

3/2-, 5/2- and 5/3 Directional control valves
 Actuation: electromagnetic
 Indirectly controlled soft seal spool valves
 Port size: G 1/4, 1/4 NPT

For single and double operated actuators

Crossover-free switching, switch-over function
 guaranteed even with small cross section air supply

Rest position in the event of power failure provided
 (monostable design)

Manual override with detent

Compact design

Simple design of soft seal spool system

Easily interchangeable solenoid

The solenoid valves are applicable in the protection
 class EEx m and EEx ia, for zones 1, 2 (gases)
 ATEX cat.II 2 G, EEx nA, for zones 2 (gases),
 22 (dust) ATEX cat.II 3 GD



Technical data

Medium:

Filtered, non-lubricated and dry compressed air *1)

Operation:

Solenoid, indirectly controlled

Flow direction:

Fixed

Mounting position:

Optional

Nominal diameter:

6 mm

Port size:

G 1/4, 1/4 NPT

Electrical connection:

See solenoid table

Operating pressure:

Max. 8 bar

Temperatures:

Valve: -25* to +65°C

Solenoid: see solenoid table

* Please consult our technical service for use below +2°C.

Materials:

Housing: Aluminium anodized

Pilot flange: Plastic (PBT)

Seals: NBR (Perbunan)

*1) Oil recommendation: Shell Hydrol DO 32, ESSO Febis K 32
 (as of July 1992) or comparable oils with DVI-values < 8 (DIN 53521)
 and ISO viscosity class 32-46 (DIN 51519).

Ordering information

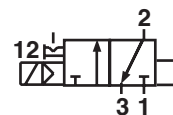
5/2 directional control valve, port size G 1/4,
 solenoid 24 V DC, with connector
 DIN EN 175301-803 form A,
 Protection class IP 65

Type: 9710032.3034.024.00
connector: 0570275

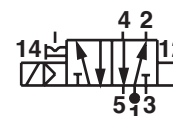
Connector

See data sheet N/UK 7.7.002

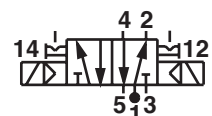
3/2



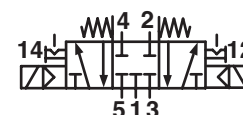
5/2







5/2



5/3









3/2, 5/2 and 5/3 directional valves, standard design

Symbol	Type *1)	Port size	Function	Actuation	Operating pressure (bar)	Flow (l/min)	Weight (kg)	Dimensions No.
	9713032	G 1/4	3/2 NC	Solenoid Air/Spring	2 ... 8	750	0,25	1
	9713042	1/4 NPT	3/2 NC	Solenoid Air/Spring	2 ... 8	750	0,25	1
	9710032	G 1/4	5/2 NC	Solenoid Air/Spring	2 ... 8	750	0,25	2
	9710042	1/4 NPT	5/2 NC	Solenoid Air/Spring	2 ... 8	750	0,25	2
	9711032	G 1/4	5/2 NC	Solenoid/Solenoid	2 ... 8	750	0,35	3
	9711042	1/4 NPT	5/2 NC	Solenoid/Solenoid	2 ... 8	750	0,35	3
	9712032	G 1/4	5/3 APB	Solenoid/Solenoid mid pos. APB	2 ... 8	500	0,40	4
	9712042	1/4 NPT	5/3 APB	Solenoid/Solenoid mid pos. APB	2 ... 8	500	0,40	4


*1) When ordering, please indicate solenoid, voltage and current type (frequency).
Valve function: APB = All Ports Blocked

Solenoid actuators

Type	Power consumption 24 V DC (W)	230 V AC (VA)	Rated current at 24 V DC (mA)	230 V AC (mA)	Ex Protection Categorie	Protection class	Temperature Ambient Fluid (°C)	Weight (kg)	Dimensional drawing No.	Circuit diagram No.
	3050	1,7	-	-	-	IP 65 (with connector) DIN EN 175301-803 Form B *6)	-40 ... +50	0,054	4	1
	3034	0,7	0,7 *2)	-	-	IP 65 (with connector) *6) DIN EN 175301-803 Form A	-40 ... +50	0,090	5	1
	3046	2	-	-	-	II3G II3D EEx nA II T5 IP65 T 95°C with connector	-15 ... +50	0,300	5	1
	3062 *3)	2,7	-	115	-	II2G EEx m II T5 Connector with 3 m cable	-20 ... +50	0,300	6	1
	3063 *3)	-	2,1	9	-	II2G EEx m II T5 Connector with 3 m cable	-20 ... +50	0,300	6	8
	3071	2,7	-	115	-	IP 66 Connection M12x1 DIN EN 60947-5-2 Anh. D	-10 ... +50	0,110	7	8

Standard voltages 24 V DC, 230 V AC. Other voltages on request. Design acc. to VDE 0580, EN 50014/50028. 100% duty cycle.

For intrinsically safe circuits, protection class EEx ia IIC T6/T4

Type	Nom. resistance R _n coil (Δ)	Required switching current (mA)	Resistance R _w 50 coil	Required voltage at terminal R _w 50	Ambient temperature (°C)	Fluid temperature max. (°C)	Weight (kg)	Dimensional drawing No.	Circuit diagram No.	
	3039 *4)	275	37	330	12,3	T6 -40 ... +80 T4 -40 ... +80	T6 +70 T4 +85	0,83	8	13

When selecting an intrinsically safe power supply, the permissible maximum values according to the Certificate of Conformity should be taken in account. On the other hand, the low effective inductivity and capacity can be ignored.

*1) Valves can only be operated with DC solenoids

*2) Valves can be operated with DC only. For 230V AC application please use 206V DC coil together with rectifier plug 0663303

*3) Certificate of Conformity PTB No. PTB 03 ATEX 2015X

*4) Certificate of Conformity PTB 03 Atex 2134 PTP 03 IEC 2166, CSA - Certificate No. LR 51090-4, FM approved.

Required connector acc. to DIN EN 17031-801 form A or ISO 4400. Installation acc. to requirements of FM and CSA.

*6) Connector is not indicated in delivery; required connector for DC: type 0680003 Form B, type 0570275 Form A.

Manifold system
Manifold plate

Valve ports	V61 Type	Weight (kg)
2	2221102 0000 000 00	0,28
3	2221103 0000 000 00	0,45
4	2221104 0000 000 00	0,72
6	2221106 0000 000 00	1,02
8	2221108 0000 000 00	1,32
10	2221110 0000 000 00	1,62
12	2221112 0000 000 00	1,92
14	2221114 0000 000 00	2,22
16	2221116 0000 000 00	2,52
18	2221118 0000 000 00	2,82
20	2221120 0000 000 00	3,12

Note: Only solenoid systems with 22 mm possible

Accessories

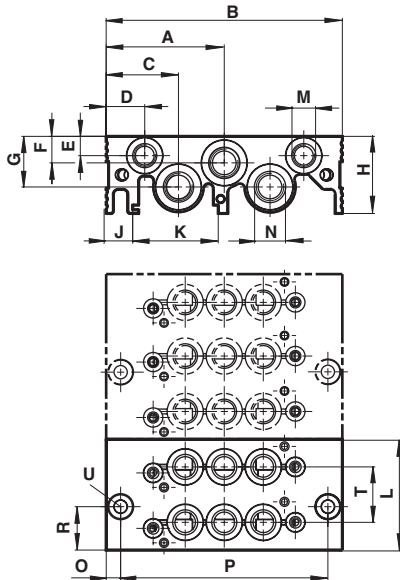
Description	Type
Pressure shut-off part *1)	0100569 0000 000 00
Blanking plate complete *2)	0100563 0000 000 00

*1) Necessary for using 2 different pressures
*2) For blocking of unused valve station

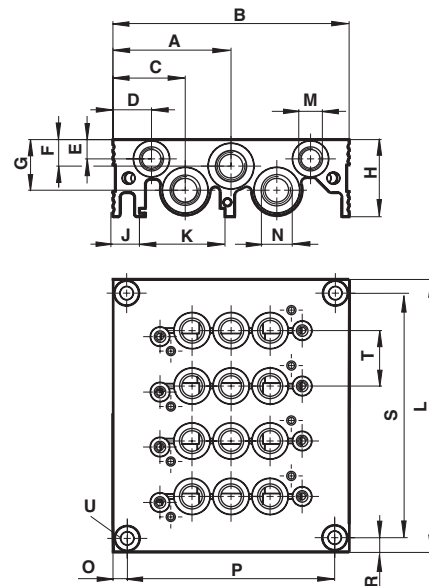
Seals and mounting screws supplied.

General dimensions

Manifold plate 2 and 3 stations





Manifold plate 4 to 20 stations



Dimension table

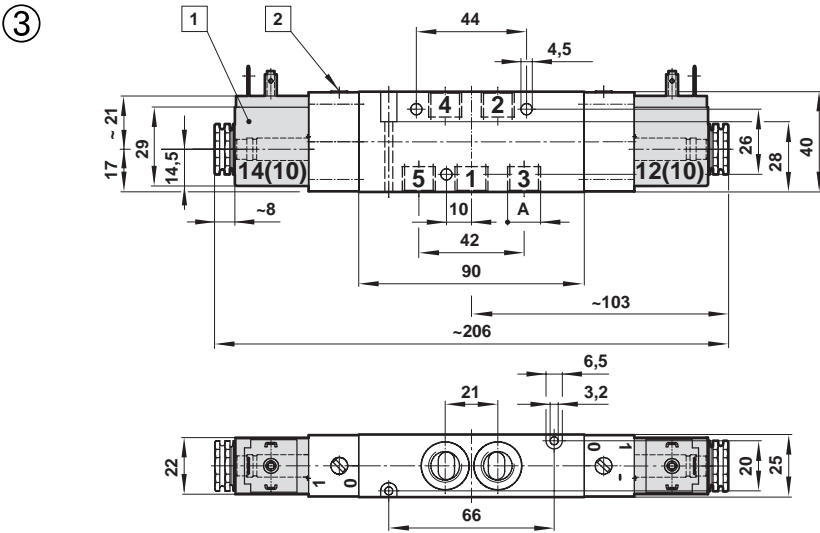
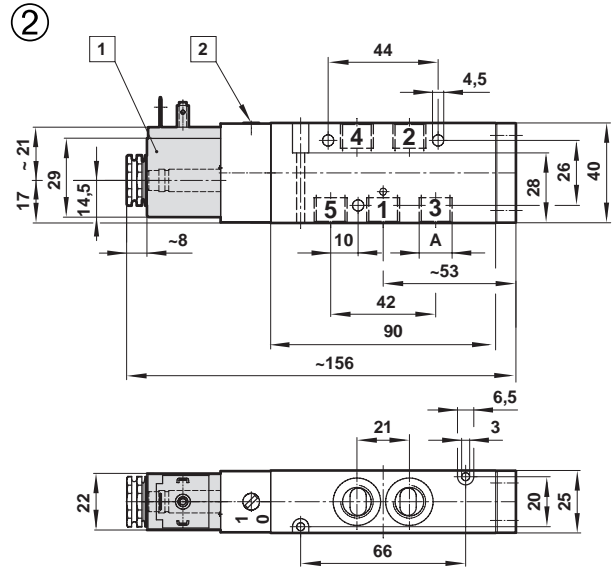
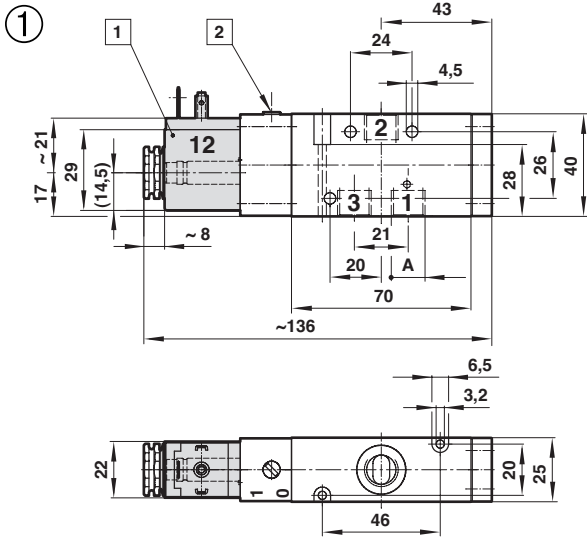
Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
2er	52	104	26	9	8	13	20	33	10	35,5	52	G 1/8	G 3/8	40	24	26	-	26	for M5
3er	52	104	26	9	8	13	20	33	10	35,5	78	G 1/8	G 3/8	40	24	52	-	26	for M5
4-20er	52	104	26	9	8	13	20	33	10	35,5	(x-26)+23	G 1/8	G 3/8	40	24	6,5	(x-26)+10	26	for M5

Accessories

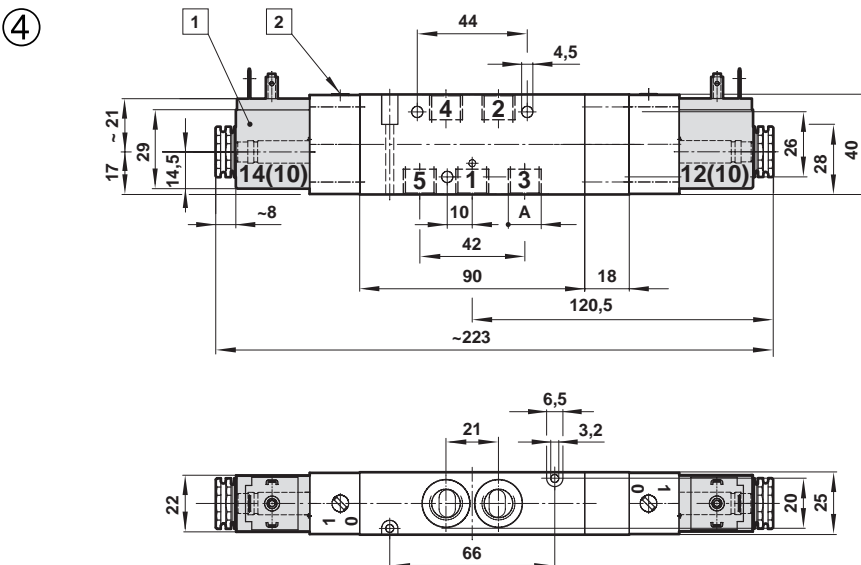
Silencer	Connectors
	
0014600 (G1/4) *1)	0570275 form A
	0663303 (with rectifier)
	0680003 form B

*1) For indoors use

Basic dimensions for valves

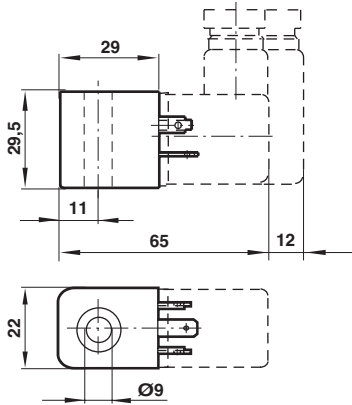


- 1 Solenoid 90° turnable
- 2 Manual override

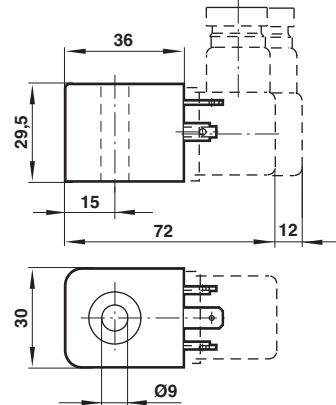


Basic dimensions for solenoid operators

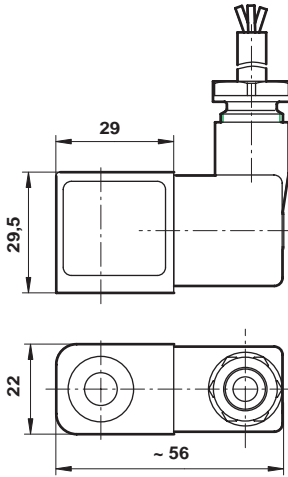
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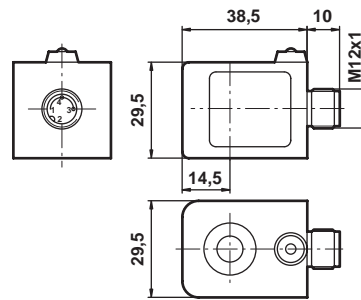
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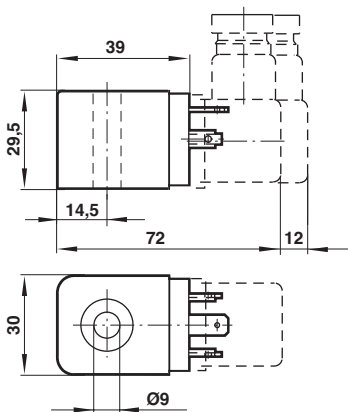
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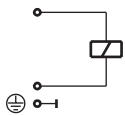


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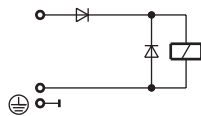


Circuit diagrams

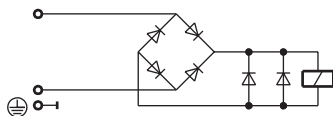
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Warning

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 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.