

- > Port size: G1/4 & G1/2
- > Compact design
- > Easily interchangeable solenoid
- > Standard manual override
- > All valves available with Ex protected coils (ATEX or other international approvals)
- > Maintenance-free



Technical features

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

Indirect solenoid operated
T-spool valves

Operating pressure:

See tables below

Port size:

G1/4, G1/2

Orifice:

6 and 12 mm

Electrical connection:

Connector acc.to
DIN EN 175301-803,
Form A and B

Flow direction:

Fixed

Mounting:

Optional, preferably with solenoid on top

Ambient/Media temperature:

-10 ... +60°C (+14° ... +140°F)
Depending on solenoid system
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

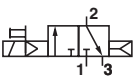
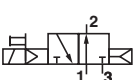
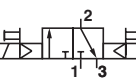
Materials:

Housing: Aluminium anodized
Pilot flange: Plastic (POM)
Seals: NBR

Other versions available on request

Low power 3 Watt
Other voltages
Additional international approvals
Pilot operated valves
NPT threaded
Temperature range up to -20°C (-4°F)

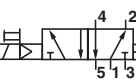
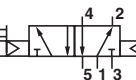
Technical data – 3/2 way

Symbol	Port size	Function	Operation/return	Flow (l/min)	Operating pressure (bar)	Switching time (ms)	Weight without Solenoid (kg)	Dimension No.	Model
	G1/4	NC	Solenoid / Air spring	1200	1 ... 10	20	0,4	1	8020750... *1)
	G1/2	NC	Solenoid/Air spring	3000	1,5 ... 10	25	0,7	1	8020850... *1)
	G1/4	NO	Solenoid/Air spring	1200	1 ... 10	20	0,4	1	8022750... *1)
	G1/2	NO	Solenoid/Air spring	3000	1,5 ... 10	25	0,7	1	8022850... *1)
	G1/4	NC	Solenoid/Solenoid	1200	1 ... 10	15	0,77	2	8021750... *2)
	G1/2	NC	Solenoid/Solenoid	3000	1 ... 10	20	0,99	2	8021950... *2)

*1) Exhaust port can not be throttled.

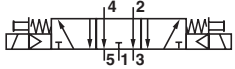
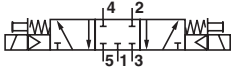
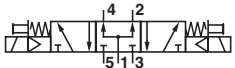
*2) Exhaust port can be throttled.

Technical data – 5/2 way





Symbol	Port size	Function	Operation/return	Flow (l/min)	Operating pressure (bar)	Switching time (ms)	Weight without Solenoid (kg)	Dimension No.	Model
	G1/4		Solenoid/Air spring	1200	1 ... 10	20	0,55	3	2636000... *3)
	G1/2		Solenoid/Air spring	3000	2 ... 10	25	0,83	3	2637050... *3)
	G1/4		Solenoid/Solenoid	1200	1 ... 10	15	0,9	4	2636200...
	G1/2		Solenoid/Solenoid	3000	2 ... 10	20	1,3	4	2637250...

*3) Valve can not be throttled at connection R.

Technical data – 5/3 way

Symbol	Port size	Function	Operation/return	Flow (l/min)	Operating pressure (bar)	Switching time (ms)	Weight without Solenoid (kg)	Dimension No.	Model
	G1/4	COE	Solenoid/Solenoid	900	3 ... 10	30	1	5	2636300
	G1/2	COE	Solenoid/Solenoid	2200	2,5 ... 10	55	1,6	5	2637300
	G1/4	APB	Solenoid/Solenoid	900	3 ... 10	30	1	5	2636404
	G1/2	APB	Solenoid/Solenoid	2200	2,5 ... 10	55	1,6	5	2637400
	G1/4	COP	Solenoid/Solenoid	900	3 ... 10	25	1	5	2636500

Solenoids group, standard voltages

	Power consumption		Rated current		Protection class IP/NEMA	Ex-Protection (ATEX-Category)	Temperature Ambient/Media (°C)	Electrical connection	Drawing No.	Circuit diagram No.	Model
	24 V DC (W)	230 V AC (VA)	24 V DC (mA)	230 V AC (mA)							
	8,0	—	331	—	IP 65 (with connector)	—	-25 ... +60 Media: +80 max	Connector DIN EN 175301-803, form A *1)	1	1	0246
	8,0	—	331	—	IP 65 (with connector)	II 3G Ex nA IIC T4 Gc II 3D Ex tc IIIB T110°C Dc	-20 ... +60	Special connector DIN EN 175301-803 Form A	1	1	3216
	-	9,2	-	40	IP 65 (with connector)	II 3G Ex nA IIC T4 Gc II 3D Ex tc IIIB T120°C Dc	-20 ... +60	Special connector DIN EN 175301-803 Form A	2	6	3218
	6,9	-	289	-	IP 66	II 2 G Ex mb IIC T4 Gb II 2 D Ex mb IIIC T110°C Db	-20 ... +60	Cable length 3 m	5	4	0292
	-	8,7	-	34	IP 66	II 2 G Ex mb IIC T4 Gb II 2 D Ex mb IIIC T110°C Db	-20 ... +60	Cable length 3 m	5	7	0293
	5,5	—	228	—	4x	Cl. I, Div. 1, Gr. A - D Cl. II/III, Div. 1, Gr. E - G T3C (160°C)	-20 ... +60	Flying leads length 460 mm	8	1	3722
	—	5,9	—	26	4x	Cl. I, Div. 1, Gr. A - D Cl. II/III, Div. 1, Gr. E - G T3C (160°C)	-20 ... +60	Flying leads length 460 mm	8	5	3723



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.

*1) Connector/cable gland is not scope of delivery, see table »Accessories«

Approvals

Model	Approvals ATEX	IECEX	FM	Datasheet
029x	KEMA 02 ATEX 1347 X	IECEX DEK 13.0014X	—	en 7.1.505
321x, 381x	EC-Declaration of Conformity	—	—	en 7.1.570
372x, 382x	—	—	CSA-LR 57643-6	en 7.1.575

Solenoids group, standard voltages

	Power consumption		Rated current		Protection class IP/NEMA	Ex-Protection (ATEX-Category)	Temperature Ambient/Media (°C)	Electrical connection	Drawing No.	Circuit diagram No.	Model
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)							
	8,9	—	369	—	IP 66 (with cable gland)	II 2G Ex eb mb IIC T4/T5 Gb II 2D Ex tb IIIC T130°C Db	T4: -40 ... +65 T5: -40 ... +55 -40 ... +65	M20 x 1,5 *1)	6	4	4220
	—	10,0	—	43	IP 66 (with cable gland)	II 2G Ex eb mb IIC T4/T5 Gb II 2D Ex tb IIIC T130°C Db	T4: -40 ... +65 T5: -40 ... +55 -40 ... +65	M20 x 1,5 *1)	6	7	4221
	8,9	—	369	—	IP 66 (with cable gland)	II 2 G Ex d mb IIC T4/T6 Gb II 2 G Ex e mb IIC T4/T6 Gb II 2 D Ex tb IIIC T130°C Db	T4: -40 ... +70 T6: -40 ... +40 -40 ... +70	1/2 NPT *1)	7	20	4620
	—	10,0	—	43	IP 66 (with cable gland)	II 2 G Ex d mb IIC T4/T6 Gb II 2 G Ex e mb IIC T4/T6 Gb II 2 D Ex tb IIIC T130°C Db	T4: -40 ... +70 T6: -40 ... +40 -40 ... +70	1/2 NPT *1)	7	21	4621
	8,9	—	369	—	IP 66 (with cable gland)	II 2 G Ex d mb IIC T4/T6 Gb II 2 G Ex e mb IIC T4/T6 Gb II 2 D Ex tb IIIC T130°C Db	T4: -40 ... +70 T6: -40 ... +40 -40 ... +70	M20 x 1,5 *1)	7	20	4622
	—	10,0	—	43	IP 66 (with cable gland)	II 2 G Ex d mb IIC T4/T6 Gb II 2 G Ex e mb IIC T4/T6 Gb II 2 D Ex tb IIIC T130°C Db	T4: -40 ... +70 T6: -40 ... +40 -40 ... +70	M20 x 1,5 *1)	7	21	4623

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.

*1) 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 protection is used, the solenoid will have protection class Ex e mb.

Approvals

Model	Approvals ATEX	IECEX	FM	Datasheet
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

Partnumbers for international approval

Land/Approval	Coil/Code	321x	372x	42xx	46xx
Europa/ATEX	Standard	x	—	x	x
International/IECEX	Standard	x	—	x	x
China/NEPSI	-01	—	—	x	x
Brasilien/INMETRO	-02	—	—	x	x
Korea/KOSHA (only gas approval)	-03	—	—	x	x
Russland, Kasachstan & Weißrussland/TR-CU 012	-04	—	—	x	x
Indien/CCOE	Standard	—	—	x	x
Taiwan/ITRI	Standard	—	—	x	x
USA/FM	Standard	—	x	—	—
Kanada/CSA	Standard	—	x	—	—

Example: 0000000422002400-04

(Coil: 4220; Voltage: 24V DC; Approval: TR-CU 012)

For solenoid	Ambient temperatur limitation solenoid 42xx	0589735 & 0589736 *2)	0589737	0589739 *2)
422x/427x	T4 & Dust Ex: -35°C +65°C T5: -35°C +55°C	T4 & Dust Ex: -40°C...+62°C T5: -40°C +55°C	T4 & Dust Ex: -40...+65°C T5: -40...+55°C	

*2) Tested for the lower level of mechanical risk (4 joule), an additional protection against impacts might be needed.

Accessories

Electrical connection

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

Page 8

For solenoid	Thread	Cable Ø (mm)	Material	Protection class (ATEX)	Ambient temperatur limitation*1)	Model
42xx	M20 x 1,5	7,0 ... 12,0	Plastic	II 2G Ex e / II 2D Ex t	See table	0589735
42xx	M20 x 1,5	10,0 ... 14,0	Plastic	II 2G Ex e / II 2D Ex t	See table	0589736
42xx	M20 x 1,5	6,0 ... 12,0	Plastic	II 2G Ex e / II 2D Ex t	See table	0589737
42xx	M20 x 1,5	5,0 ... 10,0	Plastic	II 2G Ex e / II 2D Ex t	See table	0589739
46xx	M20 x 1,5	5,0 ... 8,0	Nickel plated brass	II 2G Ex e / II 2D Ex t	-	0588819
46xx	M20 x 1,5	10,0 ... 14,0	Nickel plated brass	II 2G Ex d / II 2D Ex t	-	0588851
46xx	1/2 NPT	7,5 ... 11,9	Nickel plated brass	II 2G Ex d / II 2D Ex t	-	0588925
46xx, 48xx	M20 x 1,5	9,0 ... 13,0	Stainless steel 1.4571	II 2G Ex e / II 2D Ex t	-	0589385
46xx, 48xx	M20 x 1,5	7,0 ... 12,0	Stainless steel 1.4404	II 2G Ex d / II 2D Ex t	-	0589395
46xx, 48xx	M20 x 1,5	10,0 ... 14,0	Stainless steel 1.4404	II 2G Ex d / II 2D Ex t	-	0589387

*1) The limitation of the temperature range to the mentioned range is due to the self-heating of the solenoid.

Silencer



Connector



0014600 (G1/4) *2)

0663303 (with rectifier)

0014800 (G1/2) *2)

0570275

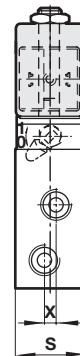
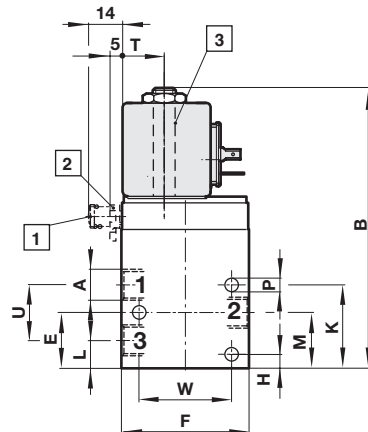
*2) For indoors use

Dimensions Valves

Dimensions in mm
Projection/First angle



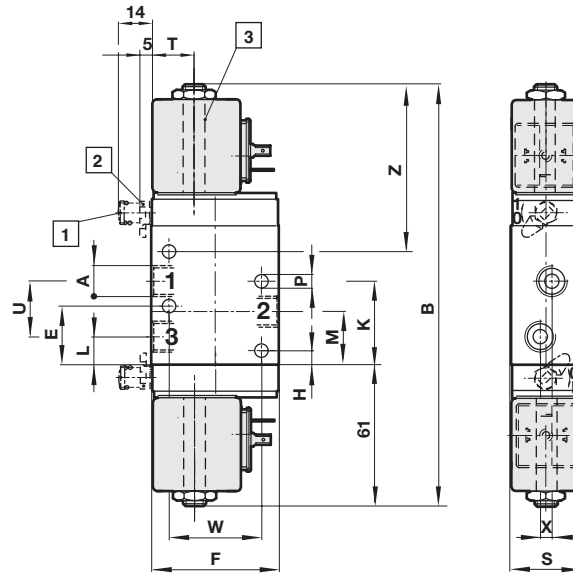
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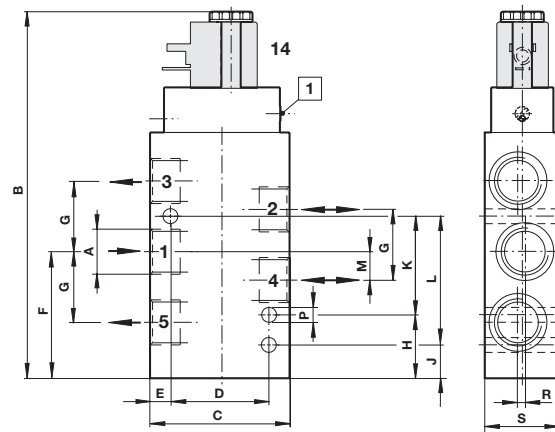
- 1 Manual override without detent
- 2 Manual override with detent
- 3 Solenoid 4 x 90° turnable

A	B	E	F	H	K	L	M	ø P	S	T	U	W	X	Model
G1/4	120	24,5	55	7,5	34,5	11	23	5,5	30	18,5	24	41	5	8020750
G1/4	120	24,5	55	7,5	34,5	11	23	5,5	30	18,5	24	41	5	8022750
G1/2	147	77,5	65	31,5	-	29	50	7	35	23,5	33	46	-	8020850
G1/2	147	77,5	65	31,5	-	29	50	7	35	23,5	33	46	-	8022850

2

 Dimensions in mm
 Projection/First angle


A	B	E	F	H	K	L	M	øP	S	T	U	W	X	Z	Model
G1/4	196	38,5	55	21,5	48,5	25	37	5,5	30	18,5	24	41	5	-	8021750
G1/2	205	-	65	26,5	-	25	44	7	35	23,5	33	46	2,5	69,5	8021950

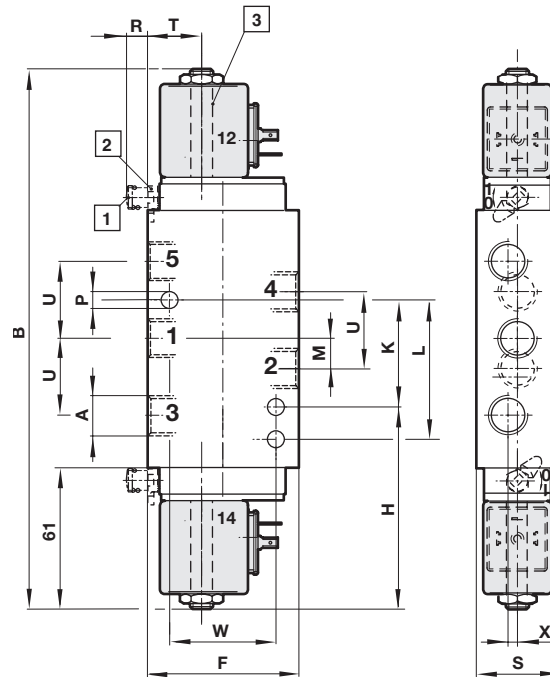
3


- 1** Manual override without detent
- 2** Manual override with detent
- 3** Solenoid 4 x 90° turnable

A	B	E	F	H	K	L	M	øP	R	S	T	U	W	X	Model
G1/4	144	35	55	5	67	-	12	7	14	30	18,5	24	40	5	2636000...
G1/2	175	59,5	65	30	46	60	13	7	7,5	35	24,5	33	46	3,2	2637050...

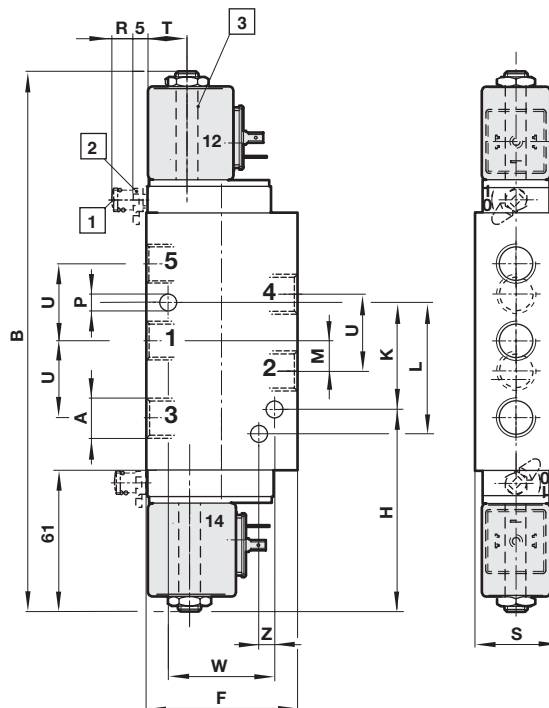
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Dimensions in mm
Projection/First angle



A	B	F	H	K	L	M	øP	R	S	T	U	W	X	Model
G1/4	224	55	82	67	-	12	7	14	30	18,5	24	40	5	2636200...
G1/2	231	65	86	46	60	13	7	7,5	35	24,5	33	46	3,2	2637250...

5

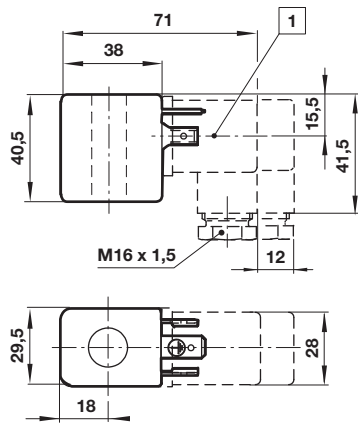
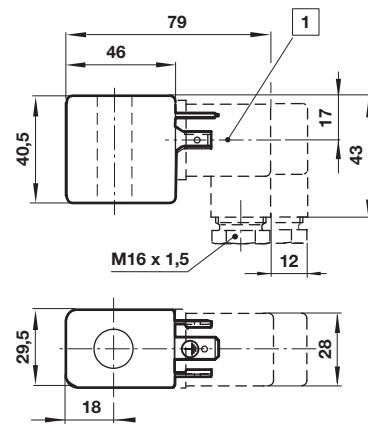
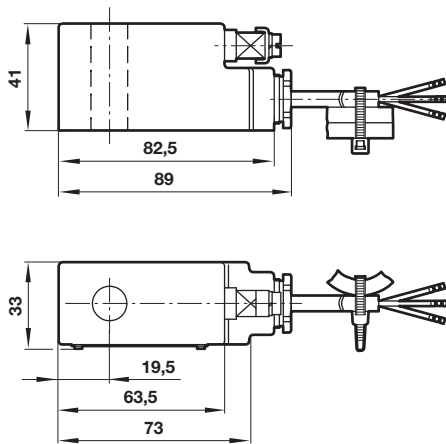
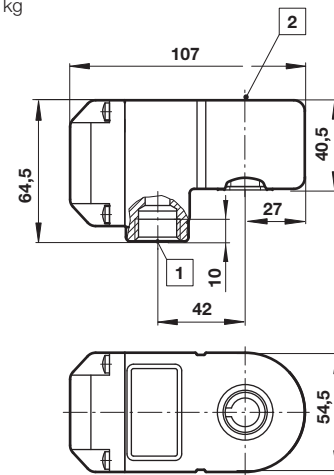
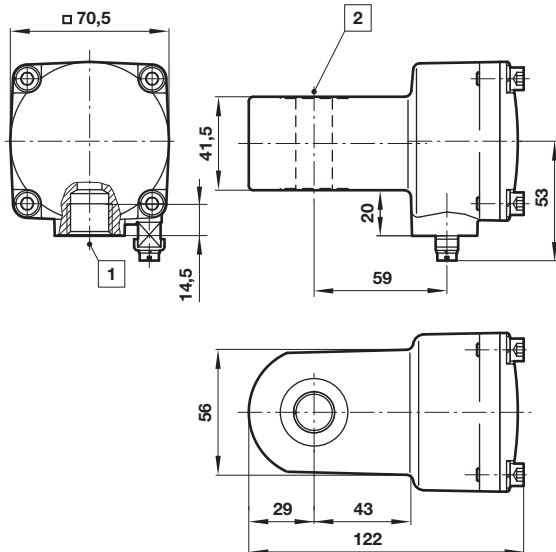
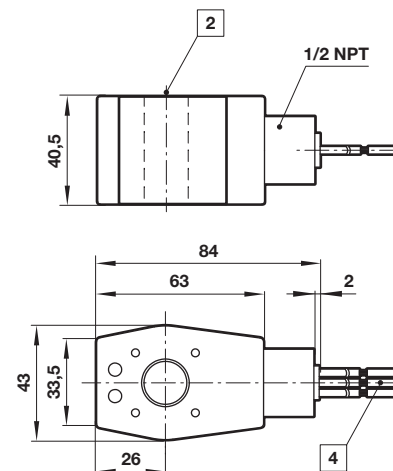


- 1 Manual override without detent
- 2 Manual override with detent
- 3 Solenoid 4 x 90° turnable

A	B	F	H	K	L	M	øP	R	S	T	U	W	X	Z	Model
G1/4	245	55	92,5	67	-	12	7	14	30	18,5	24	40	5	-	2636300...
															2636404...
															2636500...
G1/2	296	70	106	50	60	16,5	7	18,5	40	18,5	33	50	-	5	2637300...
															2637400...

Drawings - Solenoid

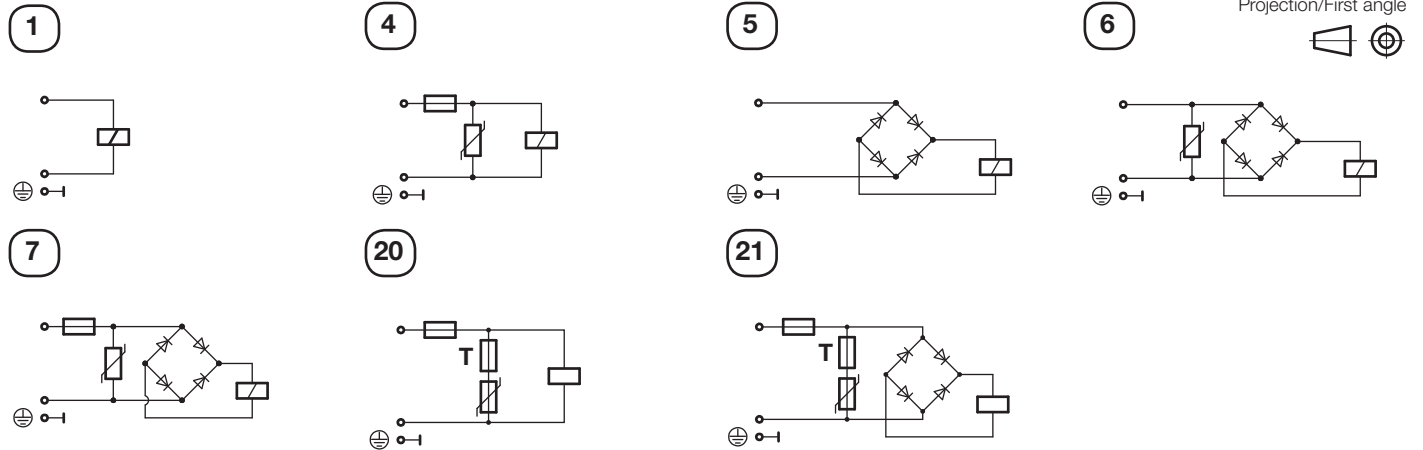
 Dimensions in mm
 Projection/First angle

1 Weight: 0,15 kg

2 Weight: 0,16 kg

5 Weight: 0,05 kg

6 Weight: 0,4 kg

7 Weight: 0,8 kg

8 Weight: 0,5 kg


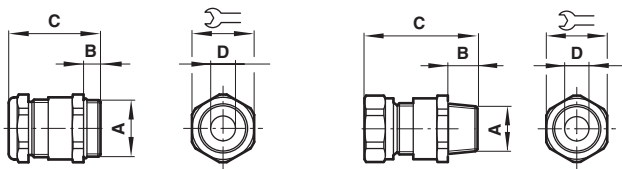
- 1** Connector can be indexed by 4x90°
- 2** \varnothing 16 or 13 (with spacer tube)
- 3** M20 x 1,5 or 1/2 NPT
- 4** Flying leads AWG18 (460 mm long)

Circuit diagrams


Dimensions in mm
Projection/First angle



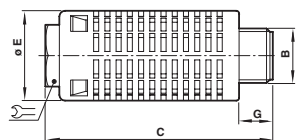
Cable gland



0588925 only

A	B	C	ø D		Model
M20 x 1,5	10	40	7,0 ... 12,0	24	0589735
M20 x 1,5	10	43	10,0 ... 14,0	27	0589736
M20 x 1,5	10	40	6,0 ... 12,0	24	0589737
M20 x 1,5	10	39,5	5,0 ... 10,0	24	0589739
M20 x 1,5	9	36	5,0 ... 8,0	22	0588819
M20 x 1,5	12	37	9,0 ... 14,0	30	0588851
1/2 NPT	15	58	7,5 ... 11,9	24	0588925
M20 x 1,5	6,5	27,5	9,0 ... 13,0	22	0589385
M20 x 1,5	16	40	7,0 ... 12,0	24	0589395
M20 x 1,5	16	41	10,0 ... 14,0	24	0589387

Silencer



B	C	G	ø D	Model
G1/4	51	8	21	0014600
G1/2	72	10	30	0014800

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 IMI Precision Engineering, Norgren GmbH.

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.