

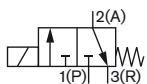
## Plunger valve 3/2 way direct-acting



- Direct-acting, compact small-format valve with diameter of up to DN 1.6
- Screwed coil system
- Banjo threaded connection for direct mounting on pneumatic valves
- Simple and quick push-in, flange, or manifold installation
- Service-friendly manual override

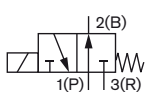
Valve 6012 is a direct-acting plunger valve. The stopper and plunger guide tube are welded together to enhance pressure resistance and leak-tightness. Various seal material combinations are available depending on the application. A Bürkert-specific flange design (SFB) enables space-saving arrangement of valves on a manifold. Push-in fittings can be selected for flexible hose connection. A banjo connection with banjo bolt is the ideal solution for easy direct mounting on a pneumatic drive. Optional manual actuation enables quick commissioning and optimal maintenance. In combination with a plug in accordance with DIN EN 17301-803 Form B or C, the valves satisfy protection class IP65.

### Circuit function C



3/2 way direct-acting solenoid valve, normally closed

### Circuit function D



3/2 way direct-acting solenoid valve, normally open

Technical data	
<b>Body material</b>	Brass, polyamide (PA), stainless steel 1.4305 Polyamide (PA)
<b>Seal material</b>	FKM / NBR
<b>Medium</b>	Neutral gases and liquids (e.g. compressed air, water, hydraulic oil, technical Vacuum) neutral gases (z.B. compressed air)
<b>Medium temperature</b>	Type 6012: -10 to +100 °C Type 6012, banjo version: -10 to +60 °C
<b>Ambient temperature</b>	max. +55 °C
<b>Viscosity</b>	Type 6012, banjo version: -10 to +40 °C max. 21 mm <sup>2</sup> /s
<b>Port connection</b>	Type 6012: M5, G 1/8, Flange Type 6012, banjo version: G 1/8, G 1/4 and tube fitting Ø 6 mm
<b>Operating voltages</b>	24 V DC 24 V / 50 Hz 110 / 230 V / 50 Hz
<b>Voltage tolerance</b>	± 10 %
<b>Duty cycle/single valve for block assembly on multiple manifold</b>	100 % continuous rating Intermittent operation 60 % (30 min) With 2 W coil 100 % (on request)
<b>Electrical connection</b>	<ul style="list-style-type: none"> <li>• Acc. to DIN EN 175301-803* Form C for cable plug Type 2516 (see ordering chart for accessories)</li> <li>• Acc. to DIN 43650 Form B (Industrial standard) for cable plug Type 2507 (see ordering chart for accessories)</li> <li>• Flying leads on request</li> </ul>
<b>Manual override</b>	Optional, as a standard feature (for Type 6012, banjo version)
<b>Installation</b>	As required, preferably with actuator upright
<b>Weight: Type 6012 / 6012P</b>	125 g (G 1/8) / 135 g
<b>Protection class</b>	IP65 with cable plug
<b>Thermic isolation class</b>	Polyamide class B Coil: Epoxy class H

<sup>1)</sup> Pressure data [bar]: Overpressure with respect to atmospheric pressure

\* Previously DIN 43650

## Response times

### Type 6012

Orifice [mm]	K <sub>v</sub> value water [m <sup>3</sup> /h]	Pressure range		Coil power	Power consumption		Response times	
		WWC [bar] <sup>1)</sup>	WWD [bar] <sup>1)</sup>		Inrush	Hold	Opening [ms]	Closing [ms]
1.2	0.045	0-10	0-10	4 W AC or 4 W DC	9 VA 4 W	6 VA (4 W) 4 W	7-10	9-12
1.6	0.06	0-6	0-6				7-12	7-12

<sup>1)</sup> Pressure data [bar]:  
Overpressure with  
respect to atmospheric  
pressure

- K<sub>v</sub> value [m<sup>3</sup>/h]: Flow rate value for water, measured at +20 °C, 1 bar<sup>1)</sup> Pressure at valve inlet and 1 bar pressure difference

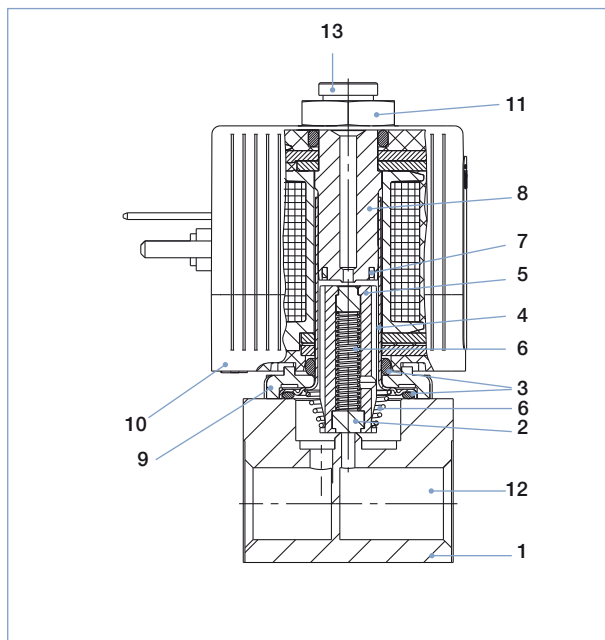
### Type 6012, banjo version

Orifice [mm]	Q <sub>Nn</sub> value air [l/min]	Pressure range [bar] <sup>1)</sup>	Coil power	Power consumption		Response times	
				Inrush	Hold	Opening [ms]	Closing [ms]
			4 W AC or 4 W DC	9 VA 4 W	6 VA (4 W) 4 W	7-10	9-12
1.2	48	0-10					
						7-12	7-12

<sup>1)</sup> Pressure data [bar]:  
Overpressure with  
respect to atmospheric  
pressure

- Q<sub>Nn</sub> value [l/min]: Flow rate value for air, measured at +20 °C, 6 bar<sup>1)</sup> Pressure at valve inlet and 1 bar pressure difference
- Response times [ms]: Measures at valve outlet at 6 bar<sup>1)</sup> and +20 °C acc. to ISO 12238  
*Opening:* Pressure build up 0 to 90 %  
*Closing:* Pressure relief 100 to 10 %

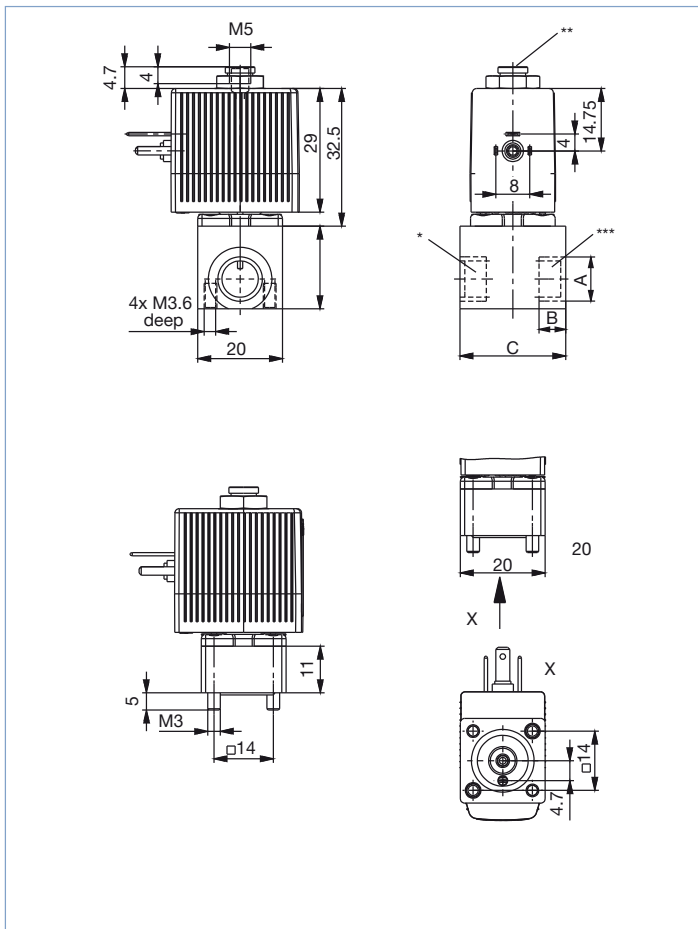
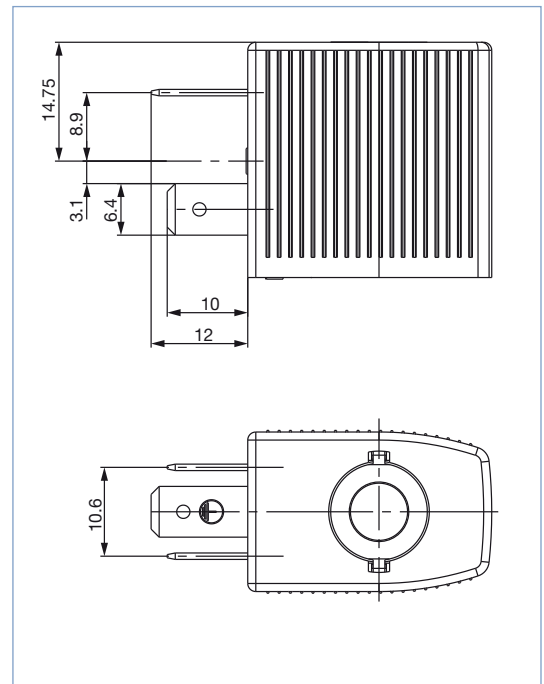
## Material



1	Body	Brass, stainless steel 1.4305 PA (polyamide)
2	Armature seal	FKM/EPDM
3	O-Ring	FKM/EPDM
4	Guide tube	Stainless steel 1.4303
5	Core	Stainless steel 1.4105
6	Spring	Stainless steel 1.4310
7	Shading ring	Copper (silver optional)
8	Stopper	Stainless steel 1.4105
9	Sub-base	Zn3 gl cC surface (brass version) Nickel-plated surface (St. st. version)
10	Coil	DIN EN 175301-803* Form C PA Form B (Industrial standard) Epoxy
11	Locknut	DIN176-9SMnPb28K (surface Zn5glcA)
12	Pressure inlet P with	Circuit function C
13	Pressure inlet P with	Circuit function D

\* previously DIN 43650

## Dimensions [mm] - Type 6012

Coil connection acc. to DIN EN 175301-803\* Form C  
(Cable Plug Type 2516)Coil connection acc. to DIN EN 43650 Form B  
Industrial standard (cable plug 2507)

Port connection	A	B	C	D
Sleeve	M5	5	20	14
Sleeve	G 1/8	8	25	19.5
sub-base	-	-	20	11

\* previously DIN 43650

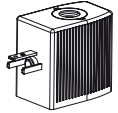
## Connections

For the positions marked with \*, \*\* or \*\*\* in the drawing, the connections are marked with the letters shown in the table above, depending on the circuit function. Unused connections in circuit functions A or B will be closed off with a blanking plug or cap nut.

Circuit function	Connection Type		
	*	**	***
A	P	blank off	A
B	blank off	B	P
C	P	R	A
D	R	P	B
T	P	R	A

## Ordering chart

Type 6012: Solenoid valve in threaded port or sub-base version with polyamide electrical coil acc. to DIN EN 175301-803\* Form C for cable plug Type 2516



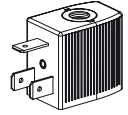
Circuit function	Orifice [mm]	Port Connection	K <sub>v</sub> value water [m <sup>3</sup> /h]	Pressure range [bar] <sup>1)</sup>	Voltage/frequency [V/Hz]	Article no. brass body without manual override	Article no. brass body with manual override	Article no. St. st. body without manual override	Article no. PA body with manual override		
<b>C</b> 3/2 way valve NC 	1.2	M5	0.045	0-10	24/DC	134143	-	-	-		
					24/50	134144	-	-	-		
					110/50	134145	-	-	-		
		1.6	M5	0.06	0-6	24/DC	134147	-	-	-	
						24/50	134148	-	-	-	
						110/50	134149	-	-	-	
	1.2	G 1/8	0.045	0-10	24/DC	134151	134159	134167	-		
					24/50	134152	134160	134168	-		
					110/50	134153	134161	134169	-		
		1.6	G 1/8	0.06	0-6	24/DC	134155	134163	134171	-	
						24/50	134156	134164	134172	-	
						110/50	134157	134165	134173	-	
	1.2	sub-base	0.045	0-10	24/DC	134175	-	134183	134191		
					24/50	134176	-	134184	134192		
					110/50	134177	-	134185	134193		
		1.6	sub-base	0.06	0-6	24/DC	134179	-	134187	134195	
						24/50	134180	-	134188	134196	
						110/50	134181	-	134189	134197	
	<b>D</b> 3/2 way valve NO 	1.2	M5	0.045	0-10	24/DC	134199	-	-	-	
						24/50	134200	-	-	-	
						110/50	134201	-	-	-	
			1.6	M5	0.06	0-6	24/DC	134204	-	-	-
							24/50	134205	-	-	-
							110/50	134206	-	-	-
1.2		G 1/8	0.045	0-10	24/DC	134208	-	134216	-		
					24/50	134209	-	134217	-		
					110/50	134210	-	134218	-		
		1.6	G 1/8	0.06	0-6	24/DC	134212	-	134220	-	
						24/50	134213	-	134221	-	
						110/50	134214	-	134222	-	
230/50		134215	-	134223	-						

<sup>1)</sup> Pressure data [bar]: Overpressure with respect to atmospheric pressure  
 \* previously DIN 43650

- All valves with FKM seal; without cable plug.
- other versions on request.

## Ordering chart

Type 6012: Solenoid Valve with threaded port or sub-base version with polyamide electrical coil acc. to DIN 43650 Form B (Industrial standard) for cable plug Type 2507

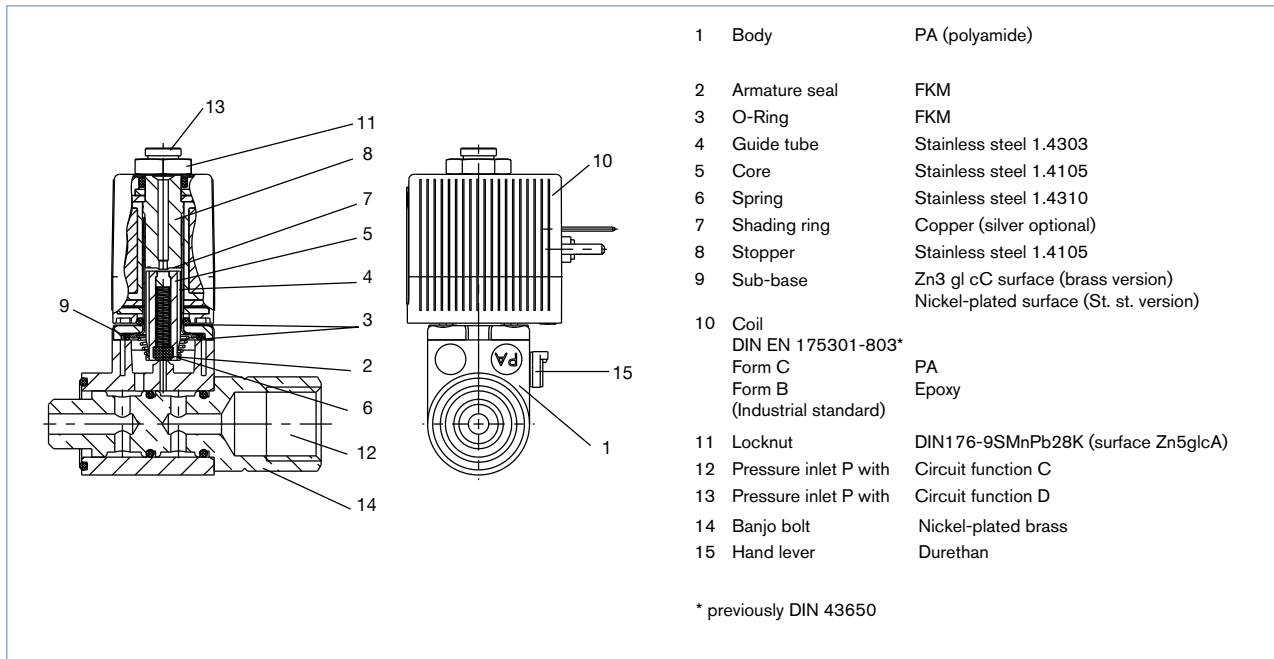


Circuit function	Orifice [mm]	Port Connection	K <sub>v</sub> value water [m <sup>3</sup> /h]	Pressure range [bar] <sup>1)</sup>	Voltage/frequency [V/Hz]	Article no. brass body without manual override	Article no. brass body with manual override	Article no. St. st. body without manual override	Article no. PA body with manual override
<b>C</b> 3/2 way valve NC 	1.2	M5	0.045	0-10	24/DC	163569	-	-	-
					24/50	163570	-	-	-
					110/50	163571	-	-	-
					230/50	163572	-	-	-
					24/DC	163573	-	-	-
					24/50	163574	-	-	-
	1.6	M5	0.06	0-6	110/50	163575	-	-	-
					230/50	163576	-	-	-
					24/DC	161904	163584	163592	-
	1.2	G 1/8	0.045	0-10	24/50	163577	163585	163593	-
					110/50	163578	163586	163594	-
					230/50	163579	163587	163595	-
					24/DC	163580	163588	163596	-
	1.6	G 1/8	0.06	0-6	24/50	163581	163589	163597	-
					110/50	163582	163590	163598	-
					230/50	163583	163591	163599	-
					24/DC	163600	-	163608	161063
	1.2	sub-base	0.045	0-10	24/50	163601	-	163609	163616
110/50					163602	-	163610	163617	
230/50					163603	-	163611	163618	
24/DC					163604	-	163612	163619	
1.6	sub-base	0.06	0-6	24/50	163605	-	163613	163620	
				110/50	163606	-	163614	163621	
				230/50	217634	-	163615	163622	
				24/DC	163607	-	163616	163623	
<b>D</b> 3/2 way valve NO 	1.2	M5	0.045	0-10	24/DC	163623	-	-	
					24/50	163624	-	-	
					110/50	163625	-	-	
					230/50	163626	-	-	
	1.6	M5	0.06	0-6	24/DC	163627	-	-	
					24/50	163628	-	-	
					110/50	163629	-	-	
	1.2	G 1/8	0.045	0-10	230/50	163630	-	-	
					24/DC	163631	-	163639	
					24/50	163632	-	163640	
					110/50	163633	-	163641	
	1.6	G 1/8	0.06	0-6	230/50	163634	-	163642	
					24/DC	163635	-	163643	
					24/50	163636	-	163644	
					110/50	163637	-	163645	
	230/50	163638	-	163646	-				

<sup>1)</sup> Pressure data [bar]: Overpressure with respect to atmospheric pressure  
 \* previously DIN 43650

- All valves with FKM seal; without cable plug.
- other versions on request.

## Materials - Banjo version



**Dimensions [mm] - Type 6012, banjo version**

**Version with coil connection acc. to DIN EN 175301-803\* Form C (cable plug Type 2516)**

**Threaded port for compressed air**

G	L
G 1/8	6.5
G 1/4	9.5

**Push-in connection for compressed air**

Pressure inlet P can be rotated through 360°.

**Version with coil connection acc. to DIN 43650 Form B Industrial standard (cable plug Type 2507)**

**Threaded port for compressed air**

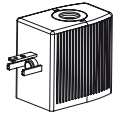
G	L
G 1/8	6.5
G 1/4	9.5

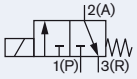
**Push-in connection for compressed air**

\* previously DIN 43650

## Ordering chart

Type 6012, banjo version: for direct mounting on to pneumatic actuator with polyamide coil acc. to DIN EN 175301-803\* Form C for cable plug Type 2516

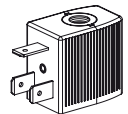


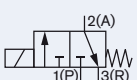
Circuit function	Orifice [mm]	Pressure inlet P (valve body)	Service port A (banjo bolt)	Q <sub>in</sub> value air [l/min]	Pressure range [bar] <sup>1)</sup>	Voltage/frequency [V/Hz]	Article no.
<b>C</b> 3/2 way valve NC 	1.2	G 1/8	G 1/8	48	0-10	24/DC	429112
						24/50	429113
						110/50	429115
						230/50	429117
		G 1/4	G 1/8	48	0-10	24/DC	429126
						24/50	429127
						110/50	429128
						230/50	429129
		G 1/4	G 1/4	48	0-10	24/DC	427919
						24/50	427920
						110/50	427921
						230/50	427922
	Tube fitting Ø 6 mm	G 1/8	48	0-10	24/DC	425299	
					24/50	425300	
					110/50	428570	
					230/50	425304	
Tube fitting Ø 6 mm	G 1/4	48	0-10	24/DC	425285		
				24/50	425286		
				110/50	428569		
				230/50	425290		

<sup>1)</sup> Pressure values [bar]: Measured as overpressure to the atmospheric pressure \* previously DIN 43650

- All valves with PA body, NBR seal and manual override; without cable plug.
- other versions on request

Type 6012, banjo version: for direct mounting on to pneumatic actuator with epoxy coil acc. to DIN EN 43650\* Form B Industrial standard for cable plug Type 2507



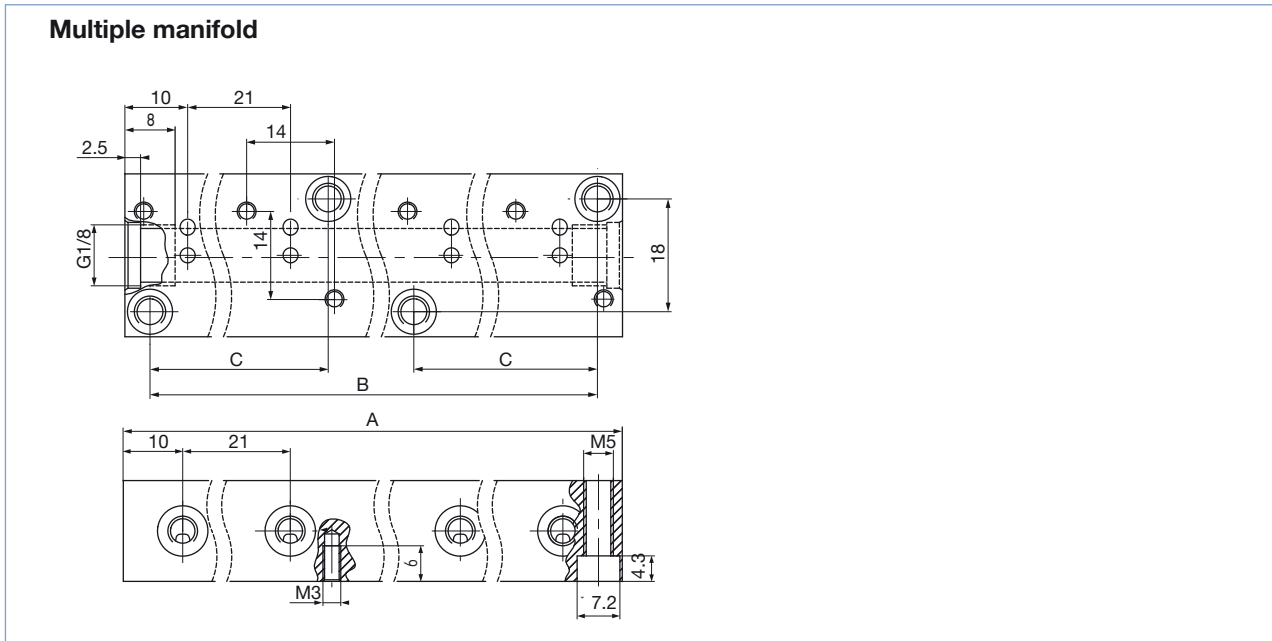
Circuit function	Orifice [mm]	Pressure inlet P (valve body)	Service port A (Banjo bolt)	Q <sub>in</sub> value air [l/min]	Pressure range [bar] <sup>1)</sup>	Voltage/frequency [V/Hz]	Article no.
<b>C</b> 3/2 way valve NC 	1.2	G 1/8	G 1/8	48	0-10	24/DC	552299
						24/50	552300
						110/50	552301
						230/50	552302
		G 1/4	G 1/8	48	0-10	24/DC	552295
						24/50	552296
						110/50	552297
						230/50	552298
		G 1/4	G 1/4	48	0-10	24/DC	552291
						24/50	552292
						110/50	552293
						230/50	552294
	Tube fitting Ø 6 mm	G 1/8	48	0-10	24/DC	552287	
					24/50	552288	
					110/50	552289	
					230/50	552290	
Tube fitting Ø 6 mm	G 1/4	48	0-10	24/DC	552283		
				24/50	552284		
				110/50	552285		
				230/50	552286		

<sup>1)</sup> Pressure values [bar]: Overpressure with respect to atmospheric pressure

- All valves with PA body, NBR seal and manual override; without cable plug.
- other versions on request



Dimensionsfor manifolds (SFB)



Ordering chart for manifold

Material	No. of valves	A [mm]	B [mm]	C [mm]	Article no.
Aluminium	1	20	12	-	005312
	2	41	33	-	005355
	3	62	54	-	005313
	4	83	75	-	005314
	5	104	96	-	005315
	6	125	117	-	005316
	7	146	138	-	005893
	8	167	159	54	005166
	9	188	180	54	005241
	10	209	201	75	005819
	11	230	222	75	005242
	12	251	243	96	005222






- only available with circuit function C (normally closed).

Manifold accessories

Accessory	Features	Article no.
Blanking plug	with seal ring, G 1/8	005041
Covering plate	for unused valves	005100

## Ordering chart for accessories






### Cable plug type 2516 to DIN EN 175301-803\* form C

	Circuitry	Voltage	Article no.
	None (standard)	0 - 250 V AC/DC	303141 
	with LED	12 - 24 V AC/DC	303145 
	with LED and varistor	12 - 24 V AC/DC	303148 
	with rectifier, LED and varistor	12 - 24 V AC/DC	303142 

- Supplied with cable plug: flat seal and fixing screw.
- Other versions of cable plug with circuitry acc. to DIN EN 175301-803\* Form C as well as detailed technical data - see datasheet Type 2516

<sup>\*)</sup> previously DIN 43650

### Cable plug Type 2507 acc. to DIN 43650 Form B (Industrial standard)

	Circuitry	Voltage	Article no.
	None (Standard)	2 - 250 V AC/DC	423845 
	with LED	24 V AC/DC	423849 
	with LED and freewheeling diode	12 - 24 V DC	423851 
	with rectifier, LED and varistor	12 - 24 V AC/DC	423853 

- Supplied with cable plug, flat seal and fixing screw.
- Further versions of cable plug with circuitry acc. to DIN EN 43650\* Form B as well as detailed technical data - see datasheet Type 2507

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