



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

Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with



Type 2507

Cable plug, form B according to industry standard



Type 2516

Cable plug, form C according to DIN EN 175301 - 803



Type description

Valve 6012 is a direct-acting plunger valve. The stopper and core 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 cable plug in accordance with industry standard Form B or DIN EN 17301 - 803 Form C, the valves satisfy protection class IP65.

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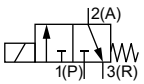
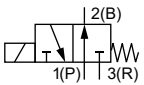
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1. General technical data

Product properties	
Dimensions	Further information can be found in chapter "5. Dimensions" on page 7.
Material	
Seal	FKM, NBR
Body	Brass, polyamide (PA), stainless steel 1.4305
Manual override	Optional, standard for Type 6012 banjo variant
Weight	
Standard variant	125 g (G 1/8)
Banjo variant	135 g
Orifice	DN 1.2 and DN 1.6
Circuit function	C and D Further information can be found in chapter "2. Circuit functions" on page 4.
Thermal insulation class of solenoid coil	Polyamide coil class B Epoxy coil class H
Performance data	
Duty cycle/single valve for block mounting on multiple manifold	100 % continuous operation Intermittent operation 60 % (30 min) or with 2 W coil 100 % (on request)
Switching time ¹⁾	
Standard variant	DN 1.2 mm: Opening 7..10 ms, Closing 9..12 ms DN 1.6 mm: Opening 7..12 ms, Closing 7..12 ms
Banjo variant	DN 1.2 mm, 4 W AC: Opening 7..10 ms, Closing 9..12 ms DN 1.2 mm, 4 W DC: Opening 7..12 ms, Closing 7..12 ms
Electrical data	
Operating voltage	24 V DC, 24 V 50 Hz, 110/230 V 50 Hz
Power consumption	Further information can be found in chapter "6.1. Power consumption" on page 10.
Voltage tolerance	± 10 %
Medium data	
Operating medium	Neutral gases and liquids (e.g. compressed air, water, hydraulic oil, technical vacuum)
Medium temperature	
Standard variant	- 10 °C...+ 100 °C
Banjo variant	- 10 °C...+ 60 °C
Viscosity	Max. 21 mm ² /s
Product connections	
Electrical connection	<ul style="list-style-type: none"> Plug contacts according to DIN EN 175301 - 80 form C for cable plug Type 2516 ▶. Further information can be found in chapter "Cable plug Type 2516, form C according to DIN EN 175301 - 803" on page 15. Plug contacts according to industry standard form B for cable plug Type 2507 ▶. Further information can be found in chapter "Cable plug Type 2507, form B according to industry standard" on page 16. Flying leads on request
Port connection	
Standard variant	M5, G 1/8, sub-base
Banjo variant	G 1/8, G 1/4 and tube fitting Ø 6 mm
Approvals and certificates	
Degree of protection	IP65 with cable plug
Environment and installation	
Installation instructions	As required, preferably with actuator upright
Ambient temperature	
Standard variant	Max. + 55 °C
Banjo variant	- 10 °C...+ 40 °C

1.) Measurement at + 20 °C, 6 bar at the valve outlet according to DIN ISO 12238:2001, opening: pressure build-up 0...90 %, closing: pressure reduction 100...10 %

2. Circuit functions

Symbol	Description
	Circuit function C (CF C) 3/2-way solenoid valve Direct-acting Normally closed
	Circuit function D (CF D) 3/2-way solenoid valve Direct-acting Normally open

3. Approvals and conformities

3.1. General notes

- The approvals and conformities listed below must be stated when making enquiries. This is the only way to ensure that the product complies with all required specifications.
- Not all available variants can be supplied with the below mentioned approvals or conformities.

3.2. Conformity

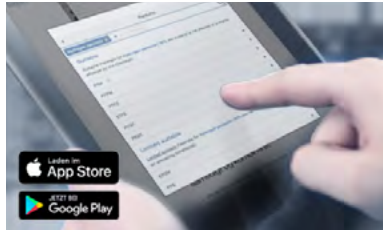
In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

3.3. Standards

The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

4. Materials

4.1. Bürkert resistApp



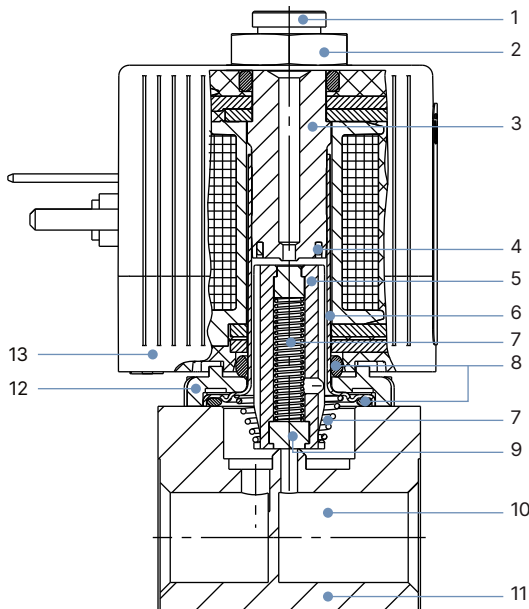
Bürkert resistApp – Chemical resistance chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

[Start chemical resistance check](#)

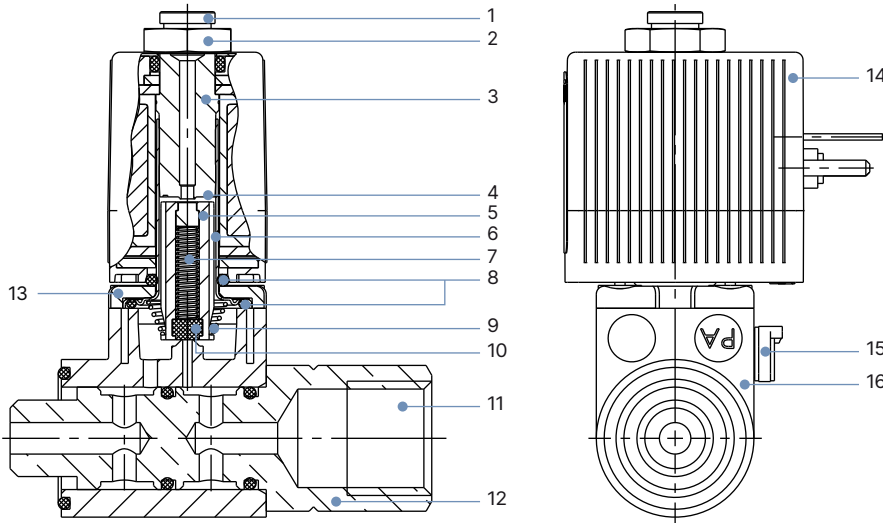
4.2. Material specifications

Standard variant



No.	Element	Material
1	Pressure inlet P	With circuit function D
2	Nut	DIN 176 - 9SMnPb28K (surface Zn5glcA)
3	Stopper	Stainless steel 1.4105
4	Shading ring	Copper (silver optional)
5	Core	Stainless steel 1.4105
6	Guide tube	Stainless steel 1.4303
7	Spring	Stainless steel 1.4310
8	O-ring	FKM/EPDM
9	Armature seal	FKM/EPDM
10	Pressure inlet P	With circuit function C
11	Body	Brass, stainless steel 1.4305 Polyamide (PA)
12	Sub-base	Zn3 gl cC surface (brass variant) Nickel-plated surface (stainless steel variant)
13	Coil	DIN EN 175301 - 803 form C: Polyamide Industry standard connector form B: Epoxy

Banjo variant



No.	Element	Material
1	Pressure inlet P	With circuit function D
2	Nut	DIN 176 - 9SMnPb28K (surface Zn5glcA)
3	Stopper	Stainless steel 1.4105
4	Shading ring	Copper (silver optional)
5	Core	Stainless steel 1.4105
6	Guide tube	Stainless steel 1.4303
7	Spring	Stainless steel 1.4310
8	O-ring	FKM
9	Spring	Stainless steel 1.4310
10	Armature seal	FKM
11	Pressure inlet P	With circuit function C
12	Banjo bold	Nickel-plated brass
13	Sub-base	Zn3 gl cC surface (brass variant) Nickel-plated surface (stainless steel variant)
14	Coil	DIN EN 175301 - 803 form C: Polyamide Industry standard connector form B: Epoxy
15	Hand lever	Durethan
16	Body	Polyamide (PA)

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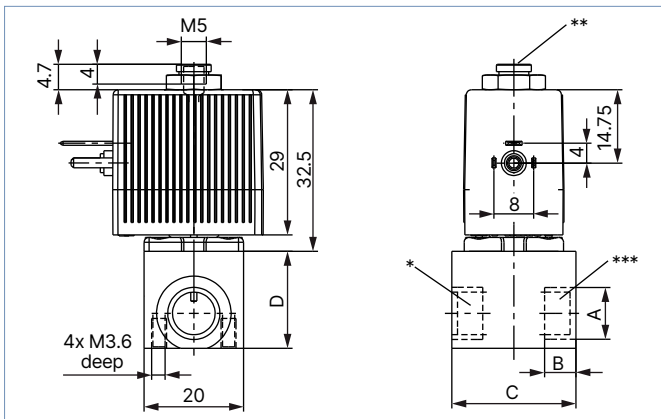
5. Dimensions

5.1. Standard variant

Threaded variant

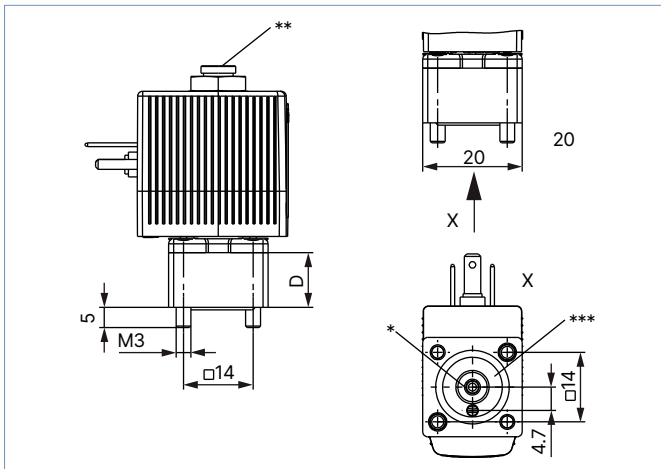
Note:

- Dimensions in mm
- Variant with coil according to DIN EN 175301 - 803 form C for cable plug Type 2516



Port connection	A	B	C	D
		[mm]	[mm]	[mm]
Thread	M5	5	20	14
	G 1/8	8	25	19.5

Sub-base variant

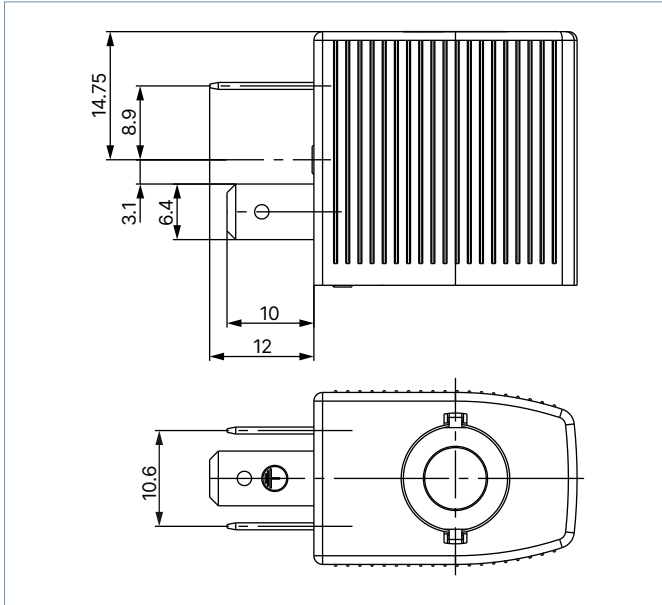


Port connection	A	B	C	D
		[mm]	[mm]	[mm]
Sub-base	-	-	20	11

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Note:

- Dimensions in mm
- Variant with coil according to industry standard form B for cable plug Type 2507



Port connection	A	B	C	D
		[mm]	[mm]	[mm]
Thread	M5	5	20	14
	G 1/8	8	25	19.5
Sub-base	-	-	20	11

Pin assignment

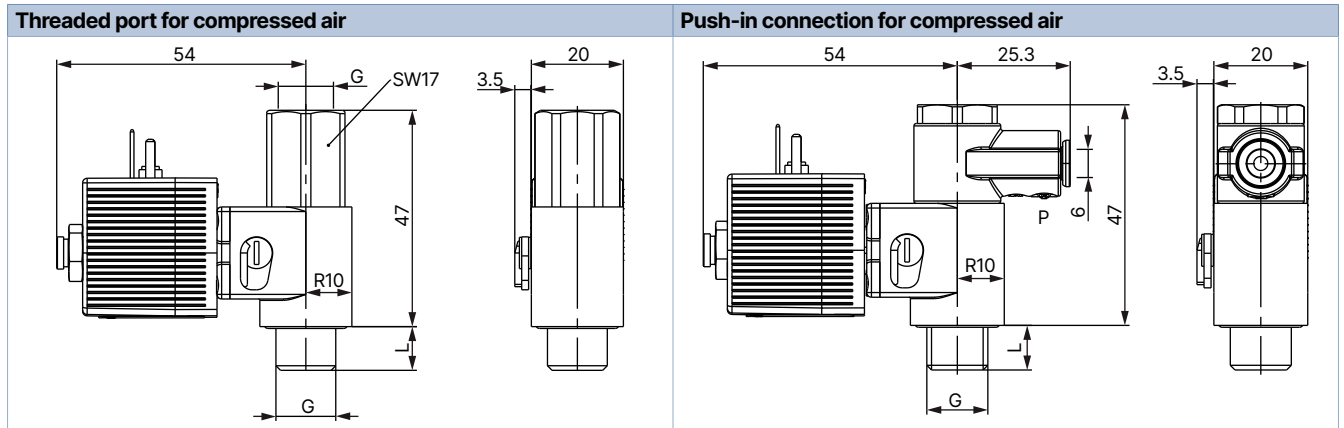
For the positions marked with *, ** or *** in the drawing, the connections are marked with the letters shown in the table above, depending on the circuit function. Unused connections in circuit functions A or B will be closed off with a blanking plug or cap nut.

Circuit function	Connection type		
	*	**	***
A	P	to lock	A
B	to lock	B	P
C	P	R	A
D	R	P	B
T	P	R	A

5.2. Banjo variant

Note:

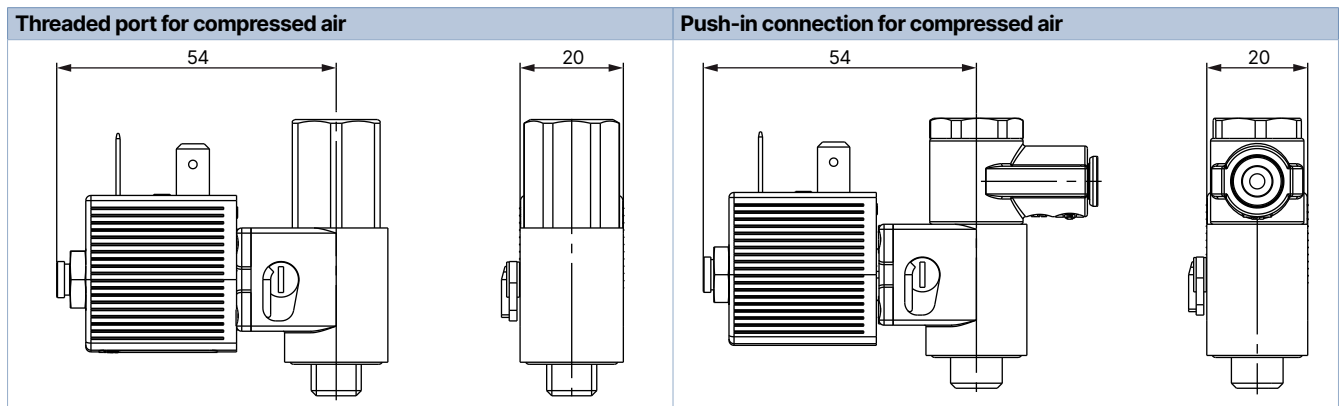
- Dimensions in mm
- Variant with coil according to DIN EN 175301 - 803 form C for cable plug Type 2516
- Push-in connection for compressed air: pressure inlet P can be rotated through 360°.



G	L [mm]
G 1/8	6.5
G 1/4	9.5

Note:

- Dimensions in mm
- Variant with coil according to industry standard form B for cable plug Type 2507



G	L [mm]
G 1/8	6.5
G 1/4	9.5

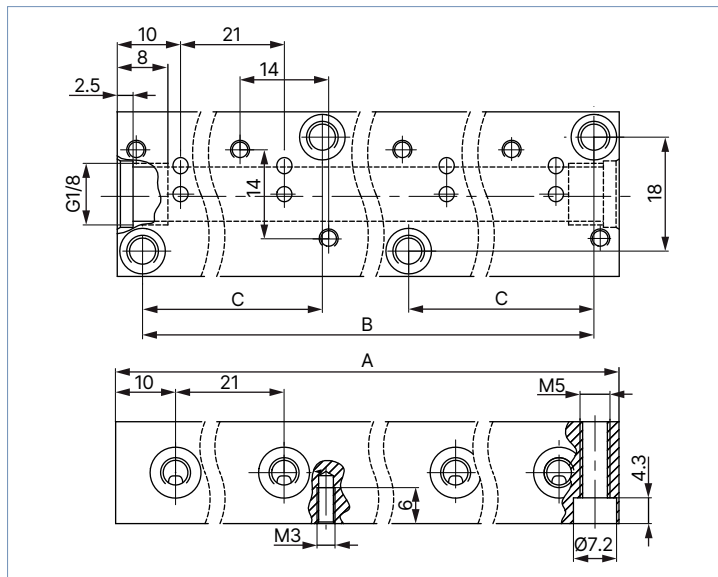
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5.3. Multiple manifold

Manifolds for valves with 20 mm coil (SG2)

Note:

- Dimensions in mm
- Made of aluminium, anodized
- Can only be combined with variants circuit function C (normally closed)



Quantity of valve slots	A	B	C	Article no.
	[mm]	[mm]	[mm]	
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

6. Performance specifications

6.1. Power consumption

Standard variant

Orifice	K _v value water ^{1.)}	Pressure range ^{2.)}		Coil power	Power consumption		Switching times ^{3.)}	
		Circuit function C	Circuit function D		Inrush	Hold	Opening	Closing
[mm]	[m ³ /h]	[bar]	[bar]				[ms]	[ms]
1.2	0.045	0...10	0...10	4 W AC or 4 W DC	9 VA	6 VA (4 W)	7...10	9...12
1.6	0.06	0...6	0...6		4 W	4 W	7...12	7...12

- 1.) Measurement at +20 °C, 1 bar^{2.)} at valve inlet and free outlet
- 2.) Pressure data: overpressure to atmospheric pressure
- 3.) Measurement at +20 °C, 6 bar^{2.)} at valve outlet according to ISO 12238. Opening: pressure build up 0...90 %, closing: pressure relief 100...10 %

Banjo variant

Orifice	Q _{Nn} value air ^{1.)}	Pressure range ^{2.)}		Coil power	Power consumption		Switching times ^{3.)}	
					Inrush	Hold	Opening	Closing
[mm]	[l/min]	[bar]				[ms]	[ms]	
1.2	48	0...10		4 W AC or 4 W DC	9 VA	6 VA (4 W)	7...10	9...12
		0...6			4 W	4 W	7...12	7...12

- 1.) Measurement at +20 °C, 6 bar^{2.)} at valve inlet and 1 bar differential pressure
- 2.) Pressure data: overpressure to atmospheric pressure
- 3.) Measurement at +20 °C, 6 bar^{2.)} at valve outlet according to ISO 12238. Opening: pressure build up 0...90 %, closing: pressure relief 100...10 %

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7. Ordering information

7.1. Bürkert eShop



Bürkert eShop – Easy ordering and quick delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

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7.2. Bürkert product filter

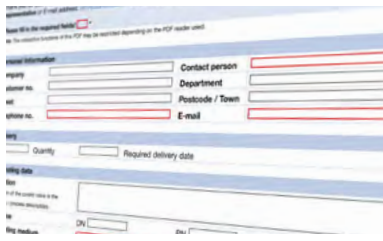


Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

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7.3. Bürkert Product Enquiry Form



Bürkert Product Enquiry Form – Your enquiry quickly and compactly

Would you like to make a specific product enquiry based on your technical requirements? Use our Product Enquiry Form for this purpose. There you will find all the relevant information for your Bürkert contact. This will enable us to provide you with the best possible advice.

[Fill out the form now](#)

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7.4. Ordering chart

Standard variant

Note:

- All valves complete with coil and FKM seal material and are supplied without a cable plug.
- Other variants are available on request.

Circuit function	Port connection	Orifice	K _v value water	Voltage/frequency	Pressure range ¹⁾	Article no. Brass body	Article no. Stainless steel body	Article no. Brass body	Article no. Polyamide body
		[mm]	[m ³ /h]	[V/Hz]	[bar]	without manual override		with manual override	
Solenoid valve complete in threaded or sub-base variant with polyamide coil according to DIN EN 175301 - 803 form C for cable plug Type 2516									
CF C 3/2-way solenoid valve Direct-acting Normally closed 	M5	1.2	0.045	024/DC	0...10	134143 ☒	–	–	–
				024/50		134144 ☒	–	–	–
				110/50		134145 ☒	–	–	–
				230/50		134146 ☒	–	–	–
	M5	1.6	0.06	024/DC	0...6	134147 ☒	–	–	–
				024/50		134148 ☒	–	–	–
				110/50		134149 ☒	–	–	–
				230/50		134150 ☒	–	–	–
	G 1/8	1.2	0.045	024/DC	0...10	134151 ☒	134167 ☒	134159 ☒	–
				024/50		134152 ☒	134168 ☒	134160 ☒	–
				110/50		134153 ☒	134169 ☒	134161 ☒	–
				230/50		134154 ☒	134170 ☒	134162 ☒	–
	G 1/8	1.6	0.06	024/DC	0...6	134155 ☒	134171 ☒	134163 ☒	–
				024/50		134156 ☒	134172 ☒	134164 ☒	–
				110/50		134157 ☒	134173 ☒	134165 ☒	–
				230/50		134158 ☒	134174 ☒	134166 ☒	–
	Sub-base	1.2	0.045	024/DC	0...10	134175 ☒	134183 ☒	–	134191 ☒
				024/50		134176 ☒	134184 ☒	–	134192 ☒
				110/50		134177 ☒	134185 ☒	–	134193 ☒
				230/50		134178 ☒	134186 ☒	–	134194 ☒
	Sub-base	1.6	0.06	024/DC	0...6	134179 ☒	134187 ☒	–	134195 ☒
				024/50		134180 ☒	134188 ☒	–	134196 ☒
				110/50		134181 ☒	134189 ☒	–	134197 ☒
				230/50		134182 ☒	134190 ☒	–	134198 ☒
CF D 3/2-way solenoid valve Direct-acting Normally open 	M5	1.2	0.045	024/DC	0...10	134199 ☒	–	–	–
				024/50		134200 ☒	–	–	–
				110/50		134201 ☒	–	–	–
				230/50		134202 ☒	–	–	–
	M5	1.6	0.06	024/DC	0...6	134204 ☒	–	–	–
				024/50		134205 ☒	–	–	–
				110/50		134206 ☒	–	–	–
				230/50		134207 ☒	–	–	–
	G 1/8	1.2	0.045	024/DC	0...10	134208 ☒	134216 ☒	–	–
				024/50		134209 ☒	134217 ☒	–	–
				110/50		134210 ☒	134218 ☒	–	–
				230/50		134211 ☒	134219 ☒	–	–
	G 1/8	1.6	0.06	024/DC	0...6	134212 ☒	134220 ☒	–	–
				024/50		134213 ☒	134221 ☒	–	–
				110/50		134214 ☒	134222 ☒	–	–
				230/50		134215 ☒	134223 ☒	–	–

1.) Pressure data: overpressure to atmospheric pressure

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Circuit function	Port connection	Orifice	K _v value water	Voltage/frequency	Pressure range ¹⁾	Article no. Brass body	Article no. Stainless steel body	Article no. Brass body	Article no. Polyamide body
		[mm]	[m ³ /h]	[V/Hz]	[bar]	without manual override		with manual override	
Solenoid valve complete in threaded or sub-base variant with epoxy coil according to industry standard form B for cable plug Type 2507									
CF C 3/2-way solenoid valve Direct-acting Normally closed 	M5	1.2	0.045	024/DC	0...10	163569	-	-	-
				024/50		163570	-	-	-
				110/50		163571	-	-	-
				230/50		163572	-	-	-
	M5	1.6	0.06	024/DC	0...6	163573	-	-	-
				024/50		163574	-	-	-
				110/50		163575	-	-	-
				230/50		163576	-	-	-
	G 1/8	1.2	0.045	024/DC	0...10	161904	163592	163584	-
				024/50		163577	163593	163585	-
				110/50		163578	163594	163586	-
				230/50		163579	163595	163587	-
	G 1/8	1.6	0.06	024/DC	0...6	163580	163596	163588	-
				024/50		163581	163597	163589	-
				110/50		163582	163598	163590	-
				230/50		163583	163599	163591	-
	Sub-base	1.2	0.045	024/DC	0...10	163600	163608	-	161063
				024/50		163601	163609	-	163616
				110/50		163602	163610	-	163617
				230/50		163603	163611	-	163618
	Sub-base	1.6	0.06	024/DC	0...6	163604	163612	-	163619
				024/50		163605	163613	-	163620
				110/50		163606	163614	-	163621
				230/50		217634	163615	-	163622
CF D 3/2-way solenoid valve Direct-acting Normally open 	M5	1.2	0.045	024/DC	0...10	163623	-	-	-
				024/50		163624	-	-	-
				110/50		163625	-	-	-
				230/50		163626	-	-	-
	M5	1.6	0.06	024/DC	0...6	163627	-	-	-
				024/50		163628	-	-	-
				110/50		163629	-	-	-
				230/50		163630	-	-	-
	G 1/8	1.2	0.045	024/DC	0...10	163631	163639	-	-
				024/50		163632	163640	-	-
				110/50		163633	163641	-	-
				230/50		163634	163642	-	-
	G 1/8	1.6	0.06	024/DC	0...6	163635	163643	-	-
				024/50		163636	163644	-	-
				110/50		163637	163645	-	-
				230/50		163638	163646	-	-

-- = not available

1.) Pressure data: overpressure to atmospheric pressure

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Banjo variant

Note:

- All valves complete with polyamide body, NBR seal material and manual override and are supplied without a cable plug.
- Other variants are available on request.

Circuit function	Orifice	Pressure inlet P (valve body)	Service port A (banjo bolt)	Q _{in} value air	Voltage/ frequency	Pressure range ¹⁾	Article no.
	[mm]			[l/min]	[V/Hz]	[bar]	
Banjo variant complete for direct mounting on pneumatic actuator with polyamide coil according to DIN EN 175301 - 803 form C for cable plug Type 2516							
CF C 3/2-way solenoid valve Direct-acting Normally closed 	1.2	G 1/8	G 1/8	48	024/DC	0...10	429112
					024/50		429113
					110/50		429115
					230/50		429117
	G 1/4	G 1/8	48	024/DC	0...10	429126	
				024/50		429127	
				110/50		429128	
				230/50		429129	
	G 1/4	G 1/4	48	024/DC	0...10	427919	
				024/50		427920	
				110/50		427921	
				230/50		427922	
	Tube fitting Ø 6 mm	G 1/8	48	024/DC	0...10	425299	
				024/50		425300	
				110/50		428570	
				230/50		425304	
	Tube fitting Ø 6 mm	G 1/4	48	024/DC	0...10	425285	
				024/50		425286	
				110/50		428569	
				230/50		425290	
Banjo variant complete for direct mounting on pneumatic actuator with epoxy coil according to industry standard form B for cable plug Type 2507							
CF C 3/2-way solenoid valve Direct-acting Normally closed 	1.2	G 1/8	G 1/8	48	024/DC	0...10	552299
					024/50		552300
					110/50		552301
					230/50		552302
	G 1/4	G 1/8	48	024/DC	0...10	552295	
				024/50		552296	
				110/50		552297	
				230/50		552298	
	G 1/4	G 1/4	48	024/DC	0...10	552291	
				024/50		552292	
				110/50		552293	
				230/50		552294	
	Tube fitting Ø 6 mm	G 1/8	48	024/DC	0...10	552287	
				024/50		552288	
				110/50		552289	
				230/50		552290	
	Tube fitting Ø 6 mm	G 1/4	48	024/DC	0...10	552283	
				024/50		552284	
				110/50		552285	
				230/50		552286	

1) Pressure data: overpressure to atmospheric pressure

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7.5. Ordering chart accessories

Multiple manifold

Note:

Further ordering information can be found in chapter "5.3. Multiple manifold" on page 10.

Accessories for manifolds

Accessory	Features	Article no.
Lock screw	With seal ring, G 1/8	005041
Cover plate	For unoccupied valve position	005100

Cable plug Type 2516, form C according to DIN EN 175301 - 803

Note:

- Dimensions in mm
- Delivery of cable plug includes a flat seal and a fastening screw.
- For further variants see data sheet **Type 2516**

Cable plug	Dimensions	Variant	Voltage	Article no.
		Without wiring	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

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Cable plug Type 2507, form B according to industry standard

Note:

- Dimensions in mm
- Delivery of cable plug includes a flat seal and a fastening screw.
- Refer to data sheet **Type 2507** ▶ for more information about the cable plug.

Cable plug	Dimensions	Variant	Voltage	Article no.
		Without wiring (standard)	2...250 V AC/DC	423845
		With LED	24 V AC/DC	423849
		With LED and free-wheeling diode	12...24 V AC/DC	423851
		With rectifier, LED and varistor	12...24 V AC/DC	423853
			2...250 V AC/DC	423854

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