6215 series
Indirect solenoid actuated spool valve

- Port size: 1/4" (ISO G/NPT) or flanged with NAMUR interface
- Suited for outdoor use under critical environment conditions (see solenoid list)
- Variable valve solenoid combination
- Applicable in the protection classes Ex e mb, Ex d mb, Ex mb for zones 1 & 2 (gas), 21 & 22 (dust), ATEX cat. II 2GD
- International approvals: ATEX, IECEx, NEPSI, others on request

Technical features

Medium:
6215M: Filtered, non-lubricated or lubricated and dried compressed air
6215L: Filtered, non-lubricated and dried compressed air

Operation:
Indirect solenoid operated spool valve

Operating pressure:
2,5 ... 8 bar (36 ... 116 psi) with internal air supply

Port size:
G1/4, 1/4 NPT or NAMUR Interface

Flow direction:
Fixed

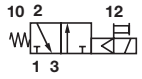
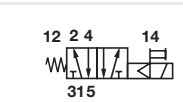
Mounting position:
Optional, impulse valves preferably horizontally

Ambient/Media temperature:
-40 ... +60°C (-40 ... +140°F)
Depending on solenoid system
Air supply must be dry enough to avoid ice formation at temperatures below +2°C.
For outdoor installations must be protected all connections against the penetration of moisture and a solenoid with IP65 protection must be used!

Material:
Body: Aluminium or Stainless Steel
Seals: Special NBR

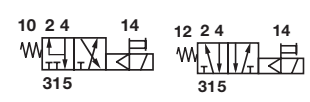
Flow conversion:
Cv US Gallon/min (water) = l/min (air) x 0,001
Kv m^3/h (water) = l/min (air) x 0,000906

Technical data
Inline valves

Symbol	Port size	Function	Actuation/return	Flow (l/min)	Operating pressure (bar)	(psi)	Material	Weight (kg)	Dimension No.	Model *1)
	G1/4	3/2	Solenoid/spring	1200	2,5 ... 8	36 ... 116	Aluminium	0,392	1	6215*3530
	1/4 NPT	3/2	Solenoid/spring	1200	2,5 ... 8	36 ... 116	Aluminium	0,392	1	6215*3540
	G1/4	3/2	Solenoid/spring	1200	2,5 ... 8	36 ... 116	Stainless Steel	0,982	1	6215*3730
	1/4 NPT	3/2	Solenoid/spring	1200	2,5 ... 8	36 ... 116	Stainless Steel	0,982	1	6215*3740
	G1/4	5/2	Solenoid/spring	1200	2,5 ... 8	36 ... 116	Aluminium	0,442	2	6215*0530
	1/4 NPT	5/2	Solenoid/spring	1200	2,5 ... 8	36 ... 116	Aluminium	0,442	2	6215*0540
	G1/4	5/2	Solenoid/spring	1200	2,5 ... 8	36 ... 116	Stainless Steel	1,106	2	6215*0730
	1/4 NPT	5/2	Solenoid/spring	1200	2,5 ... 8	36 ... 116	Stainless Steel	1,106	2	6215*0740

*1) When ordering please indicate solenoid, voltage and current type (frequency).

NAMUR valves

Symbol	Ports 1, 3, 5	2, 4	Actuation/return	Flow (l/min)	Operating pressure (bar)	(psi)	Material	Weight (kg)	Dimension No.	Model *1)
	G1/4	Flange	Solenoid/spring	900	2,5 ... 8	36 ... 116	Aluminium	0,48	3	6215*0500
	1/4 NPT	Flange	Solenoid/spring	900	2,5 ... 8	36 ... 116	Aluminium	0,48	3	6215*0510
	G1/4	Flange	Solenoid/spring	900	2,5 ... 8	36 ... 116	Stainless Steel	1,126	3	6215*0700
	1/4 NPT	Flange	Solenoid/spring	900	2,5 ... 8	36 ... 116	Stainless Steel	1,126	3	6215*0710

*1) When ordering please indicate solenoid, voltage and current type (frequency).
Valve function: 3/2 or 5/2 way function (Conversion instructions see page 7).

Option selector

6215★★★★★★★★★★★★★★★

Power consumption	Substitute
Medium	M
Low	L

Function	Substitute
5/2 spring return (3/2 way with adapter plate for NAMUR flange)	0
3/2 spring return (Inline)	3

Material / Seals	Substitute
Aluminium/NBR -40 ... +60°C	5
Stainless steel/NBR -40...+60°C	7

Ports size	Substitute
G1/4 Namur	0
1/4 NPT Namur	1
G1/4 Inline	3
1/4 NPT Inline	4

Version	Substitute
With manual override	0

Voltage	Substitute
24 V d.c.	02400
230 V a.c.	23050
24 V a.c. and 110 V a.c. are available on request	

Solenoid actuators for 6215M	Substitute
3722	3722
3723	3723
4210	4210
4211	4211
4610	4610
4611	4611
4612	4612
4613	4613
1814	1814
0242 *1)	0242

Solenoid actuators for 6215L	Substitute
3720	3720
4200	4200
4201	4201
4600	4600
4601	4601
4602	4602
4603	4603
4802	4802
4803	4803
0763	0763
2050	2050

1*) For application at ambient temperature 60°C, please consult with sales engineer.

Solenoids group, standard voltages

	Power consumption		Rated current		Protection class	Ex-Protection (ATEX-Category)	Temperature Ambient/Media	Electrical connection	Weight	Drawing	Circuit diagram	Model
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)	IP/NEMA		(°C)		(kg)	No.	No.	
	3,9	-	162	-	IP66 (with cable gland)	II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db IP66	-40 ... +80 T4 -40 ... +55 T6 -40 ... +80	M20 x 1,5 *4)	0,5	5	4	4210
	-	5,3	-	23	IP66 (with cable gland)	II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db IP66	-40 ... +80 T4 -40 ... +55 T6 -40 ... +80	M20 x 1,5 *4)	0,5	5	7	4211
	0,8	-	33	-	IP66	II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	-40 ... +80 T5 -40 ... +70 T6 -40 ... +80	M20 x 1,5 *4)	0,6	5	4	4200
	-	1,3	-	6	IP65	II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	-40 ... +80 T5 -40 ... +70 T6 -40 ... +80	M20 x 1,5 *4)	0,6	5	7	4201
	3,9	-	162	-	IP66 (with cable gland)	II2G Ex d mb IIC T4/ T6 Gb II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db	-40 ... +80 T4 -40 ... +55 T6 -40 ... +80	1/2 NPT *4)	0,8	6	20	4610
	-	5,3	-	23	IP66 (with cable gland)	II2G Ex d mb IIC T4/ T6 Gb II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db	-40 ... +80 T4 -40 ... +55 T6 -40 ... +80	1/2 NPT *4)	0,8	6	21	4611
	3,9	-	162	-	IP66 (with cable gland)	II2G Ex d mb IIC T4/ T6 Gb II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db	-40 ... +80 T4 -40 ... +55 T6 -40 ... +80	M20 x 1,5 *4)	0,8	6	20	4612
	-	5,3	-	23	IP66 (with cable gland)	II2G Ex d mb IIC T4/ T6 Gb II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db	-40 ... +80 T4 -40 ... +55 T6 -40 ... +80	M20 x 1,5 *4)	0,8	6	21	4613
	0,8	-	33	-	IP66	II2G Ex d mb IIC T5/ T6 Gb II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	-40 ... +80 T5 -40 ... +70 T6 -40 ... +80	1/2 NPT *4)	0,8	6	20	4600
	-	1,3	-	6	IP66	II2G Ex d mb IIC T5/ T6 Gb II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	-40 ... +80 T5 -40 ... +70 T6 -40 ... +80	1/2 NPT *4)	0,8	6	21	4601
	0,8	-	33	-	IP66	II2G Ex d mb IIC T5/ T6 Gb II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	-40 ... +80 T5 -40 ... +70 T6 -40 ... +80	M20 x 1,5 *4)	0,8	6	20	4602
	-	1,3	-	6	IP66	II2G Ex d mb IIC T5/ T6 Gb II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	-40 ... +80 T5 -40 ... +70 T6 -40 ... +80	M20 x 1,5 *4)	0,8	6	21	4603
	0,8	-	33	-	IP66	Ex mb d IIC T4/T6 or Ex mb e II T5/T6 Ex mbD 21 tDA21 IP66 T100°C	Cat. II 2G (gas) -40 ... +80 T4* -40 ... +70 T6 Cat. II 2D (dust) T100°C	M20 x 1,5 *4)	1,2	7	4	4802
	-	1,3	-	6	IP66	Ex mb d IIC T4/T6 or Ex mb e II T5/T6 Ex mbD 21 tDA21 IP66 T100°C	Cat. II 2G (gas) -40 ... +80 T4 -40 ... +70 T6 Cat. II 2D (dust) T100°C	M20 x 1,5 *4)	1,2	7	7	4803

Standard voltages (±10%) 24 V d.c., 230 V a.c., other voltages on request. Design according to VDE 0580, EN 50014/50028. 100% duty cycle.
*4) Connector/cable gland is not scope of delivery, see table »Accessories«.
Attention: The protection class for coil series 46xx and 48xx is determined by the choice of cable gland. Example: if an ATEX-certified cable gland is used that has Ex d type of protection, the solenoid will have the protection class Ex d mb; if a cable gland with Ex e type of proteciton is used, the solenoid will have protection class Ex e mb.

Solenoids group, standard voltages

	Power consumption		Rated current		Protection class	Ex-Protection (ATEX-Category)	Temperature Ambient/Media	Electrical connection	Weight	Drawing	Circuit diagram	Model
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)	IP/NEMA		(°C)		(kg)	No.	No.	
	5,5	-	228	-	NEMA 4, 4X, 6, 6P, 7, 9	XP/DIP, Div. 1&2 Cl. I, Gr. A-D Cl. II/III, Gr. E-G T3 (160°C)	-20 ... +60	Flying leads 450 mm	0,5	8	1	3722
	-	5,9	-	26	NEMA 4, 4X, 6, 6P, 7, 9	XP/DIP, Div. 1&2 Cl. I, Gr. A-D Cl. II/III, Gr. E-G T3 (160°C)	-20 ... +60	Flying leads 450 mm	0,5	8	5	3723
	1,4	-	59	-	4, 4X, 6, 6P, 7, 9	II2G Ex mb d IIC T4/T6 II2G EX mb e II T4/T6 II 2 D Ex td a21	-20 ... +60	Flying leads 450 mm	0,4	8	1	3720
	3,7	-	154	-	65	-	-20 ... +60	Flying leads 515 mm	0,6	9	1	1814
	3	-	125	-	IP00 without connector	-	-25 ... +60	DIN EN 175301-803 Form A	0,15	10	1	0242
	1,9	2,1 *5)	78	10	IP00 without connector IP65 with connector *7)	-	-25 ... +60	DIN EN 175301-803 Form A *5) *4)	0,3	11	1 or 5	0763

Solenoid actuators for instrinsically safe circuits

	Nominal-resistance RN coil	Min. required switching current	Resistance RW 60 Coil	Required voltage at terminal Rw 60	Protection class 6*) (ATEX-Category) IP-Protection 6*)	Temperature Ambient/Media	Weight	Drawing	Circuit diagram	Cole code
	(Ω)	(mA)	(Ω)	(V)	(class according to EN60529)	(°C)	(kg)	No.	No.	
	200	33	240	8	II2G Ex ia IIC T6 Gb	-40 ... +60	0,85	12	10	2050

Standard voltages (±10%) 24 V d.c., 230 V a.c., other voltages on request. Design according to VDE 0580, EN 50014/50028. 100% duty cycle.
Attention: The protection class for coil series 46xx and 48xx is determined by the choice of cable gland.
Example: if an ATEX-certified cable gland is used that has Ex d type of protection, the solenoid will have the protection class Ex d mb; if a cable gland with Ex e type of proteciton is used, the solenoid will have protection class Ex e mb.

5*) Required connector: model 0570275 for V DC; model 0663303 for V AC, to be ordered Solenoid Voltage 200V DC!
6*) IP-Protection class (to EN60529) T. Ex protection classes and temperature values are valid for all solenoid
7*) Required Connector: type 0570275

Approvals

Model	Approvals ATEX	IECEx	FM	Datasheet
372x, 382x	–	–	CSA-LR 57643-6	en 7.1.575
42xx	KEMA 98 ATEX 4452 X	IECEx KEM 09.0068X	–	en 7.1.580
46xx	PTB 02 ATEX 2085 X	IECEx PTB 11.0094X	–	en 7.1.585
48xx	PTB 06 ATEX 2054 X	IECEx PTB 07.0039X	–	en 7.1.590
205x	PTB 07 ATEX 2019 X	IECEx PTB 07.0017X	–	en 7.1.535

Accessories
Electrical connection

Cable gland
Protection class
Ex e, Ex d

Page 7

Thread	Cable ø (mm)	Materials	Protection class (ATEX)	Model
M20 x 1,5	5 ... 8	Nickel plated brass	II 2 GD Ex e	0588819
M20 x 1,5	10 ... 14	Nickel plated brass	II 2 GD Ex d	0588851
1/2 NPT	7,5 ... 11,9	Nickel plated brass	II 2 GD Ex d	0588925
M20 x 1,5	9 ... 13	Stainless steel 1.4571 (316 Ti)	II 2 GD Ex e	0589385
M20 x 1,5	7 ... 12	Stainless steel 1.4404 (316 L)	II 2 GD Ex d	0589395
M20 x 1,5	10 ... 14	Stainless steel 1.4404 (316 L)	II 2 GD Ex d	0589387

Valve

Adaptor complete (Adaptor, inlet filter and seal ring)	Inlet filter	Silencer (plastic) *8)	Silencer (stainless steel) *1)	Silencer (brass) *8)	Exhaust guard *9)
			 Page 10		
Page 10	Page 10	Page 10		Page 10	Page 10
0613487 (G1/4)	0681173 (G1/4, 1/4 NPT)	M/S2 (G1/4)	0014613 (G1/4)	T40C2800 (G1/4)	0613422 (G1/4, 1/4 NPT)
		C/S2 (1/4 NPT)	0613678 (1/4 NPT)	MS002A (1/4 NPT)	

*8) For indoors use only.
*9) For outdoors use, opening pressure ~ 0,2 bar.

Conversion plate

Page 9

A1502-Z11

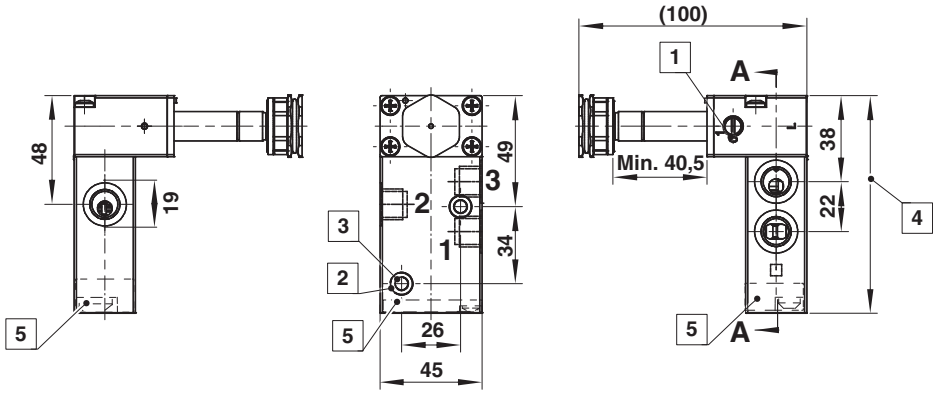
Dimensions

Dimensions in mm
Projection/Third angle

Valves

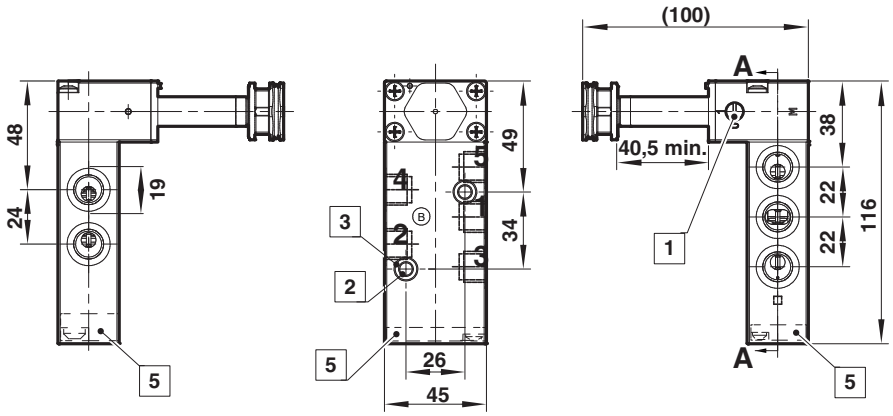
3/2 way Inline

(1)



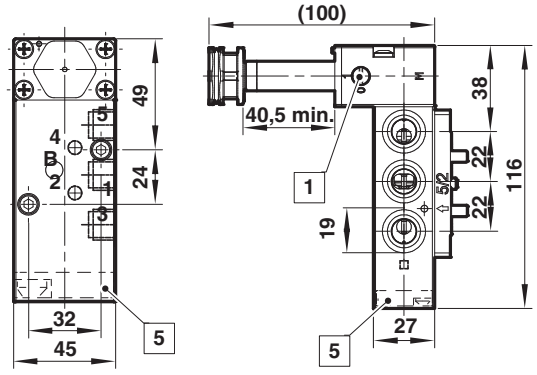
5/2 way Inline

(2)



5/2 way NAMUR

(3)

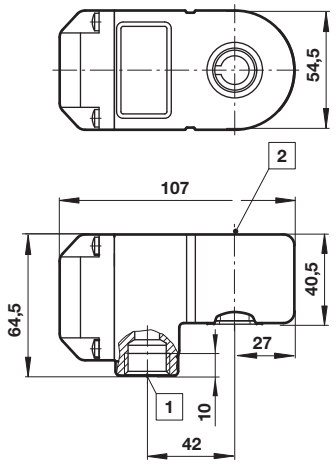


1 Manual override
2 Hole ø 5,5
3 Hole ø 9,5 x 5,5 deep
4 Aluminium valve: 96 mm
Stainless steel valve: 98,5 mm
5 dash line shows end plug of stainless steel valve

Dimensions - Solenoid

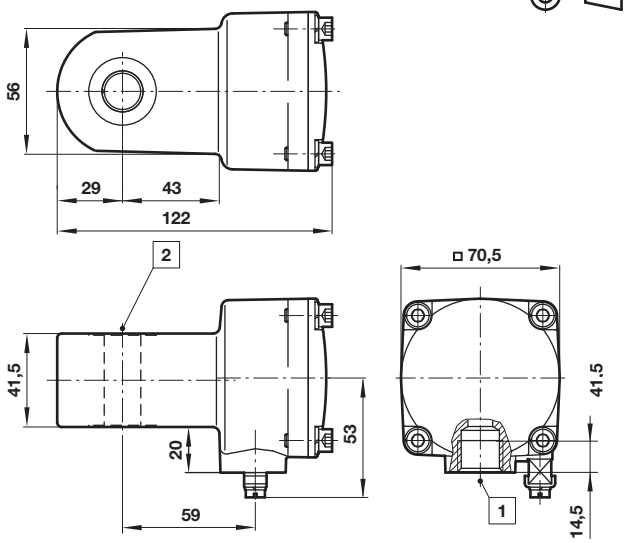
Dimensions in mm
Projection/Third angle

5



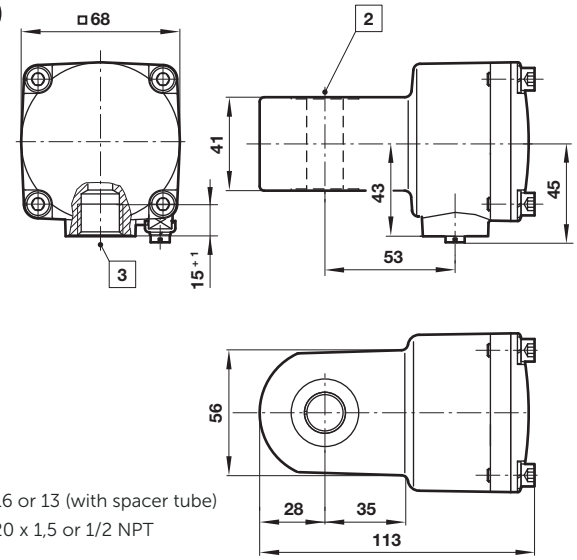
1 M20 x 1,5 or 1/2 NPT
2 ø 16 or 13 (with spacer tube)

6



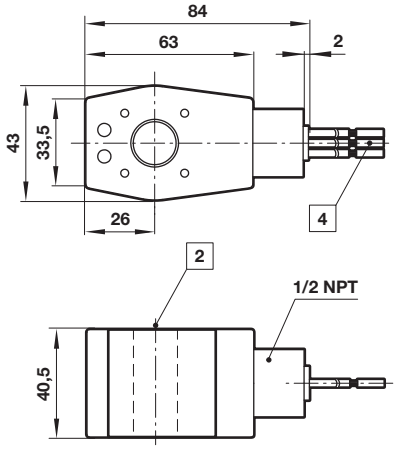
1 M20 x 1,5 or 1/2 NPT
2 ø 16 or 13 (with spacer tube)

7



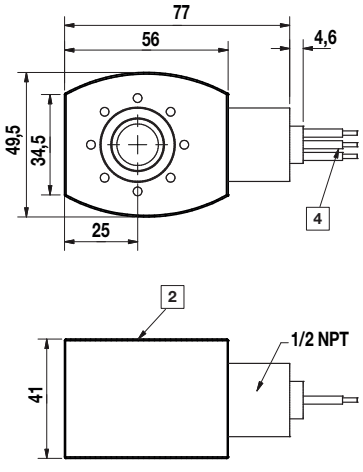
2 ø 16 or 13 (with spacer tube)
3 M20 x 1,5 or 1/2 NPT

8



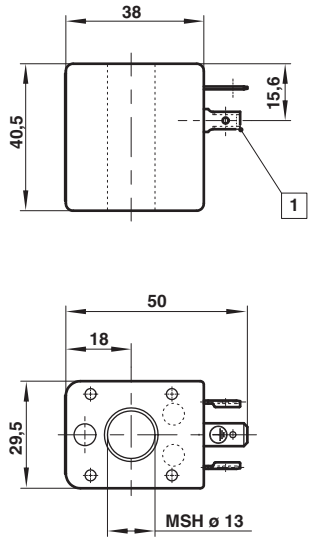
2 ø 16 or 13 (with spacer tube)
4 Flying leads AWG18 (450 mm long)

9



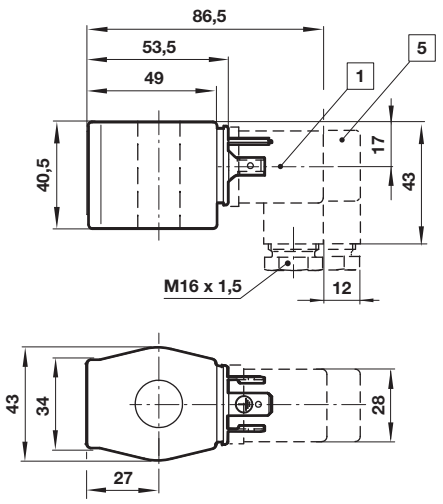
2 ø 13
4 Flying Leads AWG18(515 mm long)

10



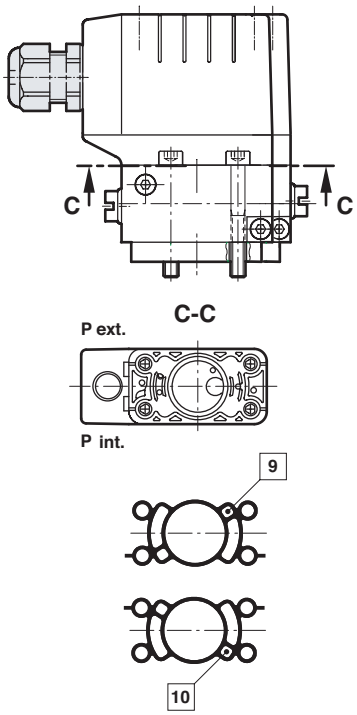
Dimensions in mm
Projection/First angle

11



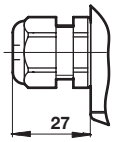
1 Connector 4 x 90° turnable
5 Connector with rectifier(0663303)

12



Electrical connection

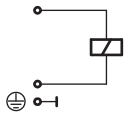
005



9 Position of gasket internal pilot air
10 Position of gasket external pilot air

Circuit diagrams

1



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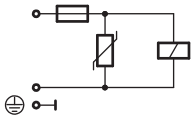

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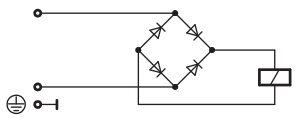

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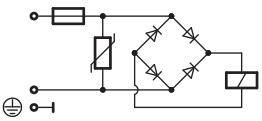

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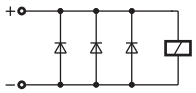

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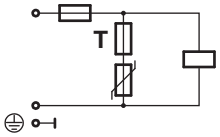
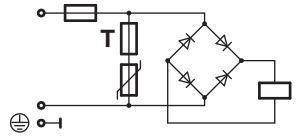
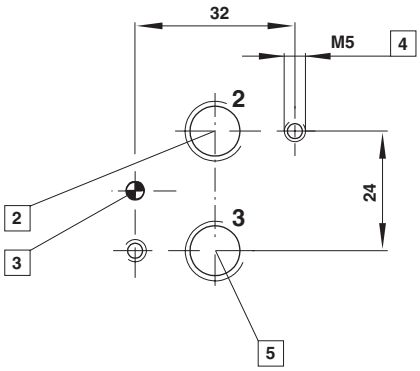


21



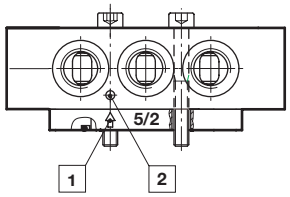
NAMUR hole pattern (driving side)
Port size G1/4



2 Port 2 (A)
3 Hole for coding stud
4 M5 & M6 (10 deep)
5 Port 3 (R)

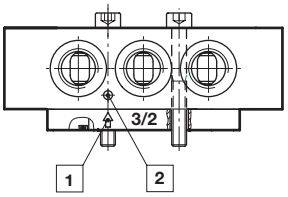
Conversion instructions of 5/2 into 3/2 way function

5/2 way function (original mode of supply)



3/2 resp. 5/2 way function according to version by swapping or turning enclosed adaptor plates. Make sure Marker and Arrow do match as shown on above drawing.

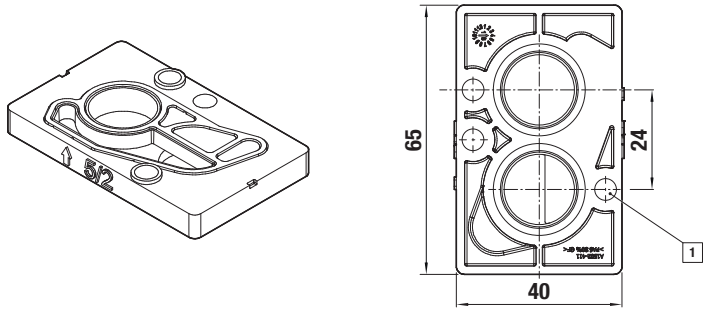
3/2 way function



1 Arrow
2 Marker

Conversion plate

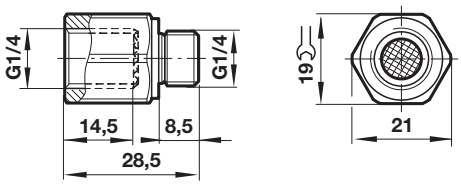
Model: A1502-Z11



1 3 x ø 5,5 mm

Adaptor complete

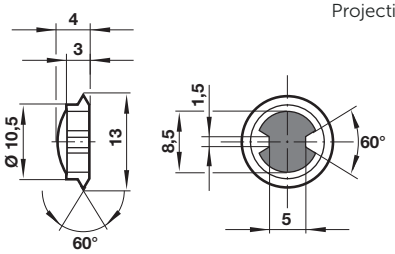
Model: 0613487



Inlet filter

Model: 0681173

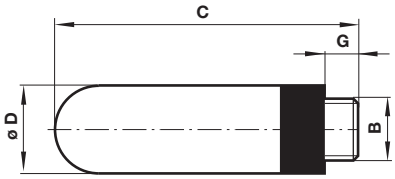
Dimensions in mm
Projection/Third angle



Thread pitch diameter max. 11,85 mm

Silencer (plastic)

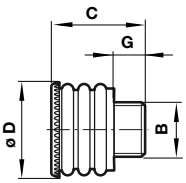
Model: M/S2, M/S4, C/S2



B	G	C	ø D	Weight (g)	Model
G1/4	7	35,5	15,5	2,9	M/S2
1/4 NPT	7	35,5	15,5	2,9	C/S2

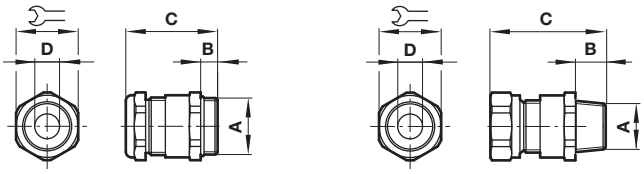
Exhaust guard

Model: 0613422



B	Suitable for	G	C	ø D	Weight (g)	Model
1/4"	G1/4, 1/4 NPT	10	26,5	21	5	0613422

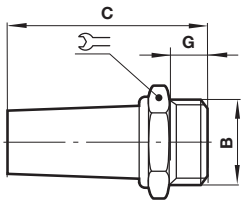
Cable gland



0588925 only

A	B	C	ø D		Model
M20 x 1,5	9	36	5 ... 8	22	0588819
M20 x 1,5	6,5	27,5	9 ... 13	22	0589385
M20 x 1,5	14	39	10 ... 14	24	0588851
1/2 NPT	15	58	7,5 ... 11,9	24	0588925
M20 x 1,5	14	39	7 ... 12	24	0589395
M20 x 1,5	10	34	10 ... 14	24	0589387

Silencer (brass or stainless steel)



B	C	G		Weight (g)	Model
G1/4	33	8	17	18	T40C2800
1/4 NPT	35	8	9/16	18	MS002A
G1/4	36	8	16	23	0014613 *10)
1/4 NPT	36	8	16	67	0613678 *10)

*10) Stainless steel

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under **»Technical features/ data«.**

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications,
consult Norgren.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.