

# Process Automation

IMI STI

ST

SmarTrak Controller





# ST

## SmarTrak Controller

The SmarTrak controller model ST-2 is used as a positioning system for proportionally-driven hydraulic actuators with up to two independent channels. Fast stroke and superior resolution allow the unit to be used with severe service hydraulic actuators which demand fast stroking and precise positioning. The SmarTrak system covers a wide range of actuator sizes and stroke length requirements. SmarTrak is able to manage two fully independent actuators (moving two different valves).

## Product features

Compact design.  
Integrated position transmitter.  
Auto-tuning system for calibration.  
Auto-diagnosis system.  
Dedicated software interface to set, customize, control and monitor high dynamic performance.

Metallic case.  
High reliability.  
Powerful digital signal processor loop time of 1m/sec.  
High performances without expensive closed-loop proportional valves.

PWM proportional solenoid valve driver with current feedback able to manage different types of valves (tested with Atos, Wandfluh, Bosch Rexroth).

The IP66 protection and unique exhaust protection system makes it suitable to be installed in harsh environments where there is tropical rain, dust, sand, salt etc.

## Technical specifications

Housing material  
Painted carbon steel  
Full stainless steel 316

Position sensor (2x)  
Input for magnetostrictive or 4-20mA passive loop

Digital output (ALARM)  
Configurable, dry contact

Position feedback output (2x)  
4-20mA passive loop isolated

Proportional solenoid valve driver (2x)  
6-24V - proportional valve, up to 2,6A

Power supply  
Electronic module  
24V - minimum 1A (up to 20A based on the number of solenoid connected)

Control loop time  
1ms

Digital input (TRIP)  
Up to 6 (8x option available)  
dry contact or 24Vac/dc. Logic function configurable

ON/OFF solenoid valve driver (6x)  
(8x option available)  
24V - solenoids up to 1,5A

Assembly  
For ac/dc input (85-264Vac: 90-350Vd): up to 480W  
For 24Vdc input: up to 240VA

Certifications  
CE  
ATEX 2014/34/UE

Enclosure protection  
IP 66

Weight  
14 kg

## Benefits

No need for an amplification device in most applications.

Superior control capacity of amplification device when installed.

High flow with quick, precise and complete control capability.

Powerful self calibration software with the ability to totally personalise the parameters.

Wide set of configurable embedded features.

Robust design with a full metal housing.

Remote control software interface

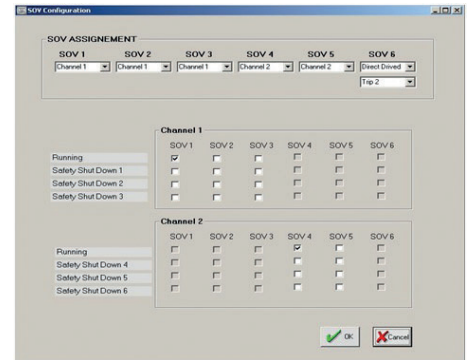
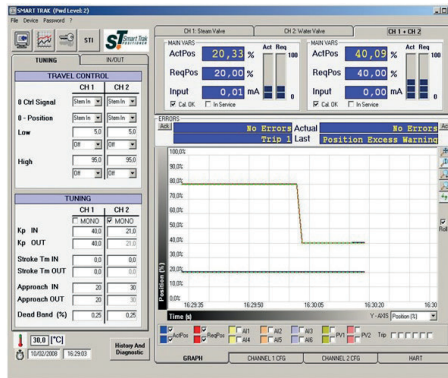
HART protocol.

USB port.

Up to 500 events are stored in eeprom on the PCB board: Parameters change and events like 'Trip', 'Low pressure', 'Probe fail' are stored

All events are saved with date & time reference (and snapshot is saved on SD card).

Remote control software available for window system.



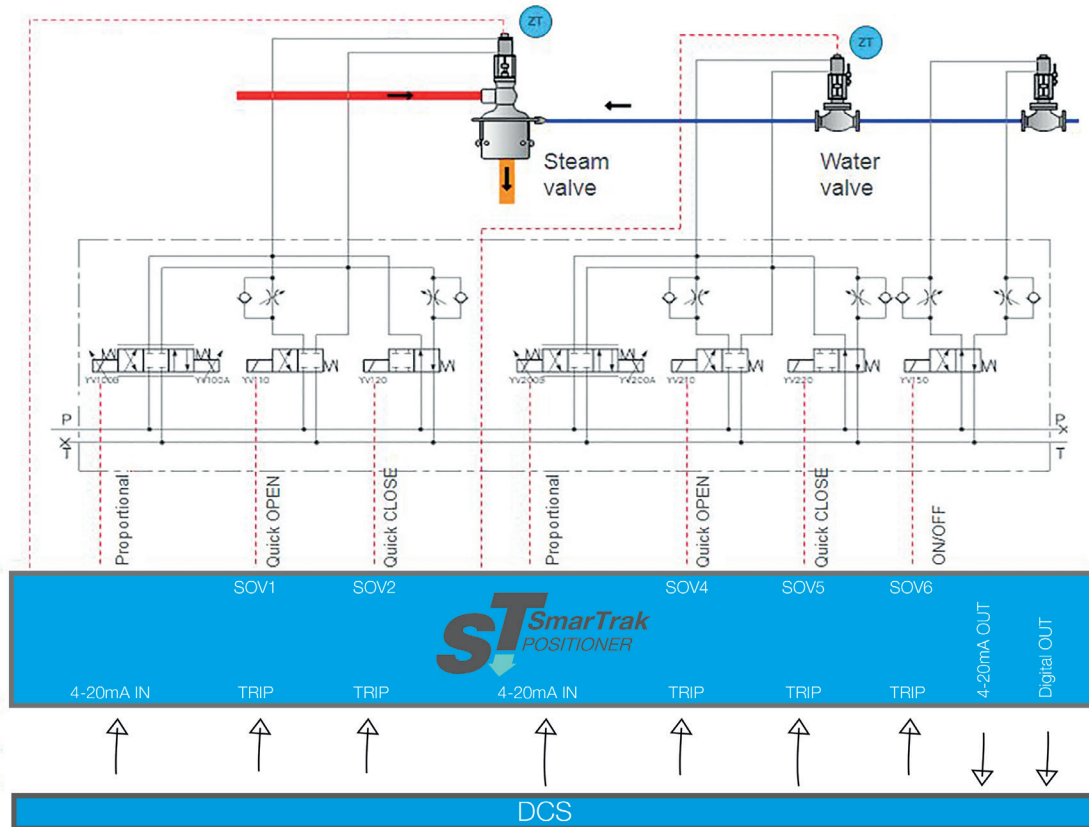
Typical Applications

For each channel  
4-20mA input (position demand)  
  
FBK Probe (magnetostrictive or 4-20mA)

One proportional valve + 3 on/off SOV  
  
3 pressure sensor input.

Common  
6 digital inputs (trip, quick open, quick close, direct drive ...)  
3 digital output relay (diagnostic)

2 analog output  
Each SOV can be assigned to a TRIP for DirectDrive function (i.e. Water ON/OFF valve).



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