



Direct-acting 3/2-way plunger valve

- Direct-acting and compact small valve up to DN 1.6
- Slipped over coil system
- Banjo fitting for direct mounting on pneumatic valves
- Simple and fast push-in, flange or manifold mounting
- Explosion-proof variants



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

Type description

The 7012 valve is a direct-acting plunger valve. The stopper and the core guide tube are welded together to increase pressure resistance and leak-tightness. Various housing and seal material combinations are available depending on the actual application. A Bürkert-specific flange variant (SFB) enables the space-saving arrangement of valves on a multiple manifold. The range is supplemented by explosion-proof variants. Push-in fittings can be selected for a flexible hose connection. A banjo fitting with banjo bolt is the ideal solution for easy direct mounting on a pneumatic actuator. Optional manual override enables quick start-up and optimal maintenance. In combination with a plug to industry standard shape B or DIN EN 17301 - 803 shape C, the valves satisfy degree of protection IP65.

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DTS 1000446517 EN Version: N Status: RL (released | freigegeben | valide) printed: 26.01.2026

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1. General technical data

1.1. Standard and banjo variant

Product properties	
Dimensions	Further information can be found in chapter “5. Dimensions” on page 9.
Material	
Seal	FKM, EPDM
Body	Brass, polyamide (PA), polyphenylene sulphide (PPS), stainless steel 1.4305/303
Manual override	Optional, standard for Type 7012 banjo variant
Weight	
Standard variant 24.5 mm solenoid coil	5 ¼ oz (with NPT ⅜)
Standard variant 20 mm solenoid coil	4 ¼ oz (with NPT ⅜)
Banjo variant	4 ¾ oz
Orifice	DN 1.2...DN 2.0
Circuit function	C and D
Thermal insulation class of solenoid coil	Further information can be found in chapter “2. Circuit functions” on page 5. Epoxy coil class H
Performance data	
Duty cycle	
Single valve	100 % resp. 50 % continuous operation
For block mounting on multiple manifold	With 4 W/5 W solenoid coil 100 % ED (at max. + 131 °F)
Switching time¹⁾	
Standard variant	Orifice 1.2...1.6 mm: opening 8...12 ms, closing 8...12 ms
Banjo variant	Orifice 1.2 mm: opening 7...12 ms, closing 7...12 ms
Electrical data	
Operating voltage	24 V DC, 24 V 50 Hz, 24 V 60 Hz, 110 V 50 Hz, 120 V 60 Hz, 230 V 50 Hz, 240 V 60 Hz
Power consumption	Further information can be found in chapter “7. Performance specifications” on page 18.
Voltage tolerance	± 10 %
Medium data	
Operating medium	Neutral gases and liquids (e.g. compressed air, water, hydraulic oil, technical vacuum)
Medium temperature	
Standard variant	+ 14 °F...+ 212 °F
Banjo variant	+ 14 °F...+ 140 °F
Viscosity	Max. 21 cSt
Product connections	
Electrical connection	- 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 27. - 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 28. - Flat pin terminal as protection class III device - Flying leads connection on request for coil size 20 mm
Port connection	
Standard variant	M5, G ⅜, NPT ⅜, Flange
Banjo variant	G ⅜, G ¼, NPT ⅜, NPT ¼ and hose connector Ø 6 mm
Approvals and conformities	
Degree of protection	IP65 with cable plug
North America (USA/Canada)	Further information can be found in chapter “3.5. North America (USA/Canada)” on page 6.
Foods and beverages/Hygiene	Further information can be found in chapter “3.6. Foods and beverages/Hygiene” on page 6.
Environment and installation	
Installation position	As required, preferably with actuator upright
Ambient temperature	
Standard variant	Max. + 131 °F resp. + 167 °F (depending on power level)
Banjo variant	+ 14 °F...+ 131 °F resp. + 167 °F (depending on power level)

1.) Measurement at + 68 °F, 87 psi at the valve outlet acc. to DIN ISO 12238:2001, opening: pressure build-up 0...10 %, closing: pressure reduction 100...90 %

1.2. ATEX/IECEx cable variant

Product properties

Material

Seal	FKM, EPDM
Body	Brass, stainless steel 1.4305/303

Circuit function	A and B Further information can be found in chapter “2. Circuit functions” on page 5.
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Available coil size	SG3 (24.5 mm width)
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Performance data

Operating pressure	Up to 34 bar (depending on orifice and coil power)
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Medium data

Operating medium	Neutral gases and liquids (e.g. compressed air, water, hydraulic oil, technical vacuum)
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Medium temperature¹⁾

FKM	- 10 °C...+ 100 °C
EPDM	- 30 °C...+ 100 °C

Product connections

Electrical connection	ATEX/IECEx cable variant with 3 m moulded-in cable
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Port connection

Thread	G 1/8, NPT 1/8, RC1/8, M5, UNF 10 - 32
Flange	Flange “FK01”

Approvals and conformities

Degree of protection	IP65 with cable plug and ATEX/IECEx cable variant
Explosion protection	Further information can be found in chapter “3.4. Explosion protection” on page 6.

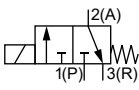
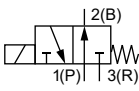
Environment and installation

Ambient temperature¹⁾

FKM	- 10 °C...+ 55 °C (max. + 60 °C on request)
EPDM	- 30 °C...+ 55 °C (max. + 60 °C on request)

1.) The minimum temperature depends on the seal material.

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.

3.4. Explosion protection

Approval	Description
	Optional: Explosion protection (valid for coils with fixed cable outlet) ATEX: EPS 21 ATEX 1 128 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db IECEx: IECEx EPS 21.0045X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db The fixed cable is halogen-free according to IEC 60754 - 1

3.5. North America (USA/Canada)

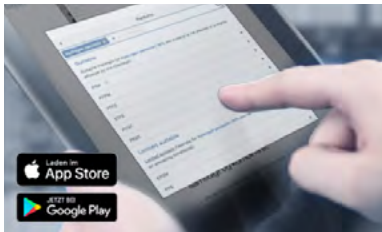
Approval	Description
	Valid for coils: UL Recognized for the USA and Canada The coils are UL Recognized for the USA and Canada according to: • UL 429 (electrically operated valves) • CAN/CSA-C22.2 No. 139

3.6. Foods and beverages/Hygiene

Conformity	Description
FDA	FDA – Code of Federal Regulations (valid for the variable code PL02, PL03) All wetted materials are compliant with the Code of Federal Regulations published by the FDA (Food and Drug Administration, USA) according to the manufacturer's declaration.
USP	United States Pharmacopeial Convention (USP) (valid for the variable code PL04) All wetted materials are biocompatible according to the manufacturer's declaration.
	EC Regulation 1935/2004 of the European Parliament and of the Council (valid for the variable code PL01, PL02) All wetted materials are compliant with EC Regulation 1935/2004/EC according to the manufacturer's declaration.

4. Materials

4.1. Bürkert resistApp



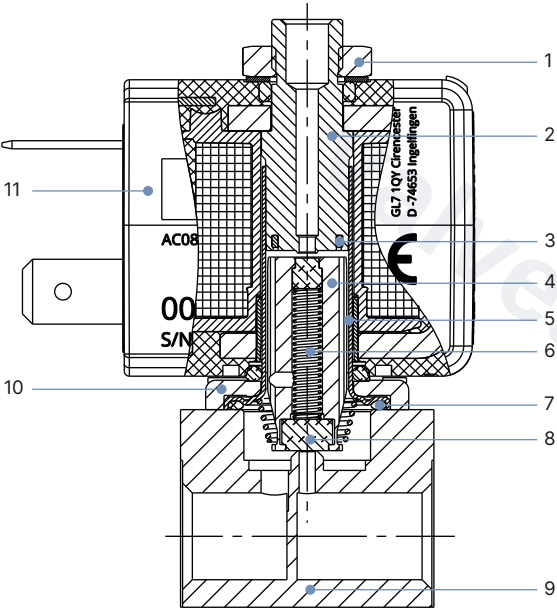
Bürkert resistApp – Chemical resistance chart

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](#)

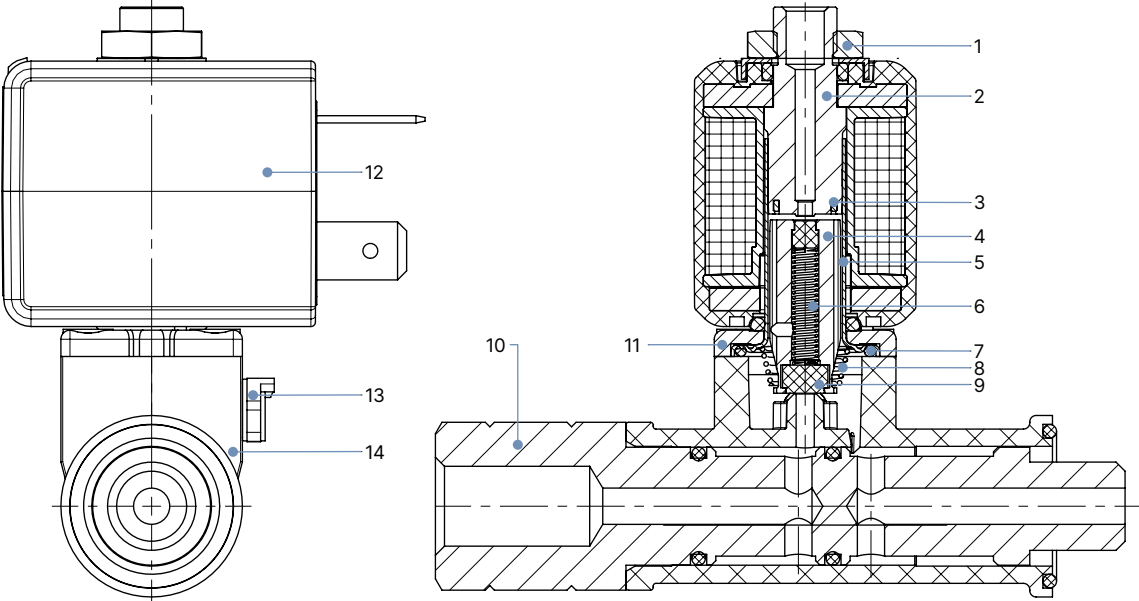
4.2. Material specifications

Standard variant



No.	Element	Material
1	Nut	DIN 176 Surface finish thick film passivated KOSA0101
2	Stopper	Stainless steel 1.4113/434
3	Shading ring	Copper (silver optional)
4	Core	Stainless steel 1.4113/434
5	Core guide tube	Stainless steel 1.4303/305L
6	Spring	Stainless steel 1.4310/301
7	O-ring	FKM/EPDM
8	Seal	FKM/EPDM
9	Valve body	Brass, stainless steel 1.4305/303 PA (polyamide)
10	Flange	• Surface finish thick film passivated KOSA0101 (brass variant) • Nickel-plated surface (stainless steel variant)
11	Coil	Epoxy

Banjo variant



No.	Element	Material
1	Nut	DIN 176 Surface finish thick film passivated KOSA0101
2	Stopper	Stainless steel 1.4113
3	Shading ring	Copper (silver optional)
4	Core	Stainless steel 1.4113
5	Core guide tube	Stainless steel 1.4303 ST
6	Spring	Stainless steel 1.4310
7	O-ring	FKM
8	Spring	Stainless steel 1.4310
9	Seal	FKM
10	Banjo bolt	Nickel-plated brass
11	Flange	• Surface finish thick film passivated KOSA0101 (brass variant) • Nickel-plated surface (stainless steel variant)
12	Coil	Epoxy
13	Manual override	Durethan
14	Body	PPS (polyphenylene sulphide)

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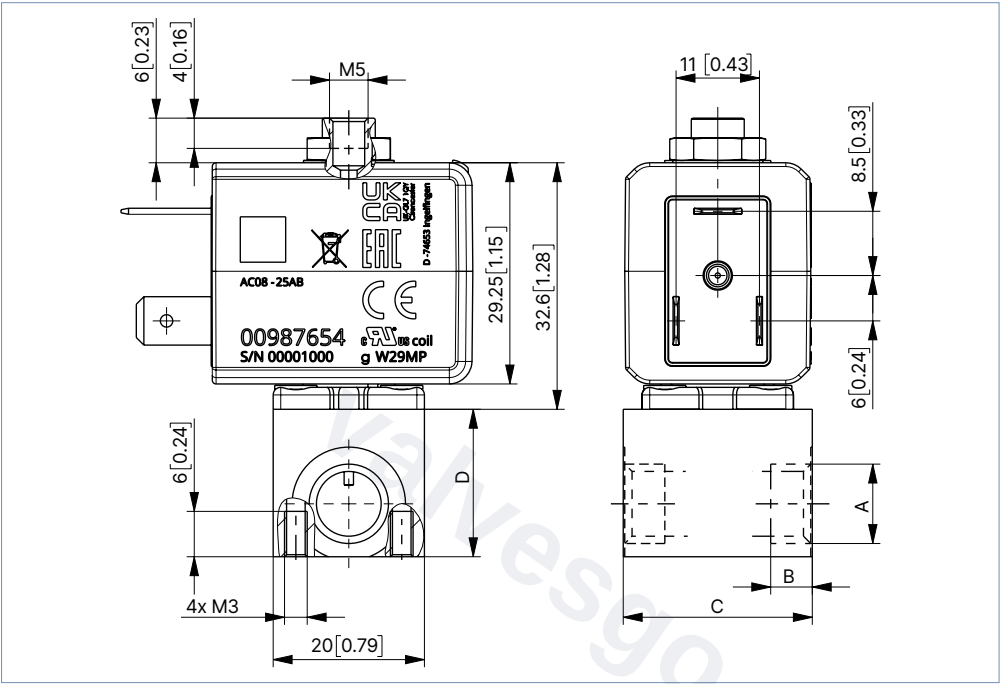
5. Dimensions

5.1. Standard variant

Threaded variant

Note:

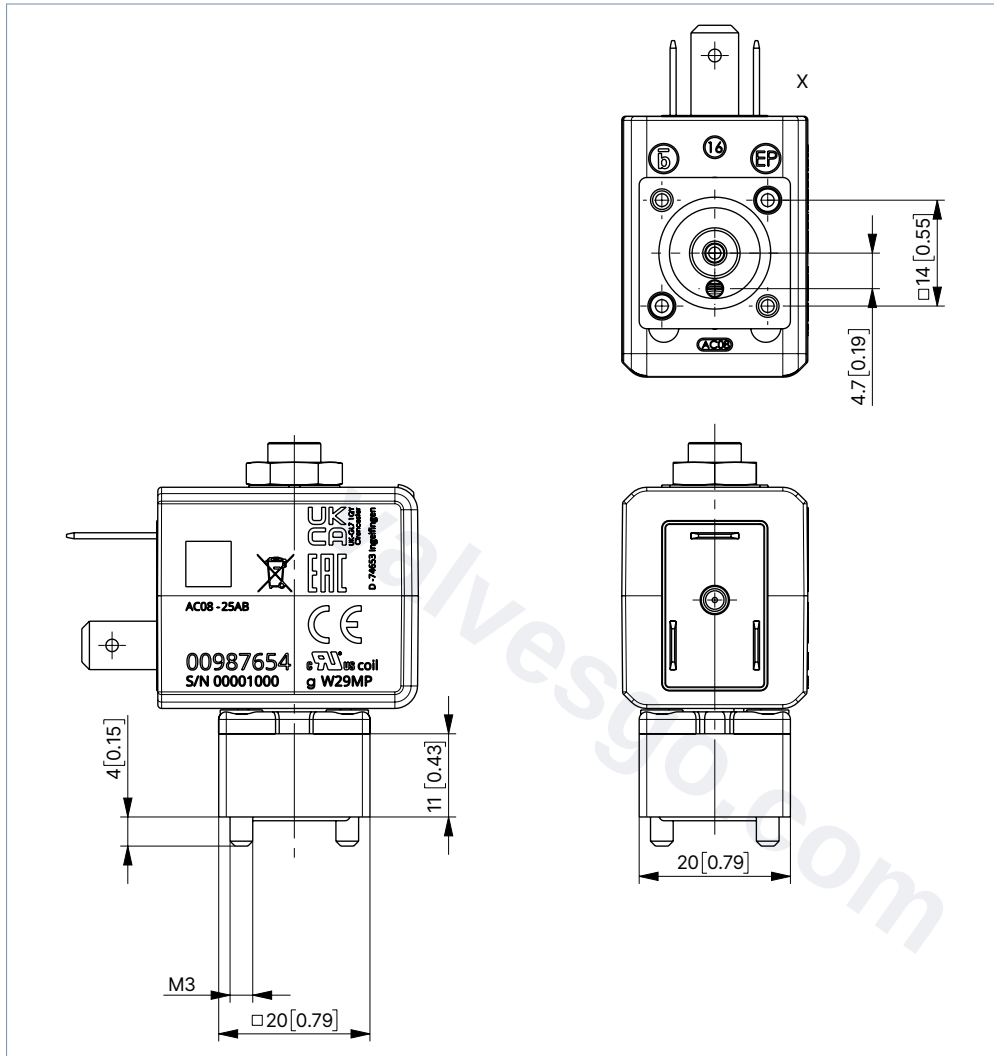
- Dimensions in mm [inch]
- Variants according to industry standard form B



Port connection	A	B		C		D	
		[mm]	[in]	[mm]	[in]	[mm]	[in]
Thread	M5	5	0.19	20	0.78	14	0.55
	G 1/8	8	0.31	25	0.98	19.5	0.74
	NPT 1/8	7	0.31	25	0.98	19.5	0.74

Flange variant
Note:

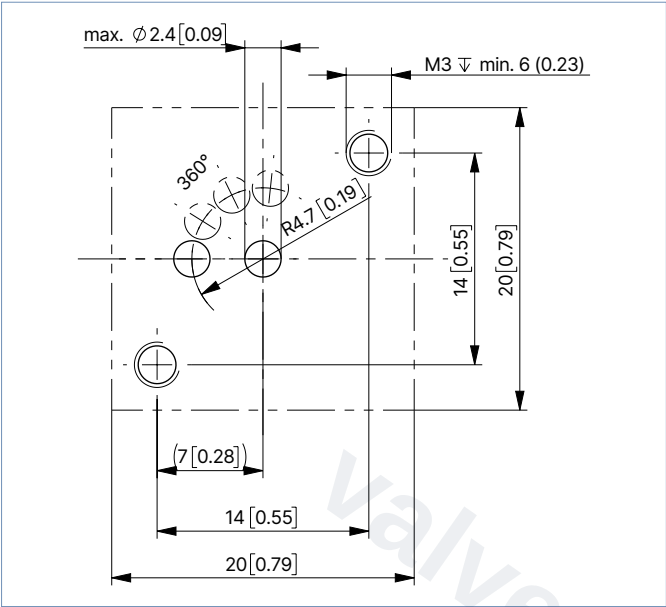
- Dimensions in mm [inch]
- Variants according to industry standard form B



Flange pattern

Note:

- Dimensions in mm [inch]
- On the connection side, the geometries are to be realised as shown in the following drawing.
- Flange variant (FK01) according to FST 1000225877

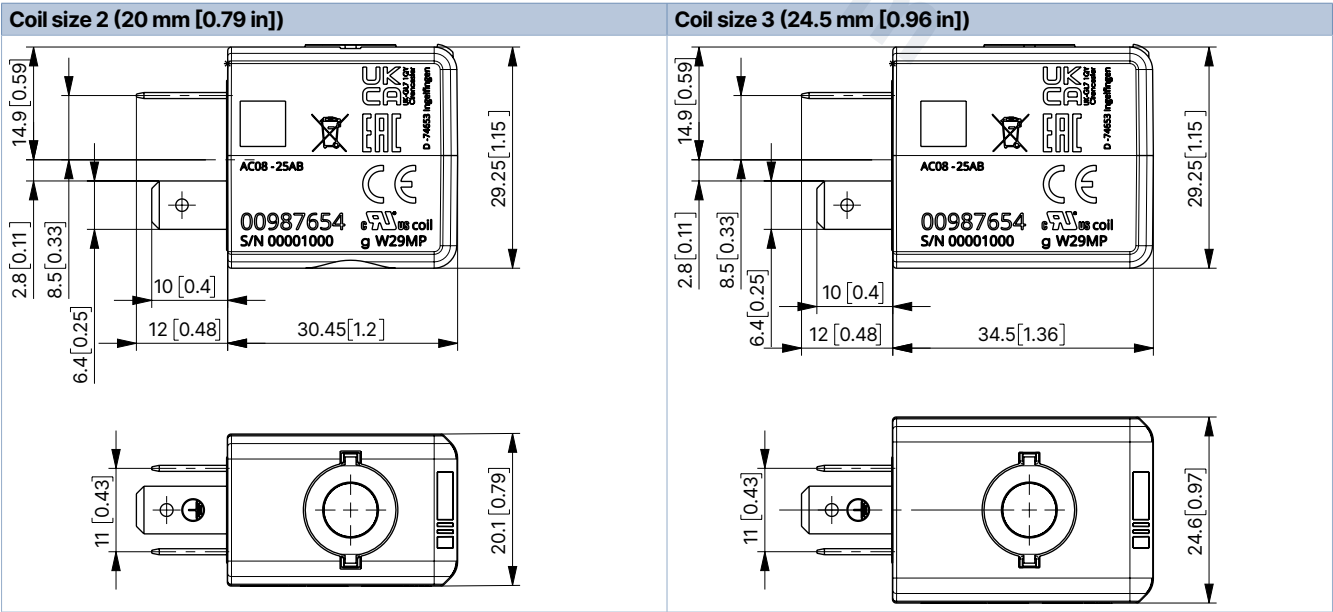


5.2. Coil variants

Variants according to industry standard form B

Note:

Dimensions in mm [inch]



Further electrical connections

Note:

- Dimensions in mm [inch]
- Specifications apply to coil sizes 20 mm [0.79 in] and 24.5 mm [0.96 in]

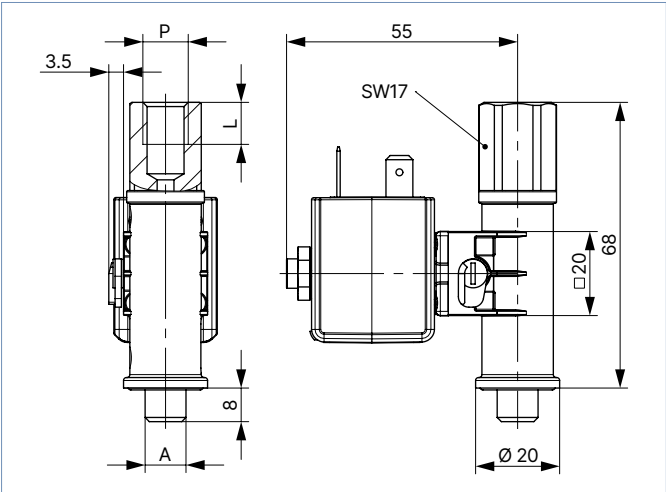
Variant flat pin terminal as protection class III device	Variant according to DIN EN 175301 - 803 form C

5.3. Banjo variant

With 76 mm banjo bolt

Note:

- Dimensions in mm [inch]
- Coil size 24.5 mm [0.96 in]
- Available orifices: 1.2 mm, 1.6 mm and 2.0 mm

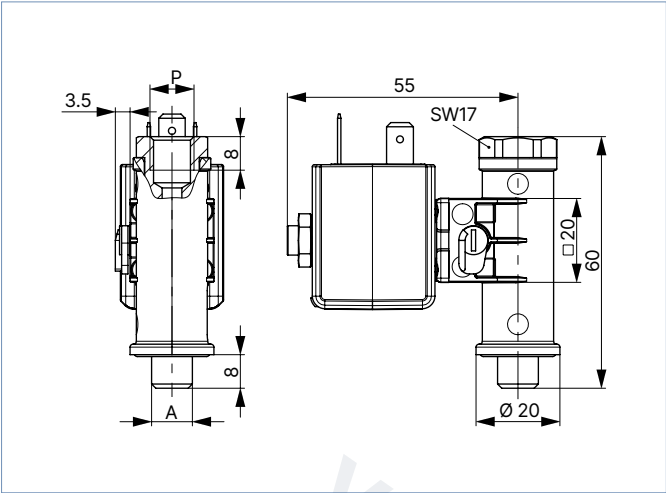


Port connection	P [inch]	A [inch]	L [mm]	[inch]
BJ02	G ¼	G ¼	12	0.47
BJ03	NPT ¼	G ⅜	12.9	0.51
BJ04	NPT ¼	G ¼	12.9	0.51
BJ05	G ¼	G ⅜	12	0.47
BJ07	NPT ⅜	G ⅜	8.9	0.35

With 60 mm banjo bolt

Note:

- Dimensions in mm [inch]
- Coil size 24.5 mm [0.96 in]
- Available orifices: 1.2 mm, 1.6 mm and 2.0 mm



Port connection	P [inch]	A [inch]	L [mm]	[inch]
BJ01	G 1/8	G 1/8	8	0.31
BJ06	G 1/8	G 1/4	8	0.31

With enclosed push-in hose connector, rotatable

Note:

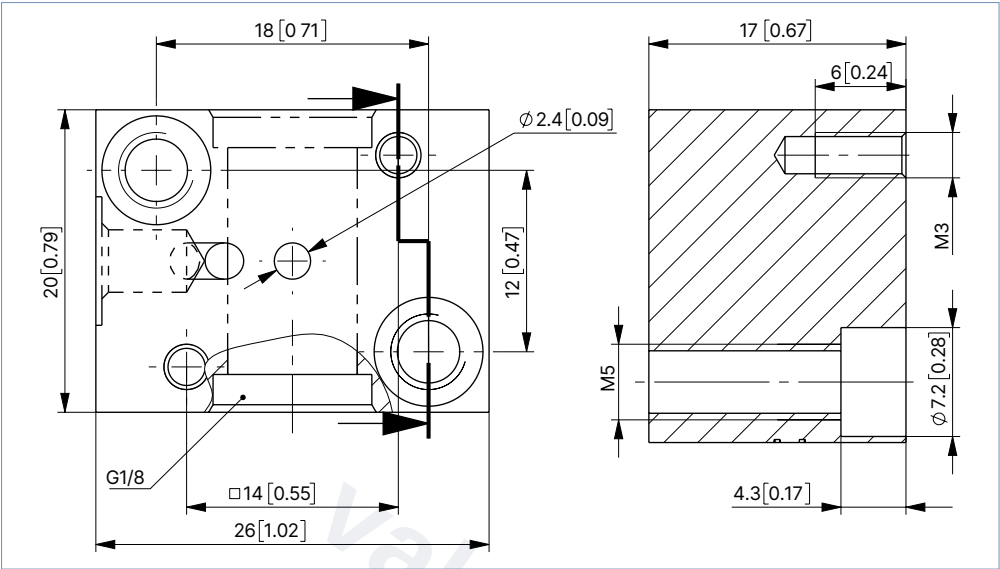
- Dimensions in mm
- Only available for banjo variants with 60 mm banjo bolt and port connection BJ01 and BJ06
- Minimum order quantity 50 pieces

Elbow screw fitting, rotatable with O-ring, made of nickel-plated brass, supplied loose (variable code: LB26)	Elbow screw fitting, rotatable with O-ring, made of POM, supplied loose (variable code: LB27)

5.4. Single manifold

Note:

- Dimensions in mm [inch]
- Can only be combined with valves with coil size 20 mm [0.79 in]



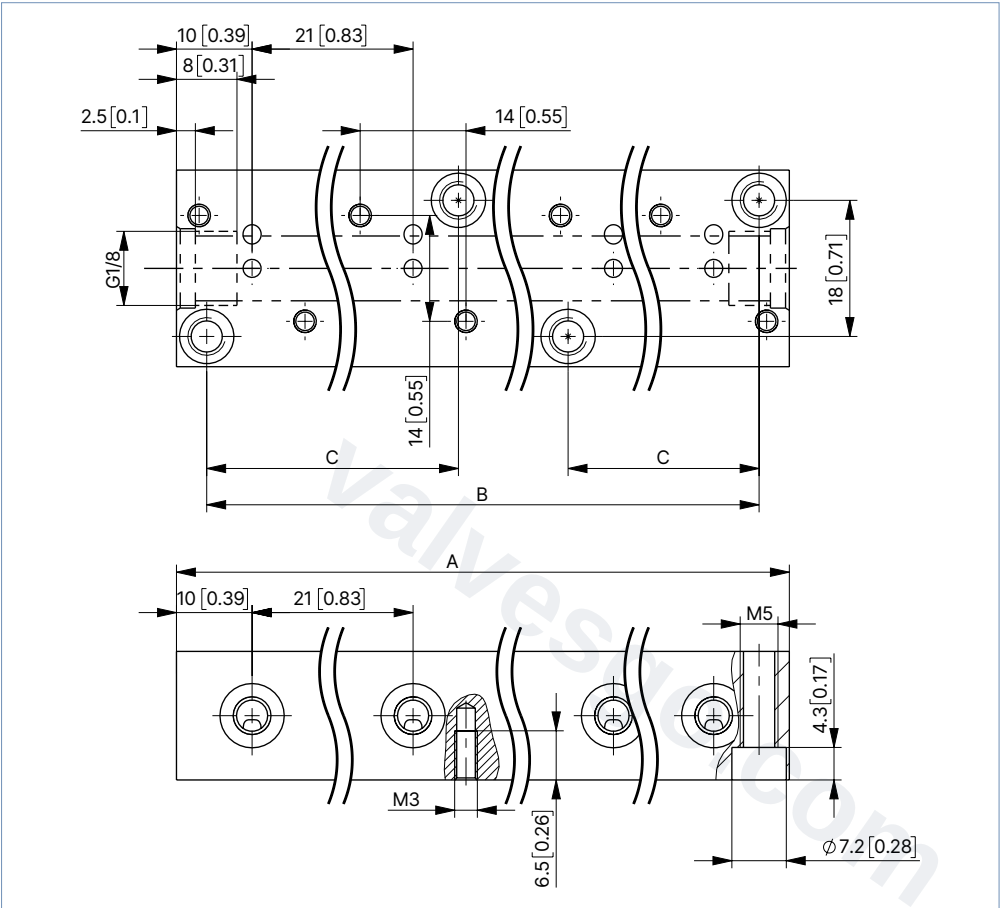
Quantity of valve slots	A		B		C		Article no.
	[mm]	[in]	[mm]	[in]	[mm]	[in]	
1	20	0.78	12	0.47	–	–	005312 𐀀

5.5. Multiple manifold

Manifolds for valves with 20 mm coil (SG2)

Note:

- Dimensions in mm [inch]
- Can only be combined with Type 7012 valves with coil size 20 mm [0.79 in]

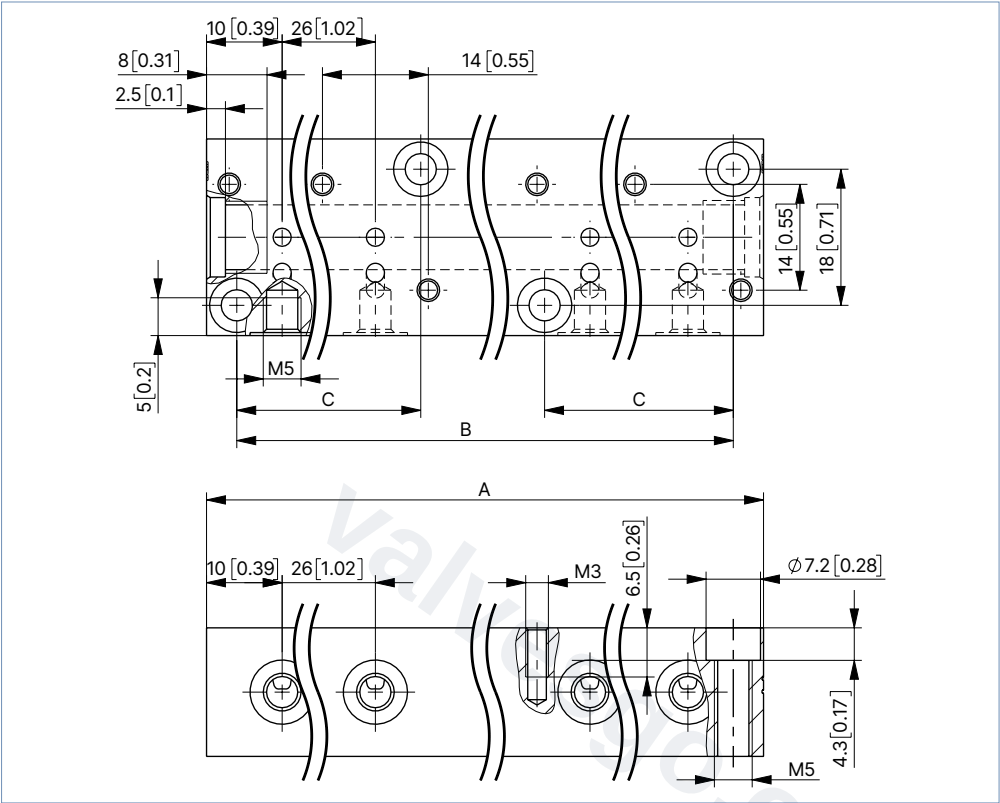


Quantity of valve slots	A		B		C		Article no.
	[mm]	[in]	[mm]	[in]	[mm]	[in]	
2	41	1.61	33	1.29	–	–	005355
3	62	2.44	54	2.12	–	–	005313
4	83	3.26	75	2.95	–	–	005314
5	104	4.09	96	3.77	–	–	005315
6	125	4.92	117	4.6	–	–	005316
7	146	5.74	138	5.43	–	–	005893
8	167	6.57	159	6.25	54	2.12	005166
9	188	7.4	180	7.08	54	2.12	005241
10	209	8.22	201	7.91	75	2.95	005819
11	230	9.05	222	8.74	75	2.95	005242
12	251	9.88	243	9.56	96	3.77	005222

Manifolds for valves with 24.5 mm coil (SG3)

Note:

- Dimensions in mm
- Can be combined with Type 7012 valves with coil size 24.5 mm [0.965 in] or with valves with function B



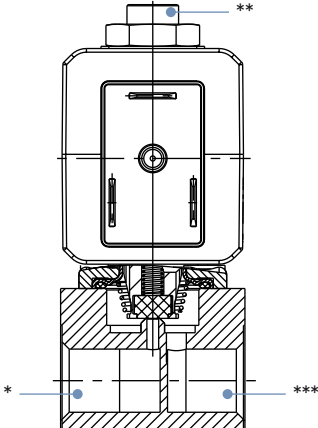
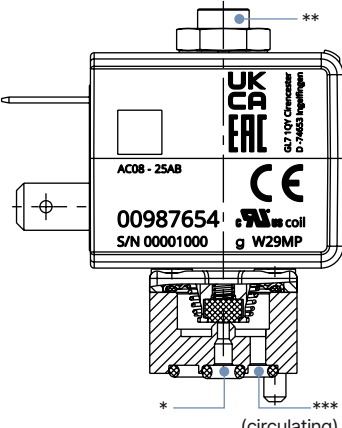
Quantity of valve slots	A		B		C		Article no.
	[mm]	[in]	[mm]	[in]	[mm]	[in]	
2	46	1.81	38	1.49	–	–	60021427
3	72	2.83	64	2.51	–	–	60021342
4	98	3.85	90	3.54	–	–	60021429
5	124	4.88	116	4.56	–	–	60021428
6	150	5.9	142	5.59	–	–	60021442
7	176	6.92	168	6.61	–	–	20060327
8	202	7.95	194	7.63	64	2.51	20060338
9	228	8.97	220	8.66	64	2.51	20060341
10	254	10	246	9.67	90	3.54	20015744
11	280	11.02	272	10.7	90	3.54	20060374
12	306	12.04	298	11.73	116	4.56	20060376

6. Product connections

6.1. Port connection

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			Threaded variant	Flange variant
	*	**	***		
A	P	to lock	A		
B	to lock	B	P		
C	P	R	A		
D	R	P	B		
T	P	R	A		

7. Performance specifications

7.1. Power consumption

Standard variant, coil size 24.5 mm [0.96 in]

Coil	Orifice	Electrical power					Switching times ¹⁾			
		Inrush AC	Hold AC		DC		Opening	Closing		
	[mm]	[VA]	[VA]	[W]	Cold [W]	Warm [W]	[ms]	[ms]		
24 V/DC/7 W	1.2	–	–	–	7	5.5	8...12	8...12		
	1.6									
	2.0									
24 V/DC/5.5 W	1.2	–	–	–	5.5	4.5				
	1.6									
	2.0									
24 V/50 Hz/4 W	1.2	12	6.5	4	–	–				
	1.6									
	2.0									
230 V/50 Hz/4 W	1.2	12	6.5	4	–	–				
	1.6									
	2.0									

1.) Measurement at + 68 °F, 87 psi²⁾ at the valve outlet acc. to DIN ISO 12238:2001, opening: pressure build-up 0...10 %, closing: pressure reduction 100...90 %

2.) Pressure data: overpressure to atmospheric pressure and air as a medium

Standard variant, coil size 20 mm [0.79 in]

Coil	Orifice	Electrical power					Switching times ¹⁾	
		Inrush AC	Hold AC		DC		Opening	Closing
	[mm]	[VA]	[VA]	[W]	Cold [W]	Warm [W]	[ms]	[ms]
24 V / DC / 6.5 W	1.2	–	–	–	6.5	5	8...12	8...12
	1.6							
	2.0							
24 V / 50 Hz / 6 W	1.2	11	7	6	–	–		
	1.6							
	2.0							
230 V / 50 Hz / 6 W	1.2	11	7	6	–	–		
	1.6							
	2.0							
24 V / DC / 5 W	1.2	–	–	–	5	4		
	1.6							
	2.0							
24 V / 50 Hz / 4 W	1.2	9	5	4	–	–		
	1.6							
	2.0							
230 V / 50 Hz / 4 W	1.2	9	5	4	–	–		
	1.6							
	2.0							

1.) Measurement at + 68 °F, 87 psi²⁾ at the valve outlet acc. to DIN ISO 12238:2001, opening: pressure build-up 0...10 %, closing: pressure reduction 100...90 %

2.) Pressure data: overpressure to atmospheric pressure and air as a medium

8. Ordering information

8.1. 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.

[Order online now](#)

8.2. Bürkert product filter

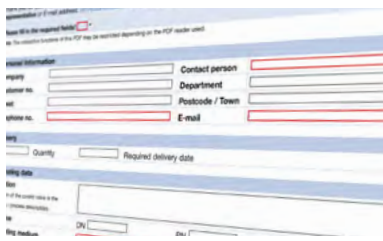


Bürkert product filter – Get quickly to the right product

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.

[Try out our product filter](#)

8.3. 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.

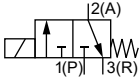
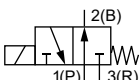
[Fill out the form now](#)

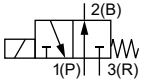
8.4. Ordering chart

Standard variant according to industry standard form B, coil size 24.5 mm [0.96 in], coil UL Recognized (cURus)

Note:

All valves are delivered without a cable plug.

Circuit function	Port connection	Orifice	C _v value water ¹⁾	Voltage/ Frequency/ Power	Maximum duty cycle	Pressure range ²⁾ (MAWP ³⁾)		Article no.	
						Ambient temperature + 167 °F	Ambient temperature + 131 °F	Brass body	Stainless steel body
		[mm]	[gal/min]	[V/Hz/W]		Air + water [psi]	Air + water [psi]	FKM seal	
CF C 3/2-way solenoid valve Direct-acting Normally closed 	NPT 1/8	1.2	0.05	24 / DC / 7	100 % ED	–	0...189	o. r.	o. r.
				24 / DC / 5.5		0...167	0...167	o. r.	o. r.
				24 / 60 / 4		0...189	0...189	o. r.	o. r.
				120 / 60 / 4		0...189	0...189	o. r.	o. r.
				240 / 60 / 4		0...189	0...189	o. r.	o. r.
		1.6	0.07	24 / DC / 7	100 % ED	–	0...109	o. r.	o. r.
				24 / DC / 5.5		0...87	0...87	o. r.	o. r.
				24 / 60 / 4		0...109	0...109	o. r.	o. r.
				120 / 60 / 4		0...109	0...109	o. r.	o. r.
				240 / 60 / 4		0...109	0...109	o. r.	o. r.
		2.0 ⁴⁾	0.13	24 / DC / 7	100 % ED	–	0...102	o. r.	o. r.
				24 / DC / 5.5		0...73	0...73	o. r.	o. r.
				24 / 60 / 4		0...87	0...87	o. r.	o. r.
				120 / 60 / 4		0...87	0...87	o. r.	o. r.
				240 / 60 / 4		0...87	0...87	o. r.	o. r.
	Manifold (FK01)	1.2	0.05	24 / DC / 7	100 % ED	–	0...189	379906 ㉞	380132 ㉞
				24 / DC / 5.5		0...167	0...167	390269 ㉞	390271 ㉞
				24 / 60 / 4		0...189	0...189	o. r.	o. r.
				120 / 60 / 4		0...189	0...189	o. r.	o. r.
				240 / 60 / 4		0...189	0...189	o. r.	o. r.
		1.6	0.07	24 / DC / 7	100 % ED	–	0...109	379915 ㉞	380137 ㉞
				24 / DC / 5.5		0...87	0...87	390275 ㉞	390273 ㉞
				24 / 60 / 4		0...109	0...109	o. r.	o. r.
				120 / 60 / 4		0...109	0...109	o. r.	o. r.
				240 / 60 / 4		0...109	0...109	o. r.	o. r.
		2.0 ⁴⁾	0.13	24 / DC / 7	100 % ED	–	0...102	o. r.	o. r.
				24 / DC / 5.5		0...73	0...73	o. r.	o. r.
				24 / 60 / 4		0...87	0...87	o. r.	o. r.
				120 / 60 / 4		0...87	0...87	o. r.	o. r.
				240 / 60 / 4		0...87	0...87	o. r.	o. r.
CF D 3/2-way solenoid valve Direct-acting Normally open 	NPT 1/8	1.2	0.05	24 / DC / 5.5	100 % ED	0...145	0...145	o. r.	o. r.
				24 / 60 / 4		0...145	0...145	o. r.	o. r.
				120 / 60 / 4		0...145	0...145	o. r.	o. r.
				240 / 60 / 4		0...145	0...145	o. r.	o. r.
		1.6	0.07	24 / DC / 5.5	100 % ED	0...87	0...87	o. r.	o. r.
				24 / 60 / 4		0...87	0...87	o. r.	o. r.
				120 / 60 / 4		0...87	0...87	o. r.	o. r.
				240 / 60 / 4		0...87	0...87	o. r.	o. r.
		2.0 ⁴⁾	0.13	24 / DC / 5.5	100 % ED	0...116	0...116	o. r.	o. r.
				24 / 60 / 4		0...102	0...102	o. r. ⁵⁾	o. r. ⁵⁾
				120 / 60 / 4		0...102	0...102	o. r. ⁵⁾	o. r. ⁵⁾
				240 / 60 / 4		0...102	0...102	o. r. ⁵⁾	o. r. ⁵⁾
				240 / 60 / 4		0...102	0...102	o. r. ⁵⁾	o. r. ⁵⁾

Circuit function	Port connection	Orifice	C _v value water ^{1.)}	Voltage/ Frequency/ Power	Maximum duty cycle	Pressure range ^{2.)} (MAWP ^{3.)}		Article no.	
						Ambient temperature + 167 °F	Ambient temperature + 131 °F	Brass body	Stainless steel body
		[mm]	[gal/min]	[V/Hz/W]		Air + water [psi]	Air + water [psi]	FKM seal	
CF D 3/2-way solenoid valve Direct-acting Normally open 	Manifold (FK01)	1.2	0.05	24 / DC / 5.5	100 % ED	0...145	0...145	390450 ☞	390452 ☞
				24 / 60 / 4		0...145	0...145	o. r.	o. r.
				120 / 60 / 4		0...145	0...145	o. r.	o. r.
				240 / 60 / 4		0...145	0...145	o. r.	o. r.
		1.6	0.07	24 / DC / 5.5	100 % ED	0...87	0...87	390462 ☞	390464 ☞
				24 / 60 / 4		0...87	0...87	o. r.	o. r.
				120 / 60 / 4		0...87	0...87	o. r.	o. r.
				240 / 60 / 4		0...87	0...87	o. r.	o. r.
		2.0 ^{4.)}	0.13	24 / DC / 5.5	100 % ED	0...116	0...116	o. r.	o. r.
				24 / 60 / 4		0...102	0...102	o. r. ^{5.)}	o. r. ^{5.)}
				120 / 60 / 4		0...102	0...102	o. r. ^{5.)}	o. r. ^{5.)}
				240 / 60 / 4		0...102	0...102	o. r. ^{5.)}	o. r. ^{5.)}

o. r. = on request

1.) Measurement at + 68 °F, 14.5^{2.)} bar at the valve inlet and free outlet

2.) Pressure data: overpressure to atmospheric pressure and air as a medium

3.) Maximum allowable working pressure

4.) Limited swelling compensation

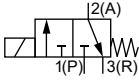
5.) Can also be feasible with coil size 2

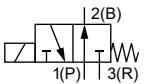
valvesgo.com

Standard variant according to industry standard form B, coil size 20 mm [0.79 in], coil UL Recognized (cURus)

Note:

All valves are delivered without a cable plug.

Circuit function	Port connection	Orifice	C _v value water ¹⁾	Voltage/ Frequency/ Power	Maximum duty cycle	Pressure range ²⁾ (MAWP ³⁾)		Article no.	
						Ambient temperature + 167 °F	Ambient temperature + 131 °F	Brass body	Stainless steel body
		[mm]	[gal/min]	[V/Hz/W]		Air + water [psi]	Air + water [psi]	FKM seal	
CFC 3/2-way solenoid valve Direct-acting Normally closed 	NPT 1/8	1.2	0.05	24 / DC / 6.5	100 % ED	–	0...160	o. r.	o. r.
				24 / 60 / 6		–	0...189	o. r.	o. r.
				120 / 60 / 6		–	0...189	o. r.	o. r.
				240 / 60 / 6		–	0...189	o. r.	o. r.
				24 / DC / 5		0...145	0...145	o. r.	o. r.
				24 / 60 / 4		0...160	0...160	o. r.	o. r.
				120 / 60 / 4		0...160	0...160	o. r.	o. r.
				240 / 60 / 4		0...160	0...160	o. r.	o. r.
		1.6	0.07	24 / DC / 6.5	100 % ED	–	0...87	o. r.	o. r.
				24 / 60 / 6		–	0...109	o. r.	o. r.
				120 / 60 / 6		–	0...109	o. r.	o. r.
				240 / 60 / 6		–	0...109	o. r.	o. r.
				24 / DC / 5		0...80	0...80	o. r.	o. r.
				24 / 60 / 4		0...87	0...87	o. r.	o. r.
				120 / 60 / 4		0...87	0...87	o. r.	o. r.
				240 / 60 / 4		0...87	0...87	o. r.	o. r.
		2.0 ⁴⁾	0.13	24 / DC / 6.5	100 % ED	–	0...73	o. r.	o. r.
				24 / 60 / 6		–	0...87	o. r.	o. r.
				120 / 60 / 6		–	0...87	o. r.	o. r.
				240 / 60 / 6		–	0...87	o. r.	o. r.
				24 / DC / 5		0...58	0...58	o. r.	o. r.
				24 / 60 / 4		0...80	0...80	o. r.	o. r.
				120 / 60 / 4		0...80	0...80	o. r.	o. r.
				240 / 60 / 4		0...80	0...80	o. r.	o. r.
	Manifold (FK01)	1.2	0.05	24 / DC / 6.5	100 % ED	–	0...160	o. r.	o. r.
				24 / 60 / 6		–	0...189	o. r.	o. r.
				120 / 60 / 6		–	0...189	o. r.	o. r.
				240 / 60 / 6		–	0...189	o. r.	o. r.
				24 / DC / 5		0...145	0...145	o. r.	o. r.
				24 / 60 / 4		0...160	0...160	o. r.	o. r.
				120 / 60 / 4		0...160	0...160	o. r.	o. r.
				240 / 60 / 4		0...160	0...160	o. r.	o. r.
		1.6	0.07	24 / DC / 6.5	100 % ED	–	0...87	o. r.	o. r.
				24 / 60 / 6		–	0...109	o. r.	o. r.
				120 / 60 / 6		–	0...109	o. r.	o. r.
				240 / 60 / 6		–	0...109	o. r.	o. r.
				24 / DC / 5		0...80	0...80	o. r.	o. r.
				24 / 60 / 4		0...87	0...87	o. r.	o. r.
				120 / 60 / 4		0...87	0...87	o. r.	o. r.
				240 / 60 / 4		0...87	0...87	o. r.	o. r.
		2.0 ⁴⁾	0.13	24 / DC / 6.5	100 % ED	–	0...73	o. r.	o. r.
				24 / 60 / 6		–	0...87	o. r.	o. r.
				120 / 60 / 6		–	0...87	o. r.	o. r.
				240 / 60 / 6		–	0...87	o. r.	o. r.
				24 / DC / 5		0...58	0...58	o. r.	o. r.
				24 / 60 / 4		0...80	0...80	o. r.	o. r.
				120 / 60 / 4		0...80	0...80	o. r.	o. r.
				240 / 60 / 4		0...80	0...80	o. r.	o. r.

Circuit function	Port connection	Orifice	C _v value water ¹⁾	Voltage/ Frequency/ Power	Maximum duty cycle	Pressure range ²⁾ (MAWP ³⁾)		Article no.	
						Ambient temperature + 167 °F	Ambient temperature + 131 °F	Brass body	Stainless steel body
		[mm]	[gal/min]	[V/Hz/W]		Air + water [psi]	Air + water [psi]	FKM seal	
CF D 3/2-way solenoid valve Direct-acting Normally open 	NPT 1/8	1.2	0.05	24 / DC / 5	100 % ED	0...145	0...145	o. r.	o. r.
				24 / 60 / 4		0...145	0...145	o. r.	o. r.
				120 / 60 / 4		0...145	0...145	o. r.	o. r.
				240 / 60 / 4		0...145	0...145	o. r.	o. r.
		1.6	0.07	24 / DC / 5	100 % ED	0...87	0...87	o. r.	o. r.
				24 / 60 / 4		0...87	0...87	o. r.	o. r.
				120 / 60 / 4		0...87	0...87	o. r.	o. r.
				240 / 60 / 4		0...87	0...87	o. r.	o. r.
		2.0 ⁴⁾	0.13	24 / DC / 6.5	100 % ED	–	0...116	o. r.	o. r.
				24 / DC / 5		0...87	0...87	o. r.	o. r.
				24 / 60 / 4		0...102	0...102	o. r.	o. r.
				120 / 60 / 4		0...102	0...102	o. r.	o. r.
				240 / 60 / 4		0...102	0...102	o. r.	o. r.
	Manifold (FK01)	1.2	0.05	24 / DC / 5	100 % ED	0...87	0...87	o. r.	o. r.
				24 / DC / 5.5		0...6	0...6	o. r.	o. r.
				24 / 60 / 4		0...87	0...87	o. r.	o. r.
				120 / 60 / 4		0...87	0...87	o. r.	o. r.
				240 / 60 / 4		0...87	0...87	o. r.	o. r.
		1.6	0.07	24 / DC / 5	100 % ED	0...87	0...87	o. r.	o. r.
				24 / 60 / 4		0...87	0...87	o. r.	o. r.
				120 / 60 / 4		0...87	0...87	o. r.	o. r.
				240 / 60 / 4		0...87	0...87	o. r.	o. r.
		2.0 ⁴⁾	0.13	24 / DC / 6.5	100 % ED	–	0...116	o. r.	o. r.
				24 / DC / 5		0...87	0...87	o. r.	o. r.
				24 / 60 / 4		0...102	0...102	o. r.	o. r.
				120 / 60 / 4		0...102	0...102	o. r.	o. r.
				240 / 60 / 4		0...102	0...102	o. r.	o. r.

o. r. = on request

1.) Measurement at + 68 °F, 14.5²⁾ bar at the valve inlet and free outlet

2.) Pressure data: overpressure to atmospheric pressure and air as a medium

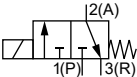
3.) Maximum allowable working pressure

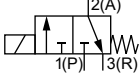
4.) Limited swelling compensation

Banjo variant, coil UL Recognized (cURus)

Note:

- All valves are delivered without a cable plug.
- Coil size 24.5 mm [0.96 in]
- Orifices 1.6 mm and 2.0 mm on request.

Circuit function	Port connection	Orifice	Q _{Nh} value air ¹⁾	Voltage/Frequency/ Power	Maximum duty cycle	Medium pressure ²⁾ (MAWP ³⁾)	Article no.	
						Ambient temperature max. + 131 °F resp. + 167 °F ⁴⁾		
						Air		FKM seal
		[mm]	[gal/min]			[V/Hz/W]		
CFC 3/2-way solenoid valve Direct-acting Normally closed 	BJ01 P: G 1/8 A: G 1/8	1.2	9.2	24 / DC / 7	100 % ED	0...189	20077509 	
				24 / DC / 5.5		0...167	20087634 	
				24 / 50 / 4		0...189	20077511 	
				230 / 50 / 4		0...189	20070709 	
		1.6	12.7	24 / DC / 7	100 % ED	0...109	o. r.	
				24 / DC / 5.5		0...87	o. r.	
				24 / 50 / 4		0...109	o. r.	
				230 / 50 / 4		0...109	o. r.	
		2.0	19.8	24 / DC / 7	100 % ED	0...102	o. r.	
				24 / DC / 5.5		0...80	o. r.	
				24 / 50 / 4		0...87	o. r.	
				230 / 50 / 4		0...87	o. r.	
	BJ02 P: G 1/4 A: G 1/4	1.2	9.2	24 / DC / 7	100 % ED	0...189	20077512 	
				24 / DC / 5.5		0...167	20077514 	
				24 / 50 / 4		0...189	20077516 	
				230 / 50 / 4		0...189	20077519 	
		1.6	12.7	24 / DC / 7	100 % ED	0...109	o. r.	
				24 / DC / 5.5		0...87	o. r.	
				24 / 50 / 4		0...109	o. r.	
				230 / 50 / 4		0...109	o. r.	
		2.0	19.8	24 / DC / 7	100 % ED	0...102	o. r.	
				24 / DC / 5.5		0...80	o. r.	
				24 / 50 / 4		0...87	o. r.	
				230 / 50 / 4		0...87	o. r.	
	BJ03 P: NPT 1/4 A: G 1/8	1.2	9.2	24 / DC / 7	100 % ED	0...189	20077523 	
				24 / DC / 5.5		0...167	20077564 	
				24 / 50 / 4		0...189	20077570 	
				230 / 50 / 4		0...189	20077574 	
		1.6	12.7	24 / DC / 7	100 % ED	0...109	o. r.	
				24 / DC / 5.5		0...87	o. r.	
				24 / 50 / 4		0...109	o. r.	
				230 / 50 / 4		0...109	o. r.	
		2.0	19.8	24 / DC / 7	100 % ED	0...102	o. r.	
				24 / DC / 5.5		0...80	o. r.	
				24 / 50 / 4		0...87	o. r.	
				230 / 50 / 4		0...87	o. r.	
	BJ04 P: NPT 1/8 A: G 1/4	1,2	35	24 / DC / 7	100 % ED	0...13	20092001 	
				24 / DC / 5,5		0...11,5	20082092 	
				24 / 50 / 4		0...13	20137198 	
				230 / 50 / 4		0...13	20096957 	
		1,6	48	24 / DC / 7	100 % ED	0...7,5	o. r.	
				24 / DC / 5,5		0...6	o. r.	
				24 / 50 / 4		0...7,5	o. r.	
				230 / 50 / 4		0...7,5	o. r.	
		2,0	75	24 / DC / 7	100 % ED	0...7	o. r.	
				24 / DC / 5,5		0...5,5	o. r.	
				24 / 50 / 4		0...6	o. r.	
				230 / 50 / 4		0...6	o. r.	

Circuit function	Port connection	Orifice	Q _{Nn} value air ^{1.)}	Voltage/Frequency/ Power	Maximum duty cycle	Medium pressure ^{2.)} (MAWP ^{3.)})	Article no.
						Ambient temperature max. + 131 °F resp. + 167 °F ^{4.)}	
		[mm]	[gal/min]			Air [psi]	
CFC 3/2-way solenoid valve Direct-acting Normally closed 	BJ05 P: G ¼ A: G ⅜	1.2	9.2	24 / DC / 7	100 % ED	0...189	20077596 ☒
				24 / DC / 5.5		0...167	20077598 ☒
				24 / 50 / 4		0...189	20077604 ☒
				230 / 50 / 4		0...189	20077609 ☒
		1.6	12.7	24 / DC / 7	100 % ED	0...109	o. r.
				24 / DC / 5.5		0...87	o. r.
				24 / 50 / 4		0...109	o. r.
				230 / 50 / 4		0...109	o. r.
		2.0	19.8	24 / DC / 7	100 % ED	0...102	o. r.
				24 / DC / 5.5		0...80	o. r.
				24 / 50 / 4		0...87	o. r.
				230 / 50 / 4		0...87	o. r.
	BJ06 P: G ⅝ A: G ¾	1.2	35	24 / DC / 7	100 % ED	0...13	20098864 ☒
				24 / DC / 5.5		0...11.5	20087550 ☒
				24 / 50 / 4		0...13	20098869 ☒
				230 / 50 / 4		0...13	20098870 ☒
		1.6	48	24 / DC / 7	100 % ED	0...7.5	o. r.
				24 / DC / 5.5		0...6	o. r.
				24 / 50 / 4		0...7.5	o. r.
				230 / 50 / 4		0...7.5	o. r.
		2.0	75	24 / DC / 7	100 % ED	0...7	o. r.
				24 / DC / 5.5		0...5.5	o. r.
				24 / 50 / 4		0...6	o. r.
				230 / 50 / 4		0...6	o. r.
	BJ07 P: NPT ⅜ A: G ⅜	1.2	9.2	24 / DC / 7	100 % ED	0...189	20077610 ☒
				24 / DC / 5.5		0...167	20077615 ☒
				24 / 50 / 4		0...189	20077618 ☒
				230 / 50 / 4		0...189	20077626 ☒
		1.6	12.7	24 / DC / 7	100 % ED	0...109	o. r.
				24 / DC / 5.5		0...87	o. r.
				24 / 50 / 4		0...109	o. r.
				230 / 50 / 4		0...109	o. r.
		2.0	19.8	24 / DC / 7	100 % ED	0...102	o. r.
				24 / DC / 5.5		0...80	o. r.
				24 / 50 / 4		0...87	o. r.
				230 / 50 / 4		0...87	o. r.

o. r. = on request

1.) For P1: 6 bar [87 psi] absolute and P2: 5 bar [73 psi] absolute

2.) Pressure data: overpressure to atmospheric pressure and air as a medium

3.) Maximum allowable working pressure

4.) Depending on the performance level

Additional options

Note:

Available on request

Option	Variable Code	Description
Oxygen variants	NL02	Suitable for applications with oxygen (non-metal materials that are in contact with the medium are tested and approved according to BAM)
Increased purity requirements e.g. oil, grease and silicone-free	NL50/NL05	Wetted parts are specially cleaned and packaged in accordance with the valves
Increased tightness requirements	PC05	Leakage rate *less than 10^{-4} mbar l/sec
	PC08	Leakage rate *less than 10^{-5} mbar l/sec
	PC06	Leakage rate *less than 10^{-6} mbar l/sec
Vacuum variant	on request	–

8.5. Ordering chart accessories

Single manifold

Note:

 Further ordering information can be found in chapter [“5.4. Single manifold” on page 14.](#)

Multiple manifold

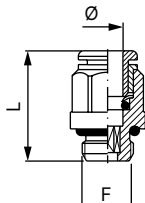
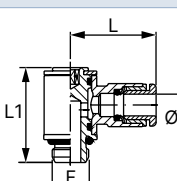
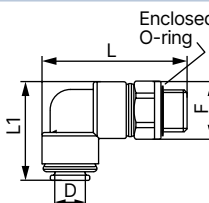
Note:

 Further ordering information can be found in chapter [“5.5. Multiple manifold” on page 15.](#)

Accessories for manifolds

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

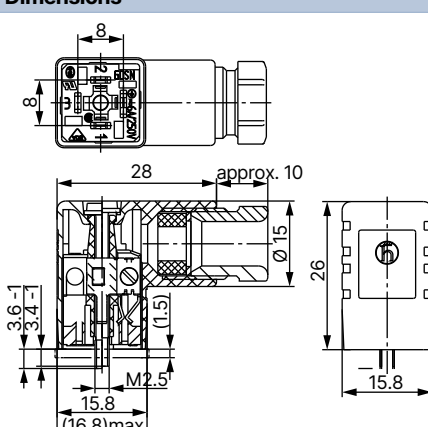
Accessories for G 1/8 threaded connections

Accessories	Material	Connection diameter	F	L		L1		Article no.
		[mm]	[mm]	[mm]	[inch]	[mm]	[inch]	
Straight push-in connector with O-ring								
	Nickel-plated brass	4	G 1/8	18.0	0.71	–	–	780001 
		6	G 1/8	21.6	0.85	–	–	780003 
		8	G 1/8	25.4	1	–	–	780005 
Elbow screw fitting, rotatable with O-ring								
	Nickel-plated brass	4	G 1/8	21.3	0.84	24.9	0.98	780081 
		6	G 1/8	23.0	0.91	24.9	0.98	780082 
		8	G 1/8	24.8	0.98	24.9	0.98	780086 
	POM	4	G 1/8	35.5	1.4	24.0	0.94	782344 
		6	G 1/8	39.5	1.56	27.0	1.06	782345 
		8	G 1/8	41.5	1.63	30.0	1.18	782346 

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

Note:

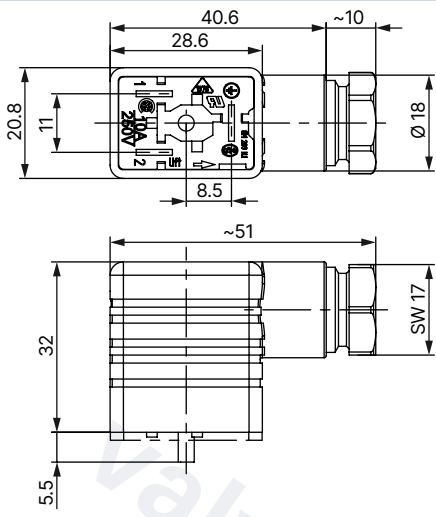
- Dimensions in mm
- Delivery of cable plug includes a flat seal and a fastening screw.
- For further variants see data sheet **Type 2516** .

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 

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	2...250 V AC/DC	423854 
			12...24 V AC/DC	423853 