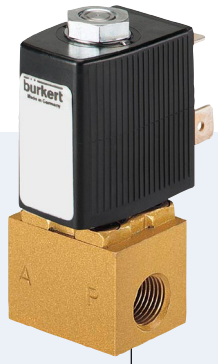
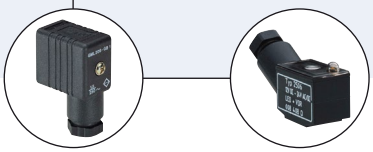
bürkert
FLUID CONTROL SYSTEMS

Plunger valve 2/2 way direct-acting



- Direct-acting and compact small-format valve with diameter of up to DN2.4
- Simple and quick flange or manifold installation
- Quick coupling (push-in fitting) for plug-in hose connections

Type 6011 can be combined with…

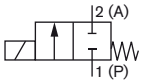


Type 2507
Cable plug industrial standard Form B

Type 2506
Cable plug to DIN EN 175 301-803* Form C

Valve 6011 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. In combination with a plug in accordance with DIN EN 17301-803 Form B or C, the valves satisfy protection class IP65.

Circuit function A



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

Technical data	
Body material	
Type 6011	brass, polyamide (PA), stainless steel 1.4305
Type 6011 A	brass, stainless steel 1.4305
Sealing material	FKM
Analytical version (Typ 6011 A)	version free from silicones, oil and grease leaktightness better than 10^{-4} mbar l/s
Limit value for remainder carbon (Type 6011 A)	< 0.2 mg/dm²
Medium	
Type 6011	• technical Vacuum • neutral gases and fluids (e.g. compressed air, water hydraulic oil
Type 6011 A	• neutral/aggressive media that do not attack the body and seal materials
Medium temperature	-10 … +100 °C
Ambient temperature	max. +55 °C
Viscosity	max. 21 mm²/s
Port connection	
Type 6011	M5, G⅛, sub-base
Type 6011 A	G⅛, sub-base
Operating voltage	
Type 6011	24 V DC, 24 V/50 Hz, 110 / 230 V / 50 Hz
Type 6011 A	24 V DC, 230 V / 50 Hz
Voltage tolerance	±10 %
Duty cycle/single valve when mounted as a block on a manifold	100 % continuous rating Intermittent operation 60 % (30 min) or with 2 W coil (on request)
Electrical connection	• to DIN EN 175 301-803* Form C for cable plug Type 2516 (see Ordering chart for Accessories) • Form B (industrial standard) for Type 2507 (see Ordering chart for Accessories)
Installation	as required, preferably with actuator upright
Assembly	no oil, grease or silicones to be used as installation aids
Mass	ca. 125 g
Protection class	IP65 with cable plug

* previously DIN 43650

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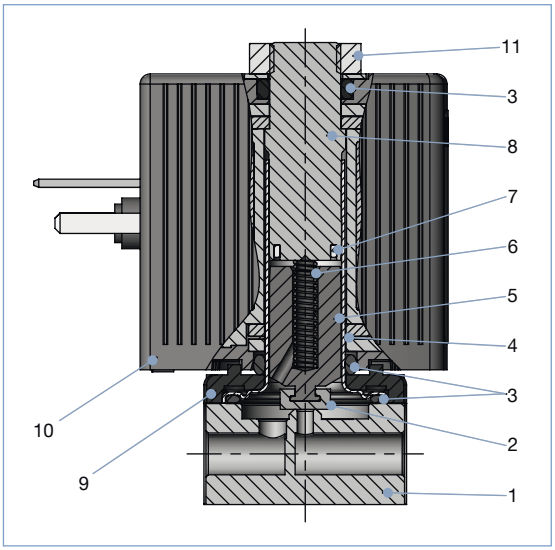
Response times

Orifice [mm]	K_V value water [m^3/h]	Pressure range for AC [bar]	Pressure range for DC [bar]	Coil power [W]	Power consumption Inrush AC [VA]	Hold AC (hot coil) [VA]	Hold AC (hot coil) [W]	DC (hot/cold coil) [W]	Response times Opening [ms]	Response times Closing [ms]
1.2	0.045	0…21	0…12	4 W	9	6	4	4/5.5	7…10	10…15
1.6	0.06	0…12	0…6							
2.0	0.11	0…8	0…4.5	4 W	9	6	4	4/5.5	7…12	7…12
2.4	0.13	0…6	0…3							

[1] Pressure data [bar]: Overpressure with respect to atmospheric pressure

- k_V value [m^3/h]: Flow rate value for water, measured at +20 °C and 1 bar[1] pressure differential over a fully opened valve.
- Response times [ms]: measured at valve outlet at 6 bar[1] and +20 °C
  Opening: pressure build-up 0…90 %, closing: pressure relief 100…10 %

Material



1	Body	Brass, stainless steel 1.4305 PA (polyamide)
2	Armature seal	FKM
3	O-ring	FKM
4	Guide tube	Stainless steel 1.4303
5	Core	Stainless steel 1.4105
6	Spring	Stainless steel 1.4310
7	Shading ring	Copper, Silver
8	Stopper	Stainless steel 1.4105
9	Sub-base	Thick-film passivated (brass version) nickel-plated surface (stainless steel version)
10	Coil	
	DIN EN 175 301-803* Form C	PA
	Form B (industr. standard)	Epoxy
11	Locknut	9SMnPb28K Thick-film passivated

*) previously DIN 43650

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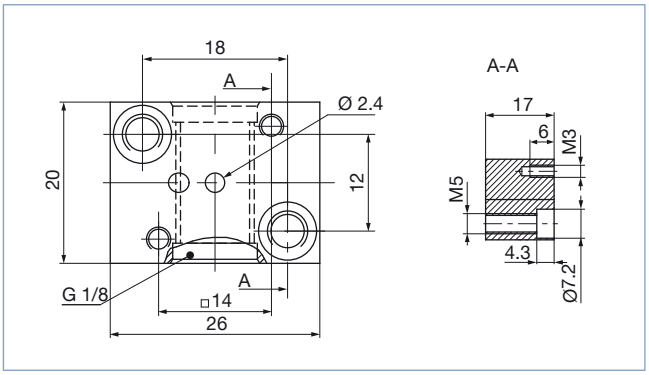
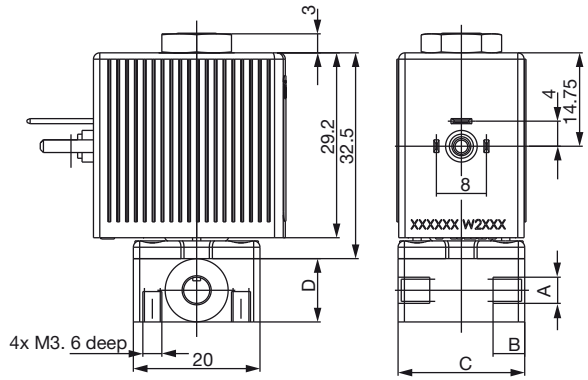
Dimensions [mm]

Single manifold

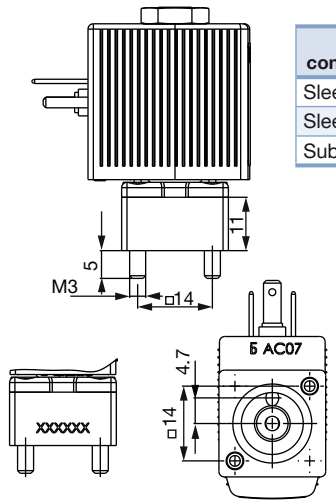


Type 6011 / 6011 A
Version with electrical coil connection to DIN EN 175 301-803* Form C (cable plug Type 2516)

Threaded version



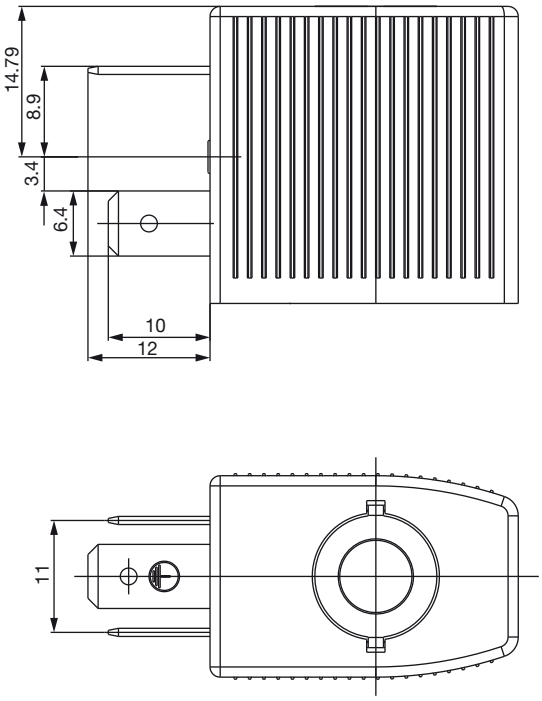
Flange version



Port connection	A	B	C	D
Sleeve	M5	5	20	10
Sleeve	G ⅛	8	25	15
Sub-base	-	-	20	11

*) previously DIN 43650

Type 6011 / 6011 A
Version with electrical coil connection Form B industrial standard (cable plug Type 2507)



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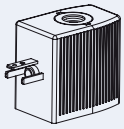
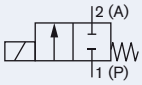
Ordering chart

Type 6011

Solenoid valve complete in ported or flanged version with electrical coil connection to DIN EN 175 301-803* Form C for cable plug Type 2516



- All valves complete with coil and FKM seal material; without cable plug
- Other versions on request.

Circuit function	Orifice [mm]	Port connection	K_V value water [m^3/h]	Pressure range [bar][1)]	Voltage/ Frequency [V/Hz]	Article no. Brass body	Article no. Stainless steel body
A 	1.2	M5	0.045	0 … 12	24/DC	134084	-
				0 … 21	24/50	134085	-
				0 … 21	110/50	134086	-
				0 … 21	230/50	134087	-
	1.6	M5	0.06	0 … 6	24/DC	134088	-
				0 … 12	24/50	134089	-
				0 … 12	110/50	134090	-
				0 … 12	230/50	134091	-
		G ⅛	0.06	0 … 6	24/DC	134071	134103
				0 … 12	24/50	134092	134104
				0 … 12	110/50	134093	134105
				0 … 12	230/50	134094	134106
	2.0	G ⅛	0.11	0 … 4.5	24/DC	134095	134107
				0 … 8	24/50	134096	134108
				0 … 8	110/50	134097	134109
				0 … 8	230/50	134098	134110
	2.4	G ⅛	0.13	0 … 3	24/DC	134099	134111
				0 … 6	24/50	134100	134112
				0 … 6	110/50	134101	134113
				0 … 6	230/50	134102	134114
	1.2	sub-base	0.045	0 … 12	24/DC	134115	-
				0 … 21	24/50	134116	-
				0 … 21	110/50	134117	-
				0 … 21	230/50	134118	-
	1.6	sub-base	0.06	0 … 6	24/DC	134119	134131
				0 … 12	24/50	134120	134132
				0 … 12	110/50	134121	134133
				0 … 12	230/50	134122	134134
	2.0	sub-base	0.11	0 … 4.5	24/DC	134123	134135
				0 … 8	24/50	134124	134136
				0 … 8	110/50	134125	134137
				0 … 8	230/50	134126	134138
	2.4	sub-base	0.13	0 … 3	24/DC	134127	-
				0 … 6	24/50	134128	-
				0 … 6	110/50	134129	-
				0 … 6	230/50	134130	-

[1)] Pressure data [bar]: Overpressure with respect to atmospheric pressure
*) previously DIN 43650

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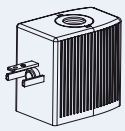
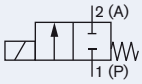
Ordering chart

Type 6011 A

Solenoid valve complete in threaded or flanged version with electrical coil connection to DIN EN 175 301-803* Form C for cable plug Type 2516



- All valves complete with coil (4 W) and FKM seal material; without cable plug
- Other versions on request.

Circuit function	Orifice [mm]	Port connection	K_v value water [m^3/h]	Pressure range [bar]1)	Voltage/ Frequency [V/Hz]	Article no. Brass body	Article no. Stainless steel body
A 	1.6	G ⅛	0.06	0…6	24/DC	137794	137800
				0…12	230/50	137795	137801
	2.0	G ⅛	0.11	0…4.5	24/DC	137796	137802
				0…8	230/50	137797	137803
	2.4	G ⅛	0.13	0…3	24/DC	137798	137804
				0…6	230/50	137799	137805
	1.2	sub-base	0.045	0…12	24/DC	137806	137812
				0…21	230/50	137807	137813
	1.6	sub-base	0.06	0…6	24/DC	137808	137814
				0…12	230/50	137809	137815
	2.0	sub-base	0.11	0…4.5	24/DC	137810	137816
				0…8	230/50	137811	137817

1) Pressure data [bar]: Overpressure with respect to atmospheric pressure
*) previously DIN 43650

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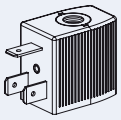
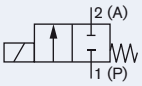
Ordering chart

Type 6011

Solenoid valve complete in ported or flanged version with electrical coil connection Form B (industrial standard) for cable plug Type 2507



- All valves complete with coil and FKM seal material; without cable plug
- Other versions on request.

Circuit function	Orifice [mm]	Port connection	K_V value water [m^3/h]	Pressure range [bar][1)]	Voltage/ Frequency [V/Hz]	Article no. Brass body	Article no. Stainless steel body
A 	1.2	M5	0.045	0 … 12	24/DC	163491	-
				0 … 21	24/50	163492	-
				0 … 21	110/50	163493	-
				0 … 21	230/50	163494	-
	1.6	M5	0.06	0 … 6	24/DC	163495	-
				0 … 12	24/50	163496	-
				0 … 12	110/50	163497	-
				0 … 12	230/50	163498	-
		G ⅛	0.06	0 … 6	24/DC	163499	163509
				0 … 12	24/50	163500	163510
				0 … 12	110/50	163501	163511
				0 … 12	230/50	163502	163512
	2.0	G ⅛	0.11	0 … 4.5	24/DC	163503	163513
				0 … 8	24/50	163504	163514
				0 … 8	110/50	163505	163515
				0 … 8	230/50	163506	163516
	2.4	G ⅛	0.13	0 … 3	24/DC	161193	163517
				0 … 6	24/50	163507	163518
				0 … 6	110/50	163508	163519
				0 … 6	230/50	161194	163520
	1.2	sub-base	0.045	0 … 12	24/DC	163521	-
				0 … 21	24/50	163522	-
				0 … 21	110/50	163523	-
				0 … 21	230/50	163524	-
	1.6	sub-base	0.06	0 … 6	24/DC	163525	163537
				0 … 12	24/50	163526	163538
				0 … 12	110/50	163527	163539
				0 … 12	230/50	163528	163540
	2.0	sub-base	0.11	0 … 4.5	24/DC	163529	163541
				0 … 8	24/50	163530	163542
				0 … 8	110/50	163531	163543
				0 … 8	230/50	163532	163544
	2.4	sub-base	0.13	0 … 3	24/DC	163533	-
				0 … 6	24/50	163534	-
				0 … 6	110/50	163535	-
				0 … 6	230/50	163536	-

[1)] Pressure data [bar]: Overpressure with respect to atmospheric pressure

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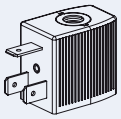
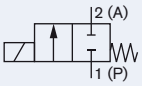
Ordering chart

Type 6011 A

Solenoid valve complete in threaded or flanged version with electrical coil connection Form B (industrial standard) for cable plug Type 2507



- All valves complete with coil (4 W) and FKM seal material; without cable plug
- Other versions on request.

Circuit function	Orifice [mm]	Port connec-tion	K_v value water [m^3/h]	Pressure range [bar][1)]	Voltage/ Frequency [V/Hz]	Article no. Brass body	Article no. Stainless steeel body
A 	1.6	G ⅛	0.06	0…6	24/DC	163545	163551
				0…12	230/50	163546	163552
	2.0	G ⅛	0.11	0…4.5	24/DC	163547	163553
				0…8	230/50	163548	163554
	2.4	G ⅛	0.13	0…3	24/DC	163549	163555
				0…6	230/50	163550	163556
	1.2	sub-base	0.045	0…12	24/DC	163557	163563
				0…21	230/50	163558	163564
	1.6	sub-base	0.06	0…6	24/DC	163559	163565
				0…12	230/50	163560	163566
	2.0	sub-base	0.11	0…4.5	24/DC	163561	163567
				0…8	230/50	163562	163568

[1)] Pressure data [bar]: Overpressure with respect to atmospheric pressure

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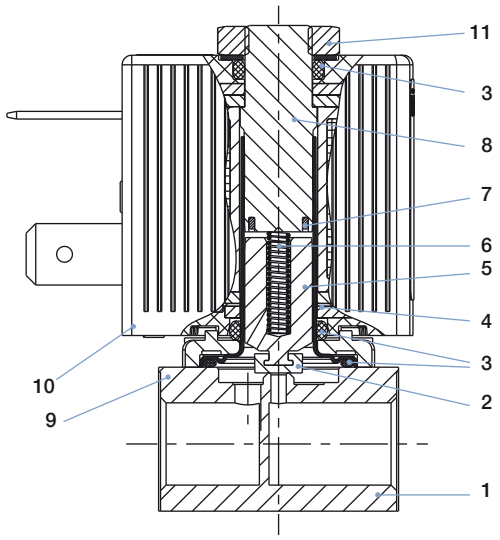
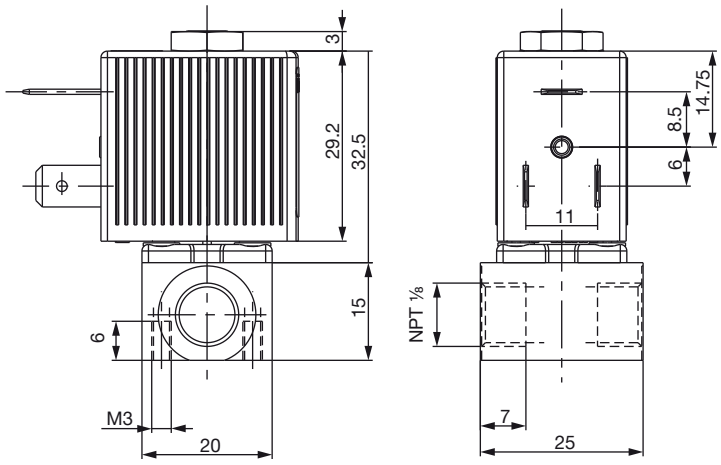
Materials for the NSF 61 drinking water versions



1	Body	Stainless steel 1.4305
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
8	Stopper	Stainless steel 1.4105
9	Sub-base	Thick-film passivated (brass version) nickel-plated surface (stainless steel version)
10	Coil	
	DIN EN 175 301-803* Form C	PA
	Form B (industr. standard)	Epoxy
11	Locknut	9SMnPb28K Thick-film passivated

*) previously DIN 43650

Dimensions for the NSF 61 drinking water versions



Ordering chart

Solenoid valve with stainless steel housing complete with coil Form B (industrial standard) for cable plug 2507

Circuit function	Orifice [mm]	Seal material	Port connection	K_V value water [m³/h]	Pressure range [bar]1	Voltage/frequency range [V/Hz]	Article no.
A	1.2	EPDM	NPT ⅛	0.05	12	12 / DC	293130
	1.2	FKM	NPT ⅛	0.05	12	24 / DC	293146
	1.6	EPDM	NPT ⅛	0.06	6	12 / DC	293131
	1.6	FKM	NPT ⅛	0.06	6	24 / DC	293147
	2	EPDM	NPT ⅛	0.11	4.5	12/DC	293132
	2	FKM	NPT ⅛	0.11	4.5	24 / DC	293148
	2.4	EPDM	NPT ⅛	0.13	3	12/DC	293133
	2.4	FKM	NPT ⅛	0.13	3	24/DC	293149

1) Pressure data [bar]: Overpressure with respect to atmospheric pressure

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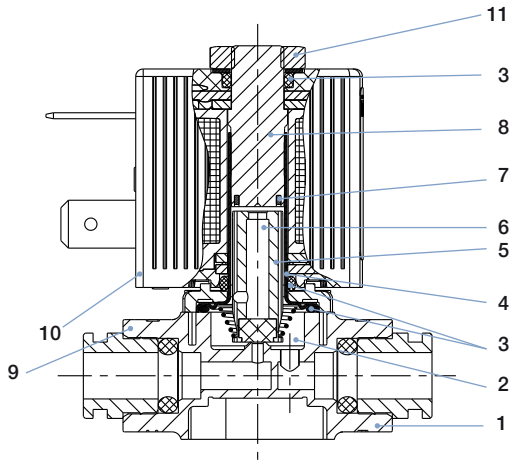
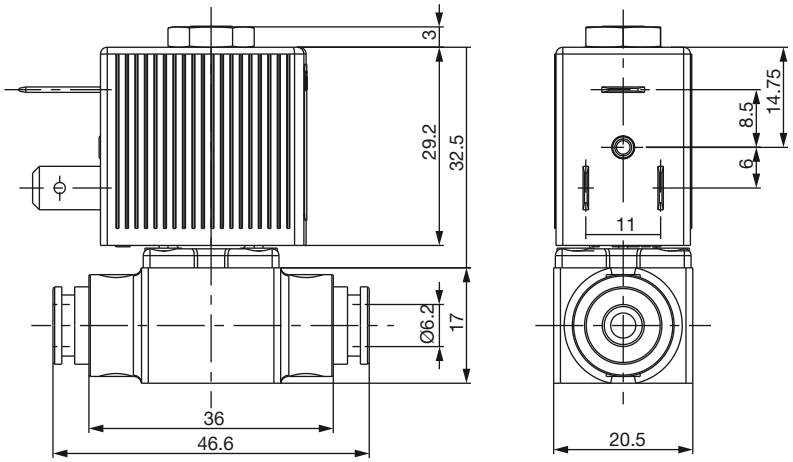
Materials for plastic version with plug-in coupling



1	Body	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
8	Stopper	Stainless steel 1.4105
9	Sub-base	Thick-film passivated (brass version) nickel-plated surface (stainless steel version)
10	Coil DIN EN 175 301-803* Form C Form B (industr. standard)	PA Epoxy
11	Locknut	9SMnPb28K Thick-film passivated

*) previously DIN 43650

Dimensions for plastic version with plug-in coupling



Ordering chart

Solenoid valve complete with seal material FKM with plastic housing and hose connection for external hose with diameter 6 mm with coil Form B (industrial standard) for cable plug 2507

Circuit function	Orifice [mm]	Seal material	K_V value water [m³/h]	Pressure range [bar]1)	Voltage/ frequency range [V/Hz]	Article no.
A	1.5	FKM	0.06	6	230/50	319647
	2.7	FKM	0.15	3	230/50	319650

1) Pressure data [bar]: Overpressure with respect to atmospheric pressure

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Ordering chart for accessories

Manifolds

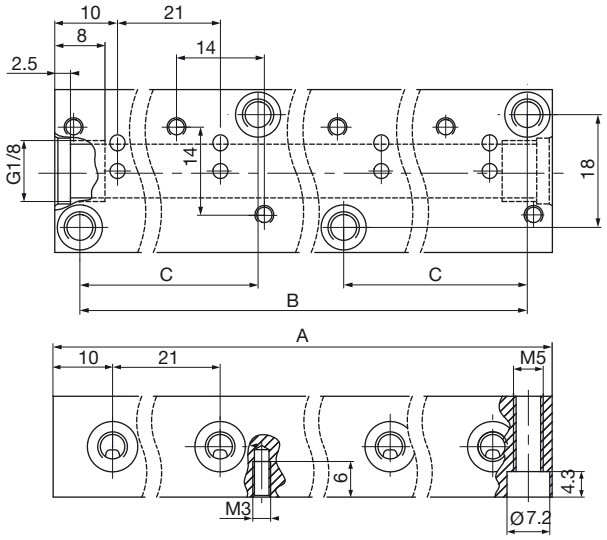
Material	No. of valves	Article no.
Aluminium anodized	1	005312
	2	005355
	3	005313
	4	005314
	5	005315
	6	005316
	7	005893
	8	005166
	9	005241
	10	005819
	11	005242
	12	005222

Accessories for manifolds

Accessory	Features	Article no.
Blanking plug	with seal ring, G ⅛	005041
Cover plate	for unused valves	005100

Dimensions [mm]

Multiple manifold



No. of valves	A [mm]	B [mm]	C [mm]
1	20	12	-
2	41	33	-
3	62	54	-
4	83	75	-
5	104	96	-
6	125	117	-
7	146	138	-
8	167	159	54
9	188	180	54
10	209	201	75
11	230	222	75
12	251	243	96

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Ordering chart for accessories (continued)

Cable plug Type 2516 to DIN EN 175 301-803* 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 175 301-803* Form C as well as detailed technical data - see datasheet Type 2516

*) previously DIN 43650

Cable plug Type 2507 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.
- Other versions of cable plug with circuitry Form B (industrial standard) as well as detailed technical data - see datasheet Type 2507.

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