



## 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.

## Table of contents

<b>1. General technical data</b>	<b>4</b>
1.1. Standard and banjo version.....	4
1.2. ATEX/IECEX cable version.....	5
<b>2. Circuit functions</b>	<b>5</b>
<b>3. Approvals and conformities</b>	<b>6</b>
3.1. General notes.....	6
3.2. Conformity.....	6
3.3. Standards.....	6
3.4. Explosion protection.....	6
3.5. North America (USA/Canada).....	6
3.6. Foods and beverages/Hygiene.....	6
<b>4. Materials</b>	<b>7</b>
4.1. Bürkert resistApp.....	7
4.2. Material specifications.....	7
Standard version.....	7
Banjo version.....	8
<b>5. Dimensions</b>	<b>9</b>
5.1. Standard version.....	9
Threaded version.....	9
Flange version.....	10
Flange pattern.....	11
5.2. Coil versions.....	11
Versions according to industry standard form B.....	11
Further electrical connections.....	12
5.3. Banjo version.....	12
With 76 mm banjo bolt.....	12
With 60 mm banjo bolt.....	13
With enclosed push-in hose connector, rotatable.....	13
5.4. Single manifold.....	14
5.5. Multiple manifold.....	15
Manifolds for valves with 20 mm coil (SG2).....	15
Manifolds for valves with 24.5 mm coil (SG3).....	16
<b>6. Device/Process connections</b>	<b>17</b>
6.1. Pin assignment.....	17
<b>7. Performance specifications</b>	<b>18</b>
7.1. Power consumption.....	18
Standard version, coil size 24.5 mm [0.96 in].....	18
Standard version, coil size 20 mm [0.79 in].....	18

<b>8. Ordering information</b>	<b>19</b>
8.1. Bürkert eShop .....	19
8.2. Bürkert product filter .....	19
8.3. Bürkert Product Enquiry Form .....	19
8.4. Ordering chart .....	20
Standard version according to industry standard form B, coil size 24.5 mm [0.96 in], coil UL Recognized (cURus) .....	20
Standard version according to industry standard form B, coil size 20 mm [0.79 in], coil UL Recognized (cURus) .....	22
Banjo version, coil UL Recognized (cURus) .....	24
Additional options .....	26
8.5. Ordering chart accessories .....	26
Single manifold .....	26
Multiple manifold .....	26
Accessories for manifolds .....	26
Accessories for G 1/8" threaded connections .....	27
Cable plug Type 2516, form C according to DIN EN 175301 - 803 .....	27
Cable plug Type 2507, form B according to industry standard .....	28

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | validé) printed: 12.02.2025

## 1. General technical data

### 1.1. Standard and banjo version

Product properties	
Dimensions	Further information can be found in chapter <a href="#">"5. Dimensions" on page 9.</a>
<b>Material</b>	
Seal	FKM, EPDM
Body	Brass, polyamide (PA), stainless steel 1.4305/303
Manual override	Optional, standard for Type 7012 banjo version
<b>Weight</b>	
Standard version 24.5 mm solenoid coil	5 ¼ oz (with NPT ⅛)
Standard version 20 mm solenoid coil	4 ¼ oz (with NPT ⅛)
Banjo version	4 ¾ oz
Orifice	DN 1.2...DN 2.0
Circuit function	C and D Further information can be found in chapter <a href="#">"2. Circuit functions" on page 5.</a>
Thermal insulation class of solenoid coil	Epoxy coil class H
Performance data	
<b>Duty cycle</b>	
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)
<b>Switching time<sup>1)</sup></b>	
Standard version	Orifice 1.2...1.6 mm: opening 8...12 ms, closing 8...12 ms
Banjo version	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 <a href="#">"7. Performance specifications" on page 18.</a>
Voltage tolerance	± 10 %
Medium data	
Operating medium	Neutral gases and fluids (e.g. compressed air, water, hydraulic oil, technical vacuum)
<b>Medium temperature</b>	
Standard version	+ 14 °F...+ 212 °F
Banjo version	+ 14 °F...+ 140 °F
Viscosity	Max. 21 cSt
Process/Port connection & communication	
Electrical connection	<ul style="list-style-type: none"> <li>Plug contacts according to DIN EN 175301 - 80 form C for cable plug <b>Type 2516</b> ►. Further information can be found in chapter <a href="#">"Cable plug Type 2516, form C according to DIN EN 175301 - 803" on page 27.</a></li> <li>Plug contacts according to industry standard form B for cable plug <b>Type 2507</b> ►. Further information can be found in chapter <a href="#">"Cable plug Type 2507, form B according to industry standard" on page 28.</a></li> <li>Flat pin terminal as protection class III device</li> <li>Flying leads connection on request for coil size 20 mm</li> </ul>
<b>Port connection</b>	
Standard version	M5, G ⅜, NPT ⅛, Flange
Banjo version	G ⅜, G ¼, NPT ⅛, 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 <a href="#">"3.5. North America (USA/Canada)" on page 6.</a>
Foods and beverages/Hygiene	Further information can be found in chapter <a href="#">"3.6. Foods and beverages/Hygiene" on page 6.</a>
Environment and installation	
Installation position	As required, preferably with actuator upright
<b>Ambient temperature</b>	
Standard version	Max. + 131 °F resp. 167 °F (depending on power level)
Banjo version	+ 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 version

Product properties	
<b>Material</b>	
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.
Available coil size	SG3 (24.5 mm width)
<b>Performance data</b>	
Operating pressure	Up to 34 bar (depending on orifice and coil power)
<b>Medium data</b>	
Operating medium	Neutral gases and fluids (e.g. compressed air, water, hydraulic oil, technical vacuum)
<b>Medium temperature<sup>1)</sup></b>	
FKM	- 10 °C...+ 100 °C
EPDM	- 30 °C...+ 100 °C
<b>Process/Port connection &amp; communication</b>	
Electrical connection	ATEX/IECEx cable version with 3 m moulded-in cable
<b>Port connection</b>	
Thread	G 1/8, NPT 1/8, RC1/8, M5, UNF 10 - 32
Flange	Flange "FK01"
<b>Approvals and conformities</b>	
Degree of protection	IP65 with cable plug and ATEX/IECEx cable version
Explosion protection	Further information can be found in chapter "3.4. Explosion protection" on page 6.
<b>Environment and installation</b>	
<b>Ambient temperature<sup>1)</sup></b>	
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
	<b>Circuit function C (CF C)</b> 3/2-way solenoid valve Direct-acting Normally closed
	<b>Circuit function D (CF D)</b> 3/2-way solenoid valve Direct-acting Normally open

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | validé) printed: 12.02.2025

### 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 versions 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
 	<p><b>Optional: Explosion protection (valid for coils with fixed cable outlet)</b></p> <p><b>ATEX:</b>            EPS 21 ATEX 1 128 X            II 2G Ex mb IIC T4 Gb            II 2D Ex mb IIIC T130 °C Db</p> <p><b>IECEX:</b>            IECEX EPS 21.0045X            Ex mb IIC T4 Gb            Ex mb IIIC T130 °C Db</p> <p>Fixed cable is halogen-free according to IEC 60754 - 1</p>

#### 3.5. North America (USA/Canada)


Approval	Description
	<p><b>Valid for coils: UL Recognized for the USA and Canada</b></p> <p>The coils are UL Recognized for the USA and Canada according to:</p> <ul style="list-style-type: none"> <li>• UL 429 (electrically operated valves)</li> <li>• CAN/CSA-C22.2 No. 139</li> </ul>

#### 3.6. Foods and beverages/Hygiene

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

## 4. Materials

### 4.1. Bürkert resistApp



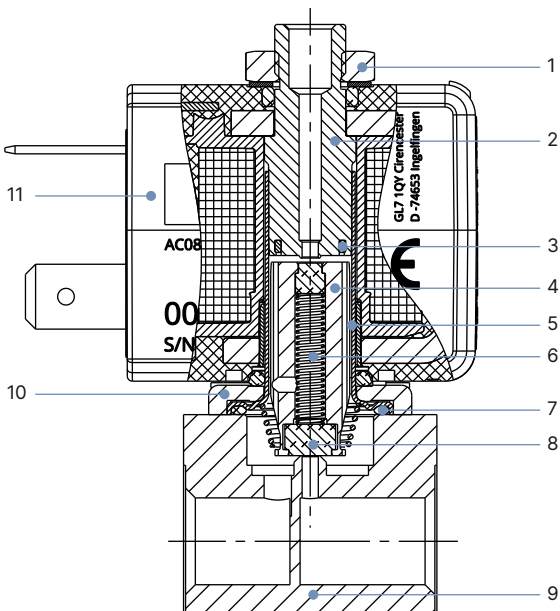
**Bürkert resistApp – Chemical resistance chart**

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

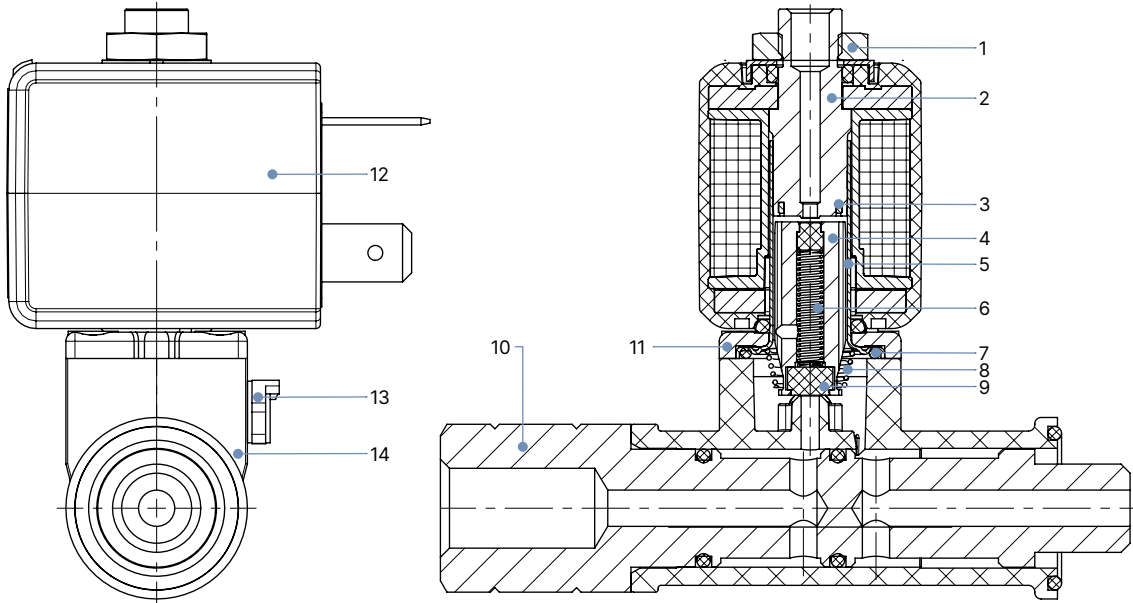
#### Standard version



No.	Element	Material
1	Locknut	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	<ul style="list-style-type: none"> <li>• Surface finish thick film passivated KOSA0101 (brass version)</li> <li>• Nickel-plated surface (stainless steel version)</li> </ul>
11	Coil	Epoxy

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | validé) printed: 12.02.2025

**Banjo version**



No.	Element	Material
1	Locknut	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	<ul style="list-style-type: none"> <li>• Surface finish thick film passivated KOSA0101 (brass version)</li> <li>• Nickel-plated surface (stainless steel version)</li> </ul>
12	Coil	Epoxy
13	Manual override	Durethan
14	Body	PPS (polyphenylene sulphide)



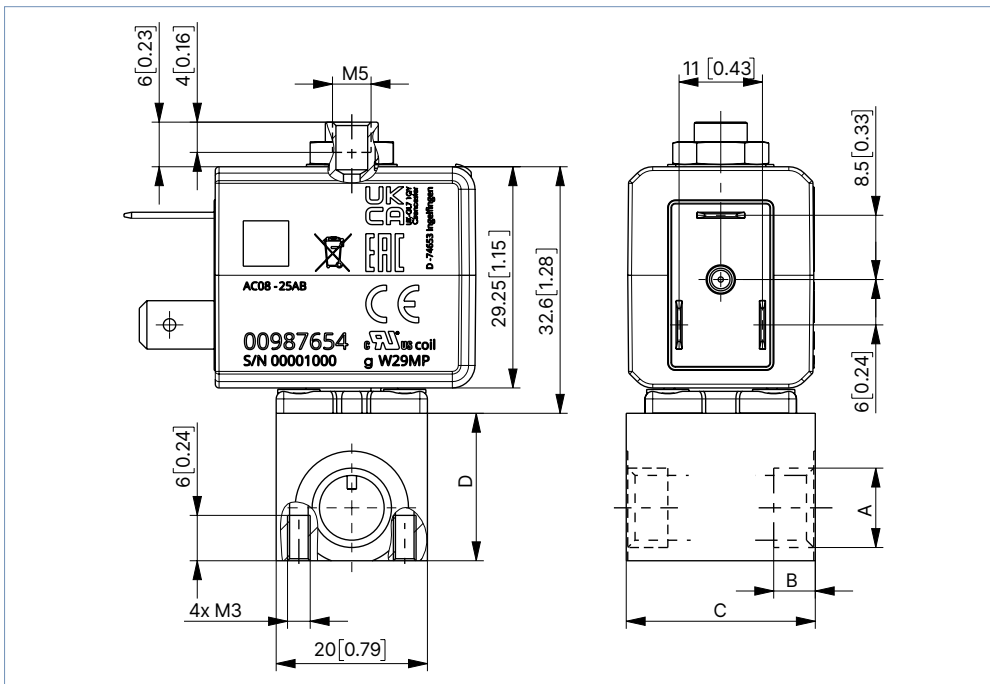
## 5. Dimensions

### 5.1. Standard version

#### Threaded version

**Note:**

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

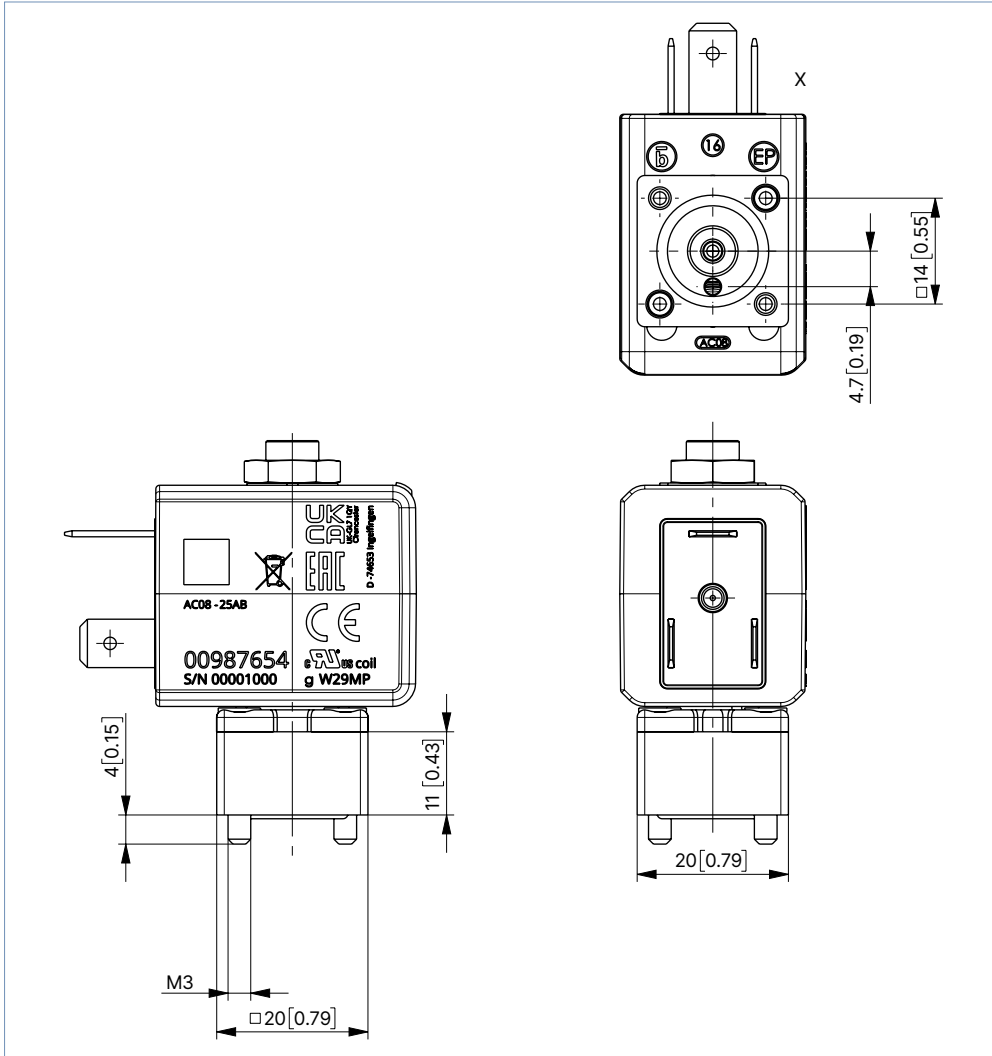


Port connection	A	B		C		D	
		[mm]	[in]	[mm]	[in]	[mm]	[in]
Thread	M5	5	0.19	20	0.78	14	0.55
	G 1/8	8	0.31	25	0.98	19.5	0.74
	NPT 1/8	7	0.31	25	0.98	19.5	0.74

**Flange version**

**Note:**

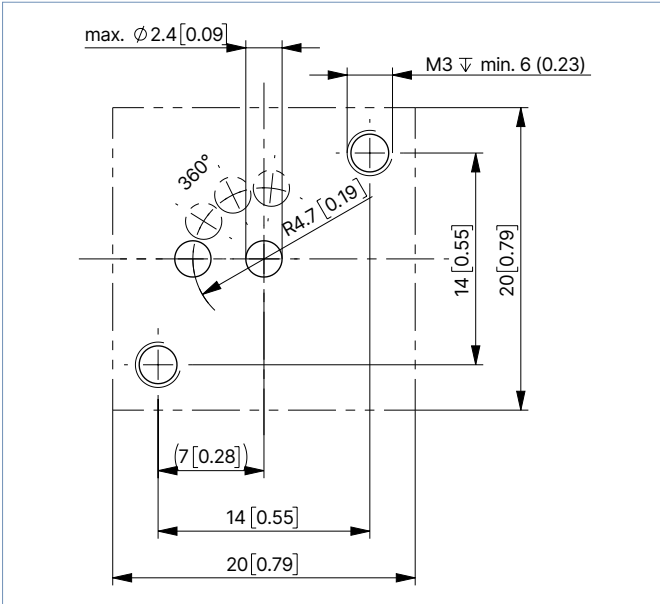
- Dimensions in mm [inch]
- Versions according to industry standard form B



**Flange pattern**

**Note:**

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

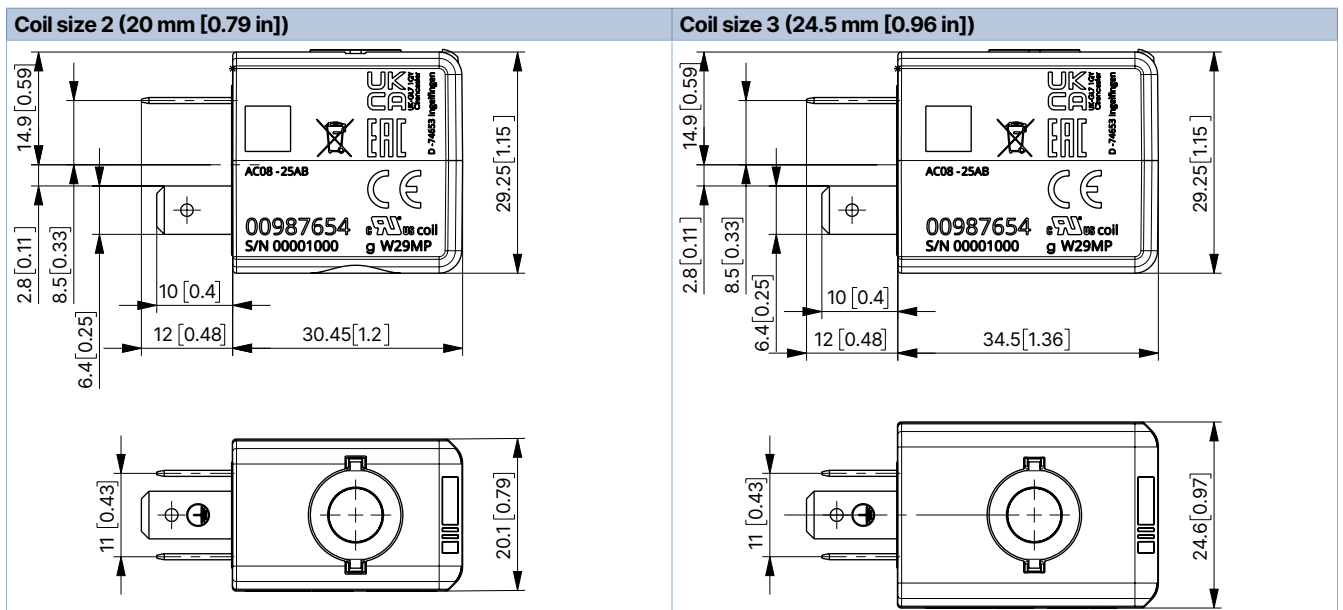


**5.2. Coil versions**

**Versions according to industry standard form B**

**Note:**

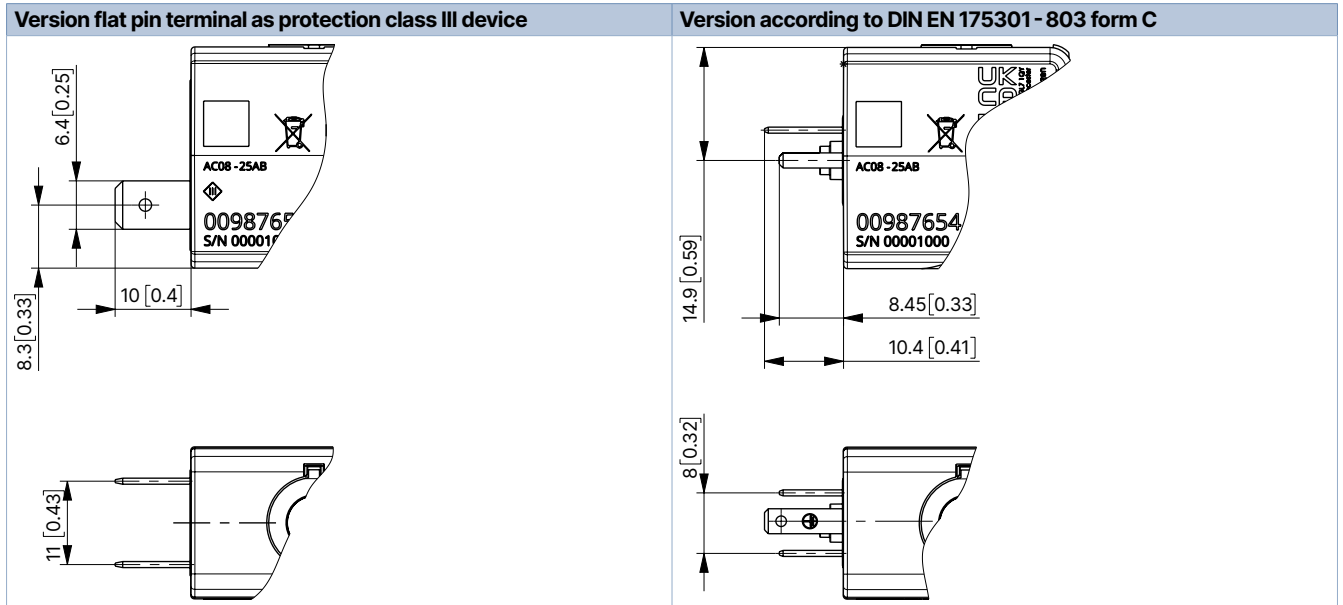
Dimensions in mm [inch]



**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]

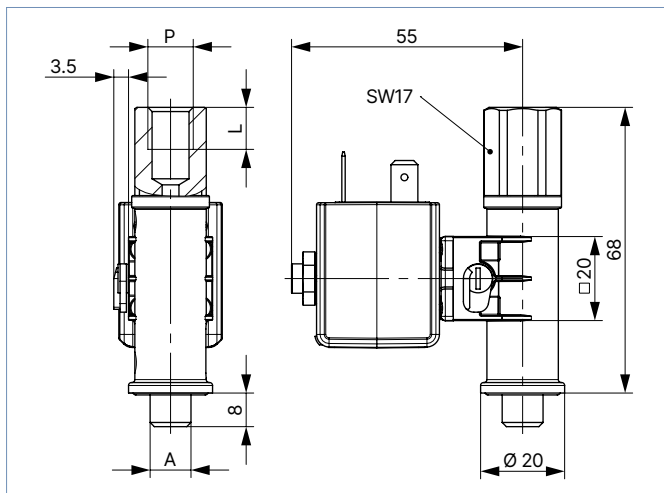


**5.3. Banjo version**

**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



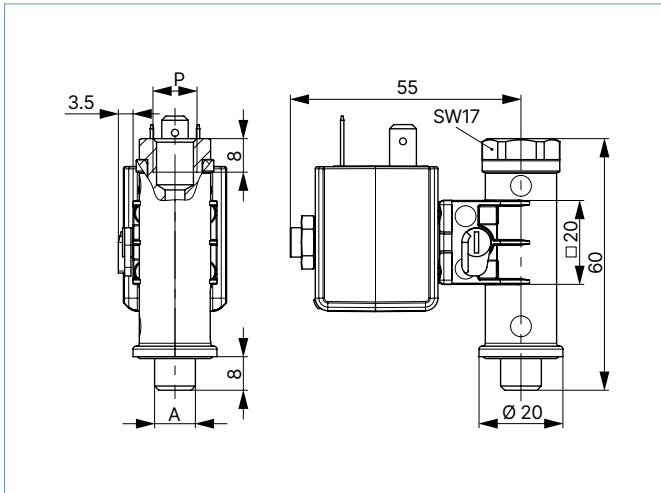
Port connection	P	A	L	
	[Zoll]	[Zoll]	[mm]	[inch]
BJ02	G ¼	G ¼	12	0.47
BJ03	NPT ¼	G ⅜	12.9	0.51
BJ04	NPT ¼	G ¼	12.9	0.51
BJ05	G ¼	G ⅜	12	0.47
BJ07	NPT ⅜	G ⅜	8.9	0.35

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | validé) printed: 12.02.2025

**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

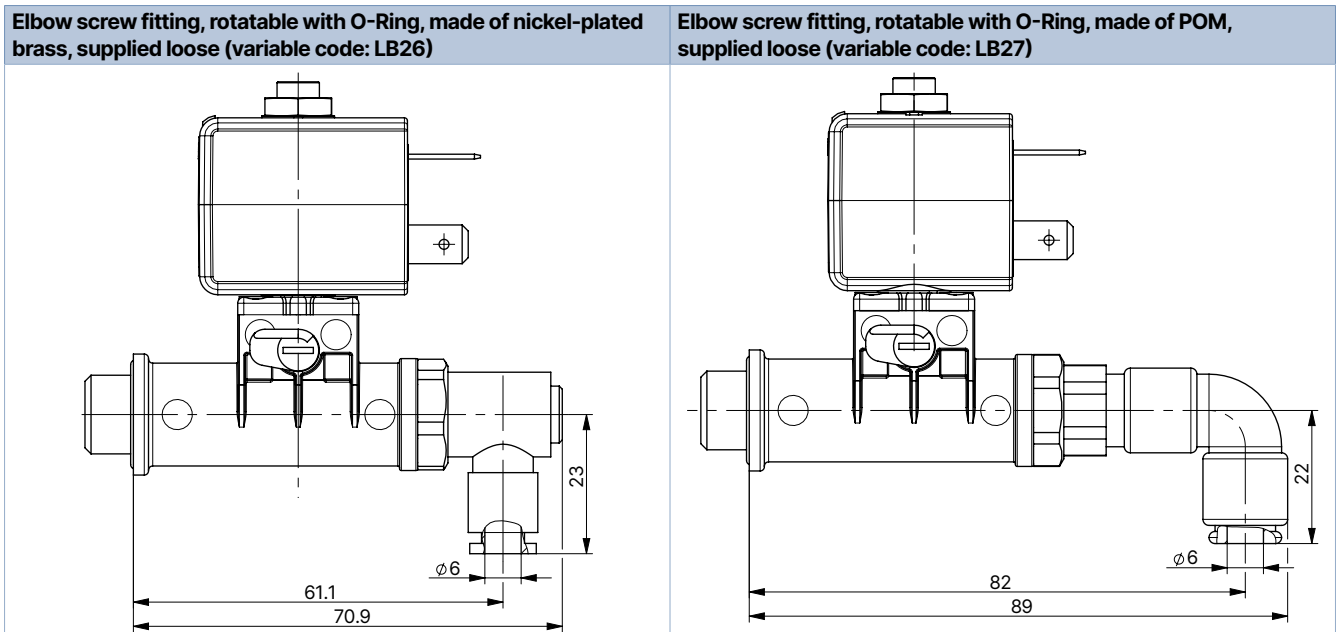


Port connection	P	A	L	
	[Zoll]	[Zoll]	[mm]	[inch]
BJ01	G 1/8	G 1/8	8	0.31
BJ06	G 1/8	G 1/4	8	0.31

**With enclosed push-in hose connector, rotatable**

**Note:**

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

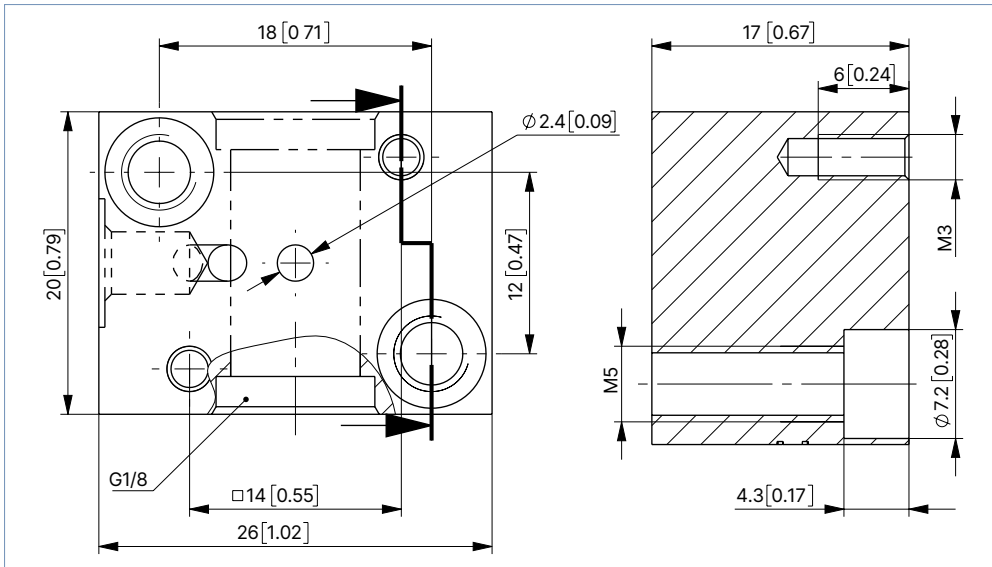


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### 5.4. Single manifold

**Note:**

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



Quantity of valve places	A		B		C		Article no.
	[mm]	[in]	[mm]	[in]	[mm]	[in]	
1	20	0.78	12	0.47	-	-	005312 𐄂

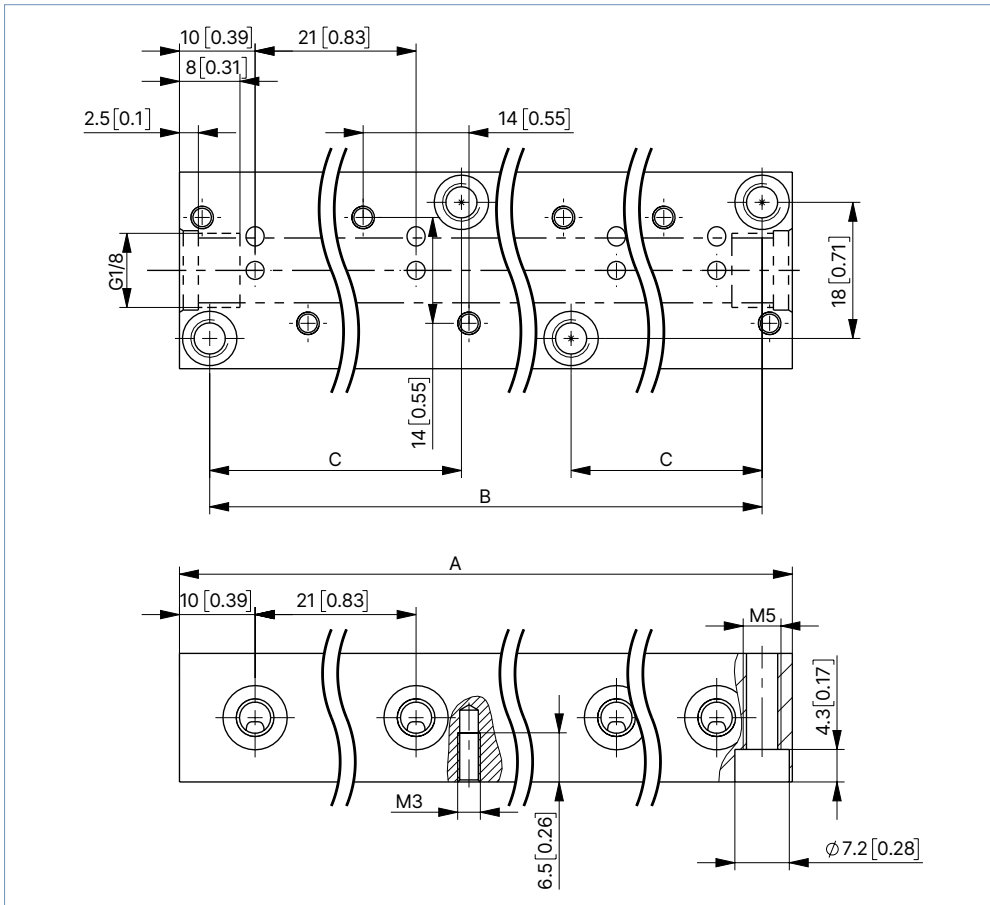
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### 5.5. Multiple manifold

#### 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]



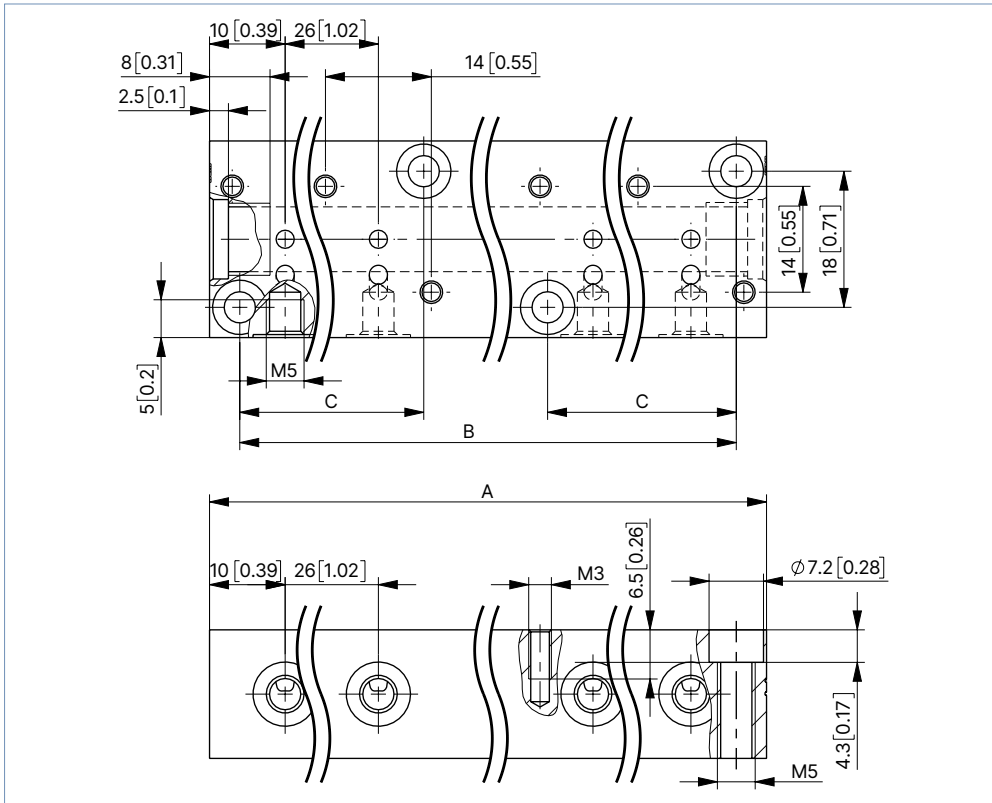
Quantity of valve places	A		B		C		Article no.
	[mm]	[in]	[mm]	[in]	[mm]	[in]	
2	41	1.61	33	1.29	-	-	005355
3	62	2.44	54	2.12	-	-	005313
4	83	3.26	75	2.95	-	-	005314
5	104	4.09	96	3.77	-	-	005315
6	125	4.92	117	4.6	-	-	005316
7	146	5.74	138	5.43	-	-	005893
8	167	6.57	159	6.25	54	2.12	005166
9	188	7.4	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

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | validé) printed: 12.02.2025

**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 places	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

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | valide) printed: 12.02.2025



## 6. Device/Process connections

### 6.1. 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 version	Flange version
	*	**	***		
A	P	to lock	A		
B	to lock	B	P		
C	P	R	A		
D	R	P	B		
T	P	R	A		

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | validé) printed: 12.02.2025

## 7. Performance specifications

### 7.1. Power consumption

#### Standard version, coil size 24.5 mm [0.96 in]

Coil	Orifice [mm]	Electrical power					Switching times <sup>1)</sup>			
		Inrush AC [VA]	Hold AC		DC		Opening [ms]	Closing [ms]		
			[VA]	[W]	Cold [W]	Hot [W]				
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 psi<sup>2)</sup> 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 version, coil size 20 mm [0.79 in]

Coil	Orifice [mm]	Electrical power					Switching times <sup>1)</sup>			
		Inrush AC [VA]	Hold AC		DC		Opening [ms]	Closing [ms]		
			[VA]	[W]	Cold [W]	Hot [W]				
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 psi<sup>2)</sup> 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

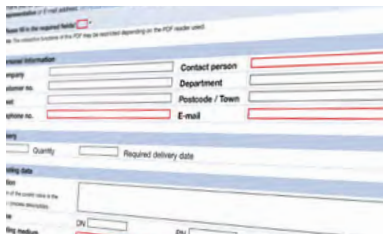


#### Bürkert product filter – Get quickly to the right product

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](#)

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | validé) printed: 12.02.2025

### 8.4. Ordering chart

Standard version 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 <sub>v</sub> value water <sup>1)</sup>	Voltage/ Frequency/ Power	Maximum duty cycle	Pressure range <sup>2)</sup> (MAWP <sup>3)</sup> )		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		
<b>CF C</b> 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 <sup>4)</sup>	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	100 % ED	24 / DC / 7	–	0...189	379906	380132
					24 / DC / 5.5	0...167	0...167	390269	390271
					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	100 % ED	24 / DC / 7	–	0...109	379915	380137
					24 / DC / 5.5	0...87	0...87	390275	390273
					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 <sup>4)</sup>		0.13	100 % ED	24 / DC / 7	–	0...102	o. r.	o. r.	
				24 / DC / 5.5	0...73	0...73	o. r.	o. r.	
<b>CF D</b> 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
		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 <sup>4)</sup>	0.13		100 % ED		24 / DC / 5.5		0...116
				24 / 60 / 4		0...102	0...102	o. r. <sup>5)</sup>	o. r. <sup>5)</sup>
		120 / 60 / 4	0...102	0...102	0...102	0...102	0...102	o. r. <sup>5)</sup>	o. r. <sup>5)</sup>

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | valide) printed: 12.02.2025

Circuit function	Port connection	Orifice	C <sub>v</sub> value water <sup>1)</sup>	Voltage/ Frequency/ Power	Maximum duty cycle	Pressure range <sup>2)</sup> (MAWP <sup>3)</sup> )		Article no.	
						Ambient temperature 167 °F	Ambient temperature 131 °F	Brass body	Stainless steel body
		Air + water	Air + water	FKM seal					
		[mm]	[gal/min]	[V/Hz/W]		[psi]	[psi]		
<b>CFD</b> 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 ㉞	390452 ㉞
				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 ㉞	390464 ㉞
				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 <sup>4)</sup>	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. <sup>5)</sup>	o. r. <sup>5)</sup>
				120 / 60 / 4		0...102	0...102	o. r. <sup>5)</sup>	o. r. <sup>5)</sup>
				240 / 60 / 4		0...102	0...102	o. r. <sup>5)</sup>	o. r. <sup>5)</sup>

o. r. = on request

- 1.) Measurement at +68 °F, 14.5<sup>2)</sup> 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

Standard version 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 <sub>v</sub> value water <sup>1)</sup>	Voltage/ Frequency/ Power	Maximum duty cycle	Pressure range <sup>2)</sup> (MAWP <sup>3)</sup> )		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					
<b>CF C</b> 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 <sup>4)</sup>	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	100 % ED		24 / DC / 6.5	-	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				100 % ED	24 / DC / 6.5	-	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 <sup>4)</sup>	0.13	100 % ED		24 / DC / 6.5	-	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.			

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | validé) printed: 12.02.2025

Circuit function	Port connection	Orifice	C <sub>v</sub> value water <sup>1.)</sup>	Voltage/ Frequency/ Power	Maximum duty cycle	Pressure range <sup>2.)</sup> (MAWP <sup>3.)</sup> )		Article no.	
						Ambient temperature 167 °F	Ambient temperature 131 °F	Brass body	Stainless steel body
		Air + water	Air + water	FKM seal					
[mm]	[gal/min]	[V/Hz/W]	[psi]	[psi]					
<b>CFD</b> 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 <sup>4.)</sup>	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.
	Manifold (FK01)	1.2	0.05	100 % ED	24 / DC / 5	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.
		1.6	0.07	100 % ED	24 / DC / 5	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 <sup>4.)</sup>	0.13	100 % ED	24 / DC / 6.5	-	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	0.13	100 % ED	240 / 60 / 4	0...102	0...102	o. r.	o. r.		

o. r. = on request  
 1.) Measurement at + 68 °F, 14.5<sup>2.)</sup> 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

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | validé) printed: 12.02.2025

**Banjo version, 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 <sub>Nn</sub> value air <sup>1)</sup>	Voltage/Frequency/ Power	Maximum duty cycle	Medium pressure <sup>2)</sup> (MAWP <sup>3)</sup> )	Article no.
		[mm]	[gal/min]	[V/Hz/W]		Ambient temperature max. + 131 °F resp. 167 °F <sup>4)</sup>	
						Air	FKM seal
						[psi]	
<b>CF C</b> 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	20070693
				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.	

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | valide) printed: 12.02.2025



Circuit function	Port connection	Orifice	Q <sub>lin</sub> value air <sup>1.)</sup>	Voltage/Frequency/ Power	Maximum duty cycle	Medium pressure <sup>2.)</sup> (MAWP <sup>3.)</sup> ) Ambient temperature max. + 131 °F resp. 167 °F <sup>4.)</sup>	Article no.
		[mm]	[gal/min]	[V/Hz/W]		Air [psi]	
<b>CF C</b> 3/2-way solenoid valve Direct-acting Normally closed 	BJ05 P: G ¼ A: G ⅝	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 ¼ A: G ⅝	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 ⅙ A: G ⅝	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

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | valide) printed: 12.02.2025

### Additional options

**Note:**

Available on request

Option	Variable Code	Description
Oxygen versions	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 version	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]	
<b>Straight push-in connector with O-Ring</b>								
	Brass, nickel-plated	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
<b>Elbow screw fitting, rotatable with O-Ring</b>								
	Brass, nickel-plated	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

DTS 1000582647 EN Version: C Status: RL (released | freigegeben | valide) printed: 12.02.2025

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 fixing screw.
- For further versions see data sheet **Type 2516** ▶

Cable plug	Dimensions	Version	Voltage	Article no.
		Without circuitry	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 fixing screw.
- Refer to data sheet **Type 2507** ▶ for more information about the cable plug.

Cable plug	Dimensions	Version	Voltage	Article no.
		Without circuitry (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

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