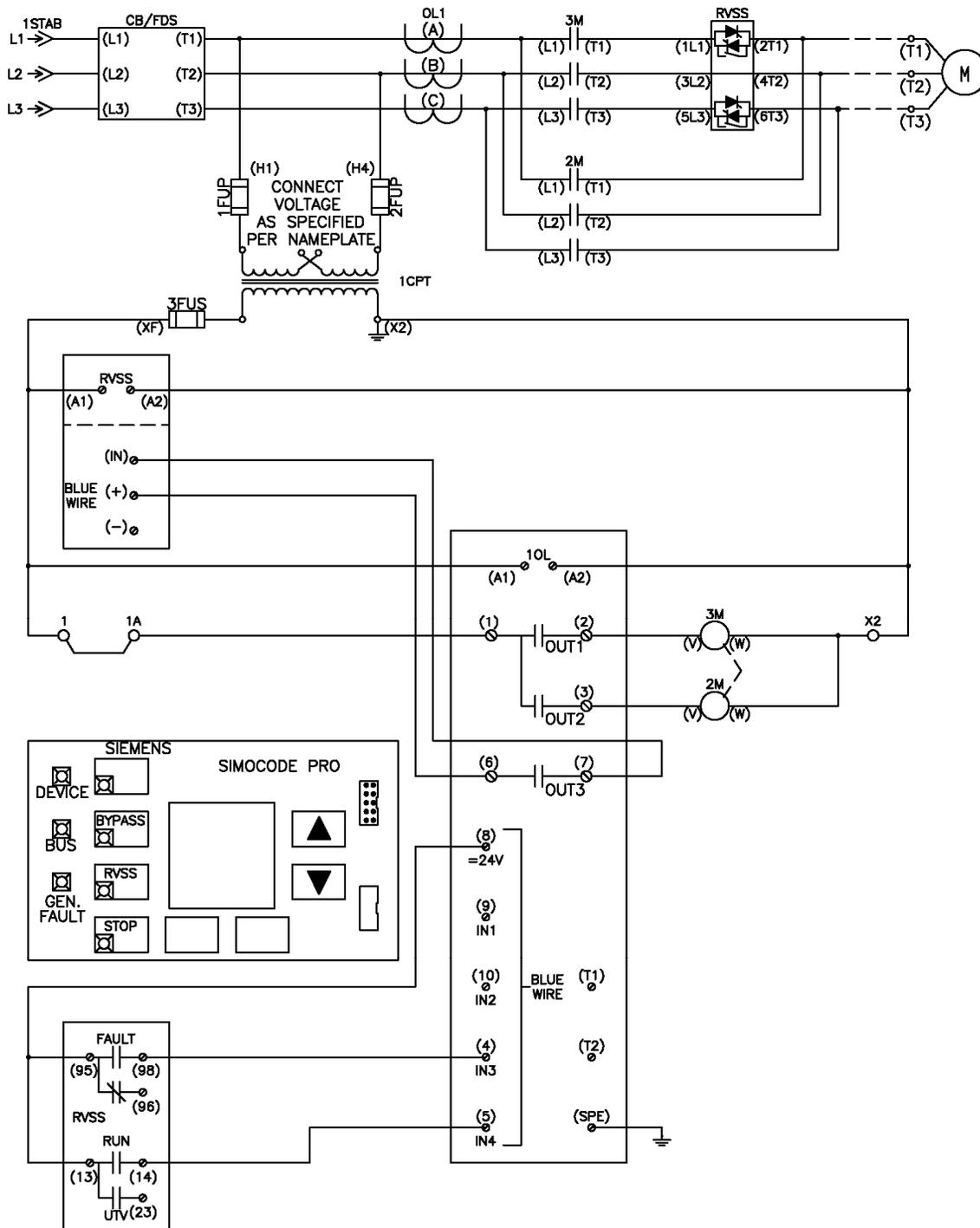


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB81

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Operating Instructions



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB81

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (RVSS) is connected to the ON > Control Command, Operator Panel Button 2 (BYPASS) is connected to the ON < Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS the OP RVSS Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the OP BYPASS Pushbutton is depressed. The ON< Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB81

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB81

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

PLC/DCS (DP):  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC (DPV1):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP):  
 Not connected  
 OP - Button 2  
 OP - Button 4  
 OP - Button 3  
 Not connected

	S1	S2	'0'	'0'	'1'	'1'
			'0'	'1'	'0'	'1'

	Local 1	Local 2	Local 3	Remote
Released				
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command:  
 On<<  
 On<  
 Off  
 On>  
 On>>

Preferred for direct Control of Control Functions:  
 On<<  
 On<  
 Off  
 On>  
 On>>

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected

Truth Table - Input 2: Cyclic Receive - Bit 0.0

Truth Table - Input 3: Cyclic Receive - Bit 0.2

**Truth Table 3/10**

I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB81

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

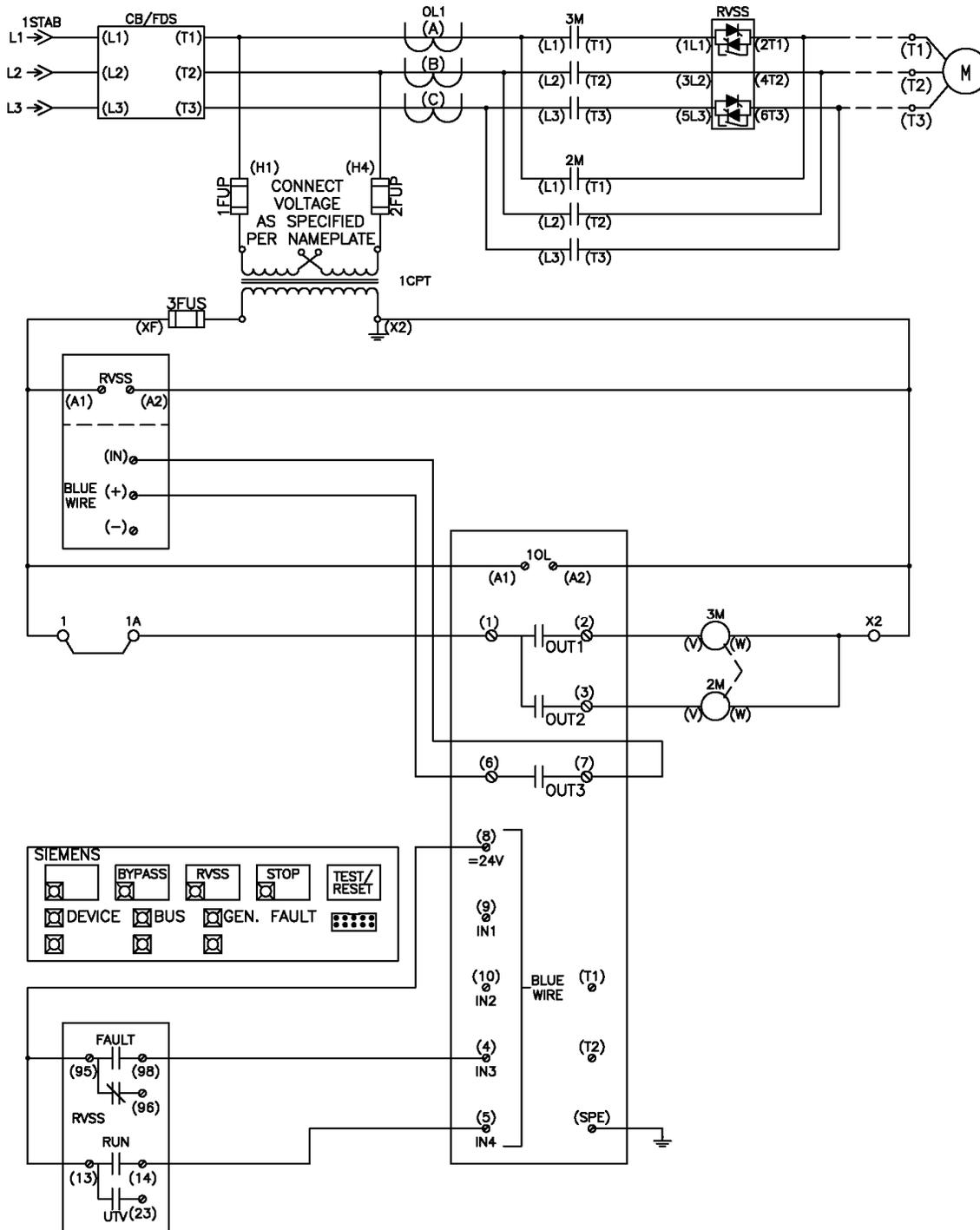
- Basic Unit:**
  - BU - Output 1: BU - Input 4
  - BU - Output 2: Contactor Control - 2 OE2
  - BU - Output 3: Contactor Control - 1 QE1
- External Fault 1:**
  - External Fault - Input: BU - Input 3
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)  normally closed (NC)
- Activity:**
  - always  only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)  Auto-Reset
  - Remote Reset, Reset 1,2,3  Off Command-Reset
- Marking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB82

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram

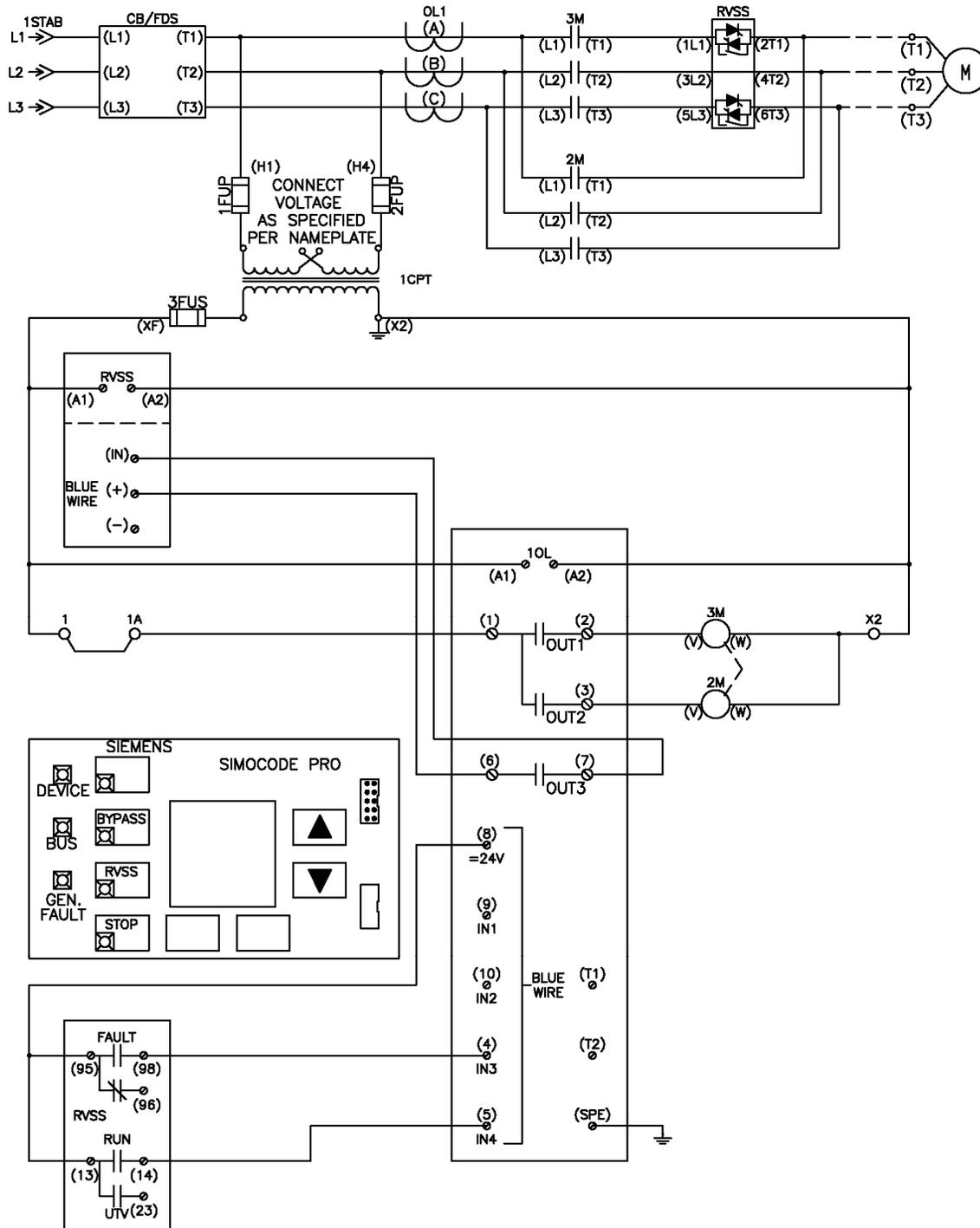


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB82

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB82

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (RVSS) is connected to the ON > Control Command, Operator Panel Button 2 (BYPASS) is connected to the ON < Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS the OP RVSS Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the OP BYPASS Pushbutton is depressed. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB82

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

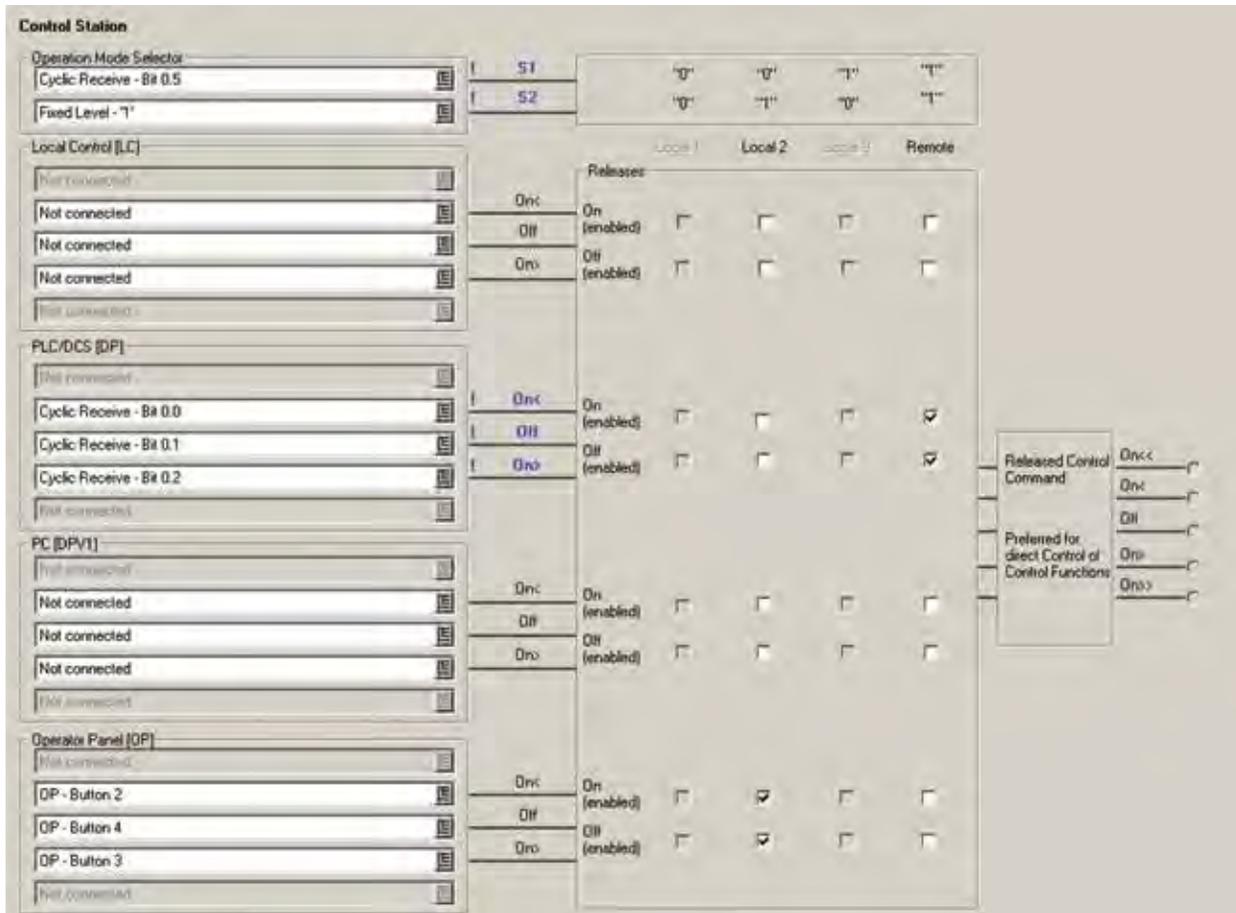
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB82

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB82

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

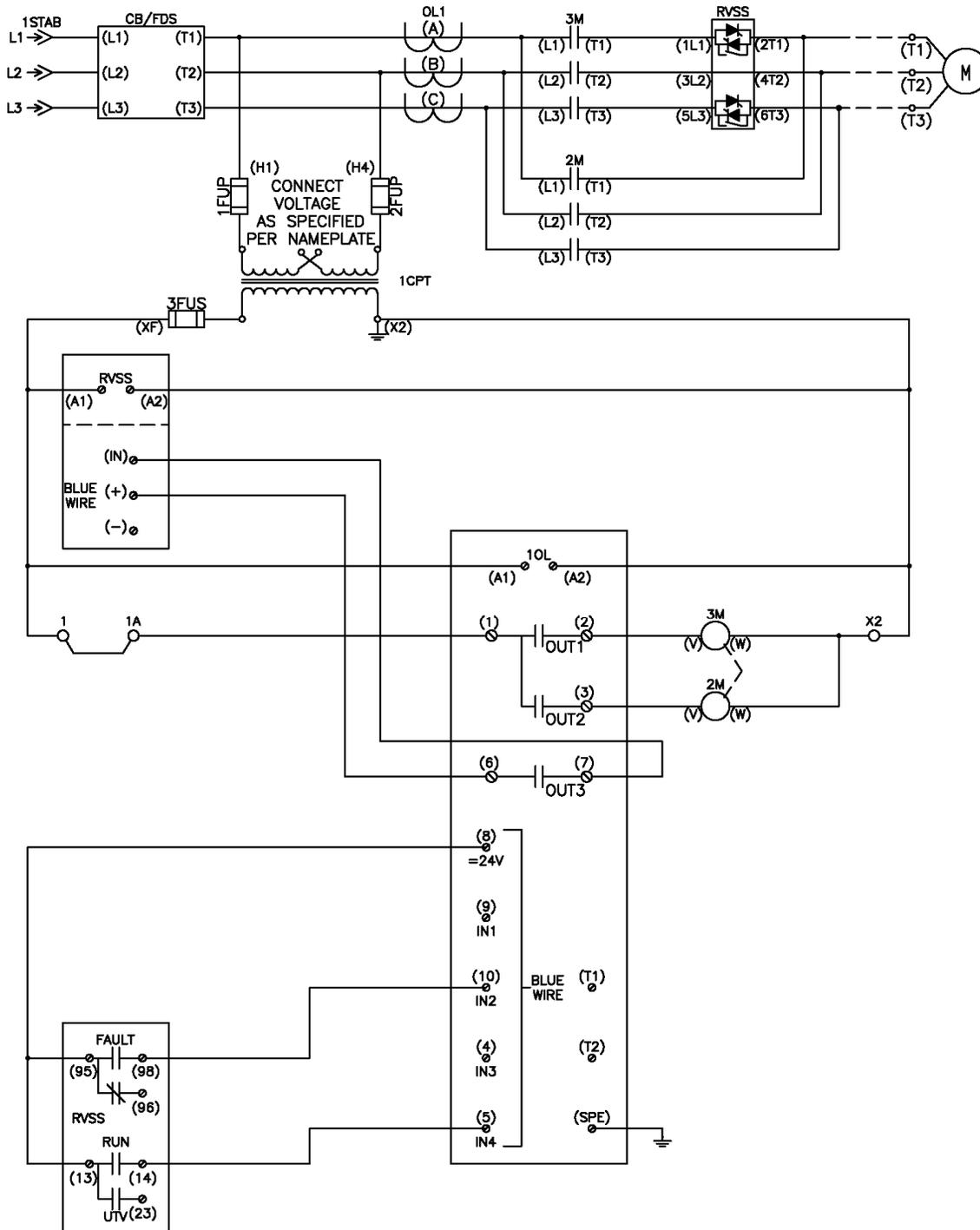
- Basic Unit:**
  - BU - Output 1: BU - Input 4
  - BU - Output 2: Contactor Control - 2 OE2
  - BU - Output 3: Contactor Control - 1 QE1
- External Fault 1:**
  - External Fault - Input: BU - Input 3
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)  normally closed (NC)
- Activity:**
  - always  only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)  Auto-Reset
  - Remote Reset, Reset 1,2,3  Off Command-Reset
- Marking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB83

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB83

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the RVSS the SIMOCODE Input 1 is activated. The ON > Control Command is then triggered causing the SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Input 4 is then activated causing the SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the SIMOCODE Input 3 is activated. The ON < Control Command is then triggered causing the SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the SIMOCODE Input 1 and the SIMOCODE Input 3 are deactivated. The OFF Control Command is then triggered causing the SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Input 4 is deactivated causing the SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Output 2 and SIMOCODE Output 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB83

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 2 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB83

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC)  
 Not connected  
 BU - Input 3  
 Truth Table 1 3I/1O - Output  
 BU - Input 1  
 Not connected

PLC/DCS (DP)  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3I/1O - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	Local 1	Local 2	Local 3	Remote
Releases				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 Oncc  
 Oncc  
 Off  
 Oncc  
 Oncc

Preferred for direct Control of Control Functions  
 Oncc  
 Oncc

**Truth Table 1 3I/1O**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: BU - Input 1  
 Truth Table - Input 3: BU - Input 3

I1	I2	I3	Q
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

**Truth Table 2 3I/1O**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: Cyclic Receive - Bit 0.0  
 Truth Table - Input 3: Cyclic Receive - Bit 0.2

I1	I2	I3	Q
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB83

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

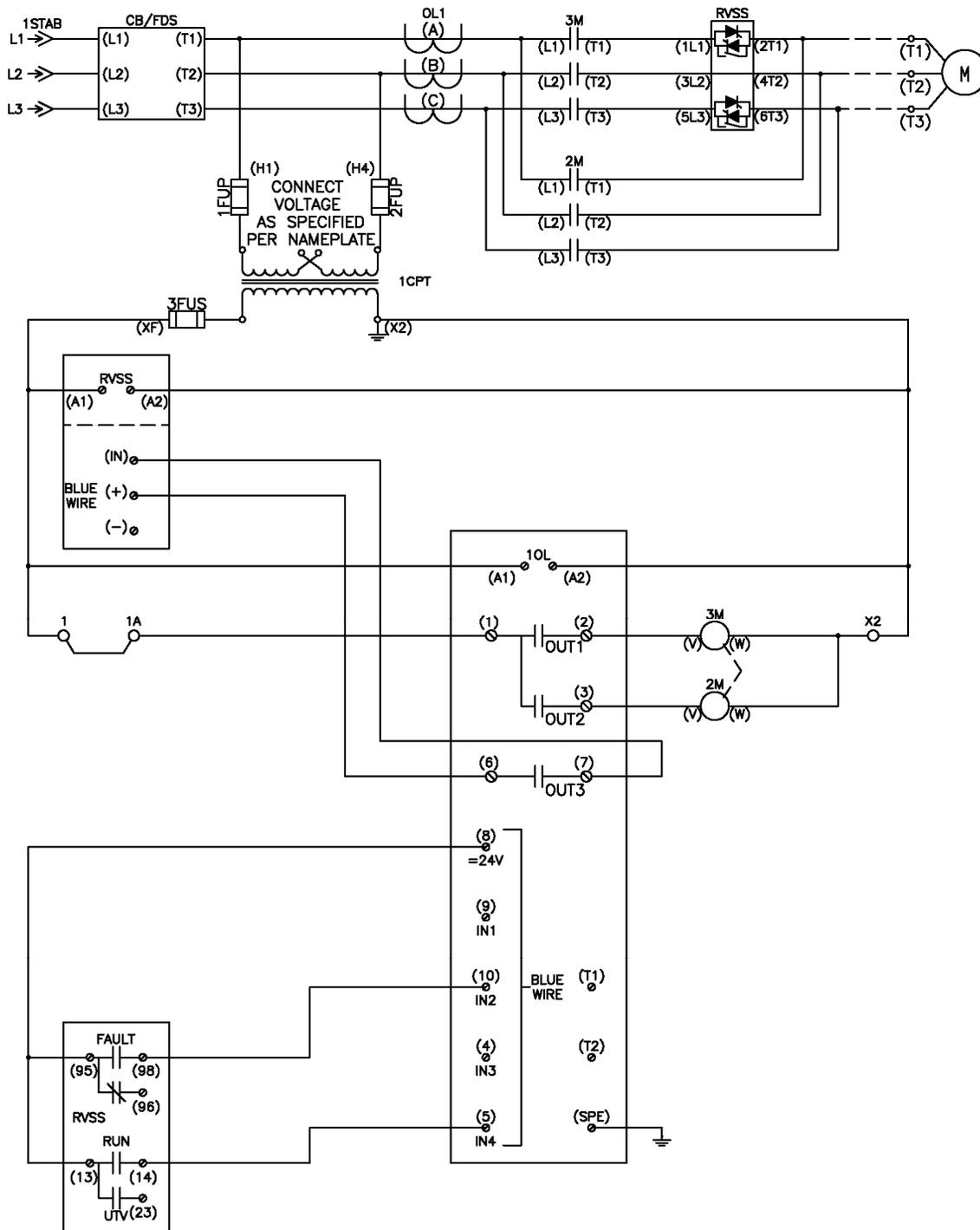
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (DM1 - Input 2), BU - Output 2 (Contactor Control - 2 OE2), and BU - Output 3 (Contactor Control - 1 QE1).
- External Fault 1:** Includes dropdowns for External Fault - Input (DM1 - Input 1) and External Fault - Reset (Not connected), along with a Response dropdown set to tripping.
- Type:** Radio buttons for normally open (NO) (selected) and normally closed (NC).
- Activity:** Radio buttons for always (selected) and only if motor runs.
- External Fault - Reset also by:** Checkboxes for Test/Reset Button, RS232 (Panel Reset), Remote Reset, Reset 1.2.3, Auto-Reset, and DIF Command-Reset.
- Marking:** A text field containing RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB84

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB84

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the RVSS SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor SIMOCODE Input 3 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor SIMOCODE Input 1 and SIMOCODE Input 3 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB84

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 2 will indicate RVSS Fault Status only.

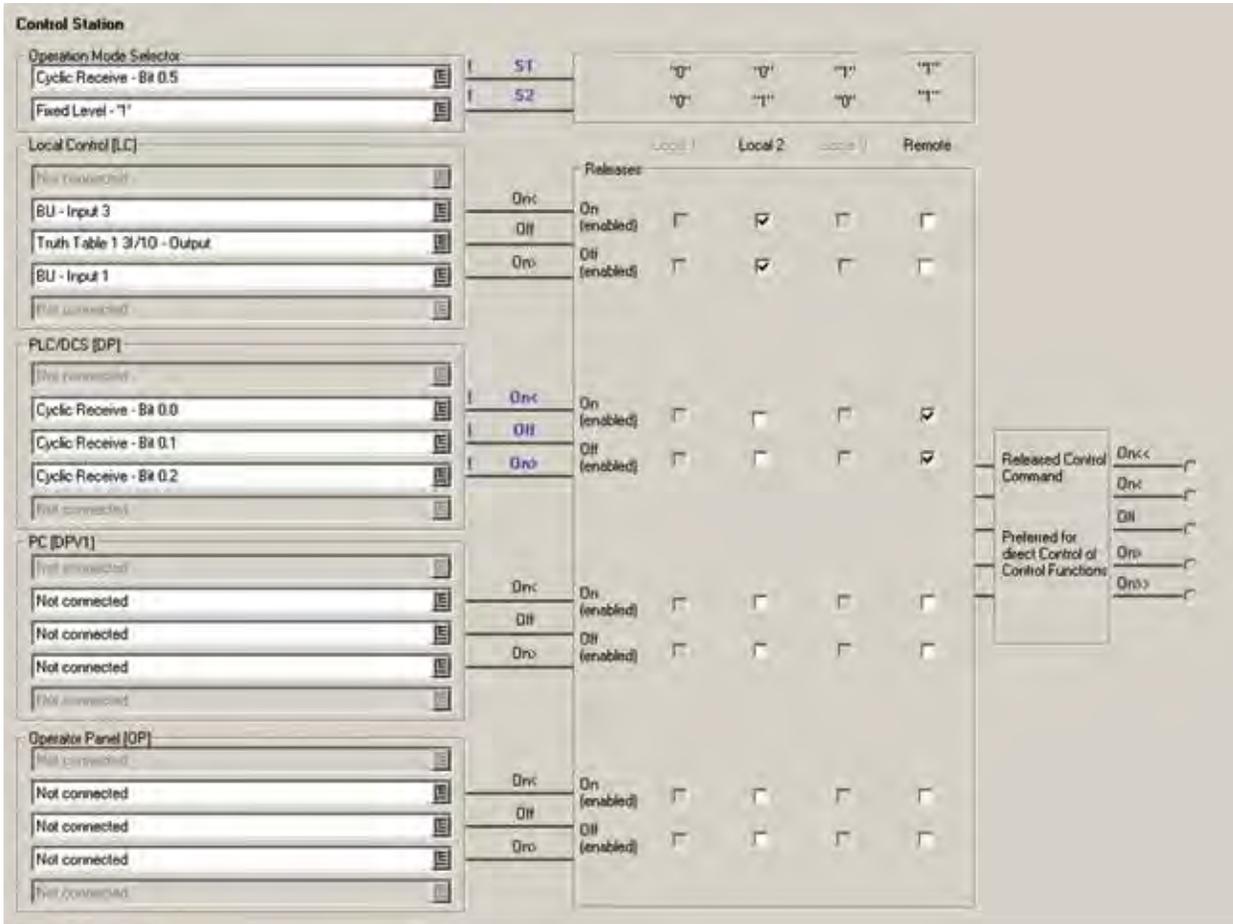
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB84

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB84

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Operating Instructions

RVSS Control and Operation

**Basic Unit**

BU - Output 1: BU - Input 4

BU - Output 2: Contactor Control - 2 OE2

BU - Output 3: Contactor Control - 1 OE1

**External Fault 1**

External Fault - Input: BU - Input 2

External Fault - Reset: Not connected

Response: tripping

Type

normally open (NO)  normally closed (NC)

Activity

always  only if motor runs

External Fault - Reset also by

Test/Reset Button, RS232 (Panel Reset)  Auto-Reset

Remote Reset, Reset 1,2,3  Diff Command-Reset

Naming: RVSS FAULT



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB85

### RVSS – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the RVSS the Selector Switch is placed into the RVSS position. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Selector Switch is placed into the BYPASS position. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB85

### RVSS – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB85

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

**Operation Mode Selector**

Cyclic Receive - BR 0.5  
BU - Input 4

**Local Control (LC)**

Not connected  
BU - Input 3  
Truth Table 1 3/10 - Output  
BU - Input 1  
Not connected

**PLC/DCS (DP)**

Not connected  
Cyclic Receive - BR 0.0  
Truth Table 2 3/10 - Output  
Cyclic Receive - BR 0.2  
Not connected

**PC (DPV1)**

Not connected  
Not connected  
Not connected  
Not connected

**Operator Panel (OP)**

Not connected  
Not connected  
Not connected  
Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
Released	0	0	1	1	0	0
On (enabled)	0	1	0	0	1	1
Off (enabled)	1	0	1	1	0	0

**Released Control Command**

On (enabled)  
Off (enabled)  
On (enabled)  
Off (enabled)

**Preferred for direct Control of Control Functions**

On (enabled)  
Off (enabled)  
On (enabled)  
Off (enabled)

**Truth Table 1 3/10**

Truth Table - Input 1: Not connected  
Truth Table - Input 2: BU - Input 1

**Truth Table 3/10**

I1	I2	I3	O
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB85

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

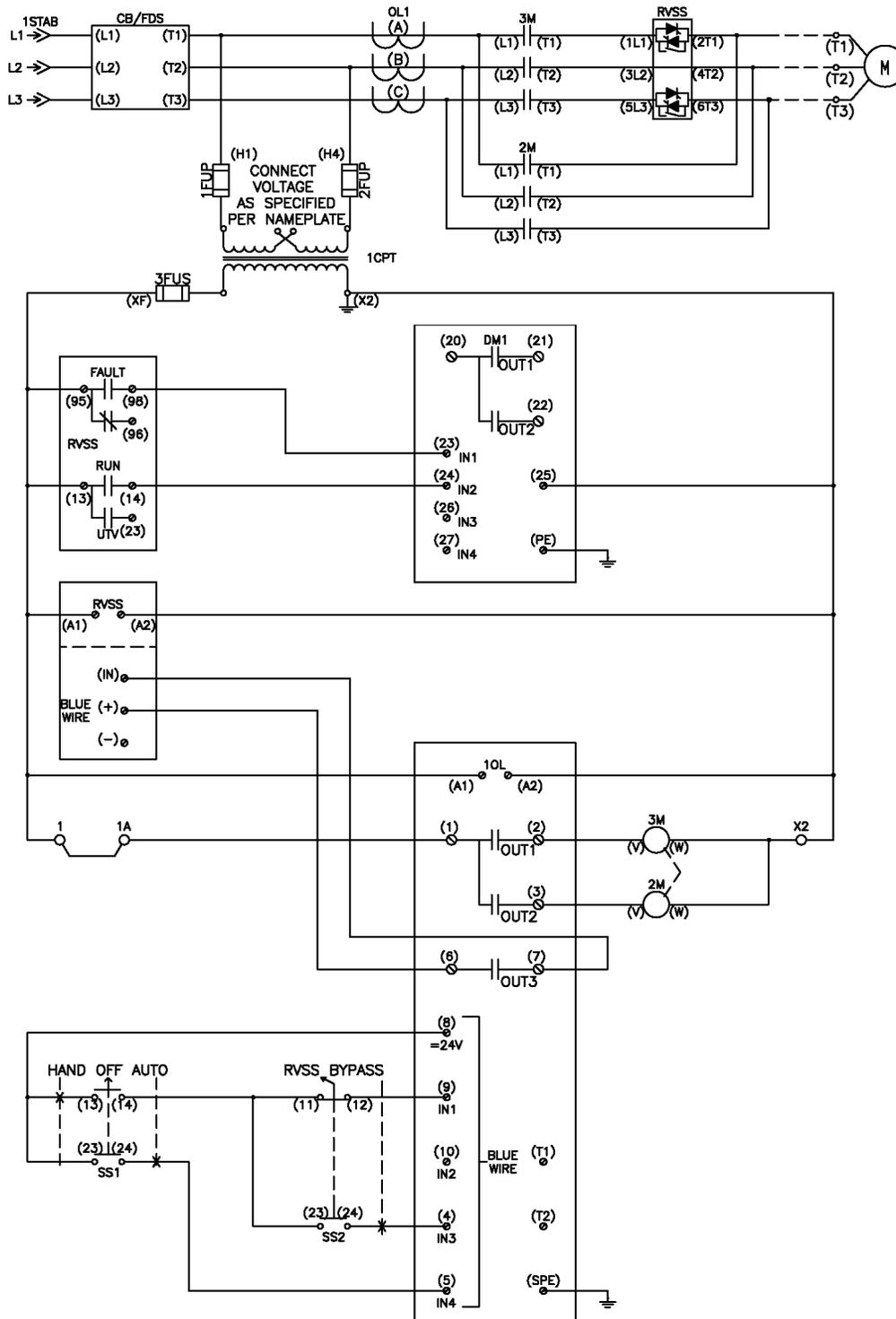
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (DM1 - Input 2), BU - Output 2 (Contactor Control - 2 OE2), and BU - Output 3 (Contactor Control - 1 QE1).
- External Fault 1:** Includes dropdowns for External Fault - Input (DM1 - Input 1) and External Fault - Reset (Not connected), along with a Response dropdown set to tripping.
- Type:** Radio buttons for normally open (NO) (selected) and normally closed (NC).
- Activity:** Radio buttons for always (selected) and only if motor runs.
- External Fault - Reset also by:** Checkboxes for Test/Reset Button, RS232 (Panel Reset) (checked), Remote Reset, Reset 1,2,3 (checked), Auto-Reset, and Diff Command-Reset.
- Masking:** A text field containing the string RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB86

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB86

### RVSS – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the RVSS the Selector Switch is placed into the RVSS position. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Selector Switch is placed into the BYPASS position. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB86

### RVSS – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB86

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 BU - Input 4

Local Control [LC]  
 Not connected  
 BU - Input 3  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 Not connected

PLC/DCS [DP]  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Cyclic Receive - Bit 0.1  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	S1	S2	'0'	'0'	'1'	'1'
			'0'	'1'	'0'	'1'

	Local 1	Local 2	Local 3	Remote
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On<<  
 On  
 Off  
 On>  
 On>>

Preferred for direct Control of Control Functions  
 On>  
 On>>

**Truth Table 1 3/10**

Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3
Not connected	BU - Input 1	BU - Input 3

Truth Table 3/10			
I1	I2	I3	O
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB86

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

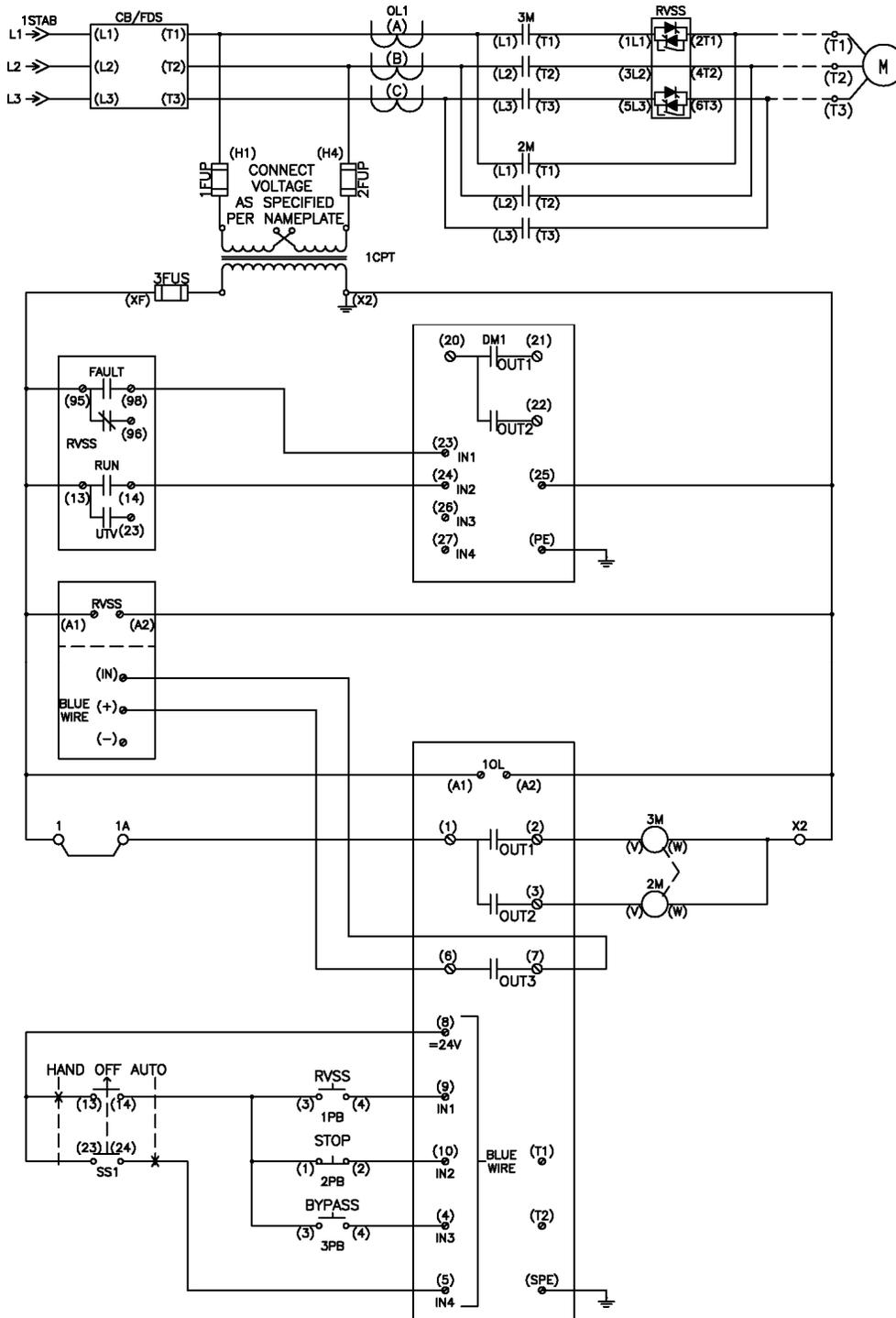
- Basic Unit:**
  - BU - Output 1: DM1 - Input 2
  - BU - Output 2: Contactor Control - 2 OE2
  - BU - Output 3: Contactor Control - 1 QE1
- External Fault 1:**
  - External Fault - Input: DM1 - Input 1
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)
  - normally closed (NC)
- Activity:**
  - always
  - only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)
  - Auto-Reset
  - Remote Reset, Reset 1,2,3
  - DfI Command-Reset
- Masking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB87

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB87

### RVSS – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the RVSS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the BYPASS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON< Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action the OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB87

### RVSS – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB87

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 BU - Input 4

Local Control [LC]  
 Not connected  
 BU - Input 3  
 BU - Input 2  
 BU - Input 1  
 Not connected

PLC/OCS [DP]  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
Released	On (enabled)	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Released	On (enabled)	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Released	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Released	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Released	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Released	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Released	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 Released for direct Control of Control Functions

Released Control Command  
 On<<  
 On  
 Off  
 On>  
 On>>

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected

Truth Table - Input 2: Cyclic Receive - Bit 0.0

Truth Table - Input 3: Cyclic Receive - Bit 0.2

**Truth Table 3/10**

I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB87

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 BU - Input 4

Local Control [LC]  
 Not connected  
 BU - Input 3  
 BU - Input 2  
 BU - Input 1  
 Not connected

PLC/OCS [DP]  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
Released	On	On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off	Off	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On	On	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off	Off	Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On	On	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off	Off	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On	On	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off	Off	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On<<  
 On  
 Off  
 On>  
 On>>

**Truth Table 2 3/10**

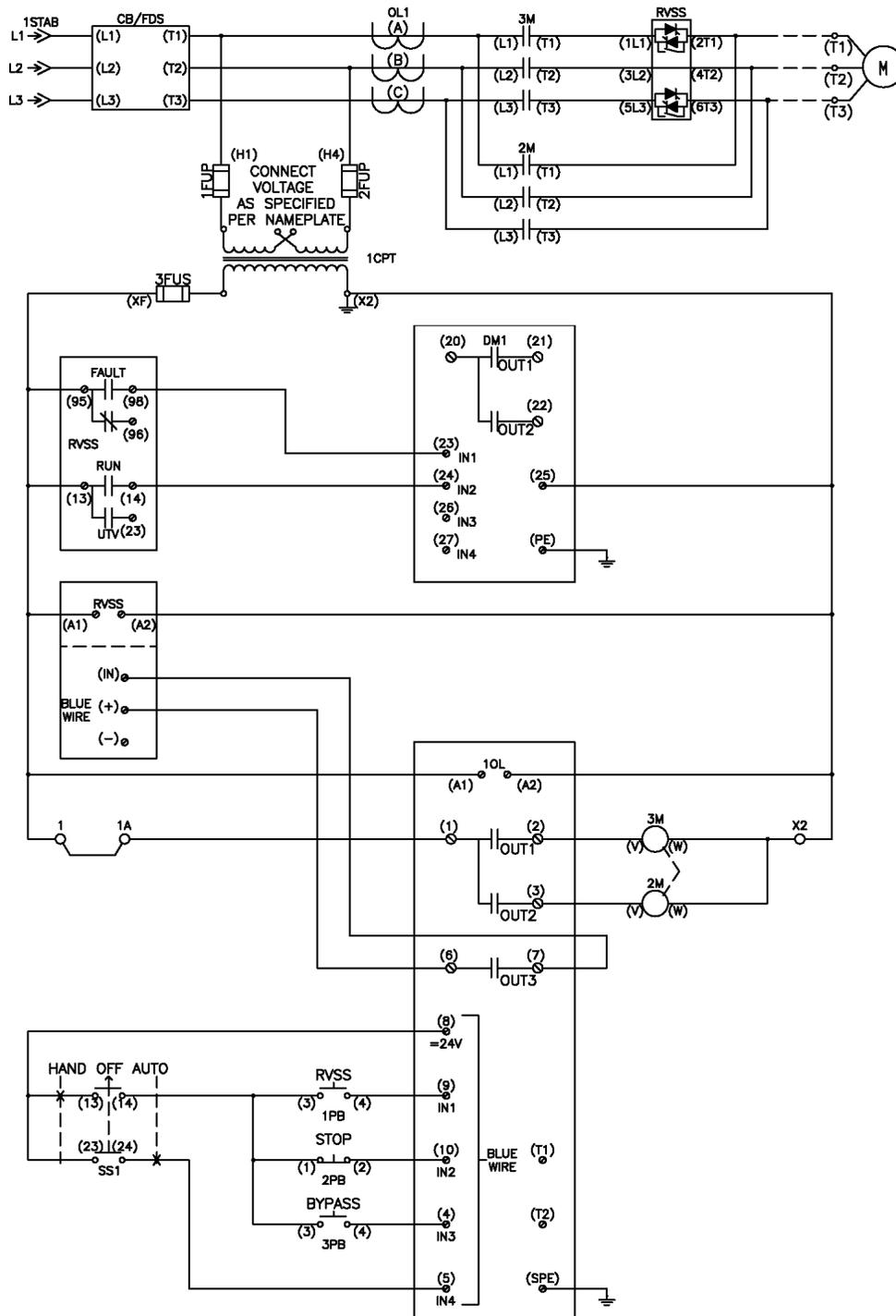
Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	Output
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB88

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB88

### RVSS – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the RVSS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the BYPASS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON< Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action the OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB88

### RVSS – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB88

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 BU - Input 4

Local Control (LC)  
 Not connected  
 BU - Input 3  
 BU - Input 2  
 BU - Input 1  
 Not connected

PLC/DCS (DP)  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Cyclic Receive - Bit 0.1  
 Cyclic Receive - Bit 0.2  
 Not connected

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
Released	0	0	1	1	1	1
On (enabled)	0	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	1	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	1	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	1	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	1	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 Preferred for direct Control of Control Functions

On  
 On  
 Off  
 On  
 On

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB88

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

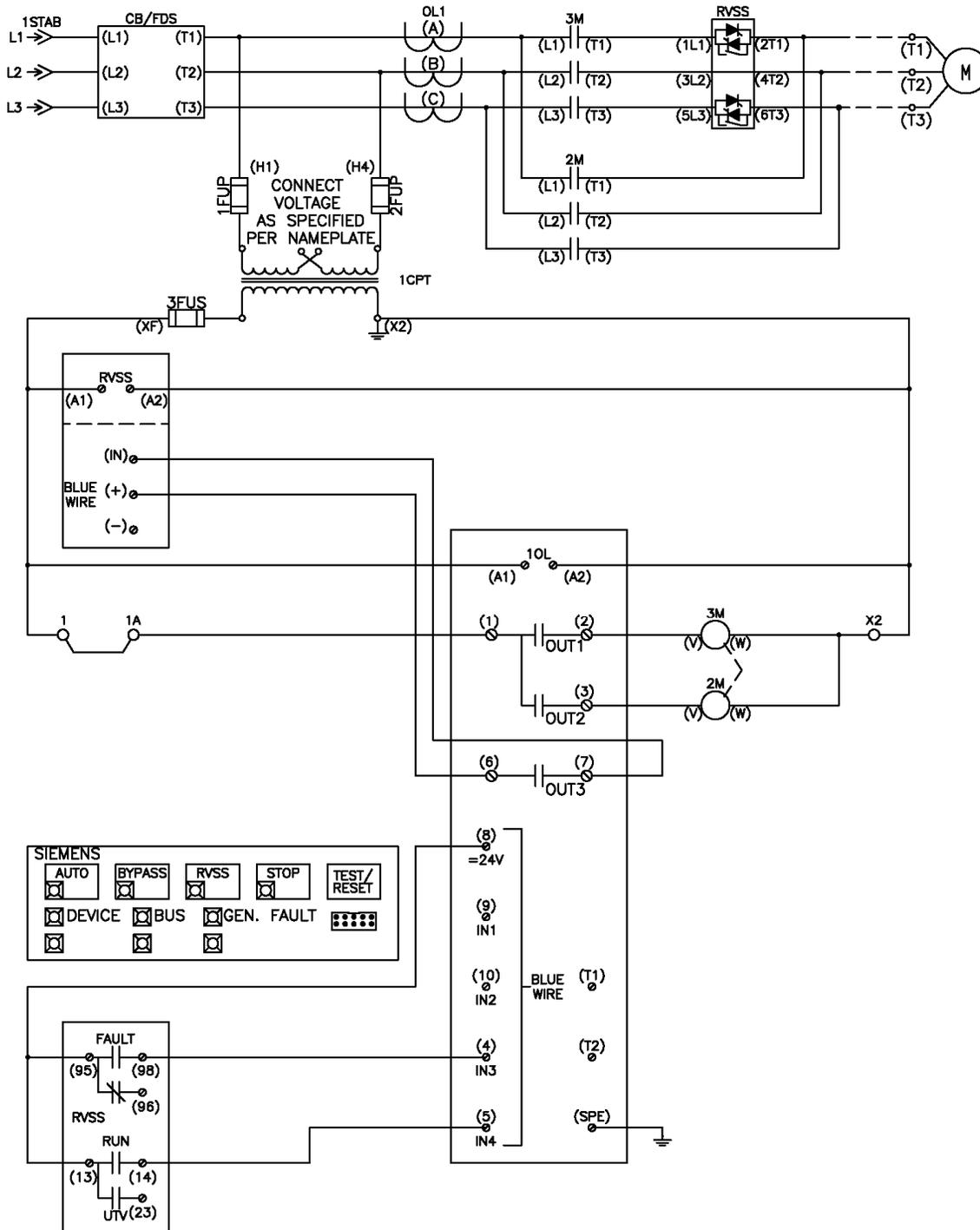
- Basic Unit:** Three dropdown menus for BU - Output 1 (DM1 - Input 2), BU - Output 2 (Contactor Control - 2 QE2), and BU - Output 3 (Contactor Control - 1 QE1).
- External Fault 1:** External Fault - Input (DM1 - Input 1), External Fault - Reset (Not connected), and Response (lipping).
- Type:** Radio buttons for normally open (NO) (selected) and normally closed (NC).
- Activity:** Radio buttons for always (selected) and only if motor runs.
- External Fault - Reset also by:** Checkboxes for Test/Reset Button, RS232 (Panel Reset) (checked), Remote Reset, Reset 1,2,3 (checked), Auto-Reset, and Dll Command Reset.
- Marking:** A text field containing RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB89

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram

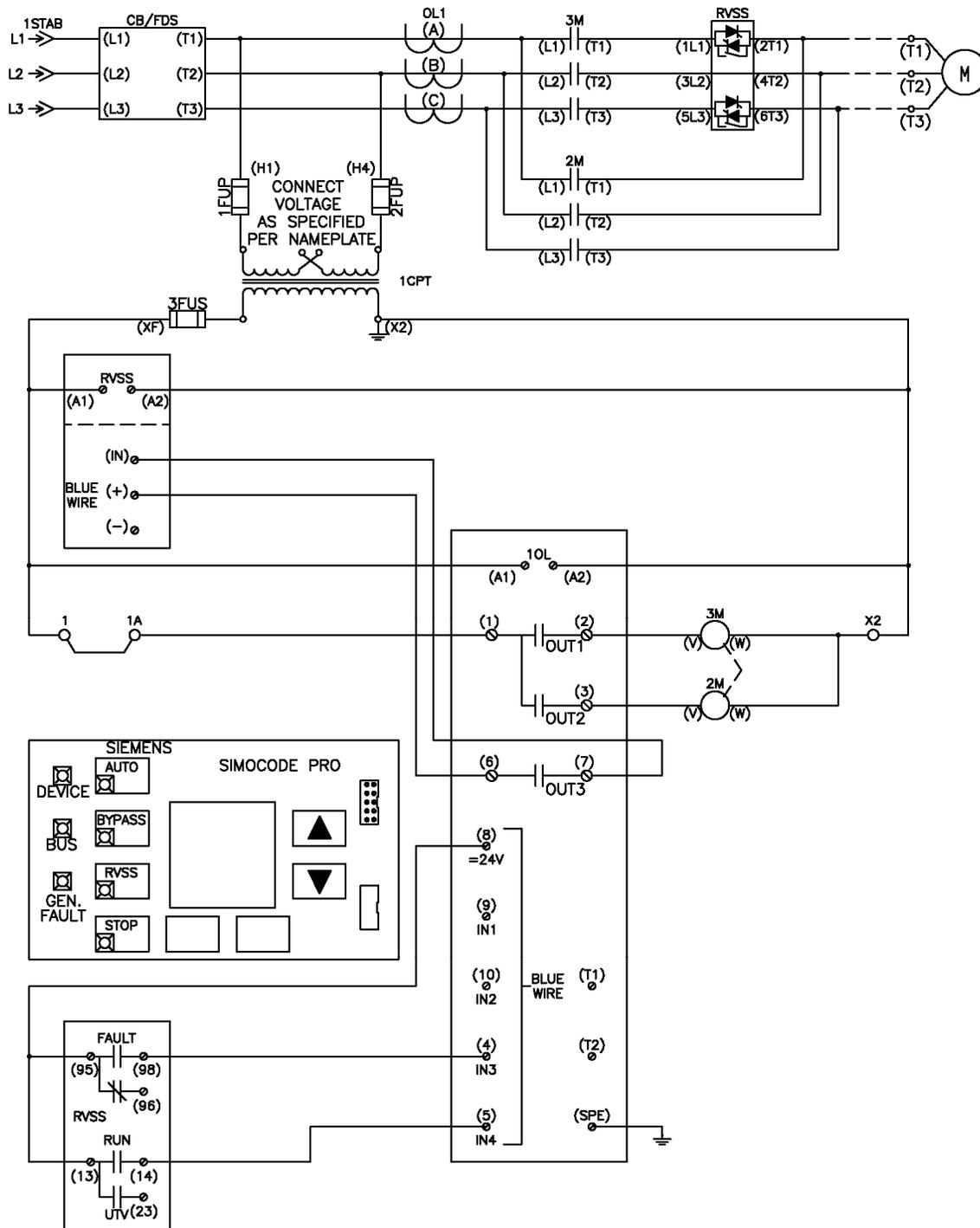


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB89

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB89

### RVSS – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (RVSS) is connected to the ON > Control Command, Operator Panel Button 2 (BYPASS) is connected to the ON < Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS Contactor the OP RVSS Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the OP BYPASS Pushbutton is depressed. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB89

### RVSS – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB89

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Non-Volatile Element 1 - Output

Local Control [LC]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

PLC/DCS [DP]  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3I/1O - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]  
 Not connected  
 OP - Button 2  
 OP - Button 4  
 OP - Button 3  
 Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
Released	0	0	1	1	0	1
On (enabled)	0	1	0	0	0	0
Off (enabled)	1	0	0	1	0	0
On (enabled)	1	1	0	0	0	0
Off (enabled)	0	0	1	1	0	0
On (enabled)	0	1	1	0	0	0
Off (enabled)	1	0	0	1	0	0
On (enabled)	1	1	1	0	0	0
Off (enabled)	0	0	0	0	1	0
On (enabled)	0	1	0	0	0	1
Off (enabled)	1	0	0	1	0	1

Released Control Command  
 Preferred for direct Control of Control Functions

Released Control Command  
 On<<  
 On  
 Off  
 On>  
 On>>

**Truth Table 2 3I/1O**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: Cyclic Receive - Bit 0.0  
 Truth Table - Input 3: Cyclic Receive - Bit 0.2

Truth Table 3I/1O			
I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB89

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

AUTO Toggle Operation

The screenshot shows a configuration window with three main sections:

- Non-Volatile Element 1**
  - Non-Volatile Element - Type: edge rising with memory
  - Non-Volatile Element - Input: OP - Button 1
  - Non-Volatile Element - Reset: Non-Volatile Element 2 - Output
- Counter 1**
  - Counter - Limit: 2
  - Counter - Input +: OP - Button 1
  - Counter - Input -: Not connected
  - Counter - Reset: Non-Volatile Element 2 - Output
- Non-Volatile Element 2**
  - Non-Volatile Element - Type: non inverting
  - Non-Volatile Element - Input: Counter 1 - Output
  - Non-Volatile Element - Reset: Not connected

RVSS Control and Operation

The screenshot shows a configuration window with several sections:

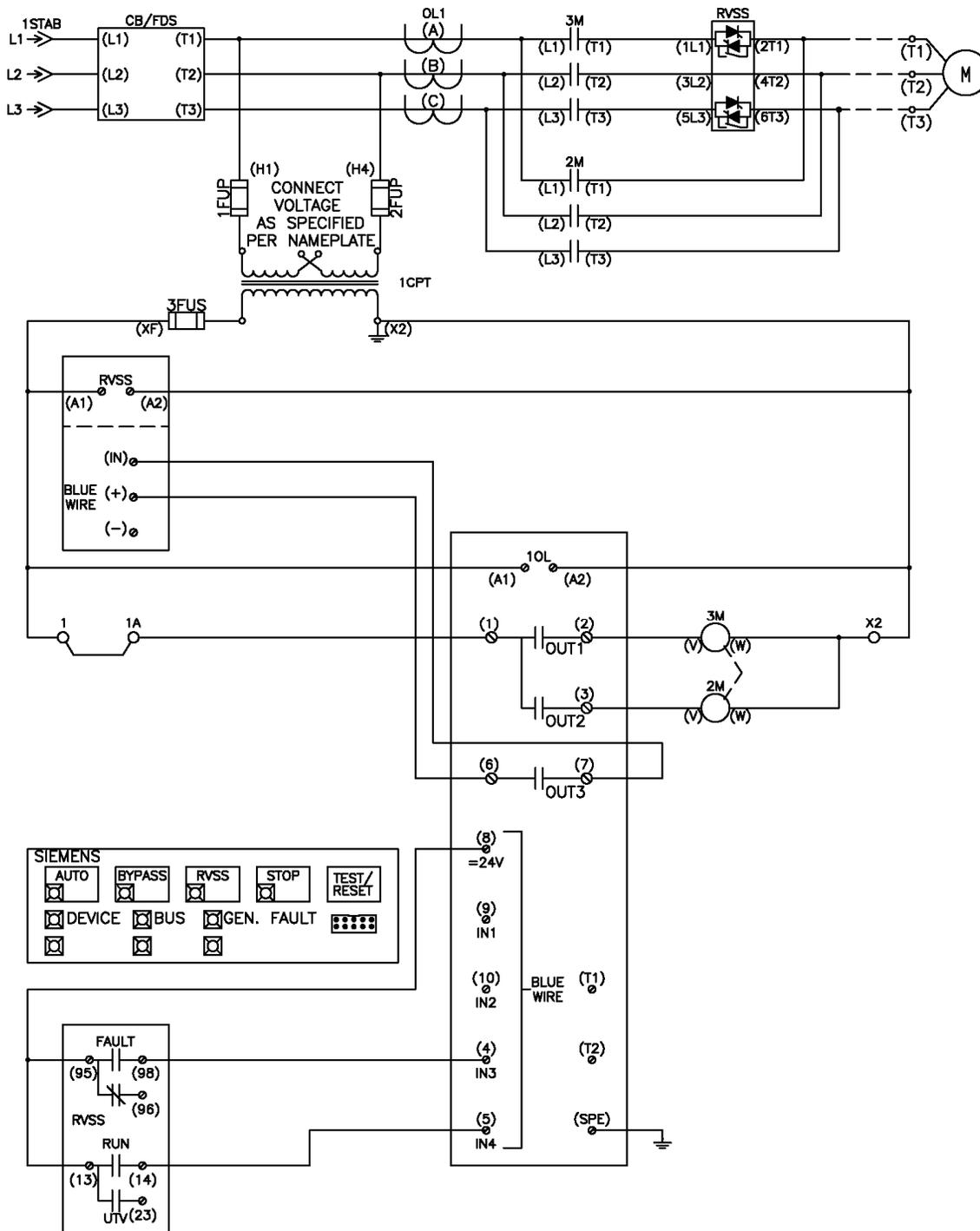
- Basic Unit**
  - BU - Output 1: BU - Input 4
  - BU - Output 2: Contactor Control - 2 QE2
  - BU - Output 3: Contactor Control - 1 QE1
- External Fault 1**
  - External Fault - Input: BU - Input 3
  - External Fault - Reset: Not connected
  - Response: tripping
- Type**
  - normally open (NO)  normally closed (NC)
- Activity**
  - always  only if motor runs
- External Fault - Reset also by**
  - Test/Reset Button, R5232 (Panel Reset)  Auto-Reset
  - Remote Reset, Reset 1,2,3  Diff Command-Reset
- Marking**
  - RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB90

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram

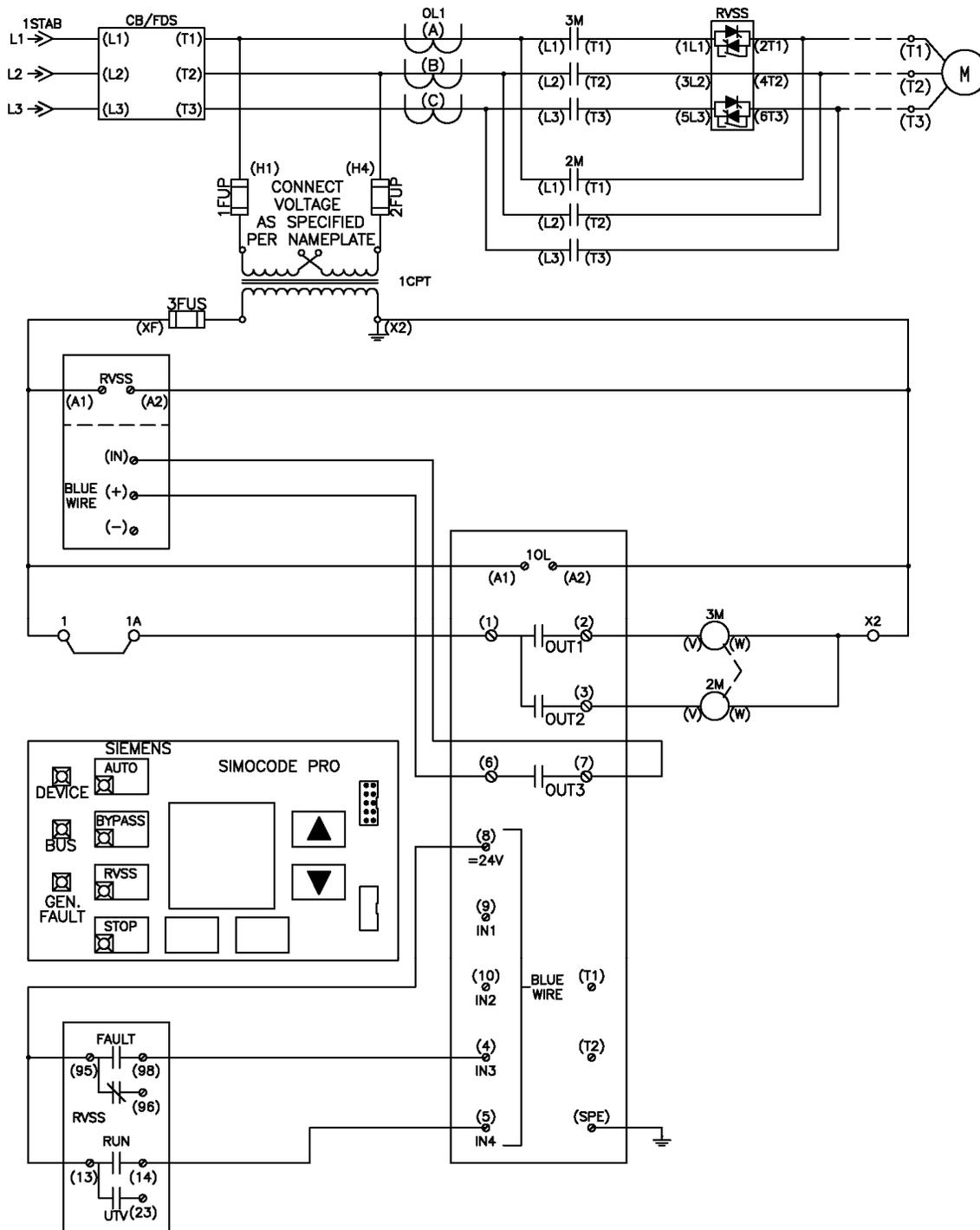


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB90

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB90

### RVSS – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (RVSS) is connected to the ON > Control Command, Operator Panel Button 2 (BYPASS) is connected to the ON < Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS Contactor the OP RVSS Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the OP BYPASS Pushbutton is depressed. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB90

### RVSS – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 3 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing SIMOCODE Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 2 and Output 3 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event the SIMOCODE Outputs 2 and 3 will open.

##### Reset Control

1. General Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. RVSS Fault conditions may be reset via the RESET button located on the unit enclosure door. SIMOCODE Input 3 will indicate RVSS Fault Status only.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB90

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Control Station	Bit	State	Local 1	Local 2	Local 3	Remote
Operation Mode Selector	S1	'0'				
	S2	'0'				
Local Control [LC]						
Not connected	On	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected	Off	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected	On	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected	Off	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLC/DCS [DP]						
Cyclic Receive - Bit 0.0	On	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cyclic Receive - Bit 0.1	Off	Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cyclic Receive - Bit 0.2	On	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PC [DPV1]						
DP - Button 2	On	On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DP - Button 4	Off	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DP - Button 3	On	On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Control Function	Released Control Command	Preferred for direct Control of Control Functions
Released Control Command	<input type="checkbox"/>	<input type="checkbox"/>
Preferred for direct Control of Control Functions	<input type="checkbox"/>	<input type="checkbox"/>

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB90

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW40 w/Input Isolation and Bypass

### Parameter Detail

AUTO Toggle Operation

The screenshot shows a configuration window with three main sections:

- Non-Volatile Element 1**:
  - Non-Volatile Element - Type: edge rising with memory
  - Non-Volatile Element - Input: OP - Button 1
  - Non-Volatile Element - Reset: Non-Volatile Element 2 - Output
- Counter 1**:
  - Counter - Limit: 2
  - Counter - Input +: OP - Button 1
  - Counter - Input -: Not connected
  - Counter - Reset: Non-Volatile Element 2 - Output
- Non-Volatile Element 2**:
  - Non-Volatile Element - Type: non inverting
  - Non-Volatile Element - Input: Counter 1 - Output
  - Non-Volatile Element - Reset: Not connected

RVSS Control and Operation

The screenshot shows a configuration window with several sections:

- Basic Unit**:
  - BU - Output 1: BU - Input 4
  - BU - Output 2: Contactor Control - 2 QE2
  - BU - Output 3: Contactor Control - 1 QE1
- External Fault 1**:
  - External Fault - Input: BU - Input 3
  - External Fault - Reset: Not connected
  - Response: tripping
  - Type:  normally open (NO)  normally closed (NC)
  - Activity:  always  only if motor runs
  - External Fault - Reset also by:  Test/Reset Button, RS232 (Panel Reset)  Auto-Reset  Remote Reset, Reset 1,2,3  Off Command Reset
  - Making: RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## 10. 3RW44 Reduced Voltage Soft Starter with Optional Input Isolation Contactor

The reduced voltage soft starter uses an SCR equipped solid state controller to provide smooth, stepless acceleration by controlling the applied voltage, current, and torque to the motor terminals for single-speed, full-voltage operation. An optional input isolation contactor is integrated into the design to provide complete voltage removal to the motor windings.

**The basic RVSS operation of this starter is as follows:**

1. A local or remote start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Output 1 closes giving the RVSS a signal to begin operation.
3. The RVSS RUN contact closes relaying the SIMOCODE Pro to close Output 3 which energizes the coil of Input Isolation Contactor 3M if equipped.
4. With 3-phase voltage applied the RVSS follows its settings for ramp-up, run, and internal bypass.
5. A local or remote stop signal is given to the SIMOCODE Pro.
6. The SIMOCODE Pro Output 1 opens giving the RVSS a signal to stop operation.
7. The RVSS follows its settings for ramp-down opening the RVSS RUN contact when the designated time has elapsed.
8. With the RVSS RUN contact open the SIMOCODE Pro opens its Output 3 which de-energizes the coil of Input Isolation Contactor 3M if equipped.
9. If a fault occurs at any time the SIMOCODE Pro will end the starter operation.

The RVSS auxiliary contacts are connected to the SIMOCODE Pro inputs to provide starter control as well as operation feedback over Profibus-DP.

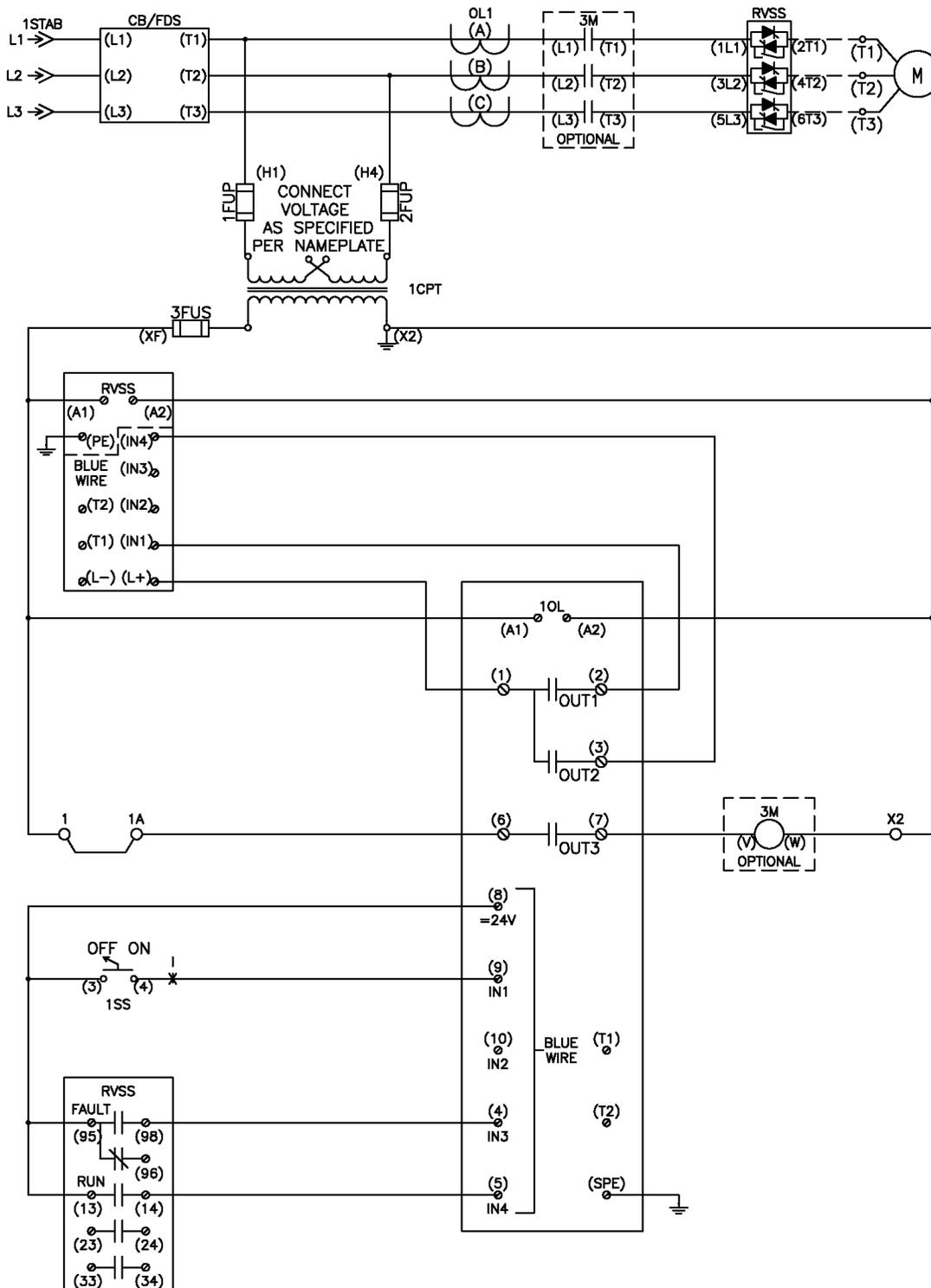
- o The RVSS RUN contact provides direct control over the 3M input isolation contactor and starter condition feedback. When active the contact will signal the SIMOCODE Pro to close Output 3 to energize the 3M Isolation Contactor coil. This contact will switch states during ramp-up, internal bypass, and ramp-down.
- o The RVSS FAULT contact provides starter condition feedback. When active the contact will signal the SIMOCODE Pro to trigger an external fault command. This contact will switch states during thyristor thermal overload, phase failure, no load voltage, mains under-voltage, mains over-voltage, or equipment error.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB92

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB92

### RVSS – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the ON position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Input 3 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB92

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:**
  - Operation Mode Selector:** Includes 'Cyclic Receive - Bit 0.5' and 'Feed Level - 7'.
  - Local Control (LC):** Includes 'BU - Input 1' and 'BU - Input 1'.
  - PLC/DCS (DP):** Includes 'Signal Conditioner 1 - Output' and 'Cyclic Receive - Bit 0.2'.
  - PC (DPV1):** Includes four 'Not connected' entries.
  - Operator Panel (OP):** Includes four 'Not connected' entries.
- Releases Table:** A table with columns for 'Local 1', 'Local 2', 'Local 3', and 'Remote'. It lists 'On (enabled)' and 'Off (enabled)' states for various releases.
- Signal Conditioner 1:**
  - Signal Conditioner - Type: inverting
  - Signal Conditioner - Input: Cyclic Receive - Bit 0.2
  - Signal Conditioner - Reset: Not connected
- Released Control Command:** Includes 'On<C', 'On<D', 'Off', 'On>', and 'On>>'.
- Preferred for direct Control of Control Functions:** Includes 'On<C', 'On<D', 'On>', and 'On>>'.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB92

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

RVSS Control and Operation

**Basic Unit**

BU - Output 1: Contactor Control - 1 QE1

BU - Output 2: Truth Table 3 3/10 - Output

BU - Output 3: BU - Input 4

**External Fault 1**

External Fault - Input: BU - Input 3

External Fault - Reset: Not connected

Response: tipping

**Type**

normally open (NO)  normally closed (NC)

**Activity**

always  only if motor runs

**External Fault - Reset also by**

Test/Reset Button, R5232 (Panel Reset)  Auto-Reset

Remote Reset, Reset 1,2,3  DI1 Command-Reset

**Naming**

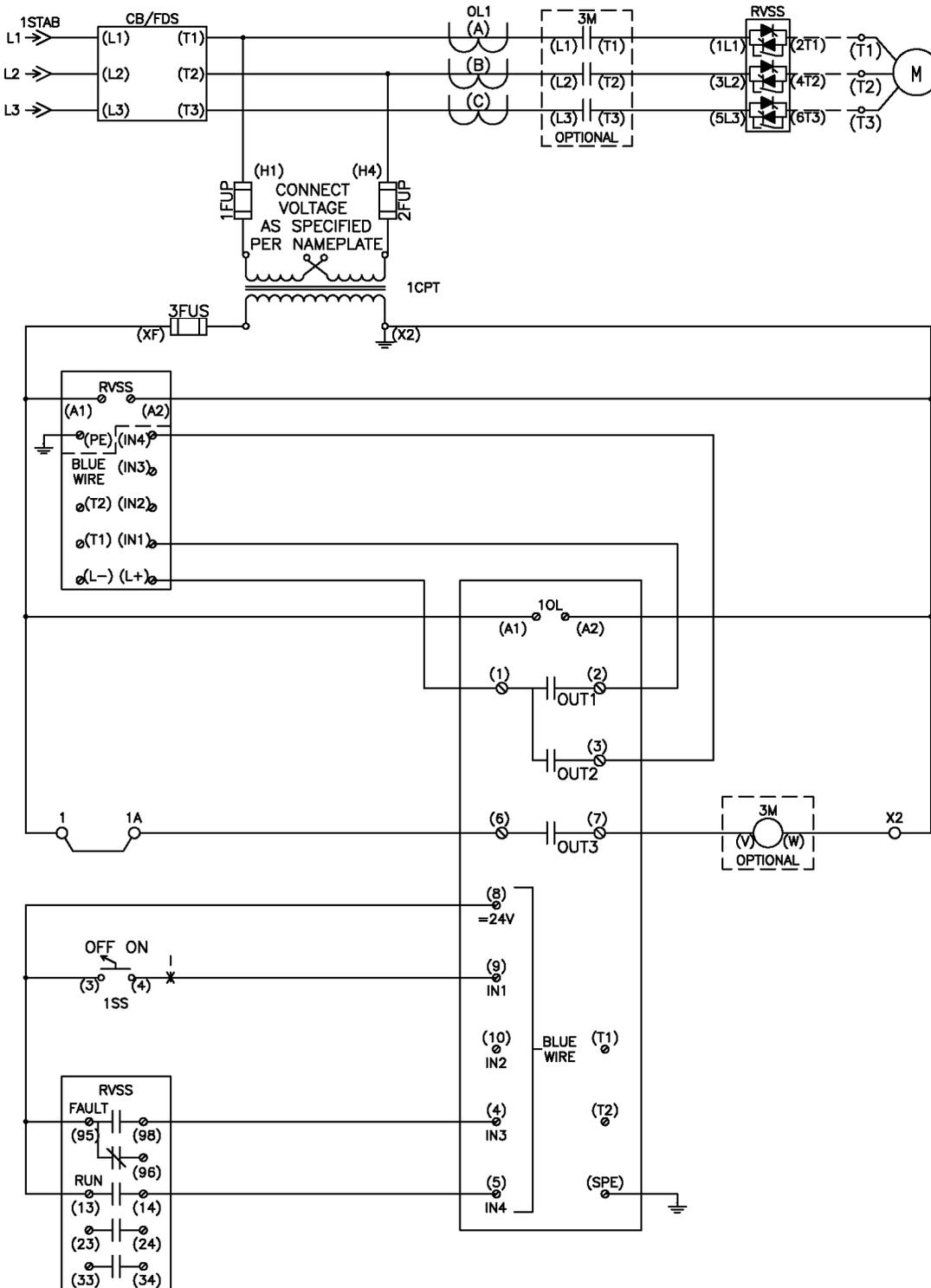
RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB93

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB93

### RVSS – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the ON position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Input 3 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB93

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

**Operation Mode Selector**

- Cyclic Receive - Bit 0.5
- Fixed Level - 1'

**Local Control (LC)**

- Not connected
- Not connected
- BU - Input 1
- BU - Input 1
- Not connected

**PLC/DCS (DP)**

- Not connected
- Not connected
- Cyclic Receive - Bit 0.1
- Cyclic Receive - Bit 0.2
- Not connected

**PC (DPV1)**

- Not connected

**Operator Panel (OP)**

- Not connected
- Not connected
- Not connected
- Not connected

	Local 1	Local 2	Local 3	Remote
<b>Releases:</b>				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Released Control Command**

- On<<
- On<
- Off

**Preferred for direct Control of Control Functions**

- On>
- On>>

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB93

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation. It is organized into several sections:

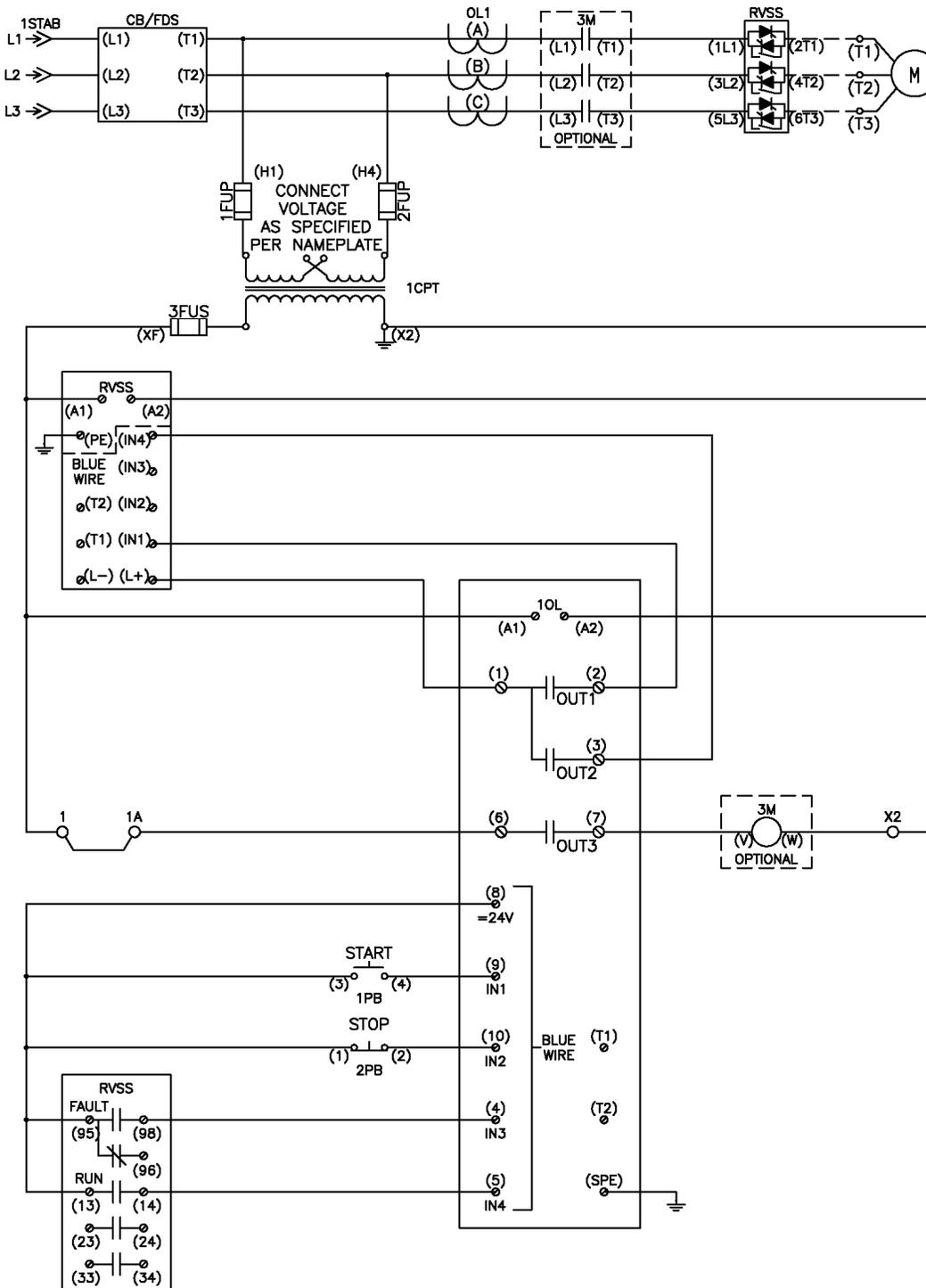
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to 'Contactor Control - 1 OE1'), BU - Output 2 (set to 'Truth Table 3 3/10 - Output'), and BU - Output 3 (set to 'BU - Input 4').
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to 'BU - Input 3'), External Fault - Reset (set to 'Not connected'), and Response (set to 'tripping').
- Type:** A group box with two radio buttons: 'normally open (NO)' (selected) and 'normally closed (NC)'.
- Activity:** A group box with two radio buttons: 'always' (selected) and 'only if motor runs'.
- External Fault - Reset also by:** A group box with four checkboxes: 'Test/Reset Button, RS232 (Panel Reset)' (checked), 'Auto-Reset' (unchecked), 'Remote Reset, Reset 1,2,3' (checked), and 'DI1 Command-Reset' (unchecked).
- Marking:** A text field containing 'RVSS FAULT'.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB94

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB94

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 2-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Start Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Input 3 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB94

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:**
  - Operation Mode Selector:**
    - Cyclic Receive - Bit 0.5
    - Fixed Level - '1'
  - Local Control (LC):**
    - Not connected
    - Not connected
    - BU - Input 2
    - BU - Input 1
    - Not connected
  - PLC/DCS (DP):**
    - Not connected
    - Not connected
    - Signal Conditioner 1 - Output
    - Cyclic Receive - Bit 0.2
    - Not connected
  - PC (DPV1):**
    - Not connected
    - Not connected
    - Not connected
    - Not connected
  - Operator Panel (OP):**
    - Not connected
    - Not connected
    - Not connected
    - Not connected
- Signal Conditioner 1:**
  - Signal Conditioner - Type: Inverting
  - Signal Conditioner - Input: Cyclic Receive - Bit 0.2
  - Signal Conditioner - Reset: Not connected

The central part of the interface features a table for 'Releases' with columns for Local 1, Local 2, Local 3, and Remote. The table lists various release states (On/Off) and their enabled status across different control modes. To the right of this table, there are two sections for control functions: 'Released Control Command' and 'Preferred for direct Control of Control Functions', each with associated On/Off indicators.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB94

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

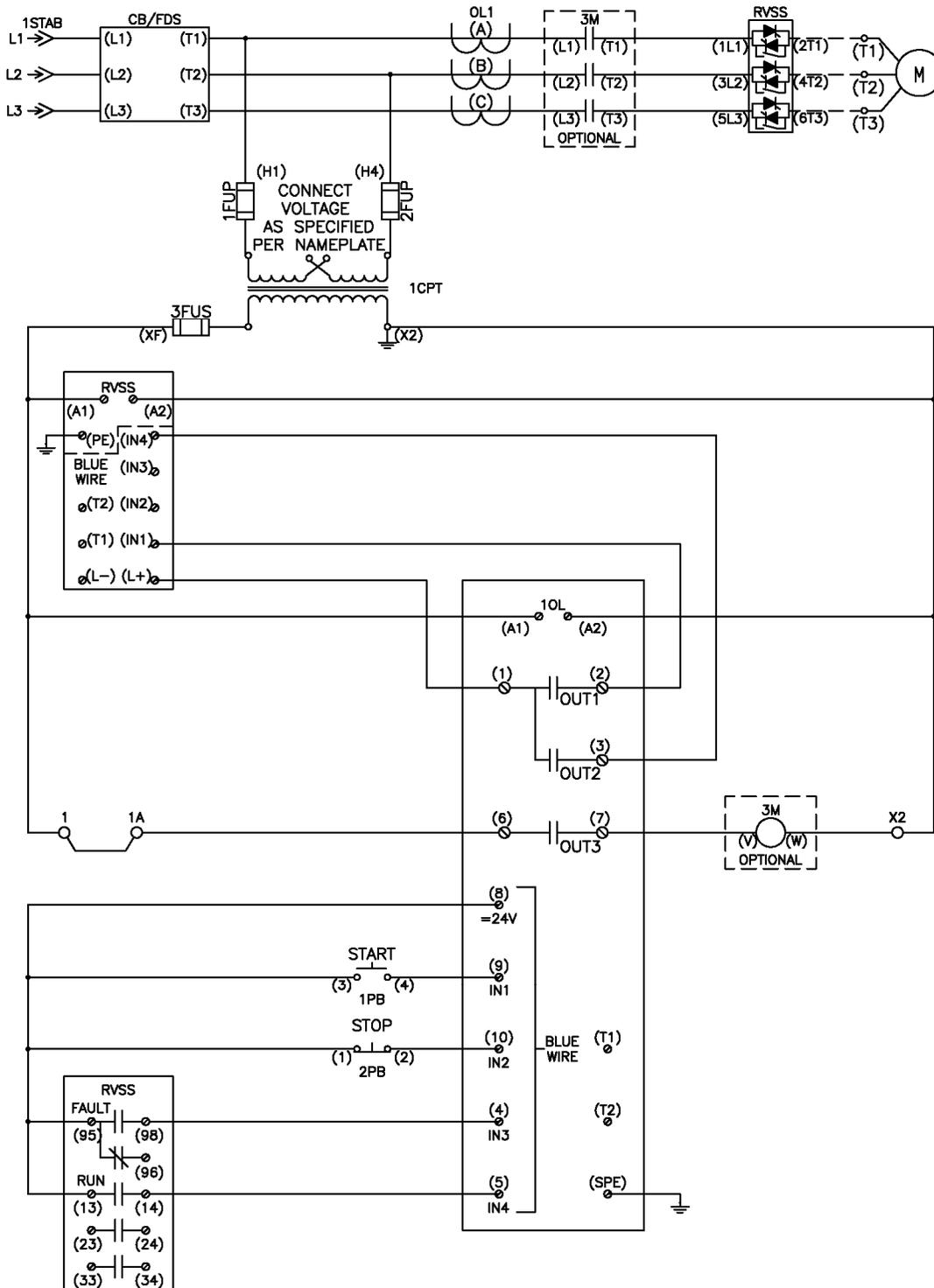
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to 'Contactor Control - 1 OE1'), BU - Output 2 (set to 'Truth Table 3 3/10 - Output'), and BU - Output 3 (set to 'BU - Input 4').
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to 'BU - Input 3'), External Fault - Reset (set to 'Not connected'), and Response (set to 'lipping').
- Type:** A group box with two radio buttons: 'normally open (NO)' (selected) and 'normally closed (NC)'.
- Activity:** A group box with two radio buttons: 'always' (selected) and 'only if motor runs'.
- External Fault - Reset also by:** A group box with four checkboxes: 'Test/Reset Button, RS232 (Panel Reset)' (checked), 'Auto-Reset' (unchecked), 'Remote Reset, Reset 1,2,3' (checked), and 'DI1 Command-Reset' (unchecked).
- Marking:** A text field containing 'RVSS FAULT'.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB95

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB95

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 3-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Start Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Input 3 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB95

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

**Operation Mode Selector**

Cyclic Receive - Bz 0.5	51	"0"	"1"	"1"	"1"
Fixed Level - 1'	52	"0"	"1"	"0"	"1"

**Local Control (LC)**

Not connected					
Not connected					
BU - Input 2	Off	On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BU - Input 1	On	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected					

**PLC/DCS (DP)**

Not connected					
Not connected					
Cyclic Receive - Bz 0.1	Off	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cyclic Receive - Bz 0.2	On	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Not connected					

**PC (DPV1)**

Not connected					
Not connected					
Not connected	Off	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected	On	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected					

**Operator Panel (OP)**

Not connected					
Not connected					
Not connected	Off	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected	On	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not connected					

**Releases**

	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Released Control Command**

- On<<
- On<
- Off
- On>
- On>>

**Preferred for direct Control of Control Functions**

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB95

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

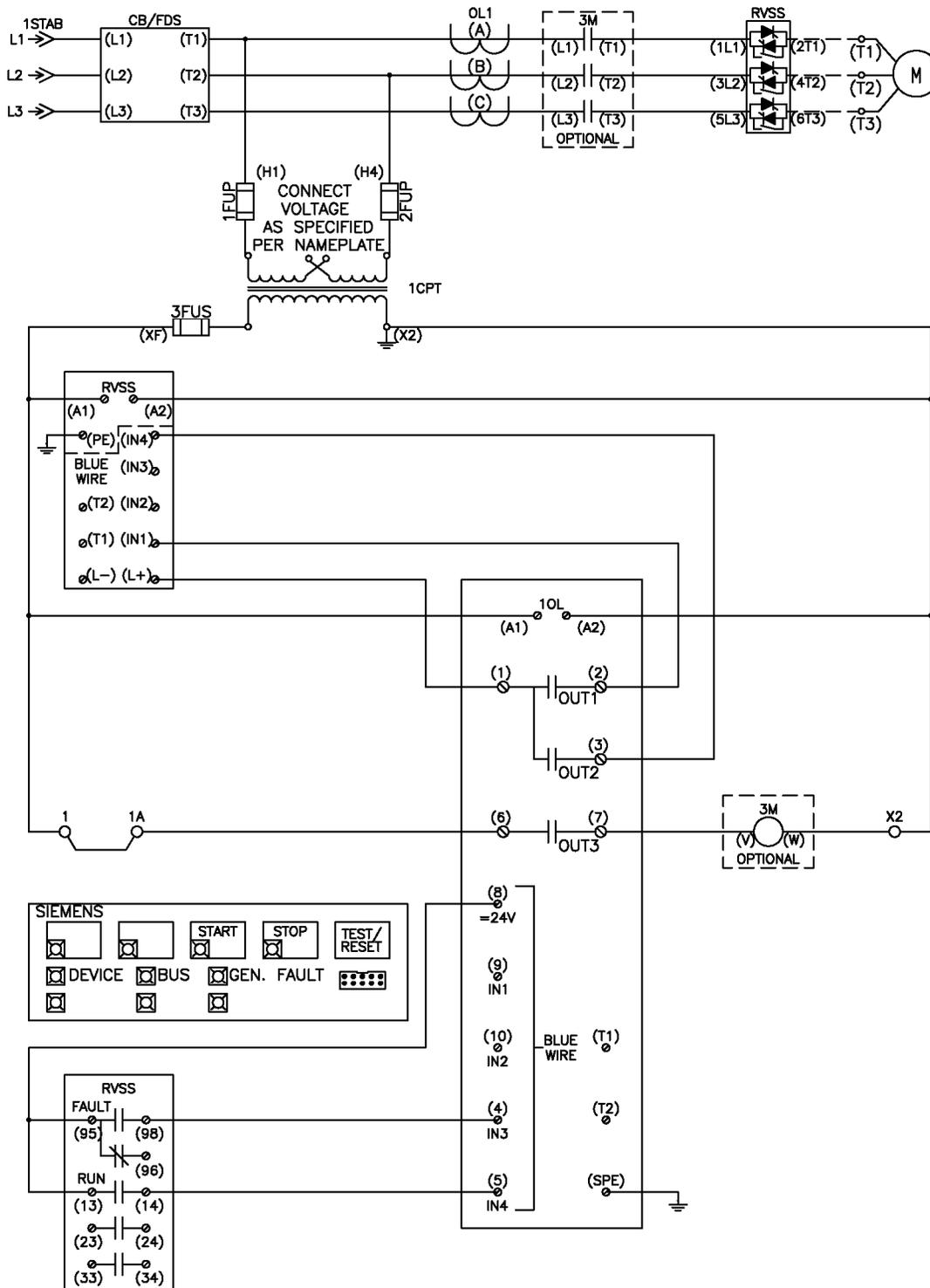
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to 'Contactor Control - 1 OE1'), BU - Output 2 (set to 'Truth Table 3 3/10 - Output'), and BU - Output 3 (set to 'BU - Input 4').
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to 'BU - Input 3'), External Fault - Reset (set to 'Not connected'), and Response (set to 'lipping').
- Type:** A radio button group with 'normally open (NO)' selected and 'normally closed (NC)' unselected.
- Activity:** A radio button group with 'always' selected and 'only if motor runs' unselected.
- External Fault - Reset also by:** A checkbox group with 'Test/Reset Button, RS232 (Panel Reset)' and 'Remote Reset, Reset 1,2,3' checked, and 'Auto-Reset' and 'DI1 Command-Reset' unchecked.
- Marking:** A text field containing 'RVSS FAULT'.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB96

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram

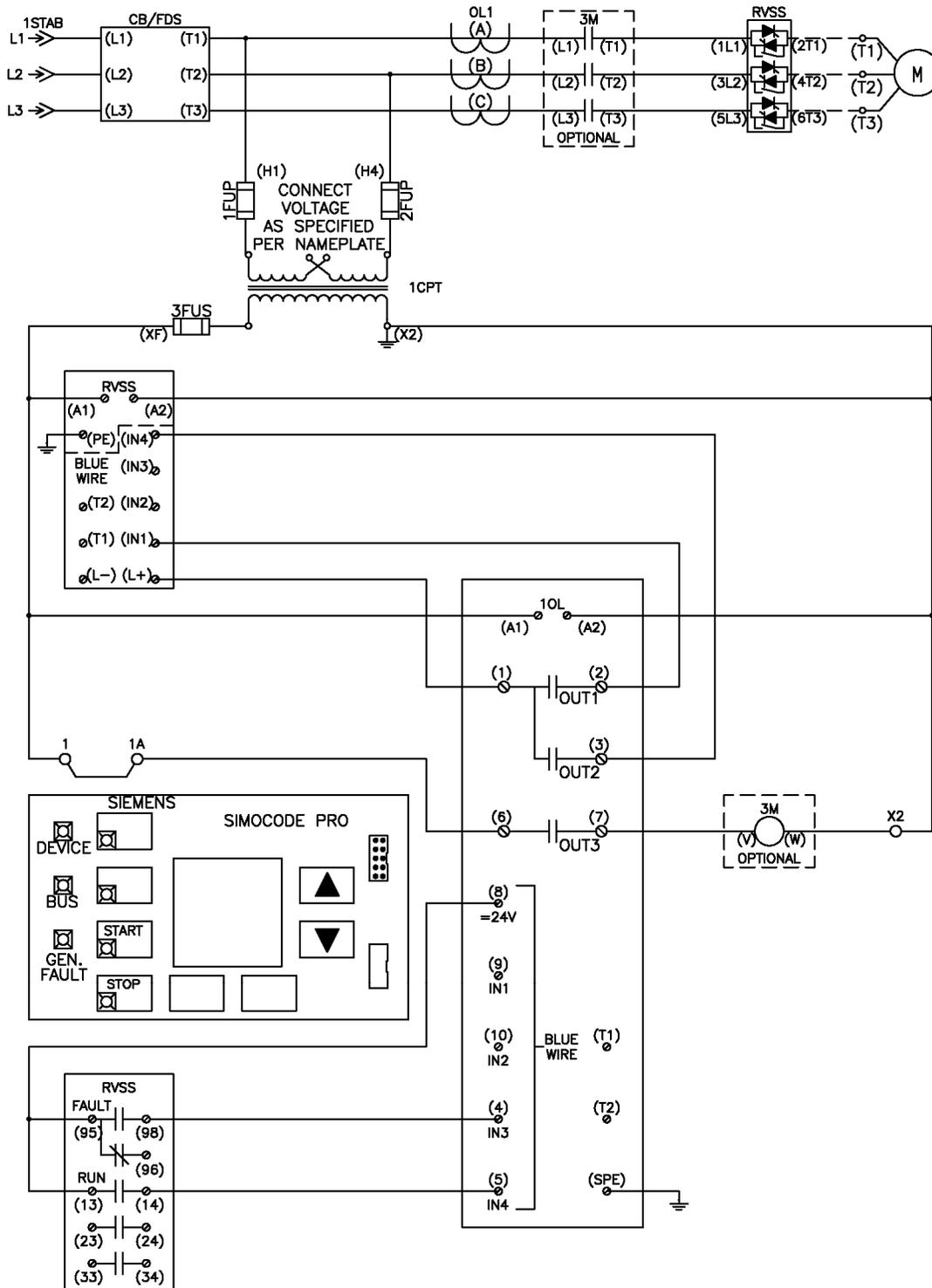


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB96

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD –Remote 2-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB96

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (START) is connected to the ON > Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS the OP Start Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Input 3 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB96

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:**
  - Operation Mode Selector:** Includes 'Cyclic Receive - Bit 0.5' and 'Fixed Level - 1'.
  - Local Control [LC]:** Four 'Not connected' status indicators.
  - PLC/DCS [DP]:** Includes 'Signal Conditioner 1 - Output' and 'Cyclic Receive - Bit 0.2'.
  - PC [DPV1]:** Four 'Not connected' status indicators.
  - Operator Panel [OP]:** Includes 'OP - Button 4' and 'OP - Button 3'.
- Signal Conditioner 1:**
  - Signal Conditioner - Type:
  - Signal Conditioner - Input:
  - Signal Conditioner - Reset:
- Release Matrix:** A table with columns for 'Local 1', 'Local 2', 'Local 3', and 'Remote'. It shows 'On (enabled)' and 'Off (enabled)' states for various control functions across these modes.
- Released Control Command:** A vertical stack of four buttons labeled 'On<', 'On<', 'Off', 'On<', and 'On>'.
- Preferred for direct Control of Control Functions:** A vertical stack of four buttons labeled 'On<', 'On<', 'On<', and 'On>'.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB96

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

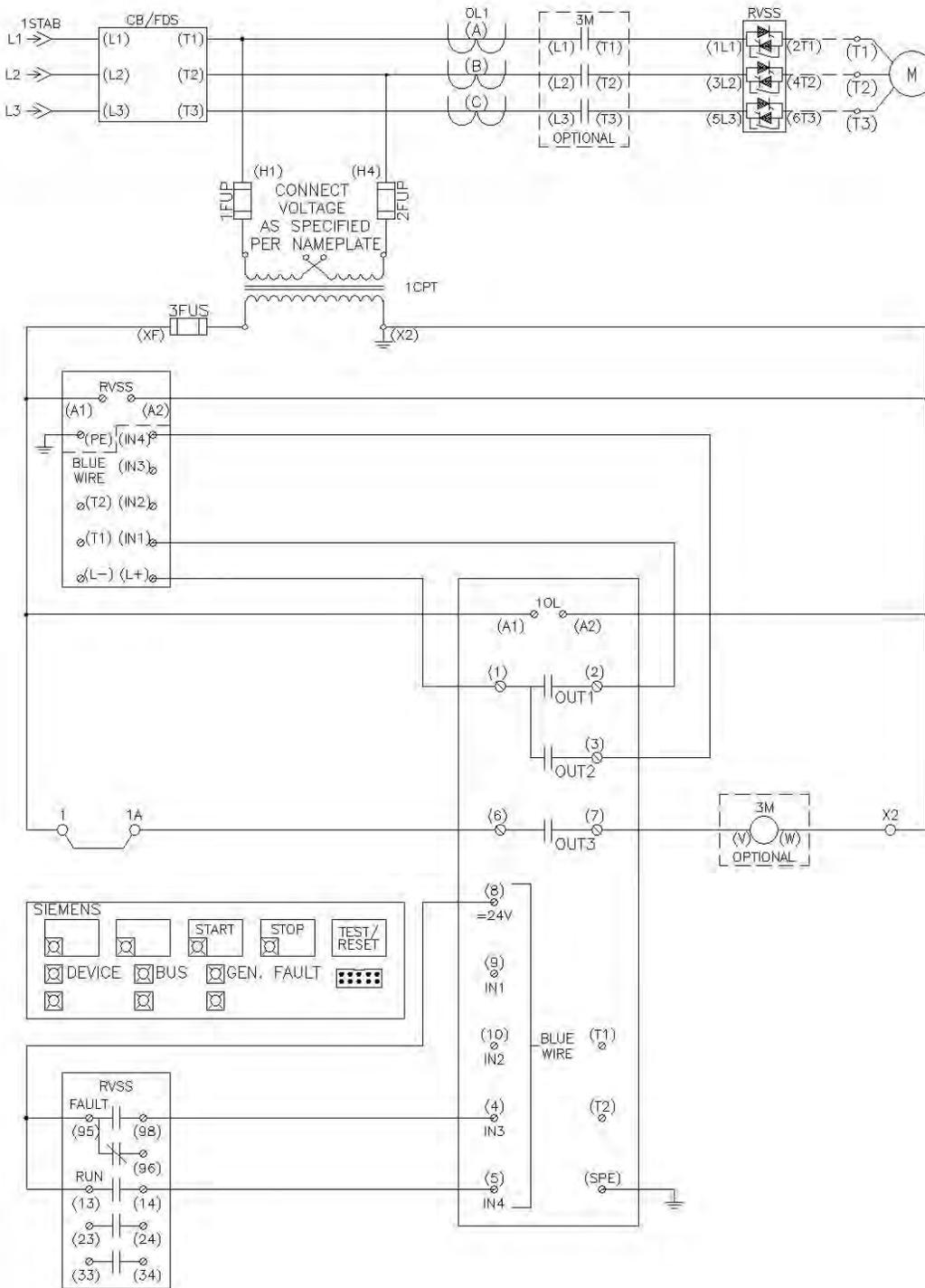
- Basic Unit:** Three dropdown menus are shown:
  - BU - Output 1: Contactor Control - 1 OE1
  - BU - Output 2: Truth Table 3 3/10 - Output
  - BU - Output 3: BU - Input 4
- External Fault 1:**
  - External Fault - Input: BU - Input 3
  - External Fault - Reset: Not connected
  - Response: Latching
- Type:** Radio buttons for normally open (NO) (selected) and normally closed (NC).
- Activity:** Radio buttons for always (selected) and only if motor runs.
- External Fault - Reset also by:** Checkboxes for Test/Reset Button, RS232 (Panel Reset), Remote Reset, Reset 1,2,3 (all checked), and Auto-Reset, DR Command/Reset (unchecked).
- Marking:** A text field containing RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB97

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB97

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (START) is connected to the ON > Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS the OP Start Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Input 3 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB97

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

Control Station	S1	S2	Local 1	Local 2	Local 3	Remote
Operation Mode Selector						
Cyclic Receive - Bit 0.5						
Fixed Level - '1'						
Local Control [LC]						
Not connected						
Not connected						
Not connected						
Not connected						
PLC/DCS [DP]						
Not connected						
Not connected						
Cyclic Receive - Bit 0.1	Off					<input checked="" type="checkbox"/>
Cyclic Receive - Bit 0.2	On					<input checked="" type="checkbox"/>
Not connected						
PC [DPV1]						
Not connected						
Not connected						
Not connected	Off					
Not connected	On					
Operator Panel [OP]						
Not connected						
Not connected						
OP - Button 4	Off			<input checked="" type="checkbox"/>		
OP - Button 3	On			<input checked="" type="checkbox"/>		
Not connected						

Released Control Command	On/Off
Released Control Command	On/Off
Preferred for direct Control of Control Functions	On/Off

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB97

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

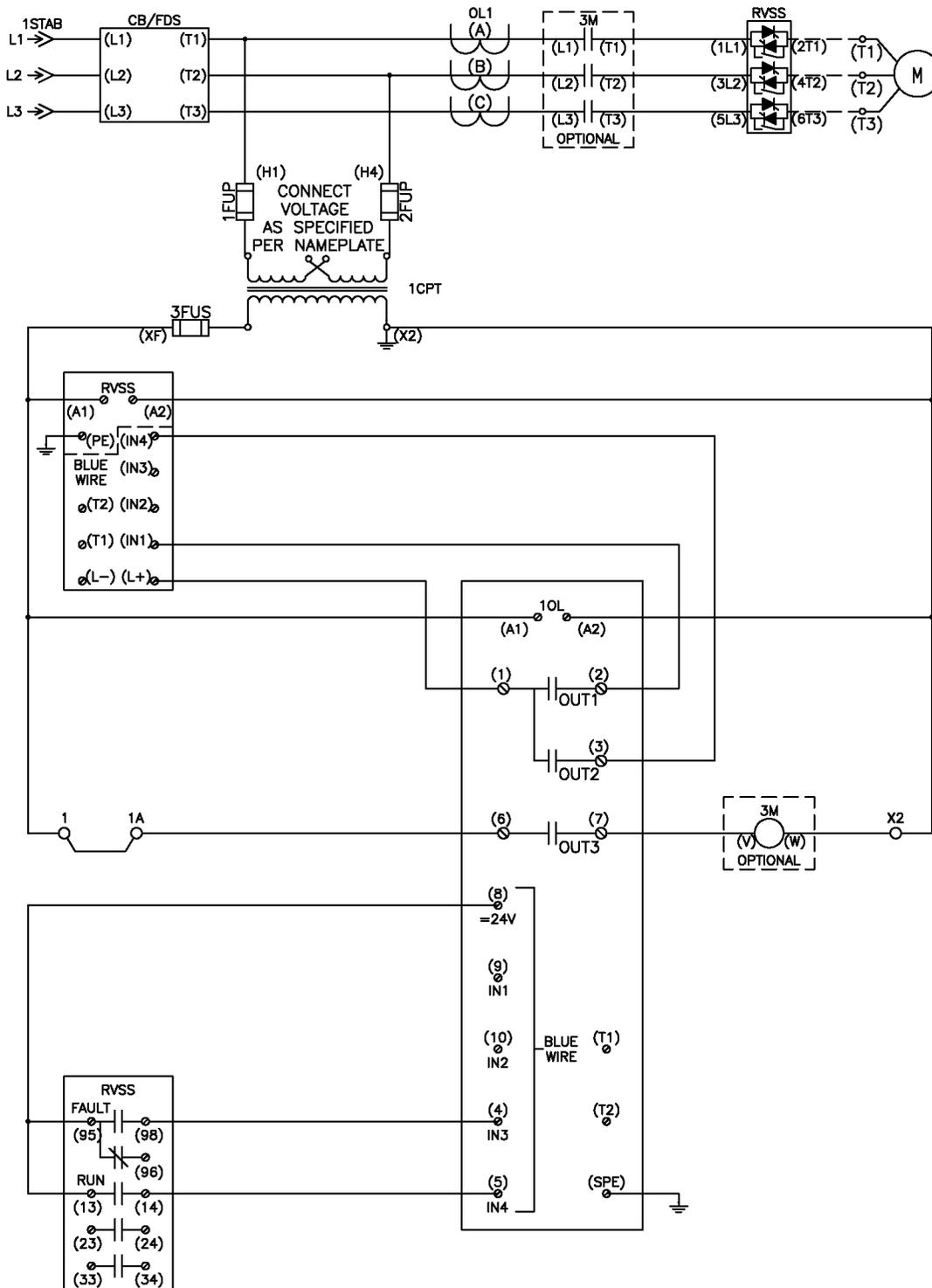
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to 'Contactor Control - 1 OE1'), BU - Output 2 (set to 'Truth Table 3 3/10 - Output'), and BU - Output 3 (set to 'BU - Input 4').
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to 'BU - Input 3'), External Fault - Reset (set to 'Not connected'), and Response (set to 'lipping').
- Type:** A group box with two radio buttons: 'normally open (NO)' (selected) and 'normally closed (NC)'.
- Activity:** A group box with two radio buttons: 'always' (selected) and 'only if motor runs'.
- External Fault - Reset also by:** A group box with four checkboxes: 'Test/Reset Button, RS232 (Panel Reset)' (checked), 'Auto-Reset' (unchecked), 'Remote Reset, Reset 1,2,3' (checked), and 'Dil Command/Reset' (unchecked).
- Marking:** A text field containing 'RVSS FAULT'.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB98

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB98

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 2-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS SIMOCODE Input 1 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Input 3 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB98

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC)  
 Not connected  
 Not connected  
 BU - Input 1  
 BU - Input 1  
 Not connected

PLC/DCS (DP)  
 Not connected  
 Not connected  
 Signal Conditioner 1 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	Local 1	Local 2	Local 3	Remote
Releases				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On< />  
 On< />  
 Off< />  
 On< />  
 On> />

**Signal Conditioner 1**  
 Signal Conditioner - Type: Inverting  
 Signal Conditioner - Input: Cyclic Receive - Bit 0.2  
 Signal Conditioner - Reset: Not connected

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB98

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

RVSS Control and Operation

**Basic Unit**

BU - Output 1	Contactor Control - 1 OE1
BU - Output 2	Truth Table 3 3/10 - Output
BU - Output 3	BU - Input 4

**External Fault 1**

External Fault - Input	BU - Input 3
External Fault - Reset	Not connected
Response	latching

**Type**

<input checked="" type="radio"/> normally open (NO)	<input type="radio"/> normally closed (NC)
---	--

**Activity**

<input checked="" type="radio"/> always	<input type="radio"/> only if motor runs
---	--

**External Fault - Reset also by**

<input checked="" type="checkbox"/> Test/Reset Button, RS232 (Panel Reset)	<input type="checkbox"/> Auto-Reset
<input checked="" type="checkbox"/> Remote Reset, Reset 1,2,3	<input type="checkbox"/> Dll Command-Reset

**Marking**

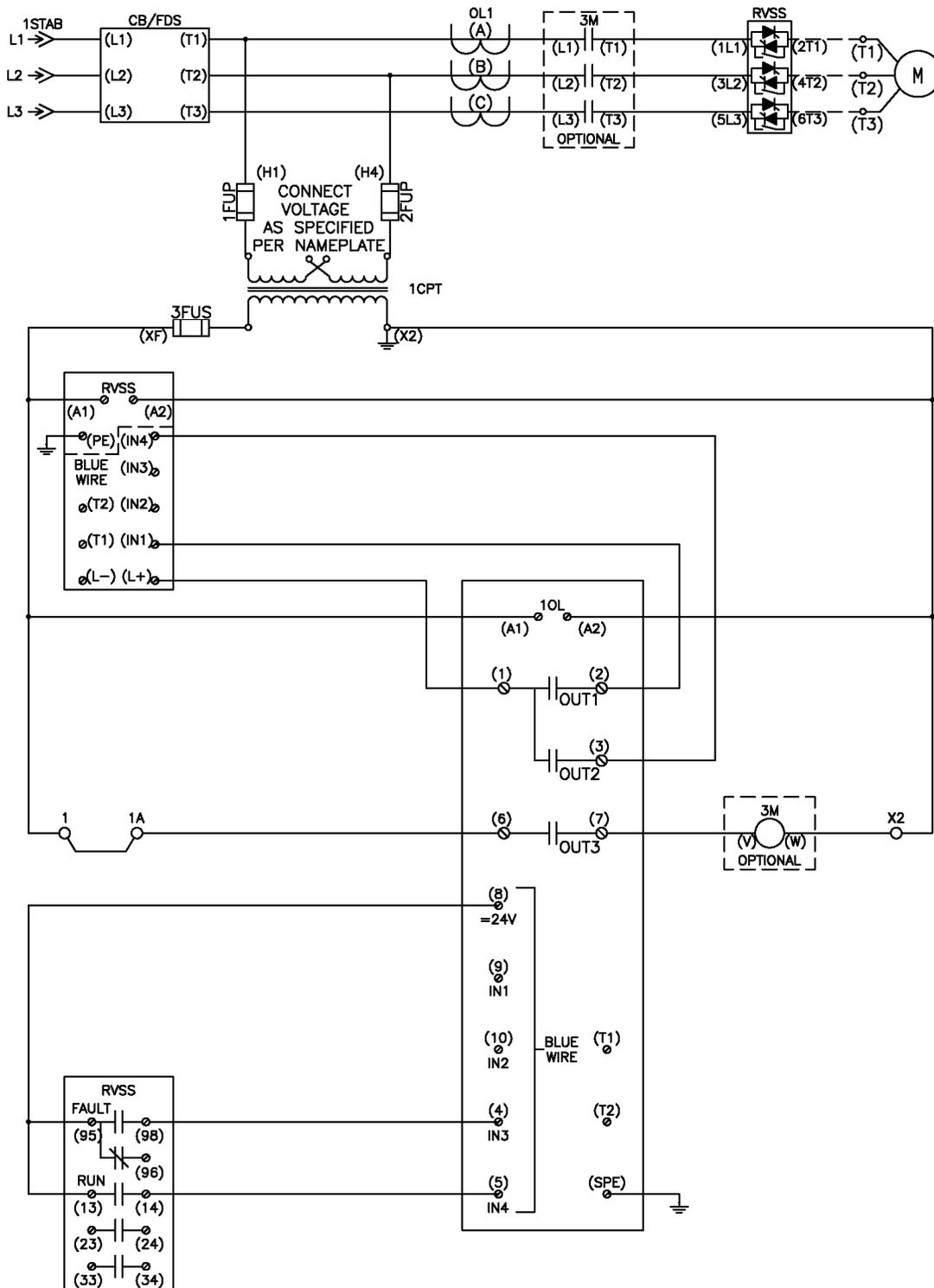
RVSS FAULT
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# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB99

RVSS – Profibus Bit Operation Mode Selection –  
 No Local – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB99

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 3-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS SIMOCODE Input 1 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Input 3 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB99

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control [LC]  
 Not connected  
 Not connected  
 BU - Input 1  
 BU - Input 1  
 Not connected

PLC/DCS [DP]  
 Not connected  
 Not connected  
 Cyclic Receive - Bit 0.1  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	Local 1	Local 2	Local 3	Remote
Releases				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On <<  
 On <  
 Off  
 On >  
 On >>

Preferred for direct Control of Control Functions

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB99

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

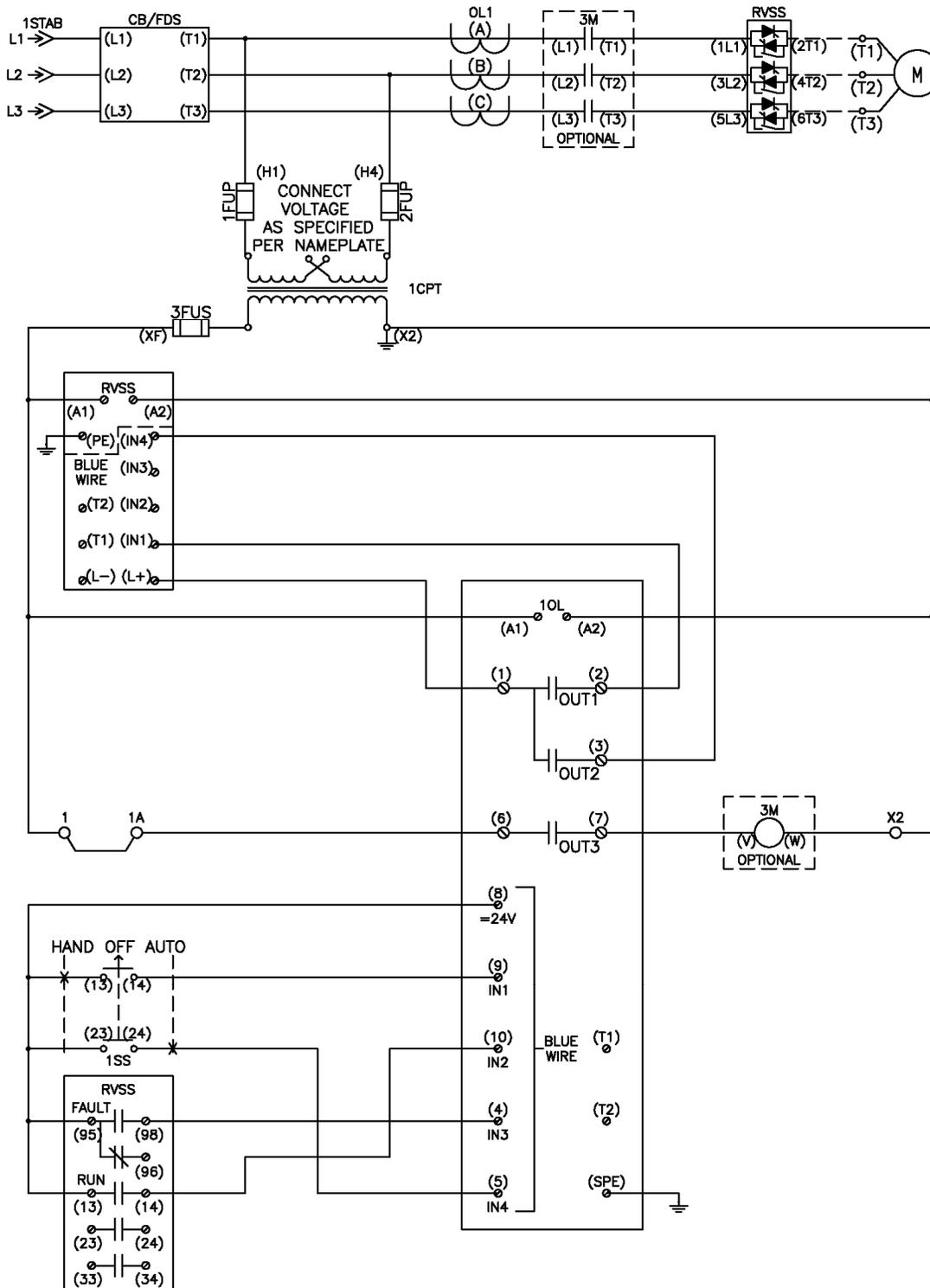
- Basic Unit:**
  - BU - Output 1: Contactor Control - 1 OE1
  - BU - Output 2: Truth Table 3 3/10 - Output
  - BU - Output 3: BU - Input 4
- External Fault 1:**
  - External Fault - Input: BU - Input 3
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)
  - normally closed (NC)
- Activity:**
  - always
  - only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)
  - Auto-Reset
  - Remote Reset, Reset 1,2,3
  - Dll Command-Reset
- Marking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB100

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB100

### RVSS – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the HAND position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 2 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 2 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 2 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 2 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Input 3 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB100

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 BU - Input 4

Local Control [LC]  
 Not connected  
 Not connected  
 BU - Input 1  
 BU - Input 1  
 Not connected

PLC/DCS [DP]  
 Not connected  
 Not connected  
 Signal Conditioner 1 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [DP]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Signal Conditioner 1  
 Signal Conditioner - Type: Inverting  
 Signal Conditioner - Input: Cyclic Receive - Bit 0.2  
 Signal Conditioner - Reset: Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
Released	On (enabled)	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Released	Off (enabled)	On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 Preferred for direct Control of Control Functions

On<<  
 On<  
 Off  
 On>  
 On>>

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB100

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

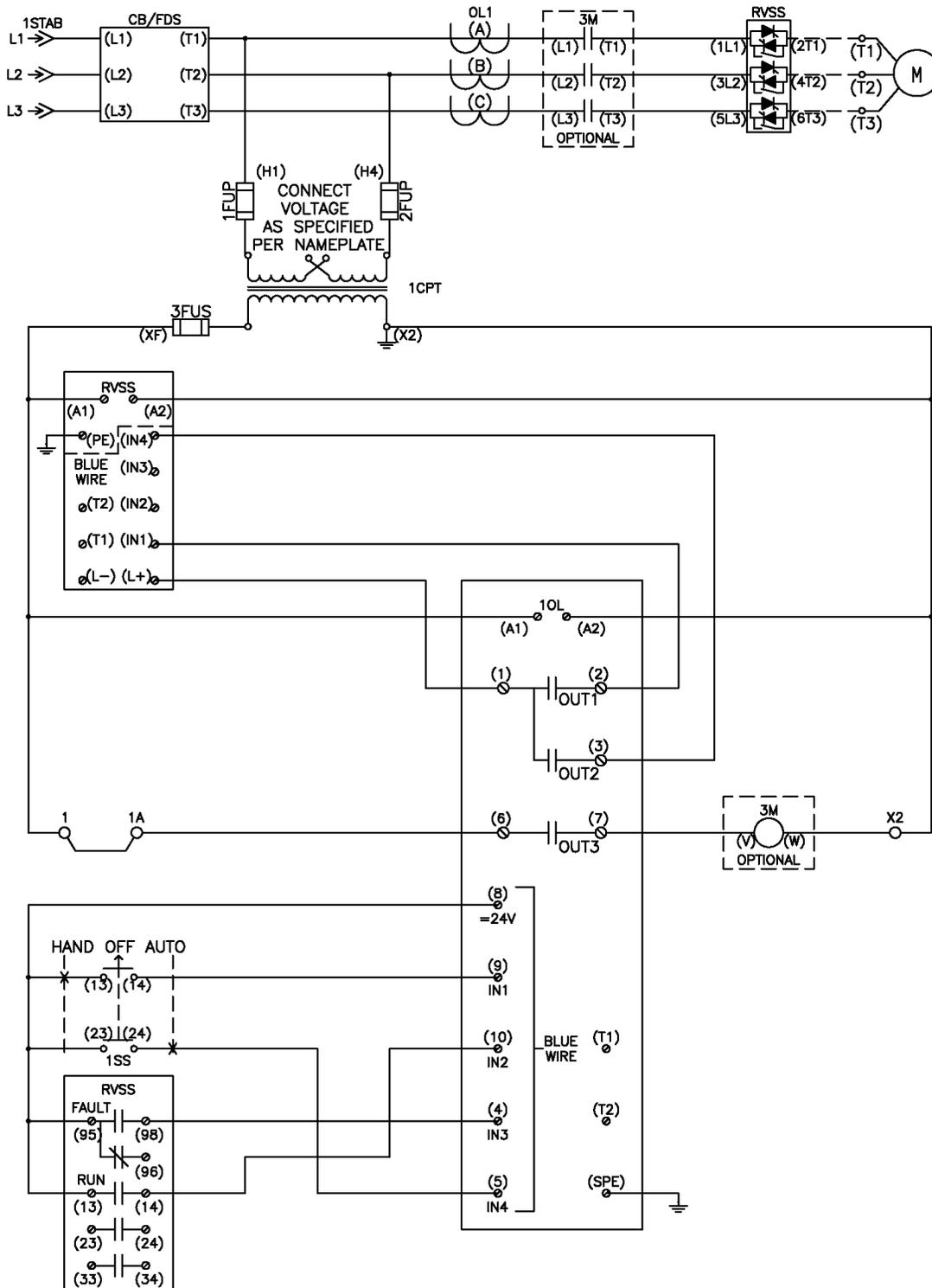
- Basic Unit:**
  - BU - Output 1: Contactor Control - 1 OE1
  - BU - Output 2: Truth Table 3 3/10 - Output
  - BU - Output 3: BU - Input 2
- External Fault 1:**
  - External Fault - Input: BU - Input 3
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)
  - normally closed (NC)
- Activity:**
  - always
  - only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)
  - Auto-Reset
  - Remote Reset, Reset 1,2,3
  - Dll Command-Reset
- Marking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB101

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB101

### RVSS – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the HAND position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 2 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 2 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 2 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 2 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Input 3 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB101

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB101

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

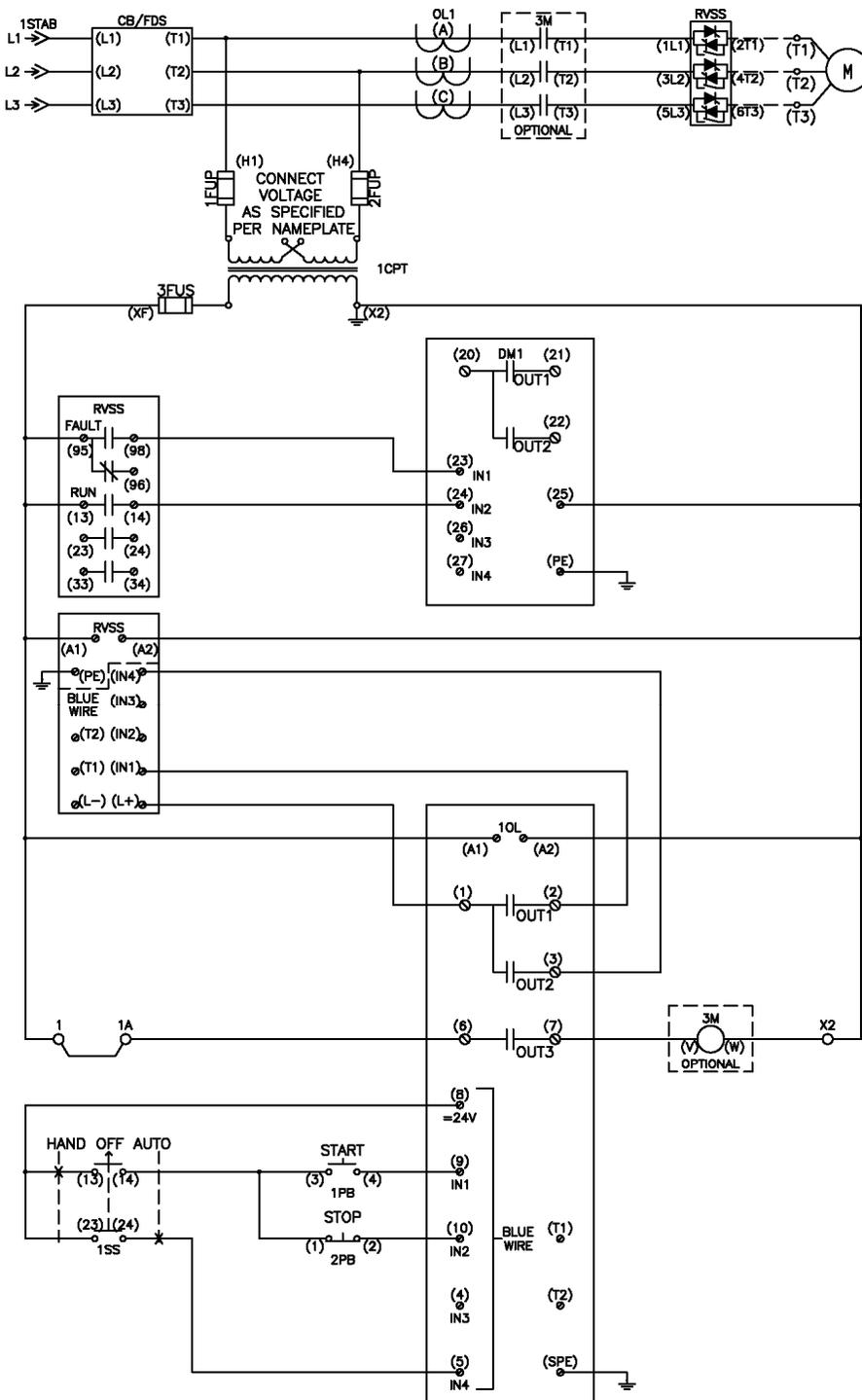
- Basic Unit:**
  - BU - Output 1: Contactor Control - 1 OE1
  - BU - Output 2: Truth Table 3 3/10 - Output
  - BU - Output 3: BU - Input 2
- External Fault 1:**
  - External Fault - Input: BU - Input 3
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)
  - normally closed (NC)
- Activity:**
  - always
  - only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)
  - Auto-Reset
  - Remote Reset, Reset 1,2,3
  - Dll Command-Reset
- Marking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB102

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB102

### RVSS – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and SIMOCODE Input 2 is connected the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the HAND position and the Start Pushbutton depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action The OFF Control Command is then triggered, causing SIMOCODE Output 1 open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB102

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 BU - Input 4

Local Control [LC]  
 Not connected  
 Not connected  
 BU - Input 2  
 BU - Input 1  
 Not connected

PLC/DCS [DP]  
 Not connected  
 Not connected  
 Signal Conditioner 1 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [DP]  
 Not connected  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
Released	On (enabled)	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On	Off (enabled)	On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	Off (enabled)	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	Off (enabled)	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	Off (enabled)	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 Preferred for direct Control of Control Functions

Released Control Command  
 On<<  
 On<  
 Off  
 On>  
 On>>

**Signal Conditioner 1**  
 Signal Conditioner - Type: Inverting  
 Signal Conditioner - Input: Cyclic Receive - Bit 0.2  
 Signal Conditioner - Reset: Not connected

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB102

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

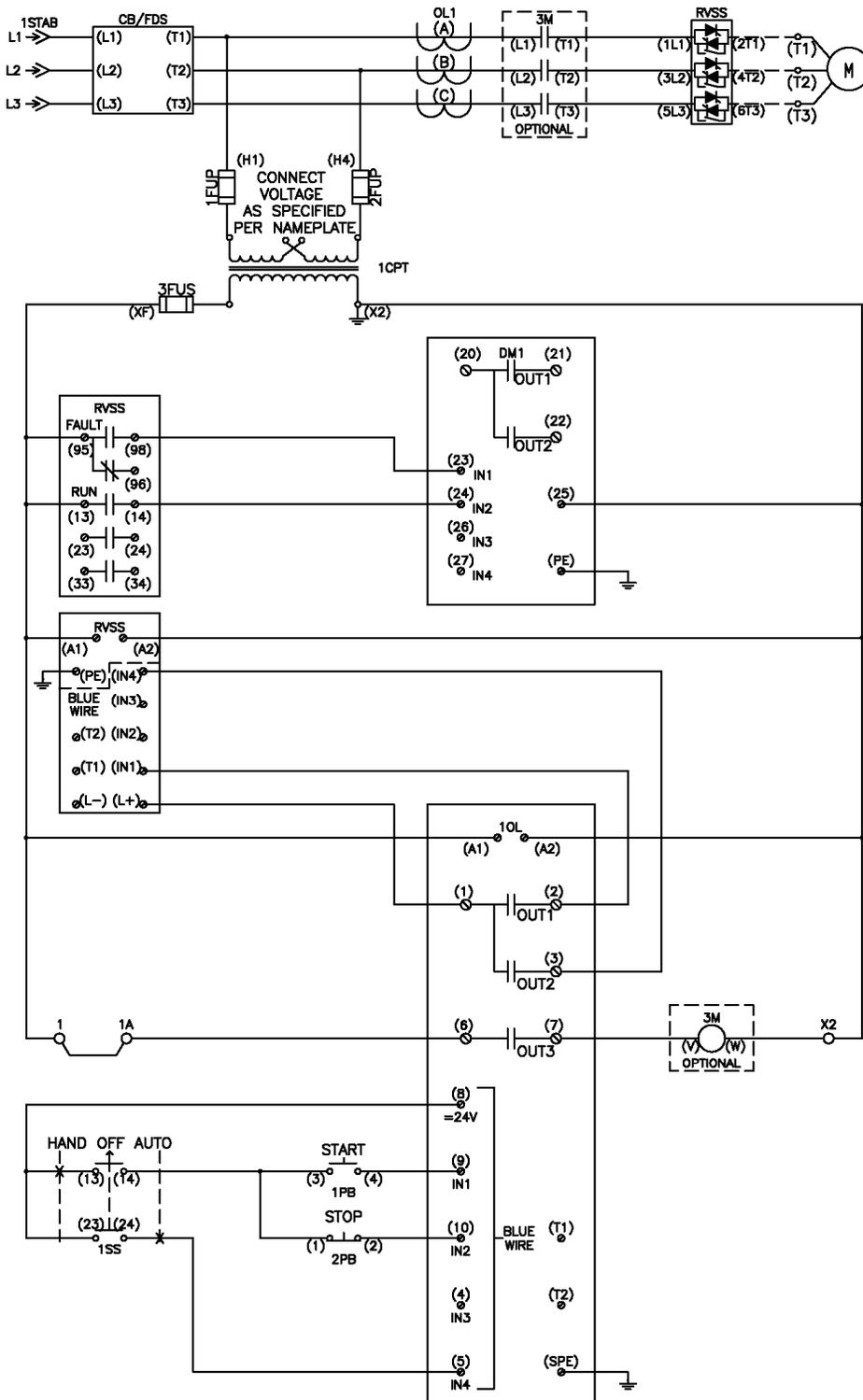
- Basic Unit:**
  - BU - Output 1: Contactor Control - 1 QE1
  - BU - Output 2: Truth Table 3 3/10 - Output
  - BU - Output 3: DM1 - Input 2
- External Fault 1:**
  - External Fault - Input: DM1 - Input 1
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)
  - normally closed (NC)
- Activity:**
  - always
  - only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)
  - Auto-Reset
  - Remote Reset, Reset 1,2,3
  - DR Command-Reset
- Marking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB103

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB103

### RVSS – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 3-Wire 3RW44 w/opt. Input Isolations

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the Selector Switch is placed into the HAND position and the Start Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE z Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

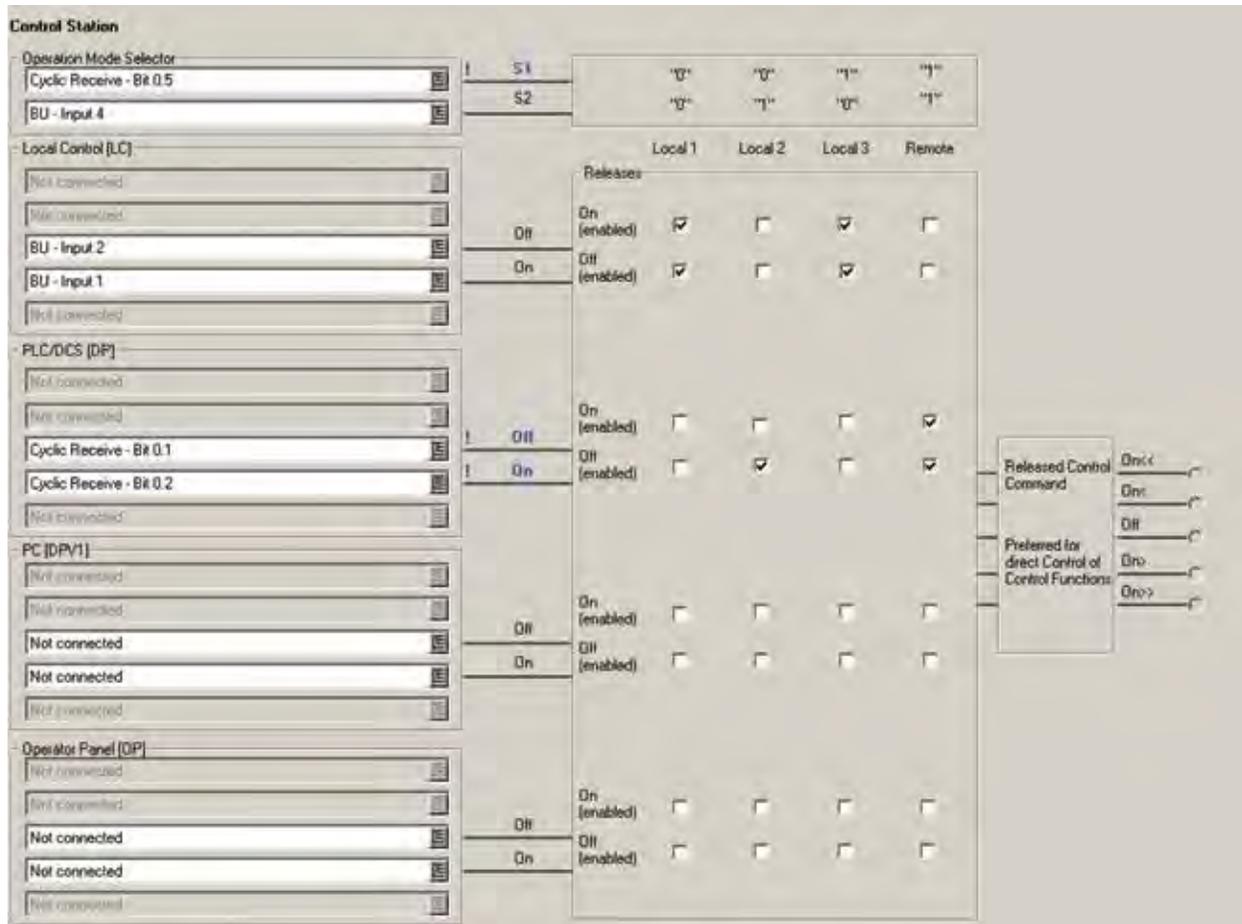
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB103

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire 3RW44 w/opt. Input Isolations

### Parameter Detail

Control Selection and Operation



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB103

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire 3RW44 w/opt. Input Isolations

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

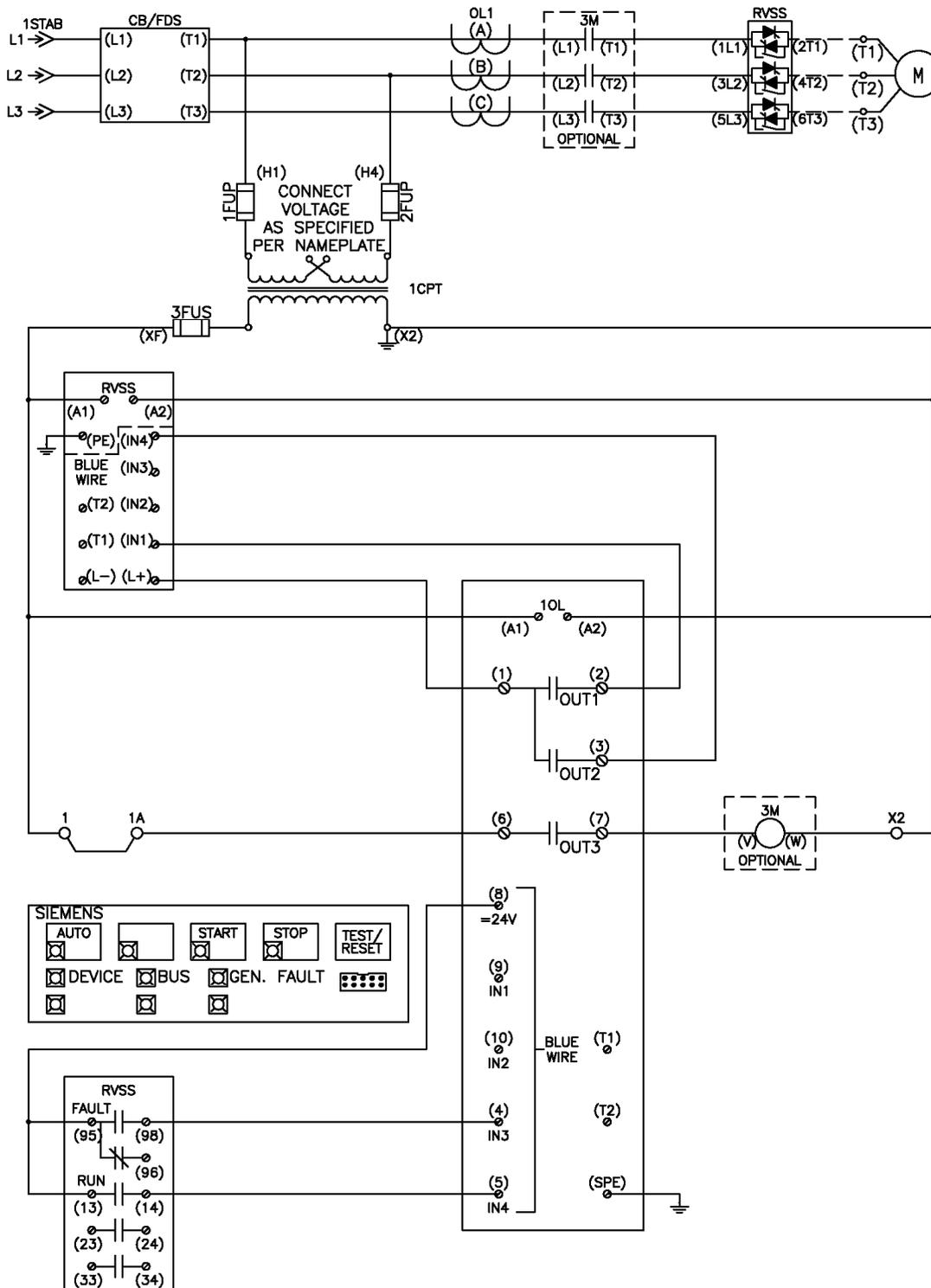
- Basic Unit:** Three dropdown menus for BU - Output 1 (Contactor Control - 1 QE1), BU - Output 2 (Truth Table 3 3I/1O - Output), and BU - Output 3 (DM1 - Input 2).
- External Fault 1:** Includes dropdowns for External Fault - Input (DM1 - Input 1) and External Fault - Reset (Not connected), and a dropdown for Response (tripping).
- Type:** Radio buttons for normally open (NO) (selected) and normally closed (NC).
- Activity:** Radio buttons for always (selected) and only if motor runs.
- External Fault - Reset also by:** Checkboxes for Test/Reset Button, RS232 (Panel Reset) (checked), Remote Reset, Reset 1,2,3 (checked), Auto-Reset, and Off Command-Reset.
- Marking:** A text field containing RVSS FAULT.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB104

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram

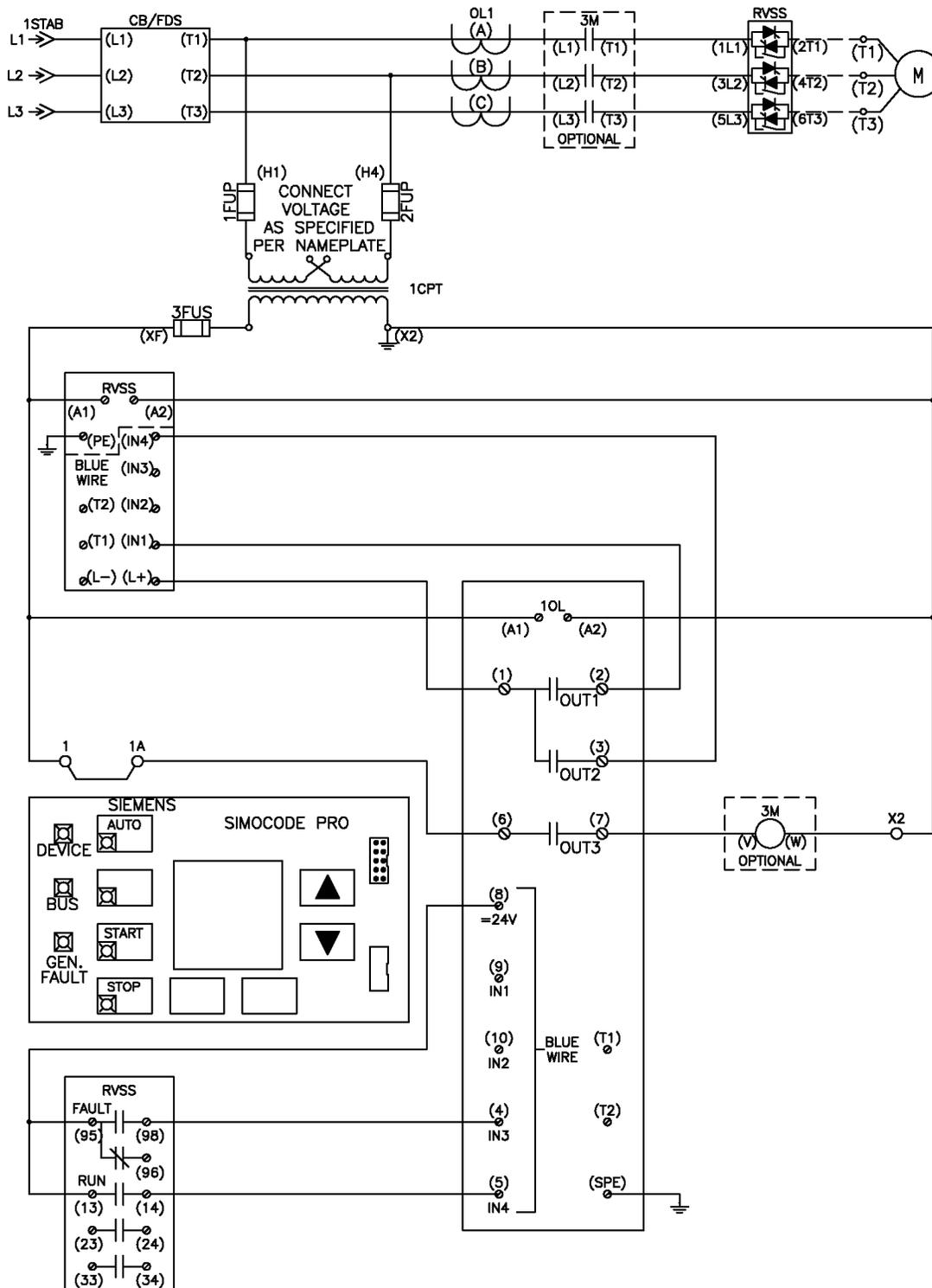


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB104

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB104

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Operating Instructions

#### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

#### Local Control

1. Operator Panel Button 3 (START) is connected to the ON > Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS the OP Start Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB104

### RVSS – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Signal Conditioner 1 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Profibus Cyclic Receive Bit 0.2 is connected to the Signal Conditioner 1 Input for inversion.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.2 is deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped
2. SIMOCODE Input 3 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB104

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Non-Volatile Element 1 - Output

Local Control [LC]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

PLC/DCS [DP]  
 Not connected  
 Not connected  
 Signal Conditioner 1 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]  
 Not connected  
 Not connected  
 OP - Button 4  
 OP - Button 3  
 Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
Released	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Released	Off (enabled)	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	Off (enabled)	On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	Off (enabled)	On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	On (enabled)	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 Preferred for direct Control of Control Functions

Released Control Command  
 On<<  
 On<  
 Off  
 On>  
 On>>

**Signal Conditioner 1**  
 Signal Conditioner - Type: inverting  
 Signal Conditioner - Input: Cyclic Receive - Bit 0.2  
 Signal Conditioner - Reset: Not connected

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB104

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

AUTO Toggle Operation

**Non-Volatile Element 1**

Non-Volatile Element - Type: edge rising with memory

Non-Volatile Element - Input: OP - Button 1

Non-Volatile Element - Reset: Non-Volatile Element 2 - Output

**Counter 1**

Counter - Limit: 2

Counter - Input +: OP - Button 1

Counter - Input -: Not connected

Counter - Reset: Non-Volatile Element 2 - Output

**Non-Volatile Element 2**

Non-Volatile Element - Type: non inverting

Non-Volatile Element - Input: Counter 1 - Output

Non-Volatile Element - Reset: Not connected

### RVSS Control and Operation

**Basic Unit**

BU - Output 1: Contactor Control - 1 QE1

BU - Output 2: Truth Table 3 3I/1O - Output

BU - Output 3: BU - Input 4

**External Fault 1**

External Fault - Input: BU - Input 3

External Fault - Reset: Not connected

Response: tripping

Type

normally open (NO)  normally closed (NC)

Activity

always  only if motor runs

External Fault - Reset also by

Test/Reset Button, RS232 (Panel Reset)  Auto-Reset

Remote Reset, Reset 1,2,3  Off Command-Reset

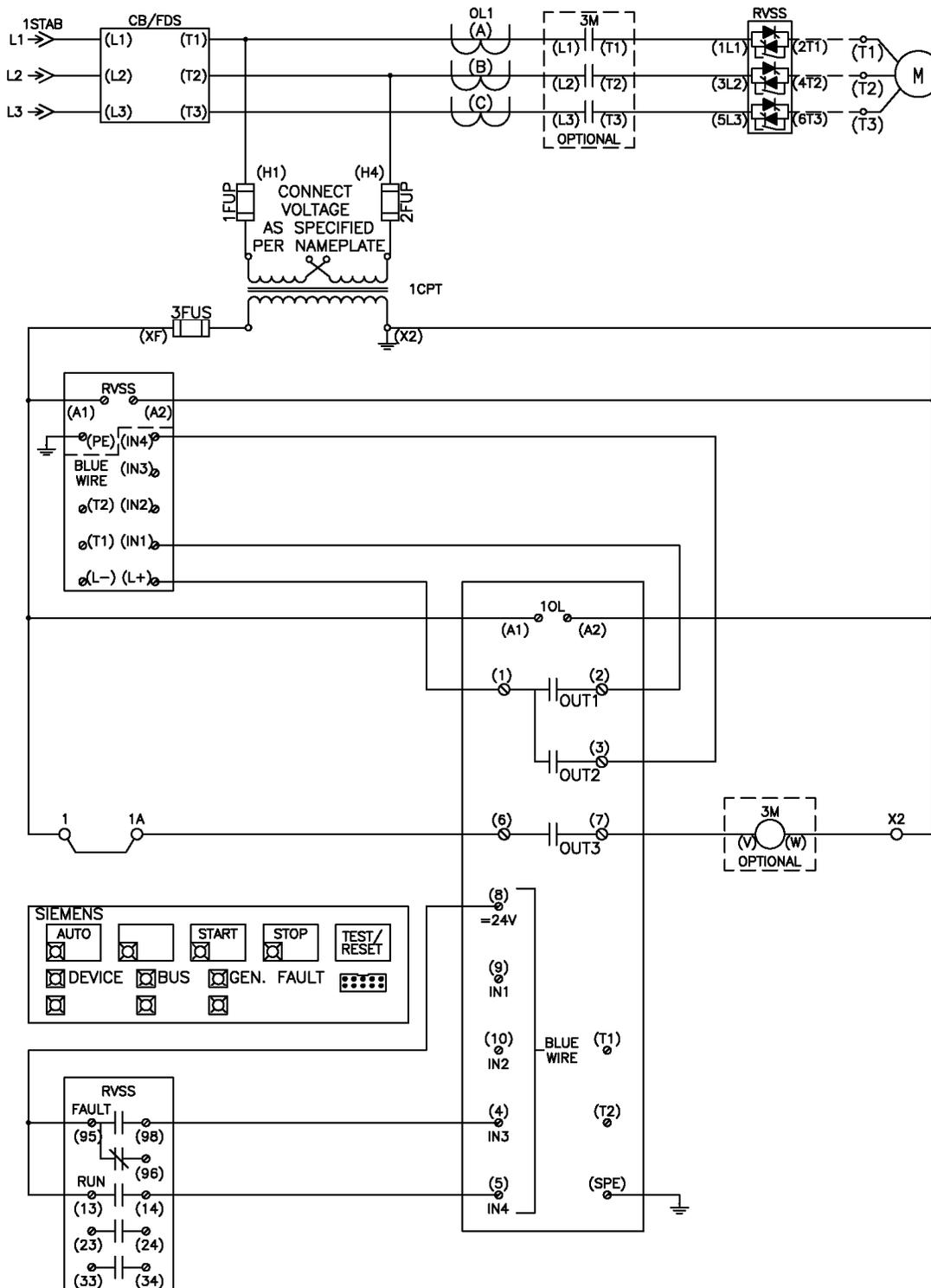
Marking: RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB105

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Connection Diagram





# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB105

### RVSS – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/opt. Input Isolation

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (START) is connected to the ON > Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS the OP Start Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time.
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB105

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Operating Instructions

#### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the optional 3M Isolation Contactor the RVSS closes the associated internal RUN contact. SIMOCODE Input 4 is then activated, causing SIMOCODE Output 3 to close.
4. To disengage the RVSS the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 to open.
5. To disengage the optional 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. SIMOCODE Input 4 is deactivated, causing SIMOCODE Output 3 to open. (RVSS Ramp-down time must be less than or equal to the SIMOCODE Execution Time).
6. In the event of an Overload or any other General Fault event SIMOCODE Output 1 will open.

#### Remote Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Input 3 will indicate RVSS Fault status only.
3. RVSS Hardware Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB105

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

Control Selection and Operation

**Control Station**

The interface displays the following sections and parameters:

- Operation Mode Selector:**
  - Cyclic Receive - Bit 0.5
  - Non-Volatile Element 1 - Output
- Local Control (LC):**
  - Not connected
  - Not connected
  - Not connected
  - Not connected
- PLC/OCS (DP):**
  - Not connected
  - Not connected
  - Cyclic Receive - Bit 0.1
  - Cyclic Receive - Bit 0.2
  - Not connected
- PC (DPV1):**
  - Not connected
  - Not connected
  - Not connected
  - Not connected
- Operator Panel (OP):**
  - Not connected
  - Not connected
  - OP - Button 4
  - OP - Button 3
  - Not connected

**Release Status Table:**

	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Released Control Command:** On<<, On<, Off, On>, On>>

**Preferred for direct Control of Control Functions:** On>, On>>

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB105

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/opt. Input Isolation

### Parameter Detail

AUTO Toggle Operation

The screenshot shows a configuration window with three sections: Non-Volatile Element 1, Counter 1, and Non-Volatile Element 2. Each section has several input fields for configuration.

Section	Parameter	Value
Non-Volatile Element 1	Non-Volatile Element - Type	edge rising with memory
	Non-Volatile Element - Input	OP - Button 1
	Non-Volatile Element - Reset	Non-Volatile Element 2 - Output
Counter 1	Counter - Limit	2
	Counter - Input +	OP - Button 1
	Counter - Input -	Not connected
	Counter - Reset	Non-Volatile Element 2 - Output
Non-Volatile Element 2	Non-Volatile Element - Type	non inverting
	Non-Volatile Element - Input	Counter 1 - Output
	Non-Volatile Element - Reset	Not connected

RVSS Control and Operation

The screenshot shows a configuration window for RVSS Control and Operation with several sections: Basic Unit, External Fault 1, and Marking.

Section	Parameter	Value
Basic Unit	BU - Output 1	Contact Control - 1 OE1
	BU - Output 2	Truth Table 3 3/10 - Output
	BU - Output 3	BU - Input 4
External Fault 1	External Fault - Input	BU - Input 3
	External Fault - Reset	Not connected
	Response	tripping
	Type	<input checked="" type="radio"/> normally open (NO) <input type="radio"/> normally closed (NC)
Activity	Activity	<input checked="" type="radio"/> always <input type="radio"/> only if motor runs
	External Fault - Reset also by	<input checked="" type="checkbox"/> Test/Reset Button, RS232 (Panel Reset) <input type="checkbox"/> Auto-Reset <input checked="" type="checkbox"/> Remote Reset, Reset 1,2,3 <input type="checkbox"/> DIR Command-Reset
Marking	Marking	RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## 11. 3RW44 Reduced Voltage Soft Starter with Input Isolation and Bypass Contactors

The reduced voltage soft starter uses an SCR equipped solid state controller to provide smooth, stepless acceleration by controlling the applied voltage, current, and torque to the motor terminals for single-speed, full-voltage operation. An input isolation contactor is integrated into the design to provide complete voltage removal to the motor windings. A bypass contactor is integrated into the design to provide selectable direct across the line, single-speed, single-direction, full-voltage operation.

### The basic RVSS operation of this starter is as follows:

1. A local or remote RVSS start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Output 1 closes giving the RVSS a signal to begin operation.
3. The RVSS RUN contact closes relaying the SIMOCODE Pro to close Digital Module Output 1 which energizes the coil of Input Isolation Contactor 3M.
4. With the Input Isolation Contactor 3M closed the RVSS follows its settings for ramp-up, run, and internal bypass.
5. A local or remote stop signal is given to the SIMOCODE Pro.
6. The SIMOCODE Pro Output 1 opens giving the RVSS a signal to stop operation.
7. The RVSS follows its settings for ramp-down opening the RVSS RUN contact when the designated time has elapsed.
8. With the RVSS RUN contact open the SIMOCODE Pro opens its Digital Module Output 1 which deenergizes the coil of Input Isolation Contactor 3M.
9. If a fault occurs at any time the SIMOCODE Pro will end the starter operation.

### The basic BYPASS operation of this starter is as follows:

1. A local or remote BYPASS start signal is given to the SIMOCODE Pro.
2. The SIMOCODE Pro Digital Module Output 2 closes which energizes the coil of Bypass Contactor 2M.
3. A local or remote stop signal is given to the SIMOCODE Pro.
4. The SIMOCODE Pro Digital Module Output 2 opens which de-energizes the coil of Bypass Contactor 2M.
5. If a fault occurs at any time the SIMOCODE Pro will end the starter operation.

The RVSS auxiliary contacts are connected to the SIMOCODE Pro inputs to provide starter control as well as operation feedback over Profibus-DP.

- o The RVSS RUN contact provides direct control over the 3M input isolation contactor and starter condition feedback. When active the contact will signal the SIMOCODE Pro to close Digital Module Output 1 to energize the 3M contactor coil. This contact will switch states during ramp-up, internal bypass, and rampdown.
- o The RVSS FAULT contact provides starter condition feedback. When active the contact will signal the SIMOCODE Pro to trigger an external fault command. This contact will switch states during thyristor thermal overload, phase failure, no load voltage, mains under-voltage, mains over-voltage, or equipment error.



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB107

### RVSS – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the RVSS the Selector Switch is placed into the RVSS position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Selector Switch is placed into the BYPASS position. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB107

### RVSS – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB107

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control [LC]  
 Not connected  
 BU - Input 3  
 Truth Table 1 3I/1O - Output  
 BU - Input 1  
 Not connected

PLC/DCS [DP]  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3I/1O - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	Local 1	Local 2	Local 3	Remote
Releases				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On<><  
 On<  
 Off  
 On<><  
 On<>

**Truth Table 1 3I/1O**

Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	Output
Not connected	BU - Input 1	BU - Input 3	
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

**Truth Table 2 3I/1O**

Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	Output
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB107

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

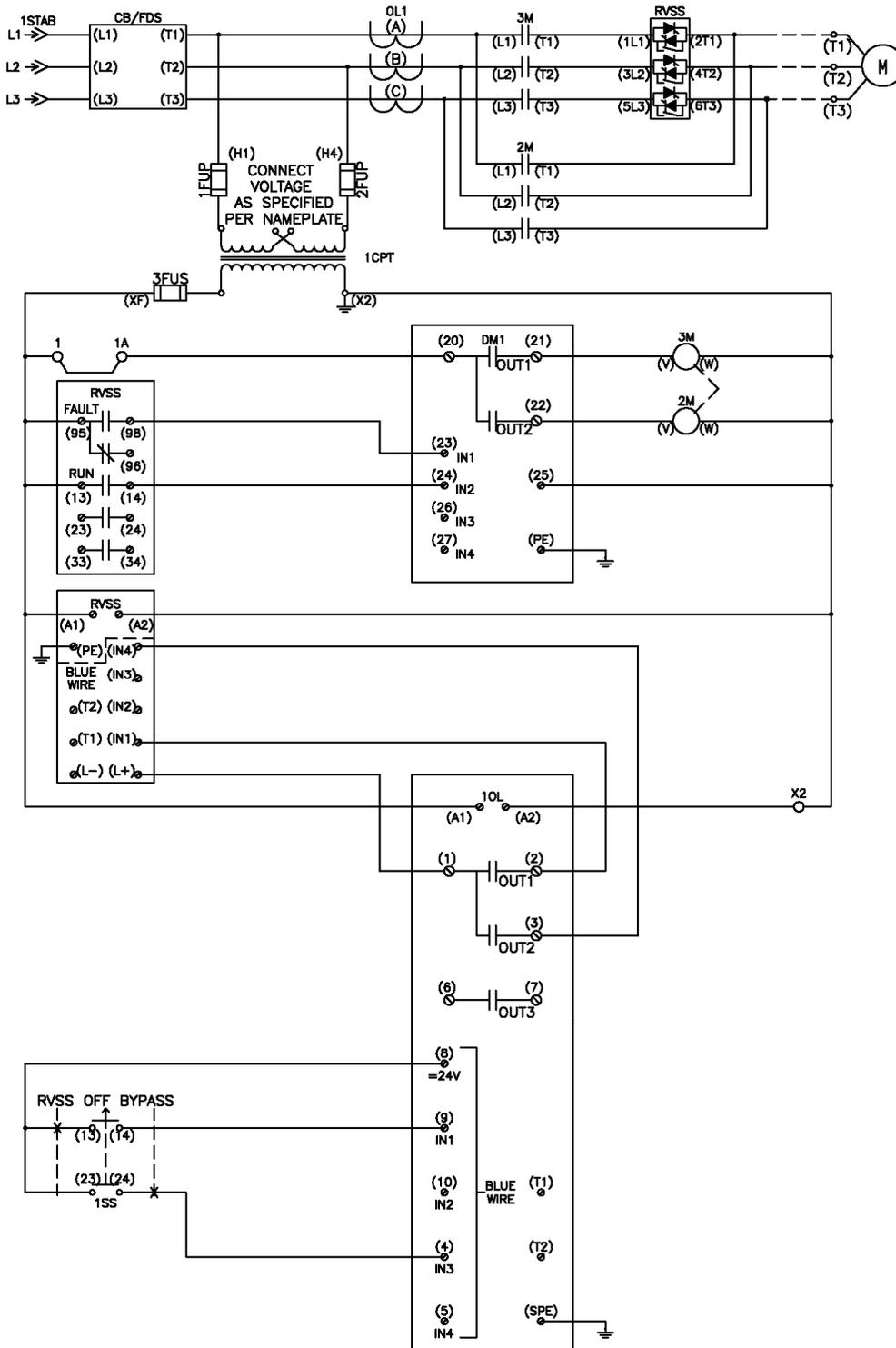
- Basic Unit:**
  - BU - Output 1: Contactor Control - 1 QE1
  - BU - Output 2: Truth Table 3 3/10 - Output
  - BU - Output 3: Not connected
- Digital Module 1:**
  - DM - Output 1: DM1 - Input 2
  - DM - Output 2: Contactor Control - 2 QE2
- External Fault 1:**
  - External Fault - Input: DM1 - Input 1
  - External Fault - Reset: Not connected
  - Response: tipping
- Type:**
  - normally open (NO)  normally closed (NC)
- Activity:**
  - always  only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)  Auto-Reset
  - Remote Reset, Reset 1,2,3  Diff Command-Reset
- Marking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB108

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB108

### RVSS – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the RVSS the Selector Switch is placed into the RVSS position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Selector Switch is placed into the BYPASS position. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB108

### RVSS – Profibus Bit Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB108

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:** Includes 'Operation Mode Selector' with 'Cyclic Receive - Bz 0.5' and 'Fixed Level - 1'. It also shows bit status for S1 and S2.
- Local Control (LC):** Lists 'BU - Input 3' and 'BU - Input 1' with their respective On/Off (enabled) status and checkboxes for Local 1, Local 2, and Remote control.
- PLC/DCS (DP):** Shows 'Cyclic Receive - Bz 0.0', 'Cyclic Receive - Bz 0.1', and 'Cyclic Receive - Bz 0.2' with their On/Off (enabled) status and checkboxes for Local 1, Local 2, and Remote control.
- PC (DPV1):** Shows 'Not connected' status for three inputs with their On/Off (enabled) status and checkboxes for Local 1, Local 2, and Remote control.
- Operator Panel (OP):** Shows 'Not connected' status for three inputs with their On/Off (enabled) status and checkboxes for Local 1, Local 2, and Remote control.
- Released Control Command:** A section with four terminals labeled On<<, On, Off, and On>>.
- Preferred for direct Control of Control Functions:** A section with four terminals labeled On<<, On, Off, and On>>.
- Truth Table 1 3/10:** A truth table with inputs I1, I2, I3 and output O. The table shows the output for all combinations of input states.
- Truth Table 3/10:** A truth table with inputs I1, I2, I3 and output O. The table shows the output for all combinations of input states.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB108

RVSS – Profibus Bit Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for the RVSS Control and Operation. It is organized into several sections:

- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to 'Contactor Control - 1 QE1'), BU - Output 2 (set to 'Truth Table 3 3/10 - Output'), and BU - Output 3 (set to 'Not connected').
- Digital Module 1:** Contains two dropdown menus for DM - Output 1 (set to 'DM1 - Input 2') and DM - Output 2 (set to 'Contactor Control - 2 QE2').
- External Fault 1:** Contains three dropdown menus: 'External Fault - Input' (set to 'DM1 - Input 1'), 'External Fault - Reset' (set to 'Not connected'), and 'Response' (set to 'lipping').
- Type:** A radio button group with 'normally open (NO)' selected and 'normally closed (NC)' unselected.
- Activity:** A radio button group with 'always' selected and 'only if motor runs' unselected.
- External Fault - Reset also by:** A checkbox group with 'Test/Reset Button, RS232 (Panel Reset)' and 'Remote Reset, Reset 1,2,3' checked, and 'Auto-Reset' and 'Dil Command-Reset' unchecked.
- Marking:** A text field containing 'RVSS FAULT'.



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB109

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the RVSS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the BYPASS Pushbutton is depressed while the Stop Pushbutton is in its normally close state. The ON< Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB109

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB109

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC)  
 Not connected  
 BU - Input 3  
 BU - Input 2  
 BU - Input 1  
 Not connected

PLC/DCS (DP)  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Releases	On (enabled)	Off (enabled)	Local 1	Local 2	Local 3	Remote
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Released Control Command  
 On<<<  
 On<<  
 On<  
 On<>>  
 On>>>

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: Cyclic Receive - Bit 0.0  
 Truth Table - Input 3: Cyclic Receive - Bit 0.2

I1	I2	I3	Q
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB109

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

**Basic Unit**

BU - Output 1: Contactor Control - 1 QE1

BU - Output 2: Truth Table 3 3/10 - Output

BU - Output 3: Not connected

**Digital Module 1**

DM - Output 1: DM1 - Input 2

DM - Output 2: Contactor Control - 2 QE2

**External Fault 1**

External Fault - Input: DM1 - Input 1

External Fault - Reset: Not connected

Response: tipping

Type

normally open (NO)  normally closed (NC)

Activity

always  only if motor runs

External Fault - Reset also by

Test/Reset Button, RS232 (Panel Reset)  Auto-Reset

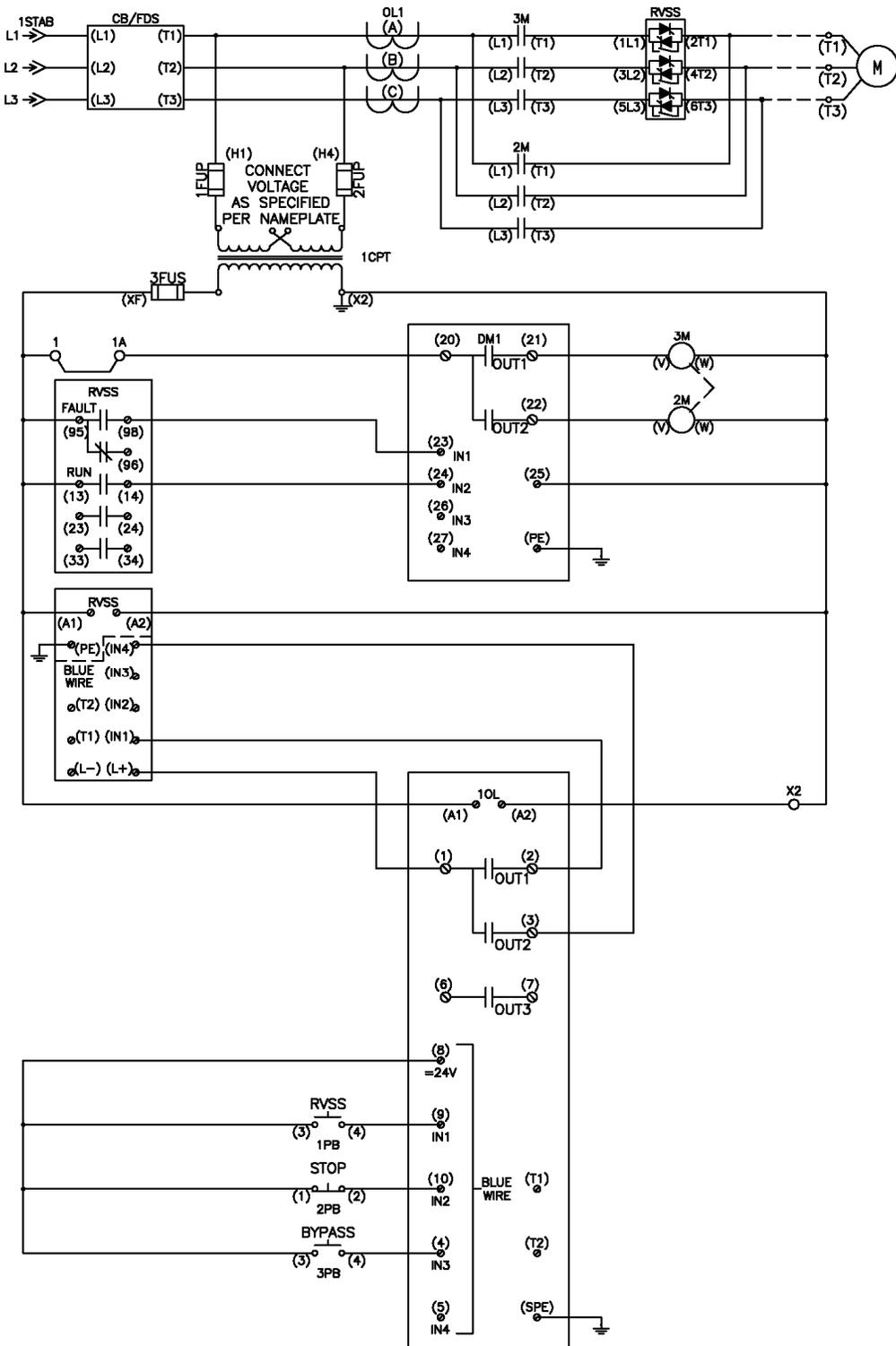
Remote Reset, Reset 1,2,3  Dll Command-Reset

Marking: RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB110

RVSS – Profibus Bit Operation Mode Selection –  
 Local 3-Wire PB – Remote 3-Wire 3RW44 w/Input Isolation and Bypass  
 Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB110

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the RVSS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the BYPASS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB110

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire PB – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped. so equipped.

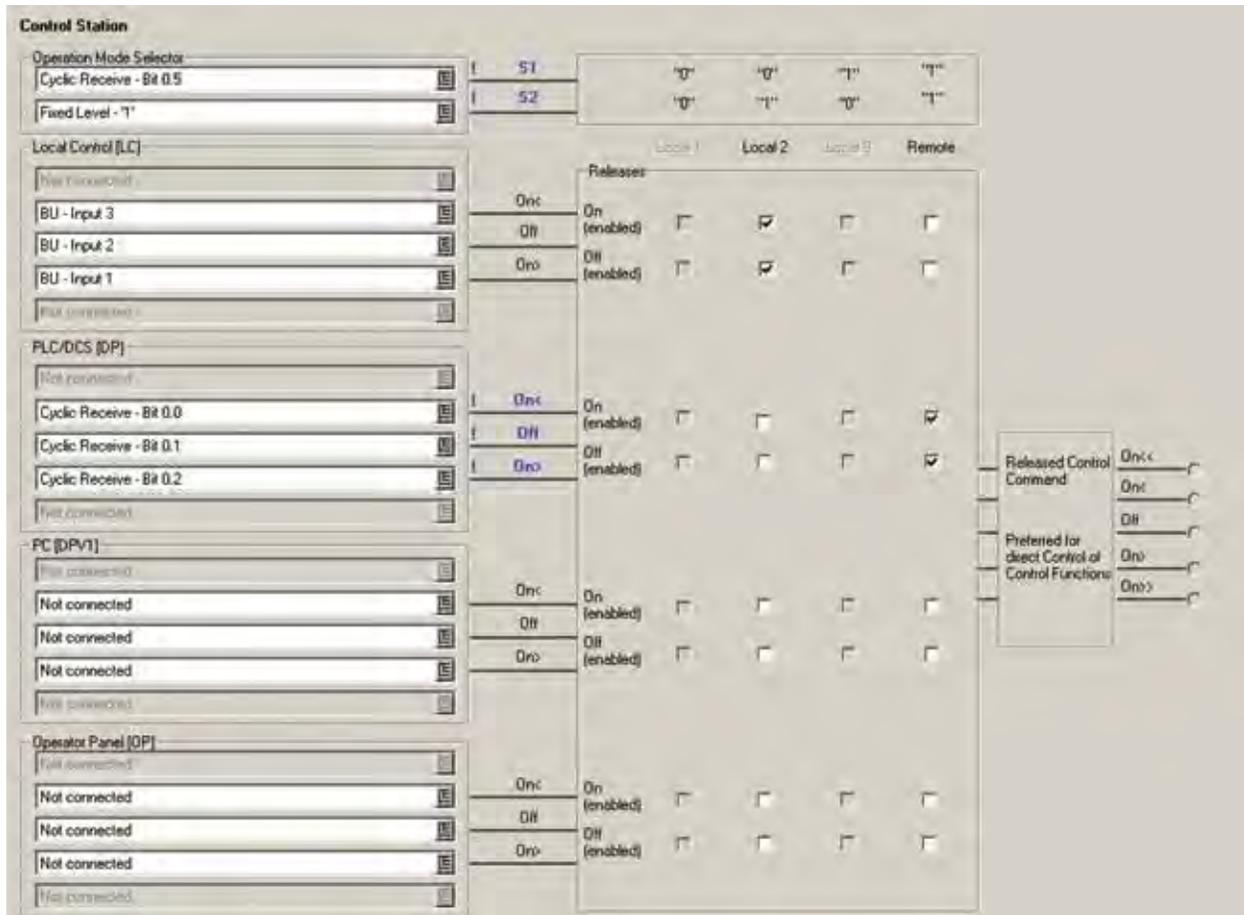
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB110

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB110

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire PB – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

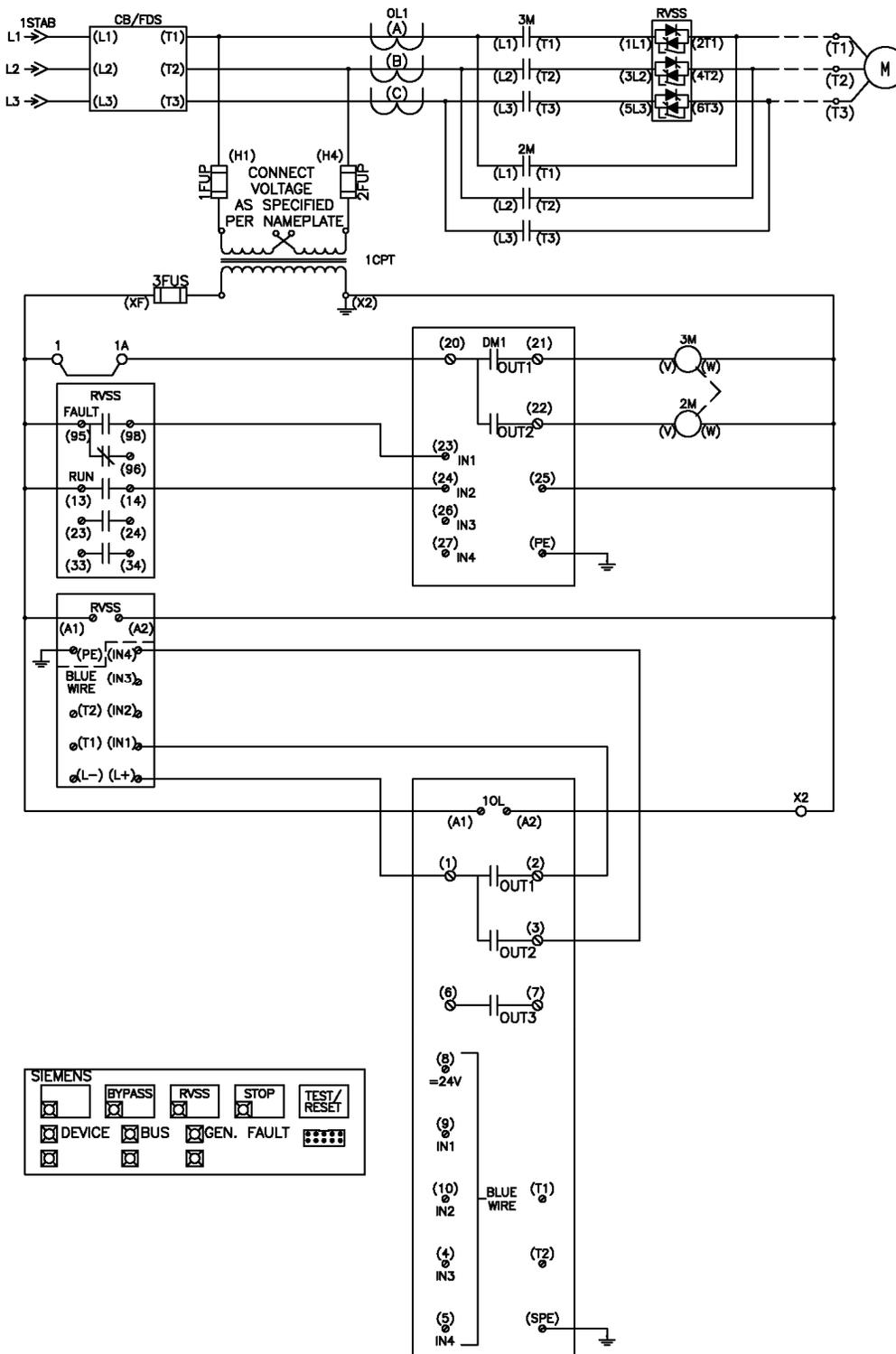
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to 'Contactor Control - 1 QE1'), BU - Output 2 (set to 'Truth Table 3 3/10 - Output'), and BU - Output 3 (set to 'Not connected').
- Digital Module 1:** Contains two dropdown menus for DM - Output 1 (set to 'DM1 - Input 2') and DM - Output 2 (set to 'Contactor Control - 2 QE2').
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to 'DM1 - Input 1'), External Fault - Reset (set to 'Not connected'), and Response (set to 'lipping').
- Type:** A group box with two radio buttons: 'normally open (NO)' (selected) and 'normally closed (NC)'.
- Activity:** A group box with two radio buttons: 'always' (selected) and 'only if motor runs'.
- External Fault - Reset also by:** A group box with four checkboxes: 'Test/Reset Button, RS232 (Panel Reset)' (checked), 'Remote Reset, Reset 1,2,3' (checked), 'Auto-Reset' (unchecked), and 'Dif Command-Reset' (unchecked).
- Marking:** A text field containing 'RVSS FAULT'.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB111

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram

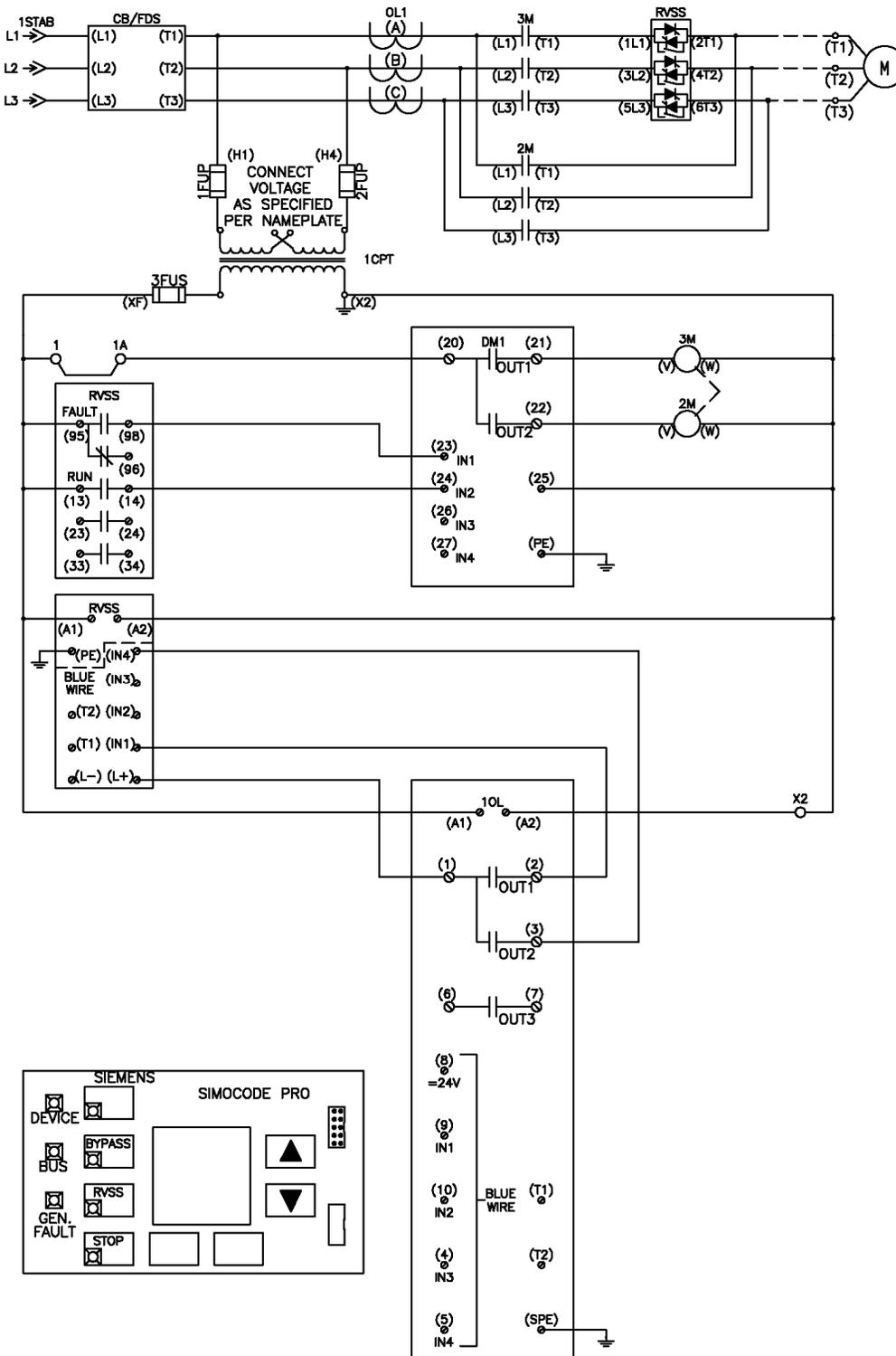


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB111

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB111

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (RVSS) is connected to the ON > Control Command, Operator Panel Button 2 (BYPASS) is connected to the ON < Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS the OP RVSS Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the OP BYPASS Pushbutton is depressed. The ON< Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB111

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB111

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

The screenshot displays the configuration interface for the tiastar Smart MCC SIMOCODE Pro Control. It is divided into several sections:

- Control Station:** Includes 'Operation Mode Selector' (Cyclic Receive - Bit 0.5, Fixed Level - '1'), 'Local Control (LC)' (Not connected), 'PLC/DCS (DP)' (Cyclic Receive - Bit 0.0, Truth Table 2 3/10 - Output, Cyclic Receive - Bit 0.2), 'PC (DPV1)' (Not connected), and 'Operator Panel (OP)' (OP - Button 2, OP - Button 4, OP - Button 3).
- Releases:** A table with columns for Local 1, Local 2, Local 3, and Remote. It lists On and Off states for On (enabled) and Off (enabled) conditions.
- Released Control Command:** A vertical stack of terminals labeled On<<, On, Off, On>>, and On>>.
- Preferred for direct Control of Control Functions:** A vertical stack of terminals labeled On<<, On, Off, On>>, and On>>.
- Truth Table 2 3/10:** A truth table with inputs I1, I2, I3 and output O.
- Truth Table 3/10:** A truth table with inputs I1, I2, I3 and output O.

**Truth Table 2 3/10**

Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	O
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

**Truth Table 3/10**

I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB111

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for the RVSS Control and Operation. It is organized into several sections:

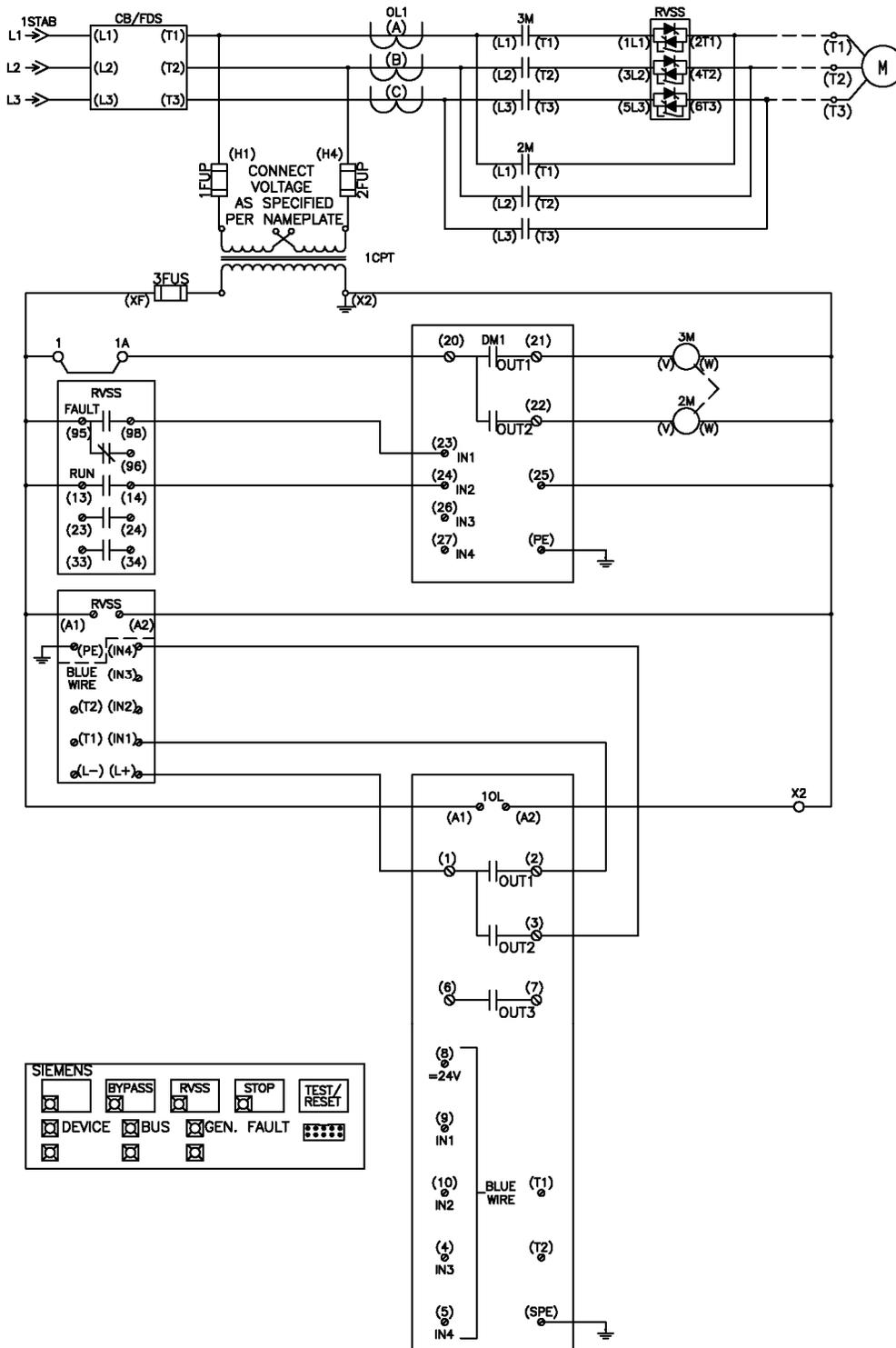
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to 'Contactor Control - 1 QE1'), BU - Output 2 (set to 'Truth Table 3 3/10 - Output'), and BU - Output 3 (set to 'Not connected').
- Digital Module 1:** Contains two dropdown menus for DM - Output 1 (set to 'DM1 - Input 2') and DM - Output 2 (set to 'Contactor Control - 2 QE2').
- External Fault 1:** Contains three dropdown menus: 'External Fault - Input' (set to 'DM1 - Input 1'), 'External Fault - Reset' (set to 'Not connected'), and 'Response' (set to 'lipping').
- Type:** A radio button group with 'normally open (NO)' selected and 'normally closed (NC)' unselected.
- Activity:** A radio button group with 'always' selected and 'only if motor runs' unselected.
- External Fault - Reset also by:** A checkbox group with 'Test/Reset Button, RS232 (Panel Reset)' and 'Remote Reset, Reset 1,2,3' checked, and 'Auto-Reset' and 'Dif Command-Reset' unchecked.
- Marking:** A text field containing 'RVSS FAULT'.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB112

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram

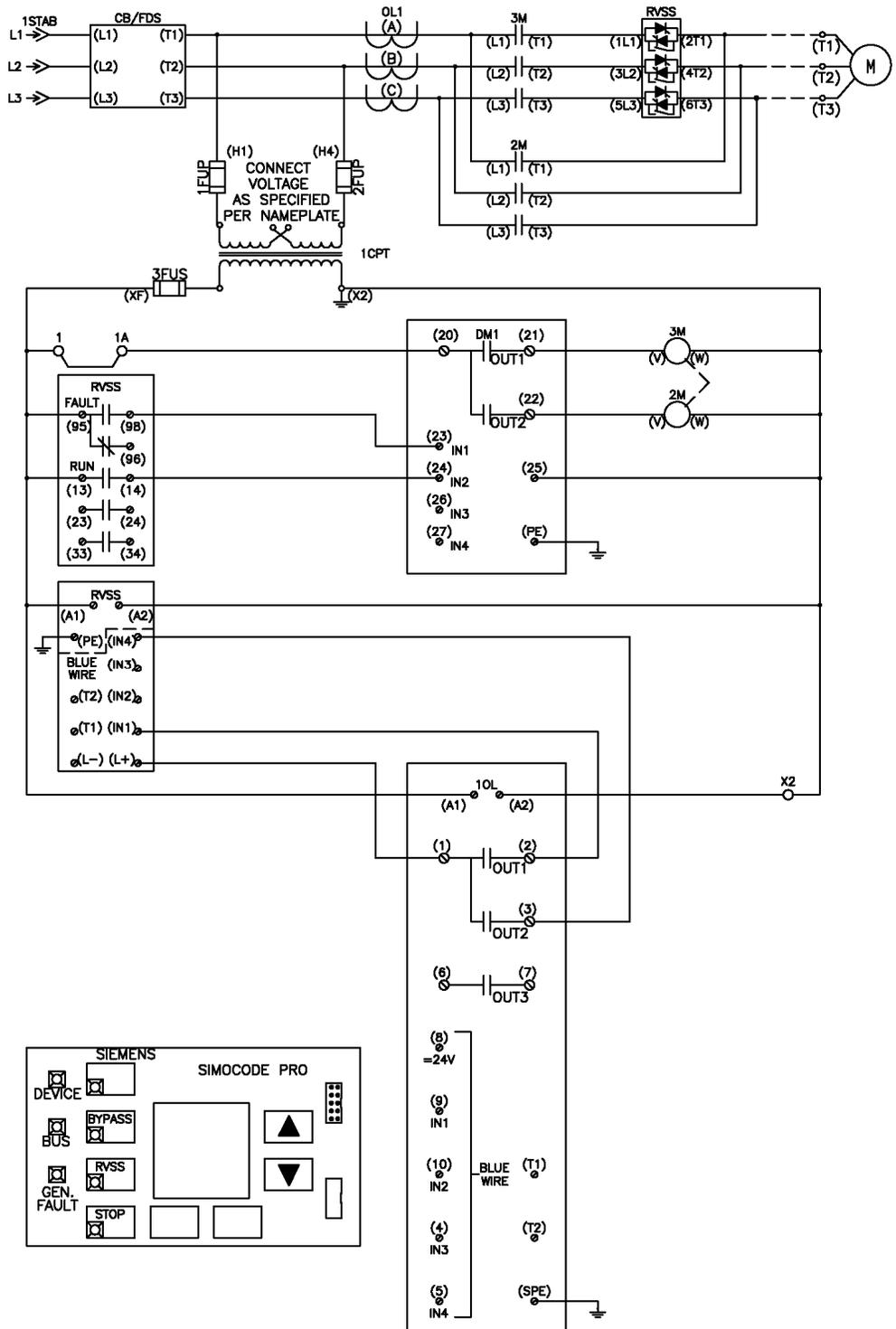


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB112

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OPD – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB112

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control

1. Operator Panel Button 3 (RVSS) is connected to the ON > Control Command, Operator Panel Button 2 (BYPASS) is connected to the ON < Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS the OP RVSS Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the OP BYPASS Pushbutton is depressed. The ON< Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB112

### RVSS – Profibus Bit Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped.

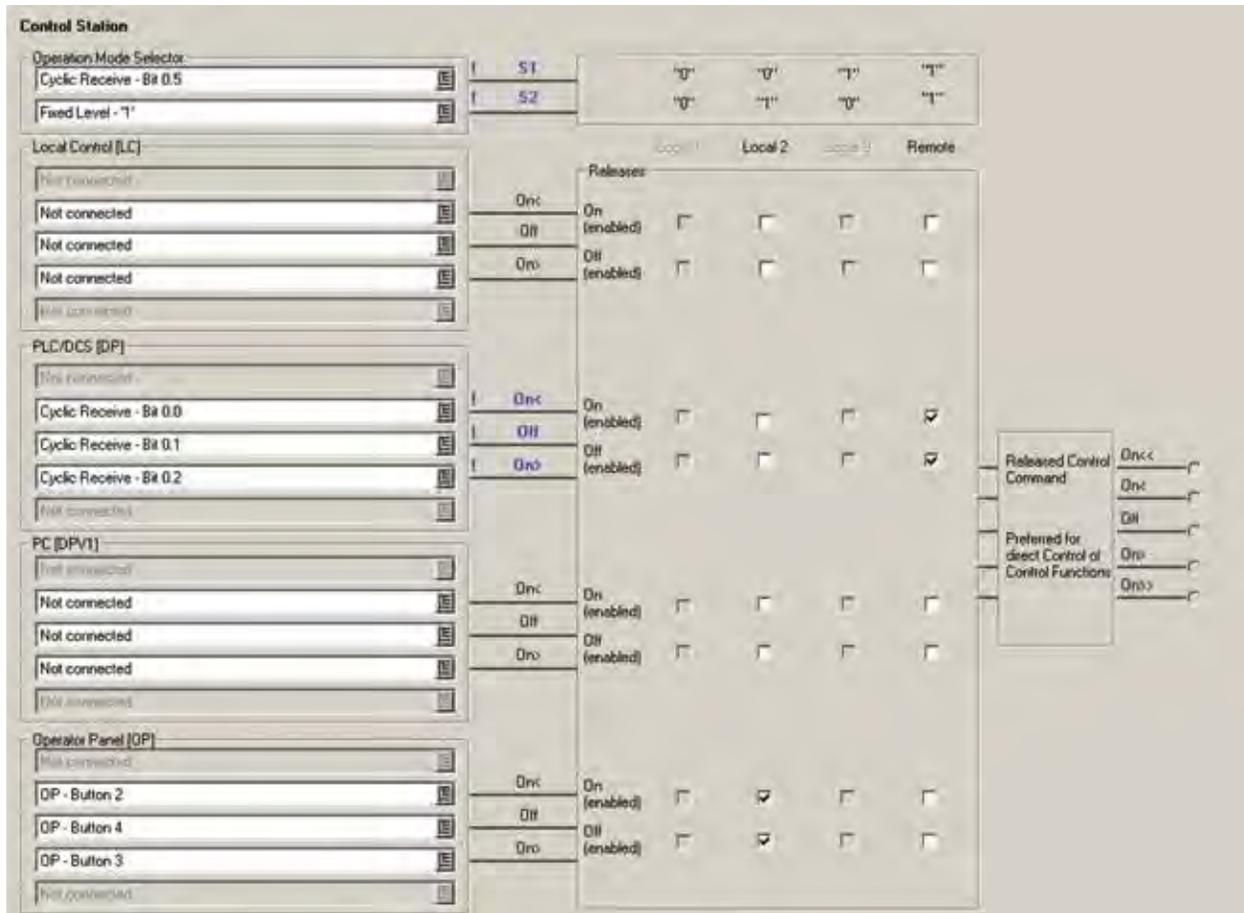
# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB112

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB112

RVSS – Profibus Bit Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation, organized into several sections:

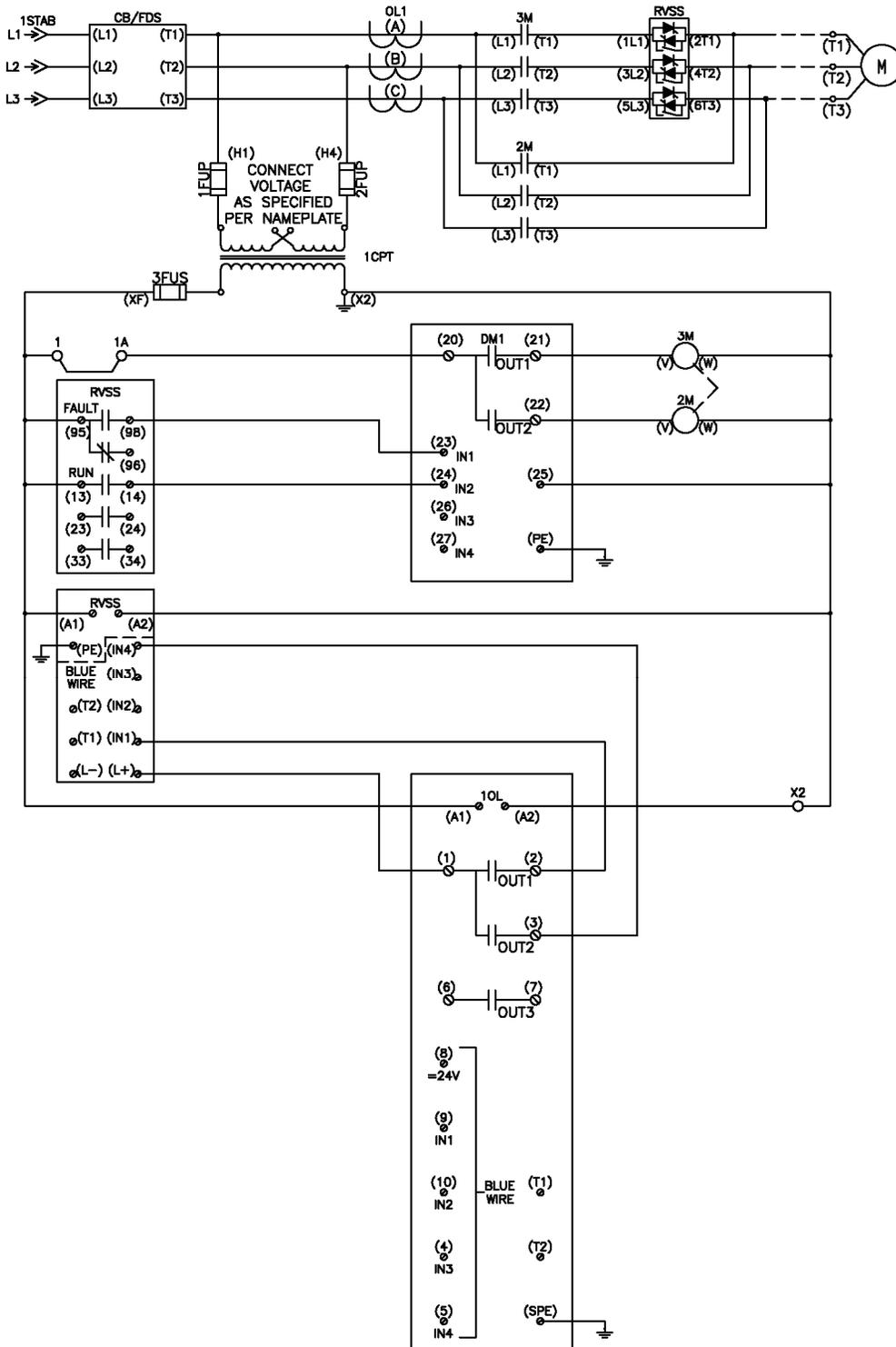
- Basic Unit:**
  - BU - Output 1: Contactor Control - 1 QE1
  - BU - Output 2: Truth Table 3 3/10 - Output
  - BU - Output 3: Not connected
- Digital Module 1:**
  - DM - Output 1: DM1 - Input 2
  - DM - Output 2: Contactor Control - 2 QE2
- External Fault 1:**
  - External Fault - Input: DM1 - Input 1
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)
  - normally closed (NC)
- Activity:**
  - always
  - only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)
  - Auto-Reset
  - Remote Reset, Reset 1,2,3
  - Diff Command-Reset
- Marking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB113

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB113

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the RVSS SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor SIMOCODE Input 3 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor SIMOCODE Input 1 and SIMOCODE Input 3 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB113

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB113

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector  
 Cyclic Receive - Bit 0.5  
 Fixed Level - '1'

Local Control (LC)  
 Not connected  
 BU - Input 3  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 Not connected

PLC/DCS (DP)  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC (DPV1)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP)  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	Local 1	Local 2	Direct	Remote
Releases				
On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
 On<><  
 On<  
 Off  
 On<  
 On>>

Preferred for direct Control of Control Functions

**Truth Table 1 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: BU - Input 1  
 Truth Table - Input 3: BU - Input 3

I1	I2	I3	O
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: Cyclic Receive - Bit 0.0  
 Truth Table - Input 3: Cyclic Receive - Bit 0.2

I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB113

RVSS – Profibus Bit Operation Mode Selection –  
No Local – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

**Basic Unit**

BU - Output 1: Contactor Control - 1 QE1

BU - Output 2: Truth Table 3 3I/1D - Output

BU - Output 3: Not connected

**Digital Module 1**

DM - Output 1: DM1 - Input 2

DM - Output 2: Contactor Control - 2 QE2

**External Fault 1**

External Fault - Input: DM1 - Input 1

External Fault - Reset: Not connected

Response: tripping

Type:

normally open (NO)  normally closed (NC)

Activity:

always  only if motor runs

External Fault - Reset also by:

Test/Reset Button, RS232 (Panel Reset)  Auto-Reset

Remote Reset, Reset 1,2,3  Off Command Reset

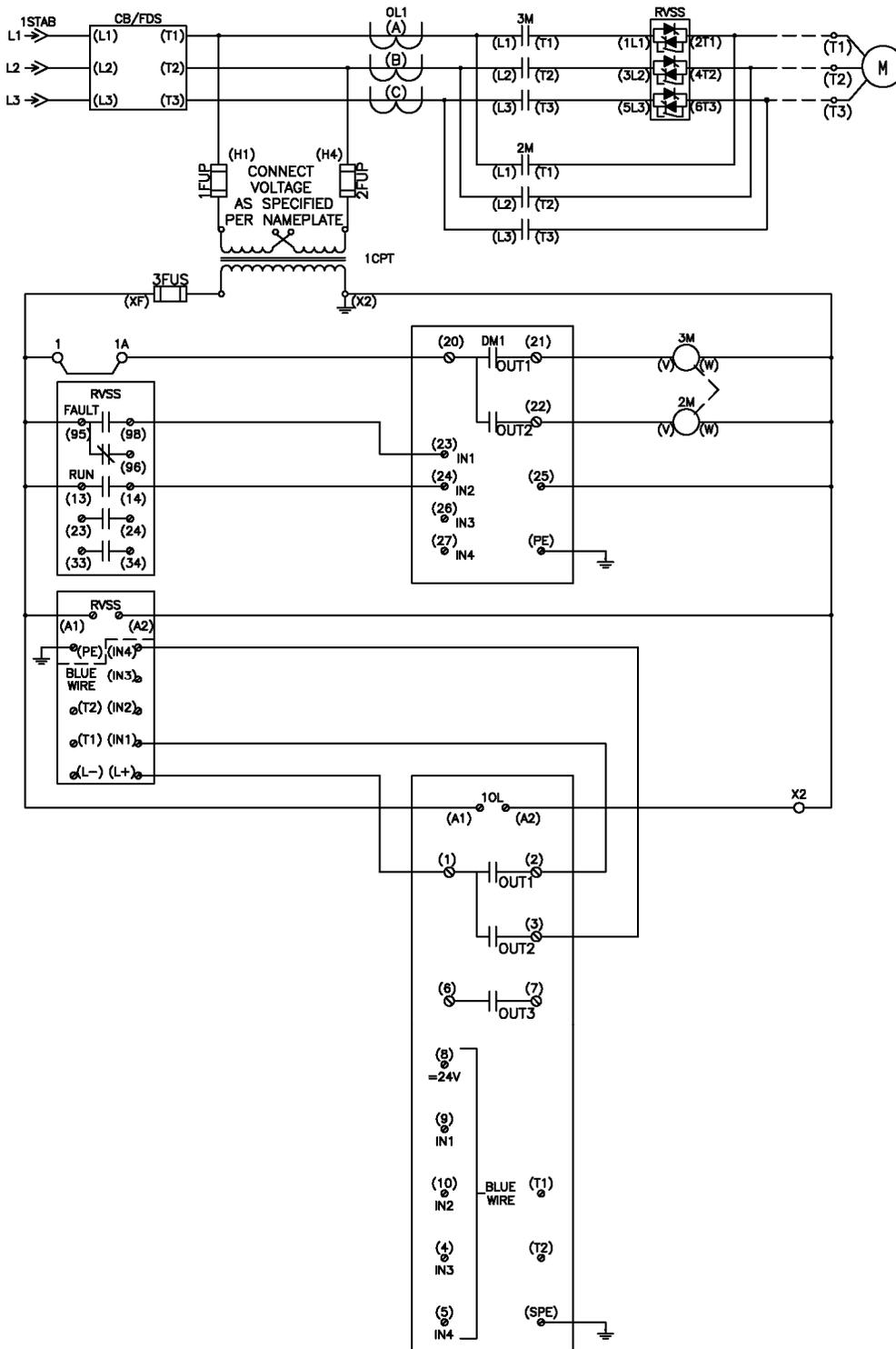
Marking: RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB114

RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB114

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Fixed Level 1 is connected to the Operation Mode Selector S2.
2. To engage Remote Operation Mode the Profibus Cyclic Receive Bit 0.5 is activated. This mode does not permit sending parameter data from the PLC/DCS.
3. To engage Local Operation Mode the Profibus Cyclic Receive Bit 0.5 is deactivated.

##### Local Control (for field commissioning purposes only)

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the RVSS SIMOCODE Input 1 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor SIMOCODE Input 3 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor SIMOCODE Input 1 and SIMOCODE Input 3 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB114

### RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB114

RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - Bz 0.5  
 Fixed Level - 1'

Local Control (LC):  
 Not connected  
 BU - Input 3  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 Not connected

PLC/DCS (DP):  
 Not connected  
 Cyclic Receive - Bz 0.0  
 Cyclic Receive - Bz 0.1  
 Cyclic Receive - Bz 0.2  
 Not connected

PC (DPV1):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel (OP):  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	S1	S2	'0'	'0'	'1'	'1'
			'0'	'1'	'0'	'1'

Local 1    Local 2    Remote

Released Control Command

Preferred for direct Control of Control Functions

Released Control Command  
 On<<  
 On<  
 Off  
 On>  
 On>>

**Truth Table 1 3/10**

Truth Table - Input 1: Not connected

Truth Table - Input 2: BU - Input 1

Truth Table - Input 3: BU - Input 3

**Truth Table 3/10**

I1	I2	I3	O
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB114

RVSS – Profibus Bit Operation Mode Selection – No Local – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for the RVSS Control and Operation. It is organized into several sections:

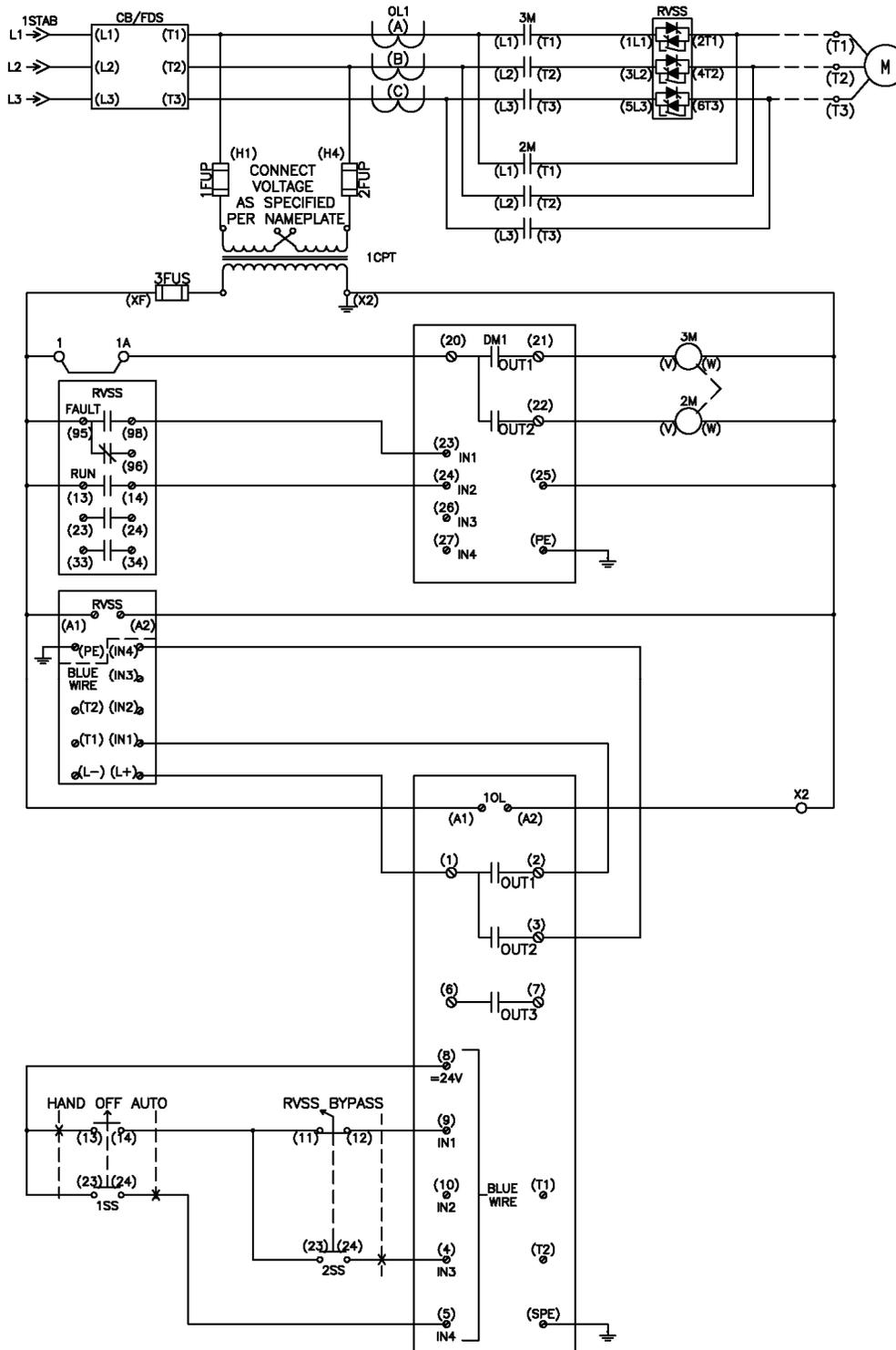
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to 'Contactor Control - 1 QE1'), BU - Output 2 (set to 'Truth Table 3 3R/1D - Output'), and BU - Output 3 (set to 'Not connected').
- Digital Module 1:** Contains two dropdown menus for DM - Output 1 (set to 'DM1 - Input 2') and DM - Output 2 (set to 'Contactor Control - 2 QE2').
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to 'DM1 - Input 1'), External Fault - Reset (set to 'Not connected'), and Response (set to 'lipping').
- Type:** A radio button group with 'normally open (NO)' selected and 'normally closed (NC)' unselected.
- Activity:** A radio button group with 'always' selected and 'only if motor runs' unselected.
- External Fault - Reset also by:** A checkbox group with 'Test/Reset Button, RS232 (Panel Reset)' and 'Remote Reset, Reset 1,2,3' checked, and 'Auto-Reset' and 'Dil Command-Reset' unchecked.
- Marking:** A text field containing 'RVSS FAULT'.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB115

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB115

### RVSS – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the RVSS the Selector Switch is placed into the RVSS position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Selector Switch is placed into the BYPASS position. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Outputs 2 and 3 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB115

### RVSS – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB115

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector:  
 Cyclic Receive - Bit 0.5  
 BU - Input 4

Local Control [LC]:  
 Not connected  
 BU - Input 3  
 Truth Table 1 3/10 - Output  
 BU - Input 1  
 Not connected

PLC/OCS [DP]:  
 Not connected  
 Cyclic Receive - Bit 0.0  
 Truth Table 2 3/10 - Output  
 Cyclic Receive - Bit 0.2  
 Not connected

PC [DPV1]:  
 Not connected  
 Not connected  
 Not connected  
 Not connected

Operator Panel [OP]:  
 Not connected  
 Not connected  
 Not connected  
 Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
Released:						
On (enabled)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command:  
 On<<<  
 On<<  
 Off  
 On>  
 On>>

Reserved for direct Control of Control Functions:  
 On<<<  
 On<<  
 Off  
 On>  
 On>>

**Truth Table 1 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: BU - Input 1  
 Truth Table - Input 3: BU - Input 3

	I1	I2	I3	Q
	0	0	0	0
	0	0	1	1
	0	1	0	1
	0	1	1	0
	1	0	0	0
	1	0	1	0
	1	1	0	0
	1	1	1	0

**Truth Table 2 3/10**

Truth Table - Input 1: Not connected  
 Truth Table - Input 2: Cyclic Receive - Bit 0.0  
 Truth Table - Input 3: Cyclic Receive - Bit 0.2

	I1	I2	I3	Q
	0	0	0	1
	0	0	1	0
	0	1	0	0
	0	1	1	1
	1	0	0	0
	1	0	1	0
	1	1	0	0
	1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB115

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation. It is organized into several sections:

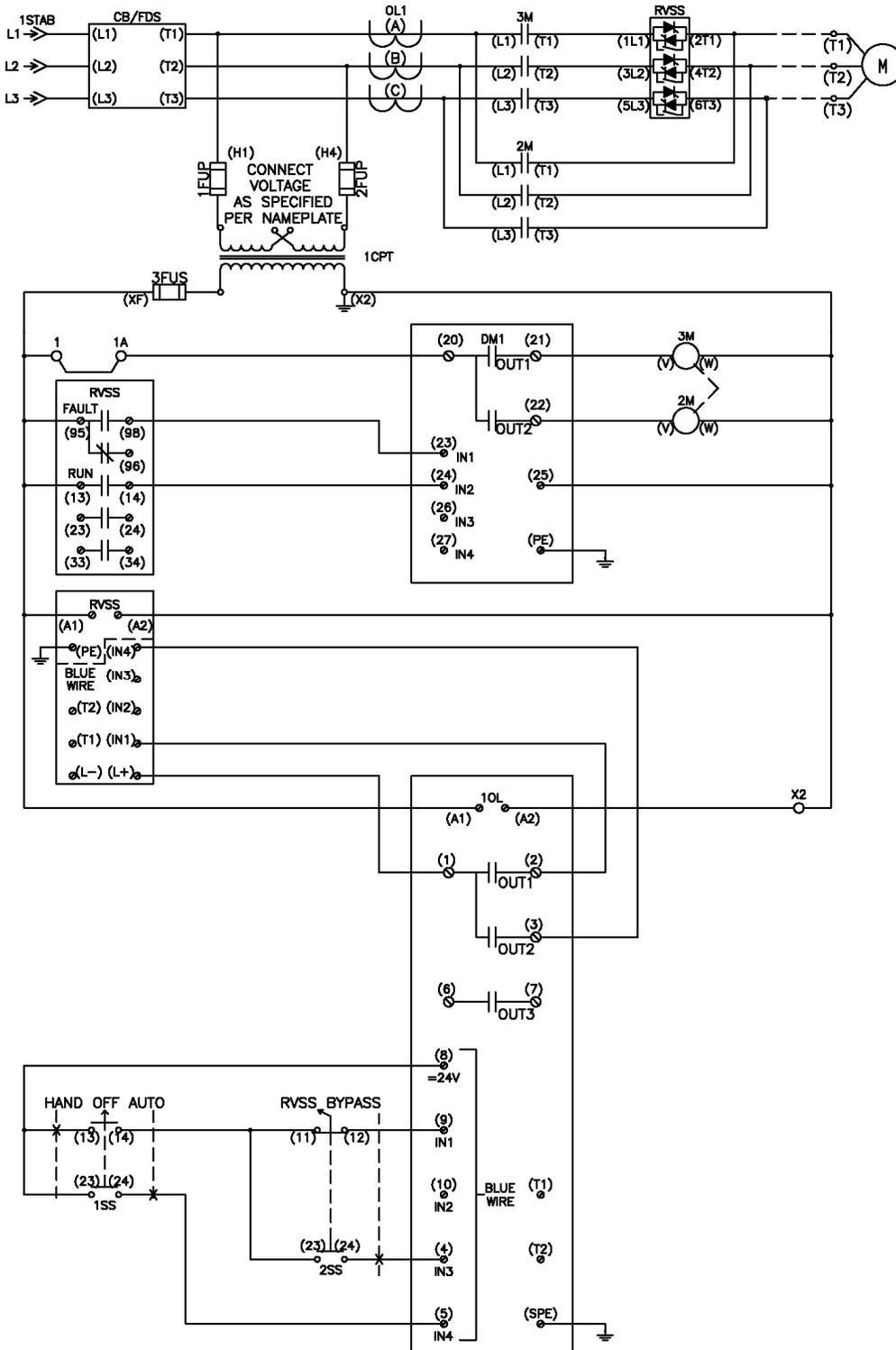
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to 'Contactor Control - 1 QE1'), BU - Output 2 (set to 'Truth Table 3 3/10 - Output'), and BU - Output 3 (set to 'Not connected').
- Digital Module 1:** Contains two dropdown menus for DM - Output 1 (set to 'DM1 - Input 2') and DM - Output 2 (set to 'Contactor Control - 2 QE2').
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to 'DM1 - Input 1'), External Fault - Reset (set to 'Not connected'), and Response (set to 'lipping').
- Type:** A group box with two radio buttons: 'normally open (NO)' (selected) and 'normally closed (NC)'.
- Activity:** A group box with two radio buttons: 'always' (selected) and 'only if motor runs'.
- External Fault - Reset also by:** A group box with four checkboxes: 'Test/Reset Button, RS232 (Panel Reset)' (checked), 'Remote Reset, Reset 1,2,3' (checked), 'Auto-Reset' (unchecked), and 'Diff Command-Reset' (unchecked).
- Marking:** A text field containing 'RVSS FAULT'.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB116

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB116

### RVSS – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and Truth Table 1 Output is connected to the OFF Control Command in Operation Mode Local Control (LC). Connected to Truth Table 1 are SIMOCODE Input 1 and SIMOCODE Input 3.
2. To engage the RVSS the Selector Switch is placed into the RVSS position. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Selector Switch is placed into the BYPASS position. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Selector Switch is placed into the OFF position. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching contactors it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Outputs 1 and 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB116

### RVSS – Selector Switch Operation Mode Selection – Local 2-Wire SS – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB116

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector

Cyclic Receive - Bit 0.5

BU - Input 4

Local Control (LC)

Not connected

BU - Input 3

Truth Table 1 3/10 - Output

BU - Input 1

Not connected

PLC/OCS (DP)

Not connected

Cyclic Receive - Bit 0.0

Cyclic Receive - Bit 0.1

Cyclic Receive - Bit 0.2

Not connected

PC (DPV1)

Not connected

Not connected

Not connected

Not connected

Not connected

Operator Panel (OP)

Not connected

Not connected

Not connected

Not connected

Not connected

Released Control Command

Preferred for direct Control of Control Functions

	S1	S2	Local 1	Local 2	Local 3	Remote
On (enabled)	0	0	1	1	0	0
Off (enabled)	0	1	0	0	1	1
On (enabled)	1	0	0	0	0	0
Off (enabled)	1	1	0	1	0	0

Released Control Command

On<<

On<

Off

On>

On>>

**Truth Table 1 3/10**

Truth Table - Input 1: Not connected

Truth Table - Input 2: BU - Input 1

Truth Table - Input 3: BU - Input 3

	I1	I2	I3	O
0	0	0	0	0
0	0	1	1	1
0	1	0	1	1
0	1	1	0	0
1	0	0	0	0
1	0	1	0	0
1	1	0	0	0
1	1	1	0	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB116

RVSS – Selector Switch Operation Mode Selection –  
Local 2-Wire SS – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for RVSS Control and Operation, organized into several sections:

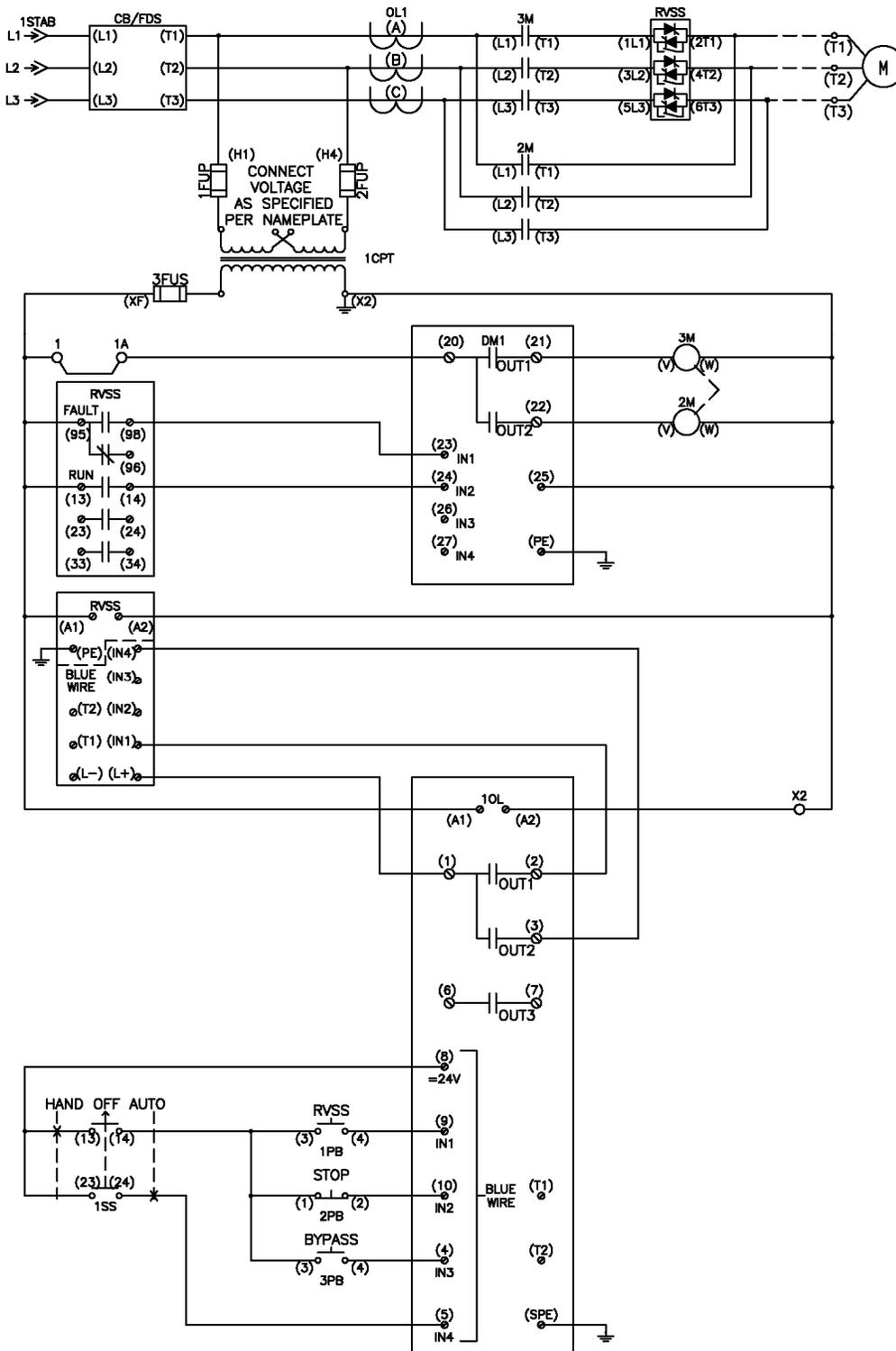
- Basic Unit:**
  - BU - Output 1: Contactor Control - 1 QE1
  - BU - Output 2: Truth Table 3 3R/1D - Output
  - BU - Output 3: Not connected
- Digital Module 1:**
  - DM - Output 1: DM1 - Input 2
  - DM - Output 2: Contactor Control - 2 QE2
- External Fault 1:**
  - External Fault - Input: DM1 - Input 1
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)
  - normally closed (NC)
- Activity:**
  - always
  - only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)
  - Auto-Reset
  - Remote Reset, Reset 1,2,3
  - Diff Command-Reset
- Marking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB117

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB117

### RVSS – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the RVSS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the BYPASS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON< Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB117

### RVSS – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB117

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector

Cyclic Receive - Bit 0.5  
BU - Input 4

Local Control [LC]

Not connected  
BU - Input 3  
BU - Input 2  
BU - Input 1  
Not connected

PLC/OCS [DP]

Not connected  
Cyclic Receive - Bit 0.0  
Truth Table 2 3/10 - Output  
Cyclic Receive - Bit 0.2  
Not connected

PC [DPV1]

Not connected  
Not connected  
Not connected  
Not connected  
Not connected

Operator Panel [DP]

Not connected  
Not connected  
Not connected  
Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
Released	On (enabled)	Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Released	Off (enabled)	On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Released	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Released	Off (enabled)	On (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Released	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Released	Off (enabled)	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Released	On (enabled)	Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Released	Off (enabled)	On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Released Control Command  
Preferred for direct Control of Control Functions

Released Control Command  
On<<  
On<  
Off  
On>  
On>>

**Truth Table 2 3/10**

Truth Table - Input 1	Truth Table - Input 2	Truth Table - Input 3	Output
Not connected	Cyclic Receive - Bit 0.0	Cyclic Receive - Bit 0.2	0
			1
			0
			0
			1
			0
			0
			1
			0
			0
			1
			0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB117

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays the configuration interface for RVSS Control and Operation, organized into several sections:

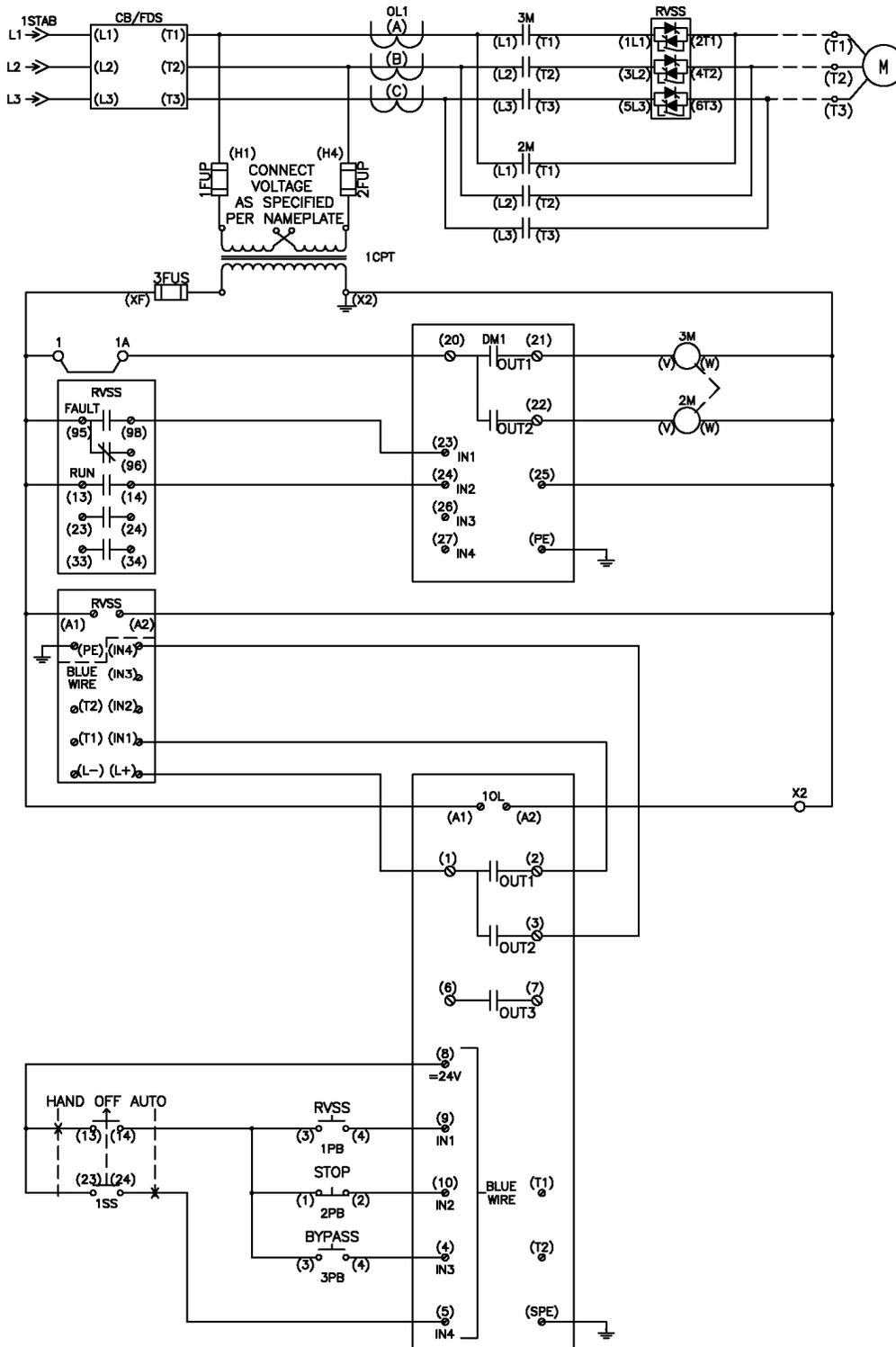
- Basic Unit:**
  - BU - Output 1: Contactor Control - 1 QE1
  - BU - Output 2: Truth Table 3 3/10 - Output
  - BU - Output 3: Not connected
- Digital Module 1:**
  - DM - Output 1: DM1 - Input 2
  - DM - Output 2: Contactor Control - 2 QE2
- External Fault 1:**
  - External Fault - Input: DM1 - Input 1
  - External Fault - Reset: Not connected
  - Response: tripping
- Type:**
  - normally open (NO)
  - normally closed (NC)
- Activity:**
  - always
  - only if motor runs
- External Fault - Reset also by:**
  - Test/Reset Button, RS232 (Panel Reset)
  - Auto-Reset
  - Remote Reset, Reset 1,2,3
  - Diff Command-Reset
- Marking:** RVSS FAULT

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB118

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB118

### RVSS – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. SIMOCODE Input 4 is connected to the Operation Mode Selector S2.
2. To engage Local Operation Mode SIMOCODE Input 4 is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode SIMOCODE Input 4 is activated while Profibus Cyclic Receive Bit 0.5 is deactivated.
4. To engage Remote Operation Mode SIMOCODE Input 4 and Profibus Cyclic Receive Bit 0.5 are activated. This mode does not permit sending parameter data from the PLC/DCS.

##### Local Control

1. SIMOCODE Input 1 is connected to the ON > Control Command, SIMOCODE Input 3 is connected to the ON < Control Command and SIMOCODE Input 2 is connected to the OFF Control Command in Operation Mode Local Control (LC).
2. To engage the RVSS the RVSS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the BYPASS Pushbutton is depressed while the Stop Pushbutton is in its normally closed state. The ON< Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor two methods are available. First, while the Selector Switch is placed into the HAND position the Stop Pushbutton is depressed. Second, the Selector Switch is placed into the OFF position. For either action The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB118

### RVSS – Selector Switch Operation Mode Selection – Local 3-Wire SS/PB – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB118

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

**Operation Mode Selector**

- Cyclic Receive - Bit 0.5
- BU - Input 4

**Local Control (LC)**

- Not connected
- BU - Input 3
- BU - Input 2
- BU - Input 1
- Not connected

**PLC/OCS (DP)**

- Not connected
- Cyclic Receive - Bit 0.0
- Cyclic Receive - Bit 0.1
- Cyclic Receive - Bit 0.2
- Not connected

**PC (DPV1)**

- Not connected

**Operator Panel (OP)**

- Not connected

	Local 1	Local 2	Local 3	Remote
<b>Releases</b>				
On (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Released Control Command**

- On
- Off
- On
- Off

**Preferred for direct Control of Control Functions**

- On
- Off

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB118

RVSS – Selector Switch Operation Mode Selection –  
Local 3-Wire SS/PB – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

RVSS Control and Operation

The screenshot displays a configuration window for the RVSS Control and Operation. It is organized into several sections:

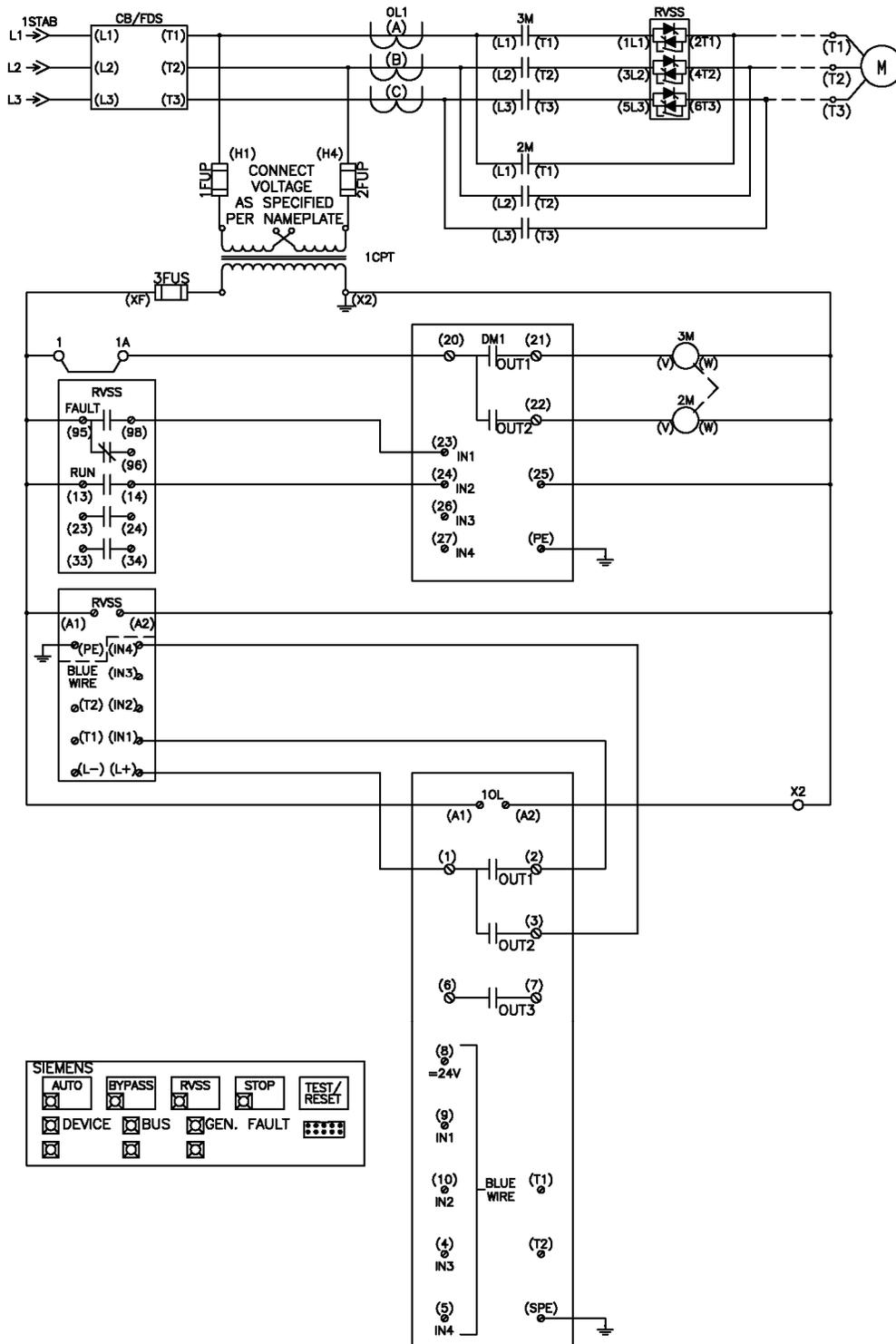
- Basic Unit:** Contains three dropdown menus for BU - Output 1 (set to 'Contactor Control - 1 QE1'), BU - Output 2 (set to 'Truth Table 3 3/10 - Output'), and BU - Output 3 (set to 'Not connected').
- Digital Module 1:** Contains two dropdown menus for DM - Output 1 (set to 'DM1 - Input 2') and DM - Output 2 (set to 'Contactor Control - 2 QE2').
- External Fault 1:** Contains three dropdown menus: External Fault - Input (set to 'DM1 - Input 1'), External Fault - Reset (set to 'Not connected'), and Response (set to 'latching').
- Type:** A radio button group with 'normally open (NO)' selected and 'normally closed (NC)' unselected.
- Activity:** A radio button group with 'always' selected and 'only if motor runs' unselected.
- External Fault - Reset also by:** A checkbox group with 'Test/Reset Button, R5232 (Panel Reset)' and 'Remote Reset, Reset 1,2,3' checked, and 'Auto-Reset' and 'Dil Command-Reset' unchecked.
- Marking:** A text field containing 'RVSS FAULT'.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB119

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram

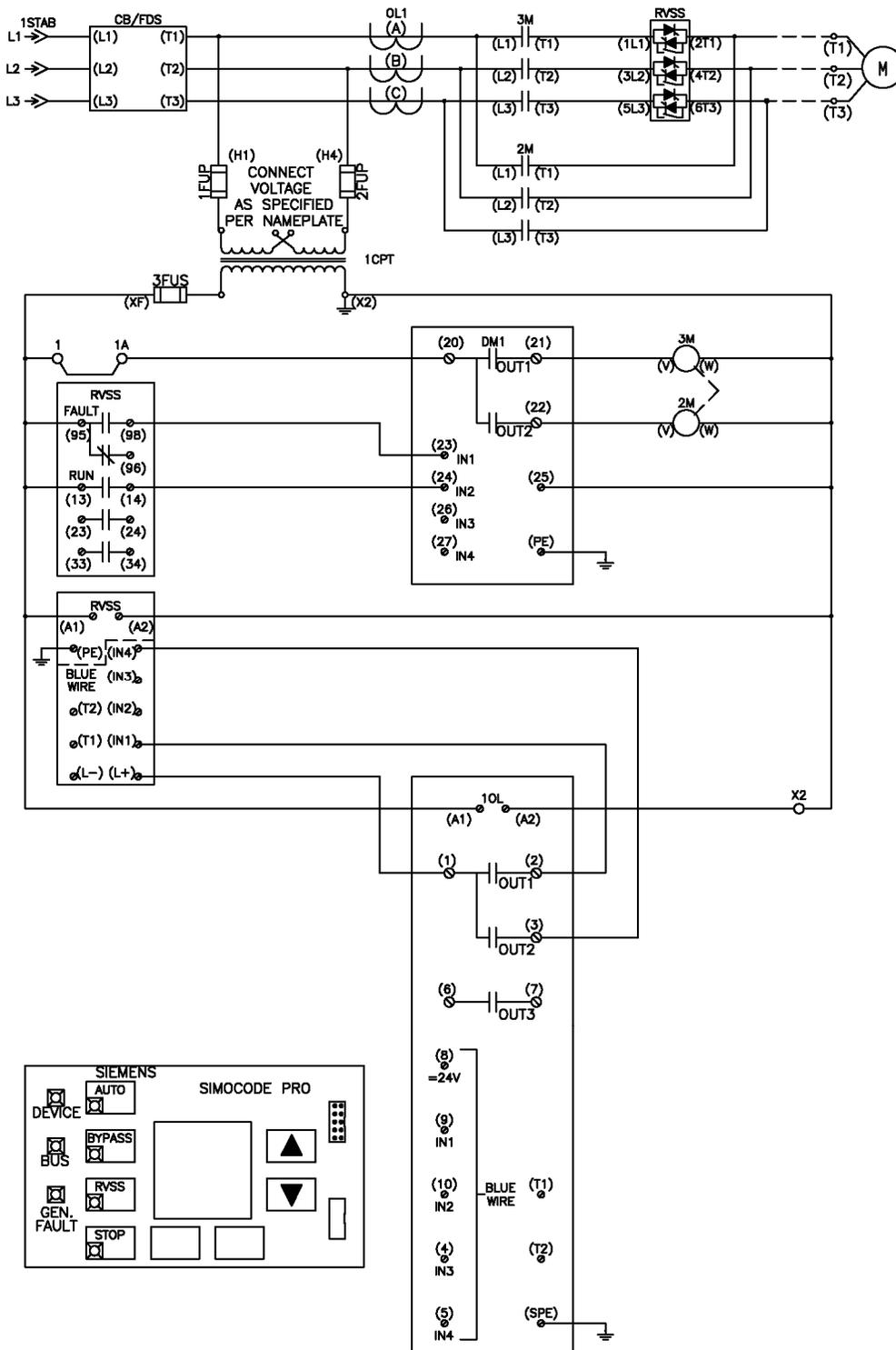


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB119

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OPD – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB119

### RVSS – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (RVSS) is connected to the ON > Control Command, Operator Panel Button 2 (BYPASS) is connected to the ON < Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS Contactor the OP RVSS Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the OP BYPASS Pushbutton is depressed. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB119

### RVSS – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Truth Table 2 Output is connected to the OFF Control Command in Operation Mode PLC/DCS (DP). Connected to Truth Table 2 are Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0.
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.2 and Profibus Cyclic Receive Bit 0.0 are deactivated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB119

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Operation Mode Selector

Cyclic Receive - Bit 0.5

Non-Volatile Element 1 - Output

Local Control [LC]

Not connected

Not connected

Not connected

Not connected

PLC/OCS [DP]

Not connected

Cyclic Receive - Bit 0.0

Truth Table 2 3I/1O - Output

Cyclic Receive - Bit 0.2

Not connected

PC [DPV1]

Not connected

Not connected

Not connected

Not connected

Not connected

Operator Panel [OP]

Not connected

OP - Button 2

OP - Button 4

OP - Button 3

Not connected

	S1	S2	Local 1	Local 2	Local 3	Remote
Releases						
On (enabled)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Off (enabled)			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
On (enabled)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off (enabled)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On (enabled)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Off (enabled)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Released Control Command

On<<

On

Off

On>

On>>

Preferred for direct Control of Control Functions

**Truth Table 2 3I/1O**

Truth Table - Input 1: Not connected

Truth Table - Input 2: Cyclic Receive - Bit 0.0

Truth Table - Input 3: Cyclic Receive - Bit 0.2

**Truth Table 3I/1O**

I1	I2	I3	O
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB119

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 2-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

AUTO Toggle Operation

The screenshot shows a configuration window with three sections:

- Non-Volatile Element 1**
  - Non-Volatile Element - Type: edge rising with memory
  - Non-Volatile Element - Input: OP-Button 1
  - Non-Volatile Element - Reset: Non-Volatile Element 2 - Output
- Counter 1**
  - Counter - Limit: 2
  - Counter - Input +: OP-Button 1
  - Counter - Input -: Not connected
  - Counter - Reset: Non-Volatile Element 2 - Output
- Non-Volatile Element 2**
  - Non-Volatile Element - Type: non inverting
  - Non-Volatile Element - Input: Counter 1 - Output
  - Non-Volatile Element - Reset: Not connected

RVSS Control and Operation

The screenshot shows a configuration window with three sections:

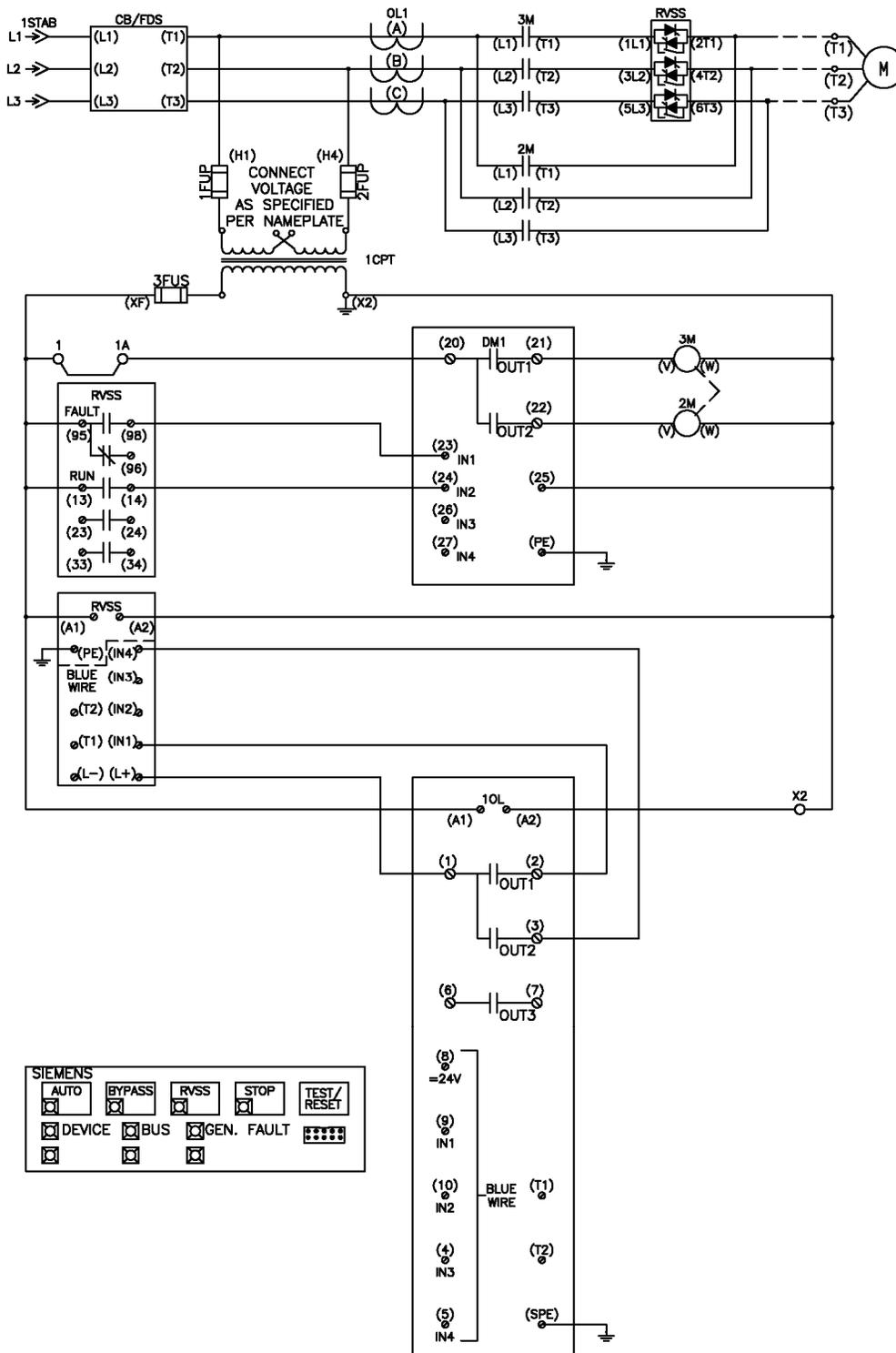
- Basic Unit**
  - BU - Output 1: Contactor Control - 1 QE1
  - BU - Output 2: Truth Table 3.3/10 - Output
  - BU - Output 3: Not connected
- Digital Module 1**
  - DM - Output 1: DM1 - Input 2
  - DM - Output 2: Contactor Control - 2 QE2
- External Fault 1**
  - External Fault - Input: DM1 - Input 1
  - External Fault - Reset: Not connected
  - Response: tripping
  - Type:  normally open (NO)  normally closed (NC)
  - Activity:  always  only if motor runs
  - External Fault - Reset also by:
    - Test/Reset Button, RS232 (Panel Reset)  Auto-Reset
    - Remote Reset, Reset 1,2,3  Off Command-Reset

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB120

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram

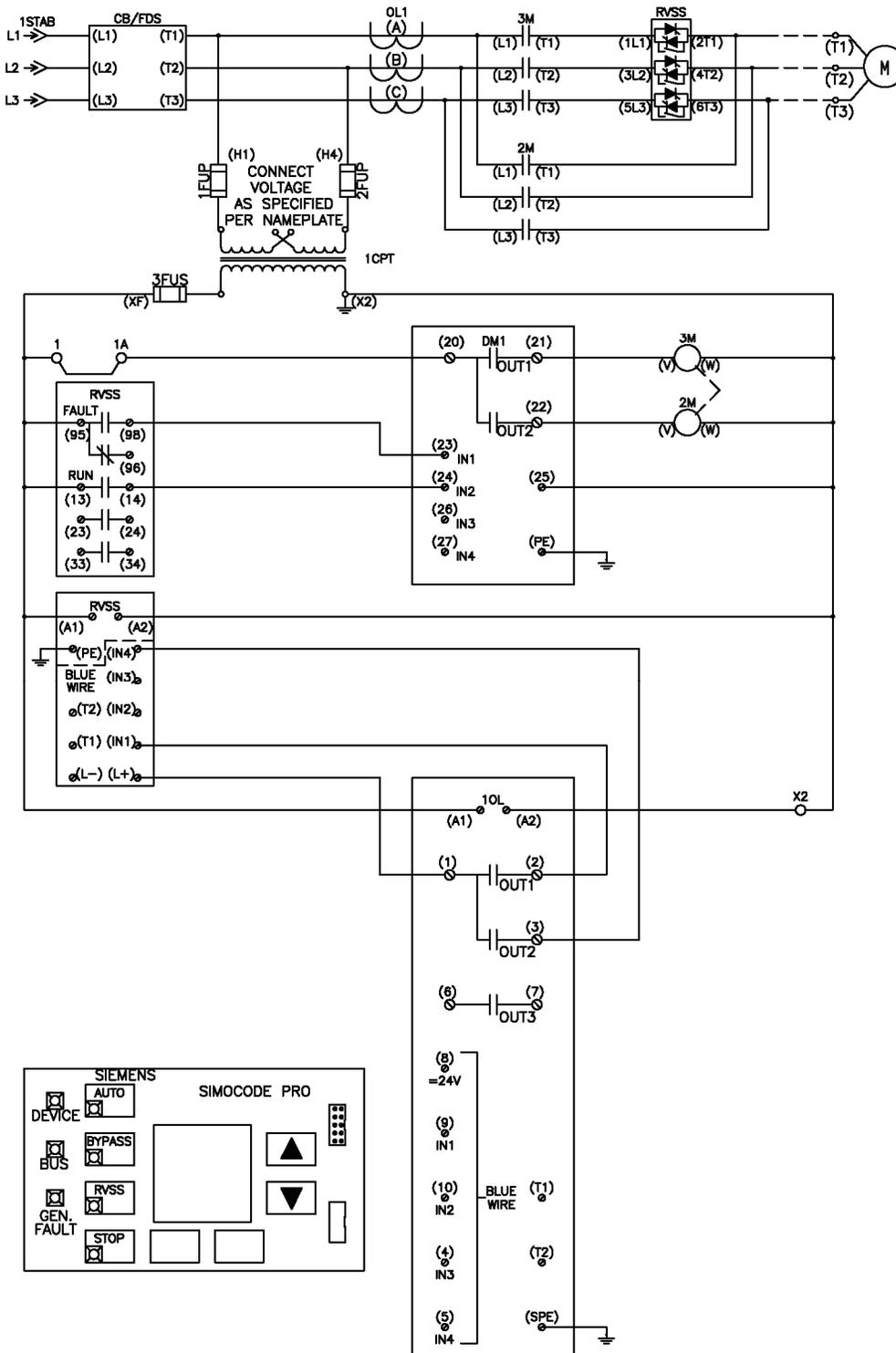


# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB120

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OPD – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Connection Diagram



# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB120

### RVSS – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Control Selection

1. Profibus Cyclic Receive Bit 0.5 is connected to the Operation Mode Selector S1. Non-Volatile Element 1 Output is connected to the Operation Mode Selector S2. Operator Panel Button 1 (AUTO) is connected to Non-Volatile Element 1 for an edge rising latch as well as to Counter 1 for latch reset. Counter 1 is connected to Non-Volatile Element 2 to maintain Operation Mode selection during loss of control power.
2. To engage Local Operation Mode the Non-Volatile Element 1 Output is deactivated. The state of Profibus Cyclic Receive Bit 0.5 is not relevant to this operation.
3. To engage Remote Parameterization Operation Mode the Non-Volatile Element 1 Output is activated while Profibus Cyclic Receive Bit 0.5 is deactivated. When mode is active indication is provided via LED on Operator Panel Button 1.
4. To engage Remote Operation Mode the Non-Volatile Element 1 Output and Profibus Cyclic Receive Bit 0.5 (maintained | signal) are activated. This mode does not permit sending parameter data from the PLC/DCS. When mode is active indication is provided via LED on Operator Panel Button 1.

##### Local Control

1. Operator Panel Button 3 (RVSS) is connected to the ON > Control Command, Operator Panel Button 2 (BYPASS) is connected to the ON < Control Command and Operator Panel Button 4 (STOP) is connected to the OFF Control Command in Operation Mode Operator Panel (OP).
2. To engage the RVSS Contactor the OP RVSS Pushbutton is depressed. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the OP BYPASS Pushbutton is depressed. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the OP Stop Pushbutton is depressed. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time)
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB120

### RVSS – Operator Panel Operation Mode Selection – Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

#### Operating Instructions

##### Remote Control

1. Profibus Cyclic Receive Bit 0.2 is connected to the ON > Control Command, Profibus Cyclic Receive Bit 0.0 is connected to the ON < Control Command and Profibus Cyclic Receive Bit 0.1 is connected to the OFF Control Command in Operation Mode PLC/DCS (DP).
2. To engage the RVSS the Profibus Cyclic Receive Bit 0.2 is activated. The ON > Control Command is then triggered, causing SIMOCODE Output 1 to close, which activates an internal RVSS RUN signal.
3. To engage the 3M Isolation Contactor the RVSS closes the associated internal RUN contact. The SIMOCODE Digital Module Input 2 is then activated, causing the SIMOCODE Digital Module Output 1 to close.
4. To engage the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.0 is activated. The ON < Control Command is then triggered, causing the SIMOCODE Digital Module Output 2 to close.
5. To disengage the RVSS with the 3M Isolation Contactor or the 2M Bypass Contactor the Profibus Cyclic Receive Bit 0.1 is activated. The OFF Control Command is then triggered, causing SIMOCODE Output 1 and Digital Module Output 2 to open.
6. To disengage the 3M Isolation Contactor the loss of RVSS RUN signal opens the associated internal RUN contact once the specified Ramp-down time expires. The SIMOCODE Digital Module Input 2 is deactivated, causing the SIMOCODE Digital Module Output 1 to open. (RVSS ramp-down time must be less than or equal to the SIMOCODE Execution Time).
7. When switching between RVSS and BYPASS it is required to issue an OFF Control Command before engaging the Control Command for the opposite operation.
8. In the event of an Overload or any other General Fault event SIMOCODE Output 1 and SIMOCODE Digital Module Output 2 will open.

##### Reset Control

1. SIMOCODE General Fault conditions and SIMOCODE RVSS Fault conditions may be reset via TEST/RESET button located on the SIMOCODE Pro Basic Unit face, via Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or via TEST/RESET button located on the SIMOCODE Pro Operator Panel if so equipped.
2. SIMOCODE Digital Module Input 1 will indicate RVSS Fault Status only.
3. RVSS Hardware Fault conditions may be reset via Truth Table 3 Output. The inputs connected to Truth Table 3 are the TEST/RESET button located on the SIMOCODE Pro Basic Unit face, the Profibus Cyclic Receive Bit 0.6 from the PLC/DCS system, or the TEST/RESET SIMOCODE Pro Operator Panel if so equipped.

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB120

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

Control Selection and Operation

**Control Station**

Control Station	Bit	Local 1	Local 2	Local 3	Remote
<b>Operation Mode Selector</b>					
Cyclic Receive - Bit 0.5	S1	0	0	1	1
Non-Volatile Element 1 - Output	S2	0	1	0	1
<b>Local Control (LC)</b>					
Not connected					
Not connected					
Not connected					
Not connected					
Not connected					
<b>PLC/OCS (DP)</b>					
Not connected					
Cyclic Receive - Bit 0.0	On	On (enabled)			
Cyclic Receive - Bit 0.1	Off	Off (enabled)			
Cyclic Receive - Bit 0.2	On	Off (enabled)			
Not connected					
<b>PC (DPV1)</b>					
Not connected					
Not connected					
Not connected					
Not connected					
Not connected					
<b>Operator Panel (OP)</b>					
Not connected					
OP - Button 2	On	On (enabled)			
OP - Button 4	Off	Off (enabled)			
OP - Button 3	On	Off (enabled)			
Not connected					

Released Control Command	On	Off
Released Control Command	On	Off
Preferred for direct Control of Control Functions	On	Off

# tiastar Smart MCC SIMOCODE Pro Control Reference Manual

## PB120

RVSS – Operator Panel Operation Mode Selection –  
Local 3-Wire OP (OPD) – Remote 3-Wire 3RW44 w/Input Isolation and Bypass

### Parameter Detail

AUTO Toggle Operation

The screenshot shows a configuration window with three sections: Non-Volatile Element 1, Counter 1, and Non-Volatile Element 2. Each section contains several input fields for configuration.

Section	Parameter	Value
Non-Volatile Element 1	Non-Volatile Element - Type	edge rising with memory
	Non-Volatile Element - Input	OP - Button 1
	Non-Volatile Element - Reset	Non-Volatile Element 2 - Output
Counter 1	Counter - Limit	2
	Counter - Input +	OP - Button 1
	Counter - Input -	Not connected
	Counter - Reset	Non-Volatile Element 2 - Output
Non-Volatile Element 2	Non-Volatile Element - Type	non inverting
	Non-Volatile Element - Input	Counter 1 - Output
	Non-Volatile Element - Reset	Not connected

RVSS Control and Operation

The screenshot shows a configuration window with four sections: Basic Unit, Digital Module 1, External Fault 1, and a section for External Fault 1 configuration options.

Section	Parameter	Value	
Basic Unit	BU - Output 1	Contactor Control - 1 QE1	
	BU - Output 2	Truth Table 3 3I/10 - Output	
	BU - Output 3	Not connected	
Digital Module 1	DM - Output 1	DM1 - Input 2	
	DM - Output 2	Contactor Control - 2 QE2	
External Fault 1	External Fault - Input	DM1 - Input 1	
	External Fault - Reset	Not connected	
	Response	latching	
Type	<input checked="" type="checkbox"/> normally open (NO)	<input type="checkbox"/> normally closed (NC)	
	Activity		
Activity		<input checked="" type="checkbox"/> always	<input type="checkbox"/> only if motor runs
External Fault - Reset also by:		<input checked="" type="checkbox"/> Test/Reset Button, RS232 (Panel Reset)	<input type="checkbox"/> Auto-Reset
		<input checked="" type="checkbox"/> Remote Reset, Reset 1,2,3	<input type="checkbox"/> Off Command-Reset



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