

Main application: single and double operated actuators

**TÜV-approval based on type examination
DIN EN 161, DIN 3394 and IEC 61 508**

**Valves for safety systems multi-channel
up to SIL 4**

Crossover-free switching

Add-on manual override

**Suited for outdoor use under critical
environment conditions (see solenoid list)**

**The solenoid valves are applicable in the
protection classes Ex e mb, Ex d mb, Ex mb,
Ex ia for zones 1 & 2 (gas), 21 & 22 (dust),
ATEX cat. II 2GD**

**International approvals: IEC Ex, FM, CSA
others on request**

Technical features

Medium:

Filtered, non-lubricated and dried compressed air, instrument air, nitrogen and other non-flammable neutral, dry fluids

Operation:

Indirect solenoid operated spool valves

Operating pressure:

2,5 ... 8 bar with internal air supply
0 ... 8 bar with external air supply (G1/2, 1/2 NPT or low power pilot system only)

Orifice:

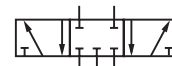
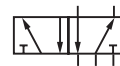
DN 6 or DN 8

Port size::

G 1/4, 1/4 NPT, G 1/2, 1/2 NPT or NAMUR Interface with integrated exhaust air

Mounting position:

Optional, impuls valves preferably horizontally



Approval depends on magnetic system, see page 4, 5 and 6!

Fluid/Ambient temperature:

Valve:

-40 ... +65°C (special NBR)

-25 ... +80°C (HNBR)

Depending on solenoid system

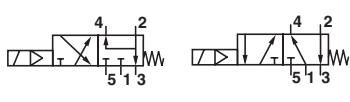
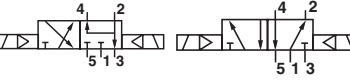
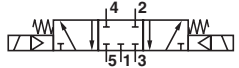
Air supply must be dry enough to avoid ice formation at temperatures below +2°C.

For outdoor installations must be protected all connections against the penetration of moisture and a solenoid with IP66 protection must be used!

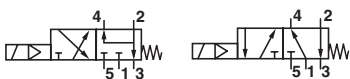
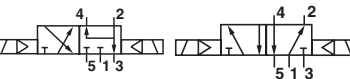
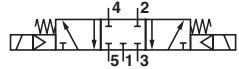
Materials:

Body: aluminium 3.0615 with surface treatment for critical environmental conditions (approved according to DIN 50018: Condensate test with alternating temperatures in sulphuric atmosphere, DIN 50021/ASTM B117-73: Salt spray test with different sodium chloride solutions, tested in ammonia atmosphere), brass 2.0401 (Ms 58) stainless steel 1.4404 (316 L) Seals: special NBR or HNBR

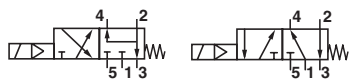
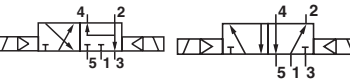
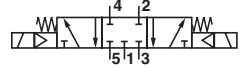
3/2, 5/2 and 5/3 way valves with seals NBR -40 ... +65°C *3)
Housing: aluminium anodized

Symbol	Ports 1, 3, (5)	2, 4	Actuation	Operating pressure (bar)	Flow *6) (l/min)	Test certification IEC 61508 *2)	Weight (kg)	Dimension No.	Model *1)
	G 1/4	Flange	Solenoid/spring	2,5 ... 8	1300	x	0,45	1	9710505
	1/4 NPT	Flange	Solenoid/spring	2,5 ... 8	1300	x	0,45	1	9710515
	G 1/2	Flange	Solenoid/spring	2,5 ... 8	2600		0,80	7	9710595
	1/2 NPT	Flange	Solenoid/spring	2,5 ... 8	2600		0,80	7	9710596
	G 1/4	Flange	Solenoid/solenoid	2,5 ... 8	1300		0,65	2	9711505
	1/4 NPT	Flange	Solenoid/solenoid	2,5 ... 8	1300		0,65	2	9711515
	G 1/4	Flange	Solenoid/solenoid (APB)	2,5 ... 8	950		0,7	3	9712505
	1/4 NPT	Flange	Solenoid/solenoid (APB)	2,5 ... 8	950		0,7	3	9712515

Housing: brass

Symbol	Ports 1, 3, (5)	2, 4	Actuation	Operating pressure (bar)	Flow *6) (l/min)	Test certification IEC 61508 *2)	Weight (kg)	Dimension No.	Model *1)
	G 1/4	Flange	Solenoid/spring	2,5 ... 8	1300	x	1,00	1	9710605
	1/4 NPT	Flange	Solenoid/spring	2,5 ... 8	1300	x	1,00	1	9710615
	G 1/4	Flange	Solenoid/solenoid	2,5 ... 8	1300		1,40	2	9711605
	1/4 NPT	Flange	Solenoid/solenoid	2,5 ... 8	1300		1,40	2	9711615
	G 1/4	Flange	Solenoid/solenoid (APB)	2,5 ... 8	950		1,50	3	9712605
	1/4 NPT	Flange	Solenoid/solenoid (APB)	2,5 ... 8	950		1,50	3	9712615

Housing: stainless steel

Symbol	Ports 1, 3, (5)	2, 4	Actuation	Operating pressure (bar)	Flow *6) (l/min)	Test certification IEC 61508 *2)	Weight (kg)	Dimension No.	Model *1)
	G 1/4	Flange	Solenoid/spring	2,5 ... 8	1300	x	1,00	1	9710705
	1/4 NPT	Flange	Solenoid/spring	2,5 ... 8	1300	x	1,00	1	9710715
	G 1/4	Flange	Solenoid/solenoid	2,5 ... 8	1300		1,40	2	9711705
	1/4 NPT	Flange	Solenoid/solenoid	2,5 ... 8	1300		1,40	2	9711715
	G 1/4	Flange	Solenoid/solenoid (APB)	2,5 ... 8	950		1,50	3	9712705
	1/4 NPT	Flange	Solenoid/solenoid (APB)	2,5 ... 8	950		1,50	3	9712715

In order to ensure full flow and proper function make sure that sufficient pressure supply with feed pipe diameters according to the port size is available.

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

*2) Since May 2008, Date code A8192

*3) For operation in plants according to IEC 61511/61508 -40 ... +40°C see test certificate (on request)

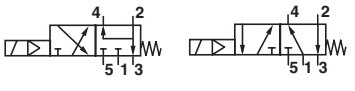

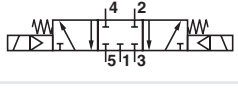
*6) Flow characteristics conforms to ISO6358 [6 » 5 bar]

Note for *6): Connecting pipe/fitting: In order to ensure and a pressure collapse avoid the flow, the supply air cross section should with 1/4: ≥ 8 mm; with 1/2: ≥ 10 mm. With smaller cross section the inlet (A1) should more largely, however at least equally large line at the port (A2; A1).

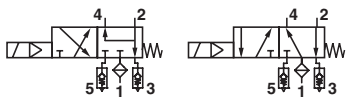
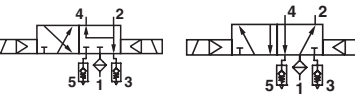
Valve function: APB = All Ports Blocked

3/2 or 5/2 way function (Conversion instructions see page 14)

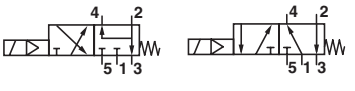
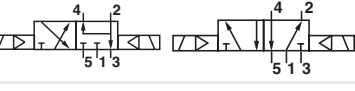
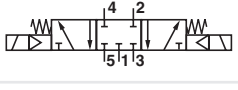
3/2, 5/2 and 5/3 way valves with seals HNBR -25 ... +80°C *3)
Housing: aluminium anodized

Symbol	Ports 1, 3, (5)	2, 4	Actuation	Operating pressure (bar)	Flow *6) (l/min)	Test certification IEC 61508 *2)	Weight (kg)	Dimension No.	Model *1)
	G 1/4	Flange	Solenoid/spring	2,5 ... 8	1300	x	0,45	1	9710205
	1/4 NPT	Flange	Solenoid/spring	2,5 ... 8	1300	x	0,45	1	9710215
	G 1/4	Flange	Solenoid/solenoid	2,5 ... 8	1300	x	0,65	2	9711205
	1/4 NPT	Flange	Solenoid/solenoid	2,5 ... 8	1300	x	0,65	2	9711215
	G 1/4	Flange	Solenoid/solenoid (APB)	2,5 ... 8	950		0,7	3	9712205
	1/4 NPT	Flange	Solenoid/solenoid (APB)	2,5 ... 8	950		0,7	3	9712215

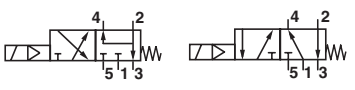
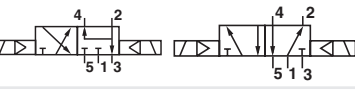
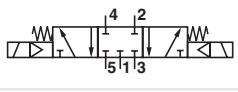
Housing: aluminium anodized, Inlet filter and exhaust guard

Symbol	Ports 1, 3, (5)	2, 4	Actuation	Operating pressure (bar)	Flow *6) (l/min)	Test certification IEC 61508 *2)	Weight (kg)	Dimension No.	Model *1)
	G 1/4	Flange	Solenoid/spring	2,5 ... 8	1300	x *4)	0,45	8	9710901
	G 1/4	Flange	Solenoid/solenoid	2,5 ... 8	1300	-	0,65	9	9711901

Housing: brass

Symbol	Ports 1, 3, (5)	2, 4	Actuation	Operating pressure (bar)	Flow *6) (l/min)	Test certification IEC 61508 *2)	Weight (kg)	Dimension No.	Model *1)
	G 1/4	Flange	Solenoid/spring	2,5 ... 8	1300	x	1,00	1	9710305
	1/4 NPT	Flange	Solenoid/spring	2,5 ... 8	1300	x	1,00	1	9710315
	G 1/4	Flange	Solenoid/solenoid	2,5 ... 8	1300		1,40	2	9711305
	1/4 NPT	Flange	Solenoid/solenoid	2,5 ... 8	1300		1,40	2	9711315
	G 1/4	Flange	Solenoid/solenoid (APB)	2,5 ... 8	950		1,50	3	9712305
	1/4 NPT	Flange	Solenoid/solenoid (APB)	2,5 ... 8	950		1,50	3	9712315

Housing: Stainless steel

Symbol	Ports 1, 3, (5)	2, 4	Actuation	Operating pressure (bar)	Flow *6) (l/min)	Test certification IEC 61508 *2)	Weight (kg)	Dimension No.	Model *1)
	G 1/4	Flange	Solenoid/spring	2,5 ... 8	1300	x	1,00	1	9710405
	1/4 NPT	Flange	Solenoid/spring	2,5 ... 8	1300	x	1,00	1	9710415
	G 1/4	Flange	Solenoid/solenoid	2,5 ... 8	1300		1,40	2	9711405
	1/4 NPT	Flange	Solenoid/solenoid	2,5 ... 8	1300		1,40	2	9711415
	G 1/4	Flange	Solenoid/solenoid (APB)	2,5 ... 8	950		1,50	3	9712405
	1/4 NPT	Flange	Solenoid/solenoid (APB)	2,5 ... 8	950		1,50	3	9712415

In order to ensure full flow and proper function make sure that sufficient pressure supply with feed pipe diameters according to the port size is available.

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

*2) Since May 2008, Date code A8192

*3) For operation in plants according to IEC 61511/61508 -25°C...+65°C or 0...+80°C see test certificate (on request)

*4) Test certificate without inlet filter and exhaust guard

*6) Flow characteristics conforms to ISO6358 [6 > 5 bar]

Note for *6): Connecting pipe/fitting: In order to ensure and a pressure collapse avoid the flow, the supply air cross section should with 1/4: ≥ 8 mm; with 1/2: ≥ 10 mm. With smaller cross section the inlet (A1) should more largely, however at least equally large line at the port (A2; A1).

Valve function: APB = All Ports Blocked

3/2 or 5/2 way function (Conversion instructions see page 14)

Option selector
971***.*****.*******

Function	Substitute
5/2 way with spring return (3/2 way with adapter plate for NAMUR flange)	0
5/2 way impuls (3/2 way with adapter plate for NAMUR flange)	1
5/3 way with spring return (ABP)	2
Material: Housing/seals	Substitute
Aluminium/HNBR (-25 ... + 80°C)	2
Brass/HNBR (-25 ... + 80°C)	3
Stainless steel/HNBR (-25 ... + 80°C)	4
Aluminium/NBR (-40 ... + 65°C)	5
Brass/NBR (-40 ... + 65°C)	6
Stainless steel/NBR (-40 ... + 65°C)	7
Special version *1)	9
Ports size	Substitute
G 1/4	0
1/4 NPT	1
G 1/2	9
1/2 NPT (in connection with 'version code 6' below described)	9
Version	Substitute
Without manual override (retrofit)	5
Semi automatic (on request)	7
Low power pilot (see page 5)	9
For 1/2 NPT only + NAMUR (manual override retrofit)	6

Air supply	Substitute
Internal	0
External	Z
Voltage	Substitute
24 V d.c.	024.0
230 V a.c.	230.5
Solenoid	Substitute
see solenoid table	

Valve function:

APB = All Ports Blocked

*1) Norgren internal use.

Port size and other features shown under version are different.

E.g. 971x901: Valve with inlet filter and exhaust guards according to customer requirement.

Solenoid operators

	Power consumption		Rated current		Ex-Protection	IP-Protection class (to EN 60529)	Temperature Ambient/Fluid	Electrical connection	Weight	Dimension	Circuit diagram	Model
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)								
	1,9	2,1 *5)	78	11	—	IP 65 (with connector)	-25 ... +60	Connector DIN EN 175 301-803 form A *5), *6)	0,3	7	1/5	0763
	3,6	—	150	—	II2G II2D	Ex mb IIC T4 Gb Ex mb IIIC T110°C Db IP 66	-20 ... +70	Cable 3 m	0,4	5	4	0298
	—	4,6	—	18	II2G II2D	Ex mb IIC T4 Gb Ex mb IIIC T110°C Db IP 66	-20 ... +70	Cable 3 m	0,4	5	7	0299
	0,8	—	38	—	II2G II2D	Ex e mb IIC T4/T5 Gb Ex tb IIIC T130°C Db IP 66 (with cable gland),	-40 ... +80 T5 -40 ... +70 T6 -40 ... +80	M20 X 1,5 *6)	0,6	6	4	4200
	—	1,3	—	6	II2G II2D	Ex e mb IIC T4/T5 Gb Ex tb IIIC T130°C Db IP 66 (with cable gland),	-40 ... +80 T5 -40 ... +70 T6 -40 ... +80	M20 X 1,5 *6)	0,6	6	7	4201

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.




*5) Required connector: type 0570275 for d.c. and 0663303 for a.c., to be ordered solenoid voltage 200 V d.c.

*6) Connector cable gland not supplied, see table »Accessories«

Approvals

Model	Approvals			Datasheet
	ATEX	IECEX	FM	
029x	KEMA 02 ATEX 1347 X	—	—	N/en 7.1.505
42xx	KEMA 98 ATEX 4452 X	IECEX KEM 09.0068X	—	N/en 7.1.580

Solenoid operators

	Power consumption		Rated current		Ex-Protection	IP-Protection class (to EN 60529)	Temperature Ambient/Fluid	Electrical connection	Weight	Dimension	Circuit diagram	Model
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)								
	0,8	—	33	—	II2G II2D	Ex d mb IIC T4/T6 Gb Ex e mb IIC T4/T6 Gb Ex tb IIIC T130°C Db IP 66 (with cable gland)	-40 ... +80 T5 -40 ... +70 T6 -40 ... +80	1/2 NPT *6)	0,8	7	20	4600
	0,8	—	33	—	II2G II2D	Ex d mb IIC T4/T6 Gb Ex e mb IIC T4/T6 Gb Ex tb IIIC T130°C Db IP 66 (with cable gland)	-40 ... +80 T5 -40 ... +70 T6 -40 ... +80	M20 X 1,5 *6)		7	21	4602
	—	1,3	—	6	II2G II2D	Ex d mb IIC T4/T6 Gb Ex e mb IIC T4/T6 Gb Ex tb IIIC T130°C Db IP 66 (with cable gland)	-40 ... +80 T5 -40 ... +70 T6 -40 ... +80	1/2 NPT *6)	0,8	7	20	4601
	—	1,3	—	6	II2G II2D	Ex d mb IIC T4/T6 Gb Ex e mb IIC T4/T6 Gb Ex tb IIIC T130°C Db IP 66 (with cable gland)	-40 ... +80 T5 -40 ... +70 T6 -40 ... +80	M20 X 1,5 *6)	0,8	7	21	4603
	0,8	—	33	—	II2G II2D	Ex d mb IIC T4/T6 Gb Ex mb e II T4/T6 Gb Ex tD A21 T100° IP 66 (with cable gland)	-40 ... +50 T4 -40 ... +40 T6 -40 ... +80	M20 X 1,5 *6)	1,2	10	4	4802
	—	1,3	—	6	II2G II2D	Ex d mb IIC T4/T6 Gb Ex mb e II T4/T6 Gb Ex tD A21 T100° IP 66 (with cable gland)	-40 ... +50 T4 -40 ... +40 T6 -40 ... +80	M20 X 1,5 *6)	1,2	10	7	4803
	1,4	—	59	—	—	XP/DIP, Div. 1 & 2 Cl. I, Gr. A-D Cl. II / III, Gr. E-G T3 (160°C) NEMA 4, 4X, 6, 6P, 7, 9	-20 ... +60	Flying leads 450 mm	0,4	8	1	3720

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.

*6) Connector cable gland not supplied, 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 protection is used, the solenoid will have protection class Ex e mb.

Approvals

Model	Approvals ATEX	IECEX	FM	Datasheet
372x, 382x	—	—	CSA-LR 57643-6	N/en 7.1.575
46xx	PTB 02 ATEX 2085 X	IECEX PTB 11.0094X	—	N/en 7.1.585
48xx	PTB 06 ATEX 2054 X	IECEX PTB 07.0039X	—	N/en 7.1.590

Solenoid actuators for intrinsically-safe circuits

	Nominal resistance RN coil (Ω)	Min. required switching current (mA)	Resistance Rw 60 coil (Ω)	Required voltage at terminal Rw 60 (V)	IP-Protection class (to EN 60529)	Temperature Ambient/Fluid	Weight	Dimension	Circuit diagram	Model
	200	33	240	8	Ex ia IIC T6 IP 66 (with cable gland)	-40 ... +60	0,85	10	10	2050
	391	24	460	11	Ex ia IIC T4 IP 66 (with cable gland)	-40 ... +80	0,85	10	10	2051
	736	17	880	15	Ex iaD 21 T80°C IP 66 (with cable gland)	-40 ... +60	0,85	10	10	2052
	1220	13	1460	19	Ex iaD 21 T100°C IP 66 (with cable gland)	-40 ... +80	0,85	10	10	2053

Cable gland is included in delivery

When selecting an intrinsically safe power supply, the permissible maximum values according to the Certificate of Conformity should be taken into account.
 $U_i = 45\text{ V}$, $I_i = 500\text{ mA}$ according to Tab. A. 1, EN 60079-11
 $P_i = 2,0\text{ W}$, L_i and C_i can be ignored.

Approvals

Model	Approvals ATEX	IECEX	FM	Datasheet
205x	PTB 07 ATEX 2019	IECEX PTB 07.0017	—	N/en 7.1.535

3/2, 5/2 and 5/3 way valves, indirect solenoid actuated using low-power pilot system in protection class Ex ia IIC T4/T6, seals NBR -40 ... +65° C

Symbol	Ports 1, 3, (5)	2, 4	Actuation	Material	Operating pressure (bar)	Flow *6) (l/min)	Weight (kg)	Dimension No.	Model *1)
	G 1/4	Flange	Solenoid/spring	Aluminium	2,5 ... 8	1300	0,45	4	9710509
	1/4 NPT	Flange	Solenoid/spring	Aluminium	2,5 ... 8	1300	0,45	4	9710519
	G 1/4	Flange	Solenoid/solenoid	Aluminium	2,5 ... 8	1300	0,65	5	9711509
	1/4 NPT	Flange	Solenoid/solenoid	Aluminium	2,5 ... 8	1300	0,65	5	9711519
	G 1/4	Flange	Solenoid/solenoid (APB)	Aluminium	2,5 ... 8	950	0,7	6	9712509
	1/4 NPT	Flange	Solenoid/solenoid (APB)	Aluminium	2,5 ... 8	950	0,7	6	9712519

3/2, 5/2 and 5/3 way valves, indirect solenoid actuated using low-power pilot system in protection class Ex ia IIC T4/T6, seals HNBR -25° ... +80° C

Symbol	Ports 1, 3 (5)	2, 4	Actuation	Material	Operating pressure (bar)	Flow *6) (l/min)	Weight (kg)	Dimension No.	Model *1)
	G 1/4	Flange	Solenoid/spring	Aluminium	2,5...8	1300	0,45	4	9710209
	1/4 NPT	Flange	Solenoid/spring	Aluminium	2,5...8	1300	0,45	4	9710219
	G 1/4	Flange	Solenoid/solenoid	Aluminium	2,5...8	1300	0,65	5	9711209
	1/4 NPT	Flange	Solenoid/solenoid	Aluminium	2,5...8	1300	0,65	5	9711219
	G 1/4	Flange	Solenoid/solenoid (APB)	Aluminium	2,5...8	950	0,7	6	9712209
	1/4 NPT	Flange	Solenoid/solenoid (APB)	Aluminium	2,5...8	950	0,7	6	9712219

In order to ensure full flow and proper function make sure that sufficient pressure supply with feed pipe diameters according to the port size is available.

*1) When ordering please indicate solenoid, voltage and electrical connection, see below

*6) Flow characteristics conforms to ISO6358 (6 » 5 bar)

Note for *6): Connecting pipe/fitting In order to ensure and a pressure collapse avoid the flow, the supply air cross section should with 1/4: ≥ 8 mm; with 1/2: ≥ 10 mm. With smaller cross section the inlet (A1) should more largely, however at least equally large line at the port (A2; A1).

Valve function: APB = All Ports Blocked

3/2 or 5/2 way function (Conversion instructions see page 14)

Low-power pilot system in protection class Ex ia IIC T4/T6

	Power P (+20°C)	Switch-on voltage U on (+20°C)	Switch-on voltage U on (+80°C)	Switch-off voltage U off (+20°C)	Switch-off voltage U off (-25°C)	Rated current I on	Resistance coil R (+20°C)	IP-Protection class (to EN 60529) Ex-Protection (ATEX-Category)	Temperature Ambient	Circuit diagram No.	Model
	6,3 mW	≥ 4,3 V	≥ 5,2 V	≤ 1,44 V	≤ 1,2 V	≥ 1,45 mA	2800 Ω	Ex ia IIC T4 IP 65 (with cable gland)	-40 ... +80°C	11	2085
	23,2 mW	≥ 16 V	≤ 16,8 V	≤ 5,4 V	≤ 4,7 V	≥ 1,45 mA	10900 Ω	Ex ia IIC T6 IP 65 (with cable gland)	-40 ... +60°C	11	2086

Max. values Ex i

Ui (V)	Ii (mA)	Pi *5) (mW)
25	150	250
27	125	250
28	115	250
30	100	250
32	85	250

Air consumption: home position ≤ 60 l/h, operating position ≤ 15 l/h

*5) Model 2086 without Pi limiting. Ci and Li can be ignored.

Ordering example

9802509.	2085.	005.	00
Valve	Pilot 6,3 mW	Electrical connection	00 internal air supply
		005 M16 x 1,5 cable gland	02 external air supply

Approvals

Model	Approvals ATEX	IECEX	FM	Datasheet
208x	PTB 06 ATEX 2001U	—	—	N/en 7.1.540

Accessories

Cable gland
Protection class Ex e, Ex d (ATEX),
Nickel plated brass/
stainless steel



Connector



0570275

0663303 (with rectifier)

Page 18

Thread

Cable Ø

Material

Protection class (ATEX)

Model

M 20x1,5	5,0...8,0 mm	Nickel plated brass	II2GD Ex e	0588819
M 20x1,5	10...14 mm	Nickel plated brass	II2GD Ex d	0588851
1/2-14-NPT	7,5...11,9 mm	Nickel plated brass	II2GD Ex d	0588925
M 20x1,5	9,0...13 mm	Stainless steel 1.4571 (316 Ti)	II2GD Ex e	0589385
M 20x1,5	7,0...12 mm	Stainless steel 1.4404 (316 L)	II2GD Ex d	0589395
M 20x1,5	10...14 mm	Stainless steel 1.4404 (316 L)	II2GD Ex d	0589387

Adaptor complete
(Adaptor, inlet filter and
seal ring)



Page 17

0613487

Inlet filter



Page 17

0681173 (G1/4, 1/4 NPT)

Silencer (plastic) *1)



Page 17

M/S2 (G1/4)
C/S2 (1/4 NPT)
M/S4 (G1/2)
C/S4 (1/2 NPT)

Exhaust guard *2)



Page 17

0613422 (G1/4, 1/4 NPT)
0613423 (G1/2, 1/2 NPT)

Silencer (stainless steel) *1)



Page 17

0014613 (G 1/4)
0613678 (1/4 NPT)
0014813 (G 1/2)
0613679 (1/2 NPT)

Manual override



Page 16

0553886 (without detent)
0553887 (with detent)

Manual override
(for start-up only)



Page 16

0613379 (without detent)

*1) For indoors use only

*2) For outdoors use, opening pressure – 0,2 bar

Throttle control plate



Page 15

4040239 (only for G1/4)

Flange plate, for G1/4 only



Page 15

0612790 (NAMUR single connection plate)
0612791 (NAMUR-rip use in combination with 0612790)

Yoke



Page 15

0540593

Distance plate for pressure
switches



Page 16

0540109

Mounting plate
90°, 180° and 270°

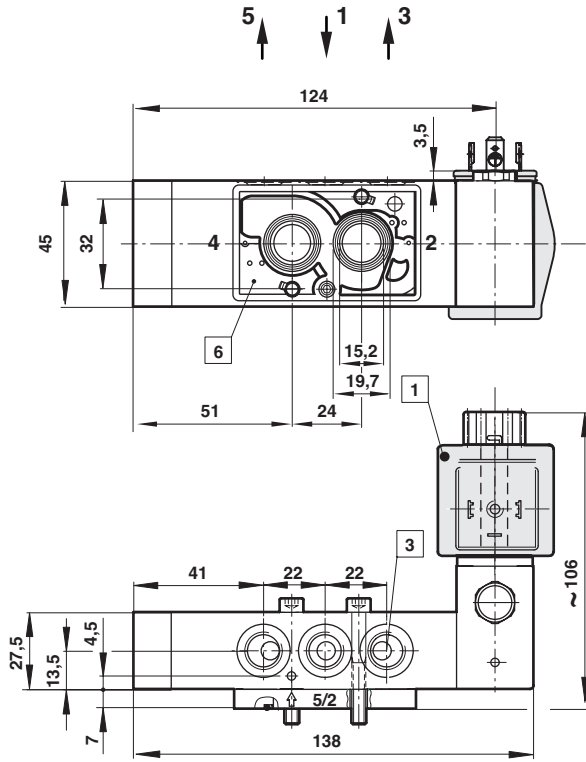


Page 16

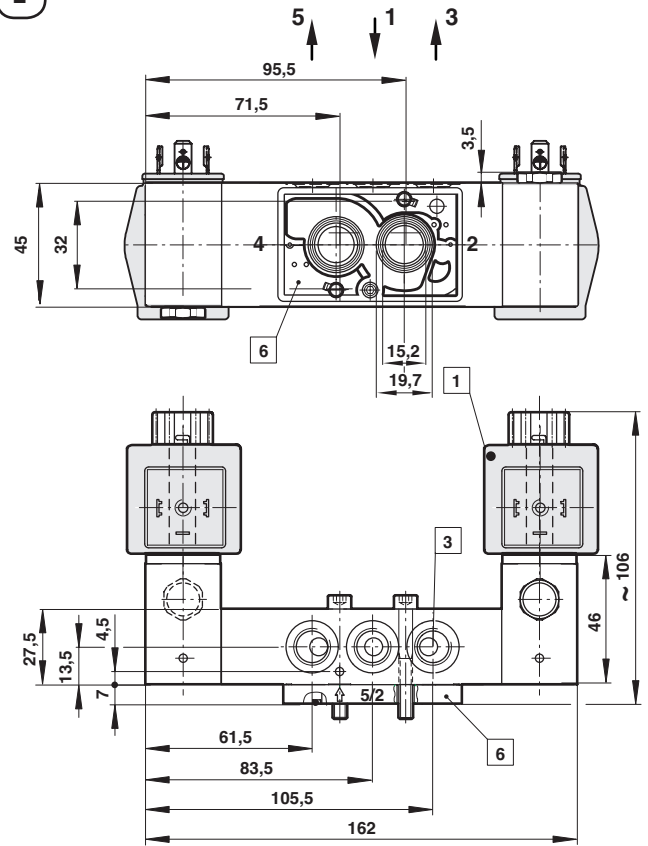
0613453 (90°)
0612631 (180°)
0613556 (270°)

**Dimensions
Valves**

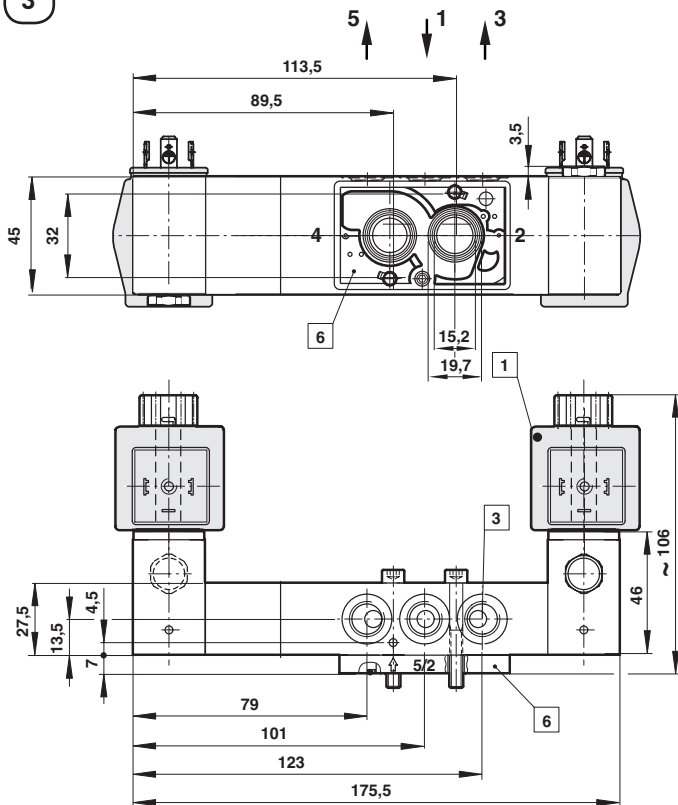
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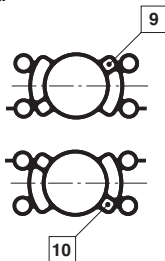
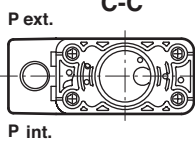
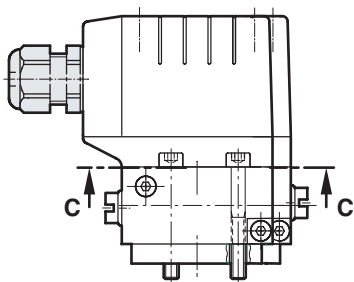
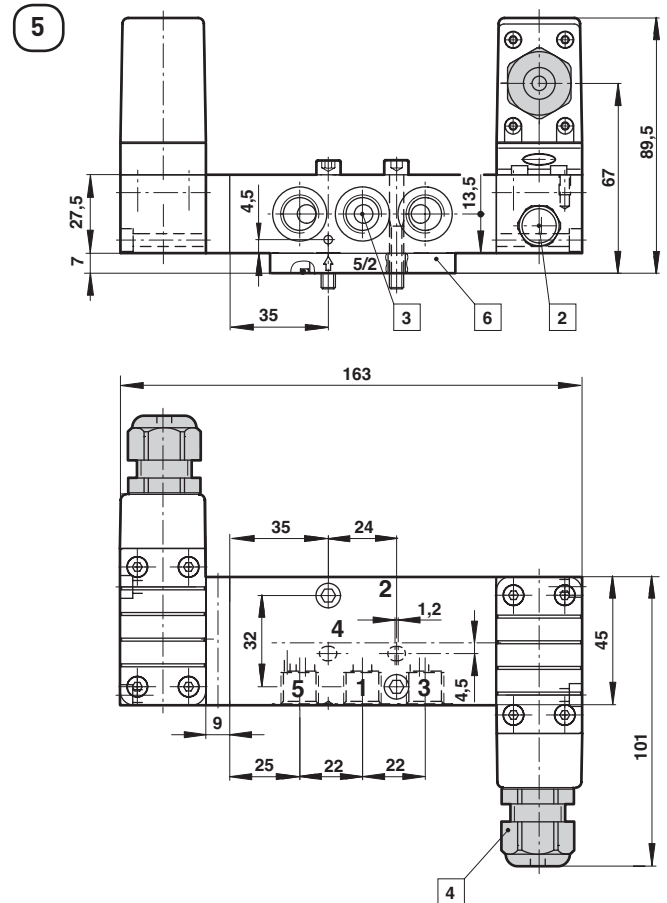
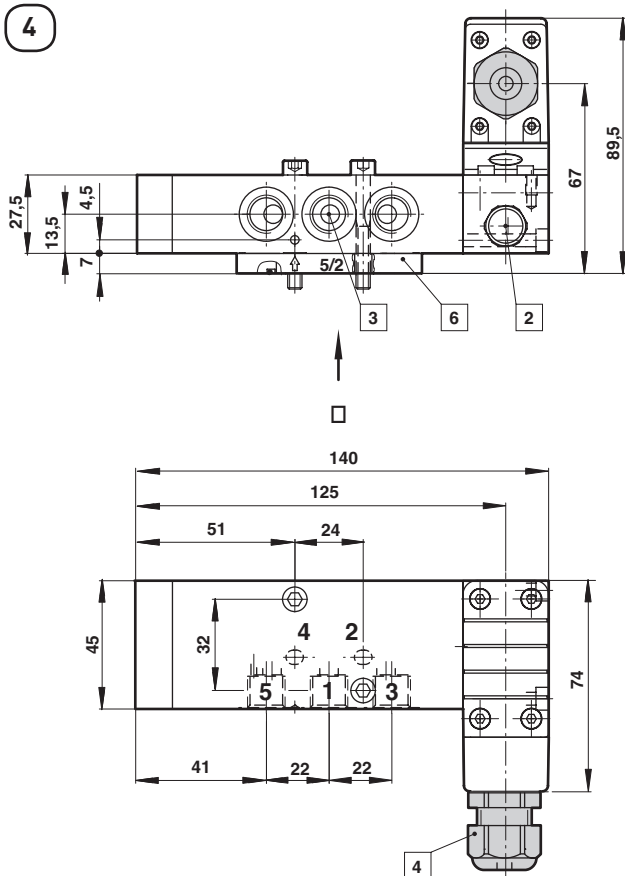
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3



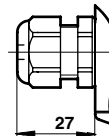
- 1 Solenoid dimensions on page 13
- 3 Port G 1/4 or 1/4 NPT
- 6 NAMUR connection plate 3/2 or 5/2 way function

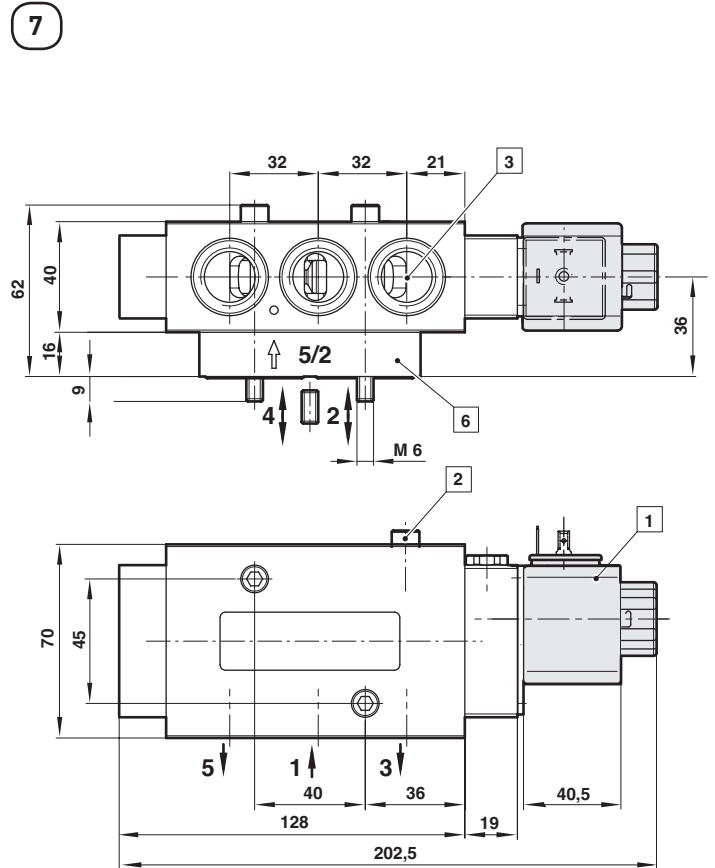
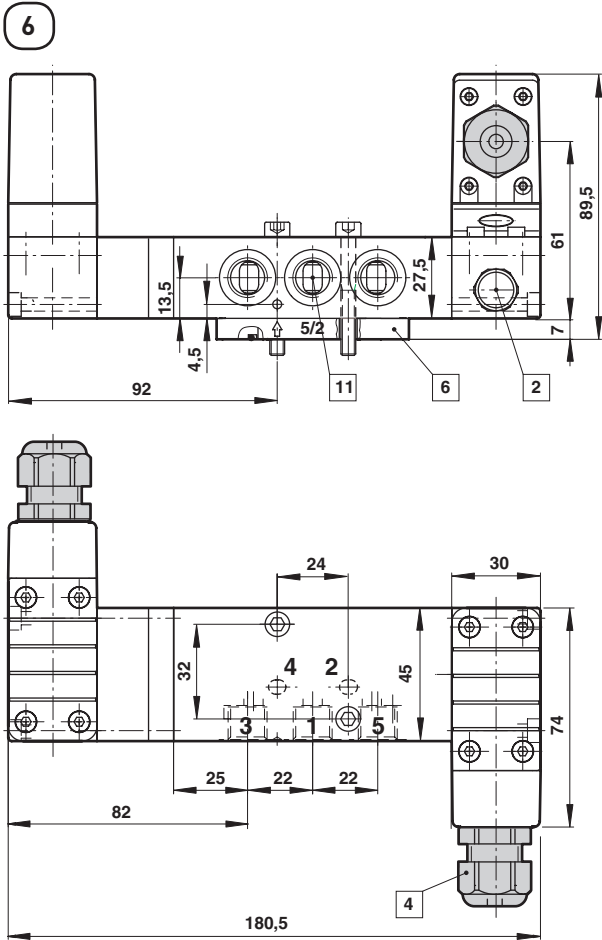


- 2 External control pressure connection G1/8 or 1/8 NPT
- 3 Port G1/4 or 1/4 NPT
- 4 Electrical connection 005
- 6 NAMUR connection plate 3/2 or 5/2 way function
- 9 Position of gasket internal pilot air
- 10 Position of gasket external pilot air

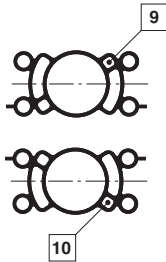
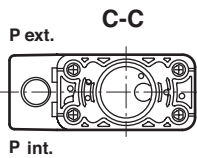
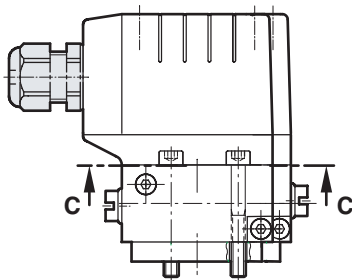
Electrical connection

005



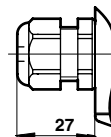


- 1 Solenoid optional turnable
- 2 External control pressure connection G1/8 or 1/8 NPT
- 3 Port G1/2 or 1/2 NPT
- 4 Electrical connection 005
- 6 NAMUR connection plate 3/2 or 5/2 way function
- 9 Position of gasket internal pilot air
- 10 Position of gasket external pilot air
- 11 Port G1/4 or 1/4 NPT

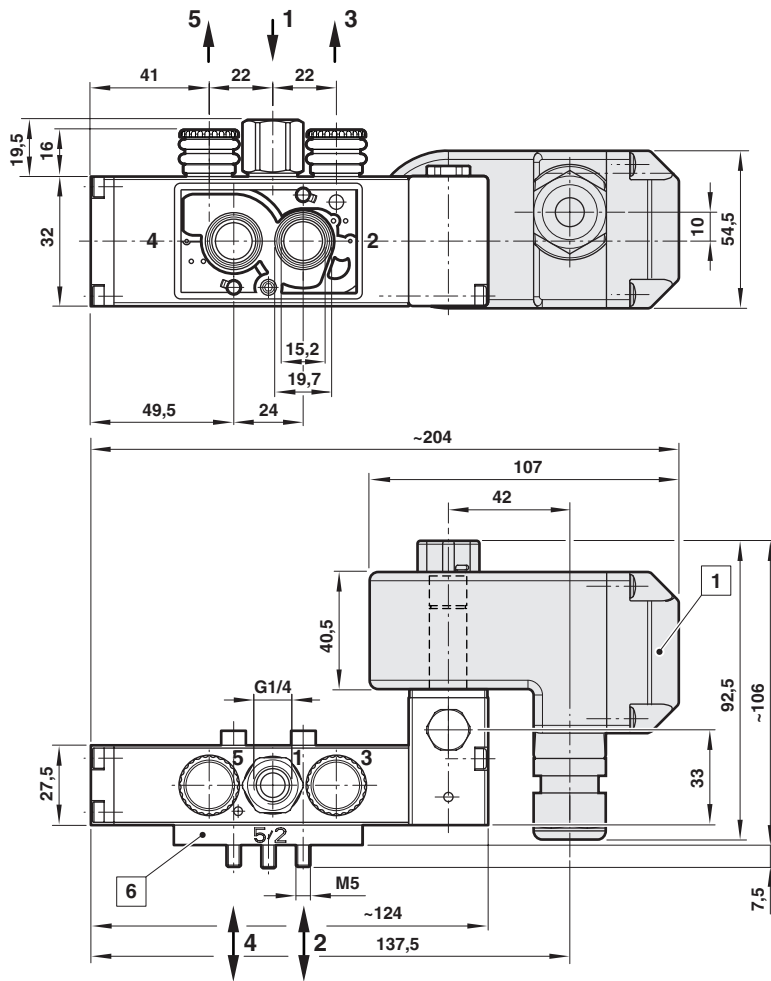


Electrical connection

005

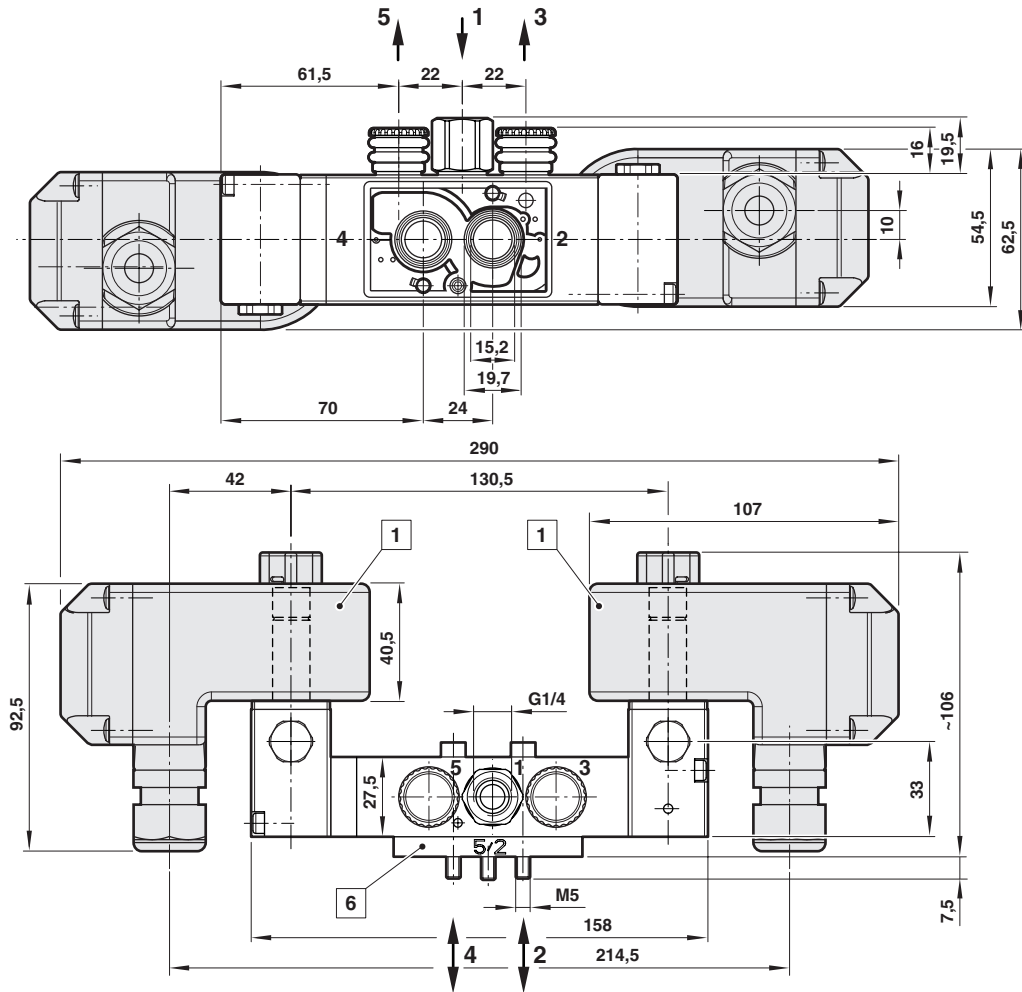


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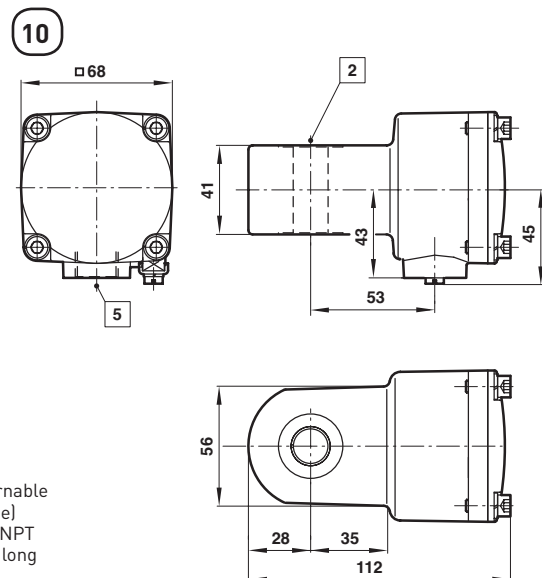
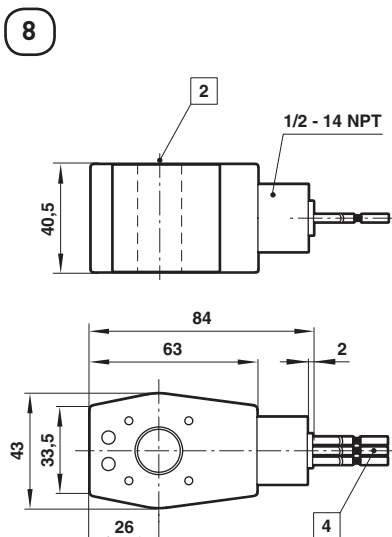
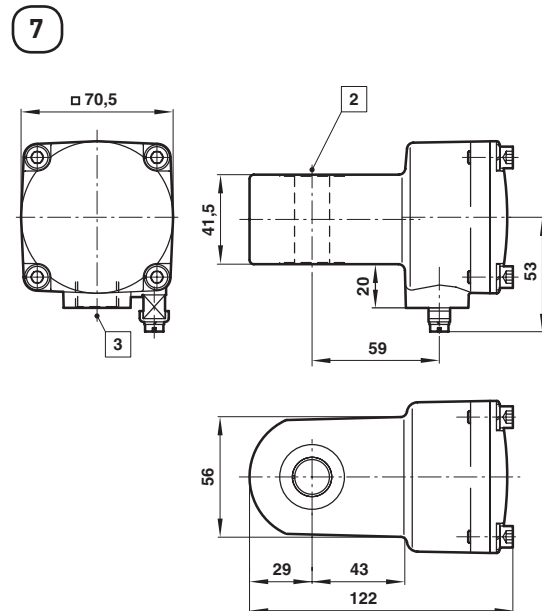
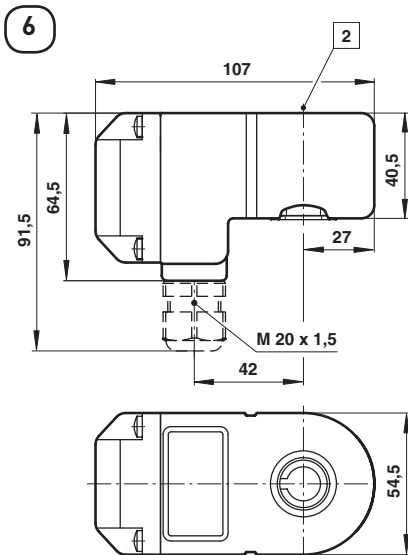
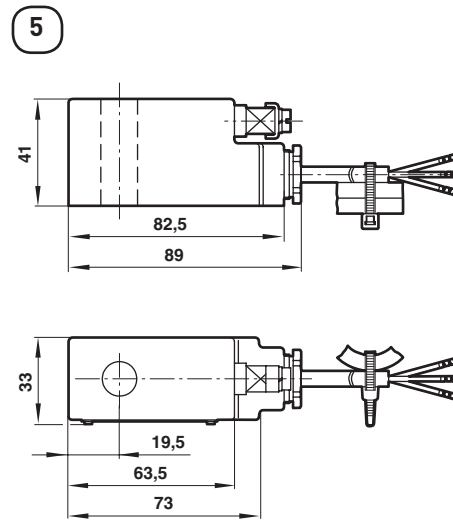
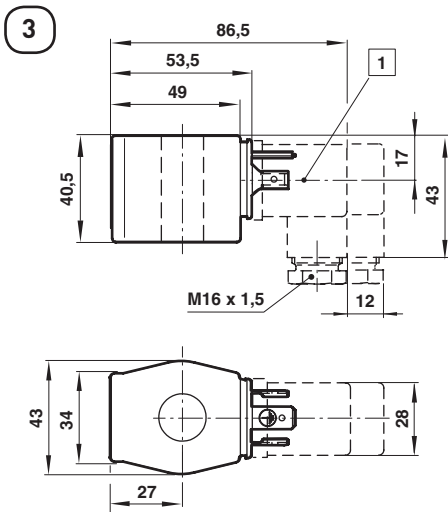


- 1 Solenoid turnable
- 6 NAMUR connection plate 3/2 or 5/2 way function

9



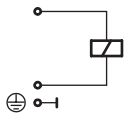
- 1 Solenoid turnable
- 6 NAMUR connection plate 3/2 or 5/2 way function

Dimensions
Solenoid operators


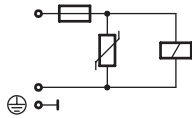
- 1 Connector 4 x 90° turnable
- 2 Ø 13 (with spacer tube)
- 3 M20 x 1,5 or 1/2 - 14 NPT
- 4 Flying leads 450 mm long
- 5 M20 x 1,5

Circuit diagrams

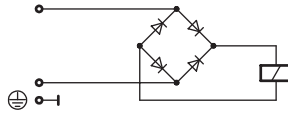
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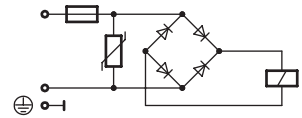
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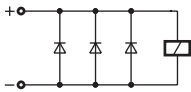
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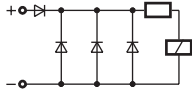
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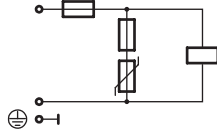
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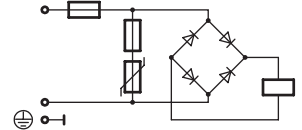
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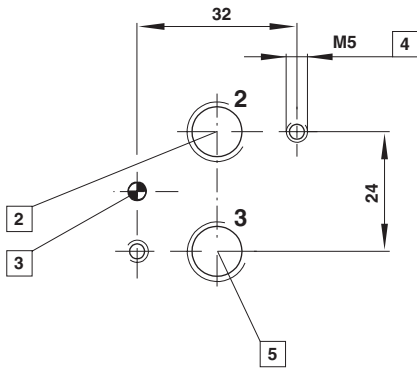
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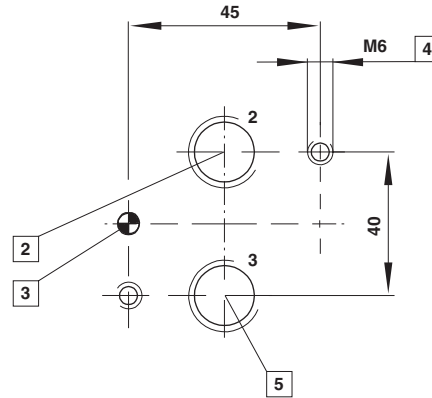
21



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



Port size G1/2



2 Port 2 (A)

3 Hole for coding stud

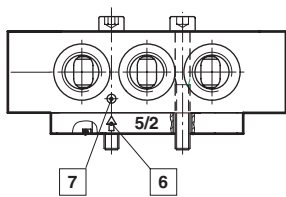
4 M5 & M6 (10 deep)

5 Port 3 (R)

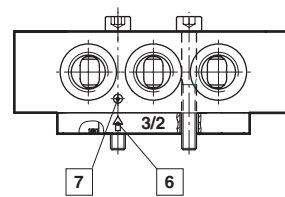
NAMUR quick exhaust module for a better kv-value by exhaust see data sheet 5.4.820

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

5/2 way function (original mode of supply)



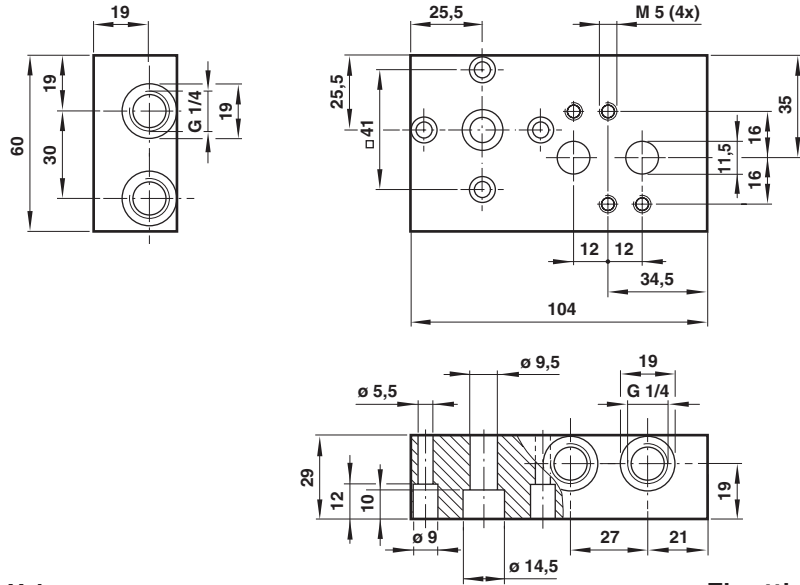
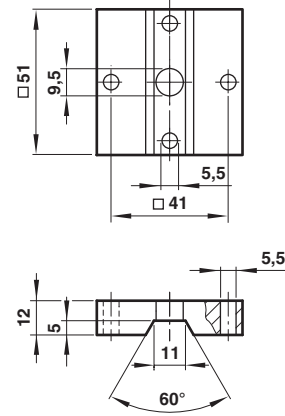
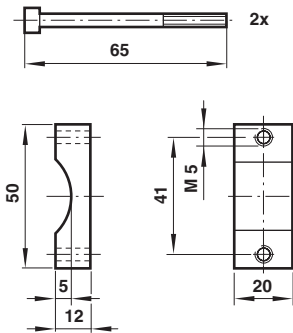
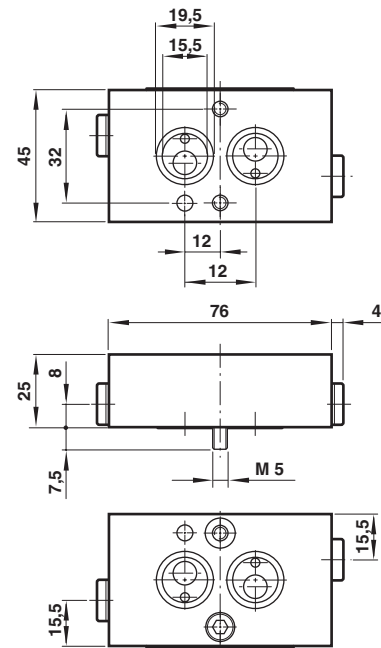
3/2 way function



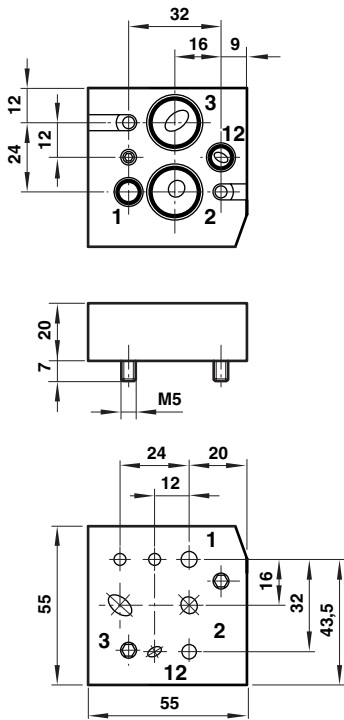
3/2 resp. 5/2 way function according to version by swapping or turning enclosed adaptor plates. Make sure Marker and Arrow do match as shown on above drawing.

6 Arrow

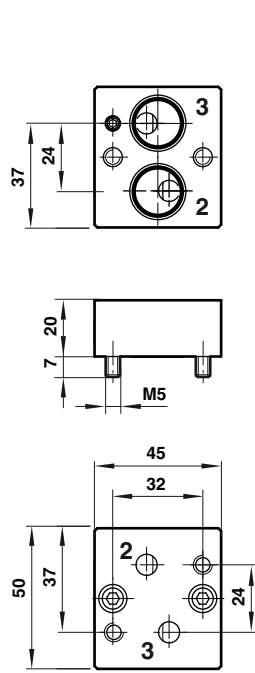
7 Marker

Single connection plate
Model: 0612790

NAMUR slot (in connection with 0612790 only)
Model: 0612791

Yoke
Model: 0540593

Throttle control plate
Model: 4040239


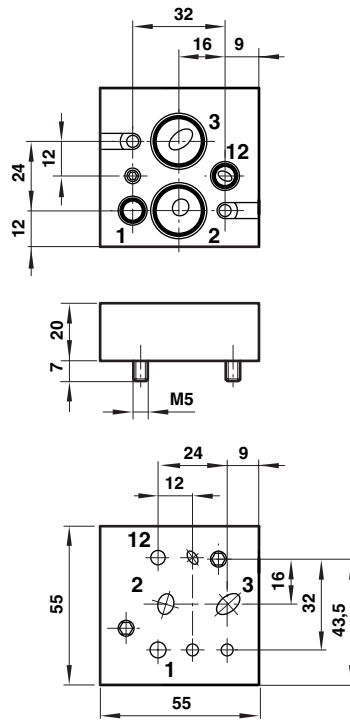
90° Mounting plate
Model: 0613453



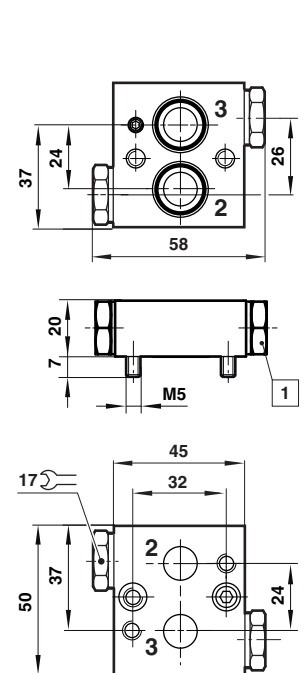
180° Mounting plate
Model: 0612631



270° Mounting plate
Model: 0613556

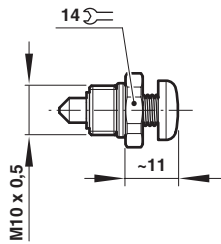


Distance plate
Model: 0540109

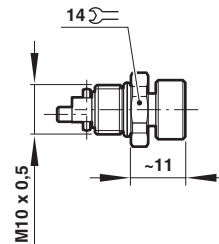


1 G1/4 ports for pressure switches

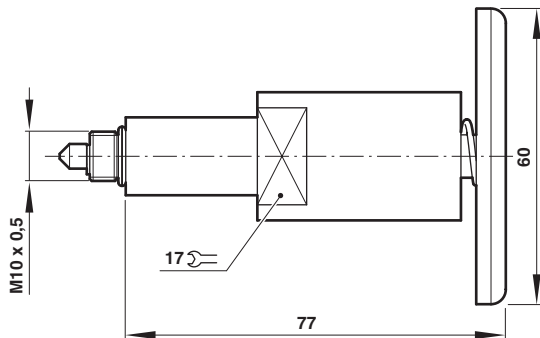
Manual override
Model: 0553886



Model: 0553887

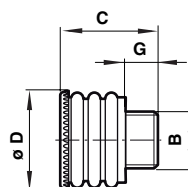


Model: 0613379

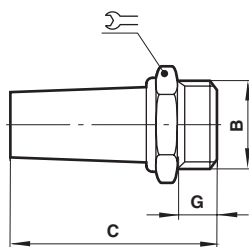


Silencer (plastic)
Model: M/S2, M/S4, C/S2 & C/S4

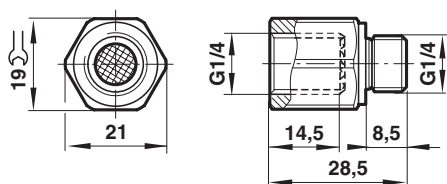
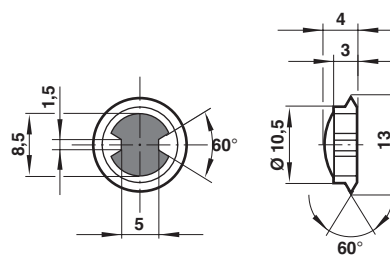

B	G	C	Ø D	Weight (g)	Model
G1/4	7	35,5	15,5	2,9	M/S2
1/4 NPT	7	35,5	15,5	2,9	C/S2
G1/2	12	67	23	11,5	M/S4
1/2 NPT	12	67	23	11,5	C/S4

Exhaust guard
Model: 0613422 & 0613423


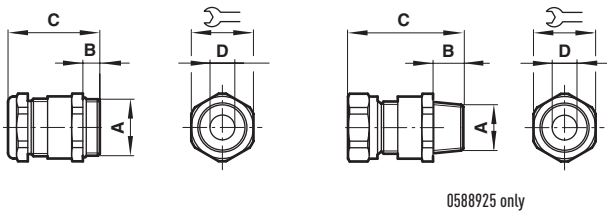
B	Suitable for	G	C	Ø D	Weight (g)	Model
1/4"	G1/4, 1/4 NPT	10	26,5	21	5	0613422
1/2"	G1/2, 1/2 NPT	12	33,5	29	11	0613423


Silencer (stainless steel)
Model: 0014613, 0014813, 0613678 & 0613679


B	C	G		Weight (g)	Model
G 1/4	36	8	16	23	0014613
1/4 NPT	36	8	16	67	0613678
G 1/2	49	12	24	81	0014813
1/2 NPT	49	12	24	235	0613679

Adaptor complete
Model: 0613487

Inlet filter
Model: 0681173


Thread pitch diameter max. 11,85 mm

Cable gland


A	B	C	∅ 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
1/2-14 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

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**«.

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 pneumatic 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.

Functional safety according to DIN EN 61508 SIL:

Suitable for certain applications can only be evaluated through examination of each safety-related overall system with regard to the requirements of IEC 61508 / 61511.