








### 4/2 way Solenoid Valve for pneumatics

- Compact design
- Push-over solenoid coil
- Exhaust air can be regulated
- Tube, threaded and sub-base connections
- Servo-diaphragm seat discs



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

#### Can be combined with

	<b>Type 1087</b> Timer, form A according to DIN EN 175301-803	▶
	<b>Type 2518</b> Cable plug, form A according to DIN EN 175301-803	▶
	<b>Type 2000</b> Pneumatically operated 2/2-way angle seat valve CLASSIC	▶
	<b>Type 2511</b> Cable Plug Form A	▶
	<b>Type 2513</b> Cable plug, form A according to DIN EN 175301-803	▶

#### Type description

The Type 5420 is a pilot-controlled 4-way seat valve with servo-diaphragms. A minimum differential pressure of 2.5 bar is needed for switch-over. The valve can be mounted on two channel manifolds with a common pressure supply.

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## 1. General technical data

Product properties	
Dimensions	Further information can be found in chapter "5. Dimensions" on page 6
Materials	
Seal	NBR
Body	Polyamide
Coil	Polyamide, Epoxy
Weight	Approx. 0.4 kg
Orifice	DN 3
Circuit function	G
	Further information can be found in chapter "2. Circuit functions" on page 4
Performance data	
Duty cycle	100 % continuous operation
Air pressure quality	ISO 8573 - 1:2010, class 7.4.4 <sup>1)</sup>
Flow rate (Q <sub>Nn</sub> -value air)	200 l/min <sup>2)</sup>
Switching time	Opening: 30 ms (pressure build-up 0...90 %) Closing: 20 ms (pressure reduction 100...10 %)
Electrical data	
Operating voltage	Standard version: 24 V DC, 24/230 V 50/60 Hz ATEX/IECEx version: 24/110/230 V UC
Power consumption	V DC version: 2 W V AC version: 11 VA (inrush), 6 VA (hold)
Voltage tolerance	+ 10 %
Medium data	
Operating medium	Neutral medium (e.g. lubricated or oil-free compressed dry air)
Medium pressure	2.5...10 bar <sup>3)</sup>
Medium temperature	- 10 °C...+ 60 °C
Process/Port connection & communication	
Electrical connection	Plug contacts according to DIN EN 175301 - 803 form A for cable plug <b>Type 2518</b> ▶ Further information can be found in chapter "Cable plug Type 2518, form A according to DIN EN 175301 - 803" on page 11.
Port connection	G 1/8, tube SL 6/4, sub-base
Approvals and conformities	
Protection class	IP65 with cable plug
Explosion protection	Further information can be found in chapter "3.4. Explosion protection" on page 4
North America (USA/Canada)	Further information can be found in chapter "3.5. North America (USA/Canada)" on page 5
Environment and installation	
Installation	As required, preferably with actuator upright
Ambient temperature	Max. + 55 °C

1.) To prevent freezing of the expanded compressed air, the pressure dew point must be at least 10 K lower than the temperature of the medium.

2.) Measurement at + 20 °C, 6 bar at the valve inlet and 1 bar differential pressure

3.) Pressure data: overpressure to atmospheric pressure

## 2. Circuit functions

Symbol	Description
	<b>Circuit function G (CF G)</b> 4/2-way solenoid valve Servo-controlled

## 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				
	<b>Optional: Explosion protection</b> EU type examination certificate: PTB 20 ATEX 2003X / IECEx PTB 20 ATEX 2003X  Suitable as category 2 device for zone 1/21 and zone 2/22 (optional).  Ex marking of the components according to the following table:				
	<table border="1"> <thead> <tr> <th>Coils with cable outlet</th> <th>Coils with terminal box</th> </tr> </thead> <tbody> <tr> <td> <b>ATEX:</b>                              EPS 18 ATEX 1 232 X                              II 2G Ex mb IIC T* Gb                              II 2D Ex mb IIIC T*** °C Db   <b>IECEX:</b>                              IECEx EPS 18.0110X                              Ex mb IIC T* Gb                              Ex mb IIIC T*** °C Db                         </td> <td> <b>ATEX:</b>                              EPS 18 ATEX 1 232 X                              II 2G Ex eb mb IIC T* Gb                              II 2D Ex mb tb IIIC T*** °C Db   <b>IECEX:</b>                              IECEx EPS 18.0110X                              Ex eb mb IIC T* Gb                              Ex mb tb IIIC T*** °C Db                         </td> </tr> </tbody> </table>	Coils with cable outlet	Coils with terminal box	<b>ATEX:</b> EPS 18 ATEX 1 232 X II 2G Ex mb IIC T* Gb II 2D Ex mb IIIC T*** °C Db  <b>IECEX:</b> IECEx EPS 18.0110X Ex mb IIC T* Gb Ex mb IIIC T*** °C Db	<b>ATEX:</b> EPS 18 ATEX 1 232 X II 2G Ex eb mb IIC T* Gb II 2D Ex mb tb IIIC T*** °C Db  <b>IECEX:</b> IECEx EPS 18.0110X Ex eb mb IIC T* Gb Ex mb tb IIIC T*** °C Db
Coils with cable outlet	Coils with terminal box				
<b>ATEX:</b> EPS 18 ATEX 1 232 X II 2G Ex mb IIC T* Gb II 2D Ex mb IIIC T*** °C Db  <b>IECEX:</b> IECEx EPS 18.0110X Ex mb IIC T* Gb Ex mb IIIC T*** °C Db	<b>ATEX:</b> EPS 18 ATEX 1 232 X II 2G Ex eb mb IIC T* Gb II 2D Ex mb tb IIIC T*** °C Db  <b>IECEX:</b> IECEx EPS 18.0110X Ex eb mb IIC T* Gb Ex mb tb IIIC T*** °C Db				

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

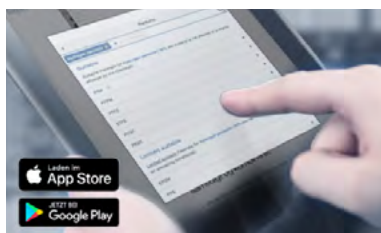
**Note:**

The following approvals are only available on request for coil systems with epoxy coils.

Approval	Description
	<p><b>Optional: UL Recognized for the USA and Canada (valid for coils)</b>                      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>
	<p><b>Optional: UL Hazardous Locations – Explosion Protection (valid for coils)</b>                      UL Listed for Hazardous Locations for USA and Canada                      Class I, Zone 1                      Class I, Division 2, Group A, B, C and D                      Class II + III, Division 2, Group F and G</p>
	<p><b>Optional: FM (Factory Mutual) – Explosion Protection (valid for coils)</b>                      FM for Hazardous Locations for USA and Canada                      Class I, Zone 1                      Class I, Division 1, Groups A, B, C and D                      Class II + III, Division 1, Groups E, F and G</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](#)

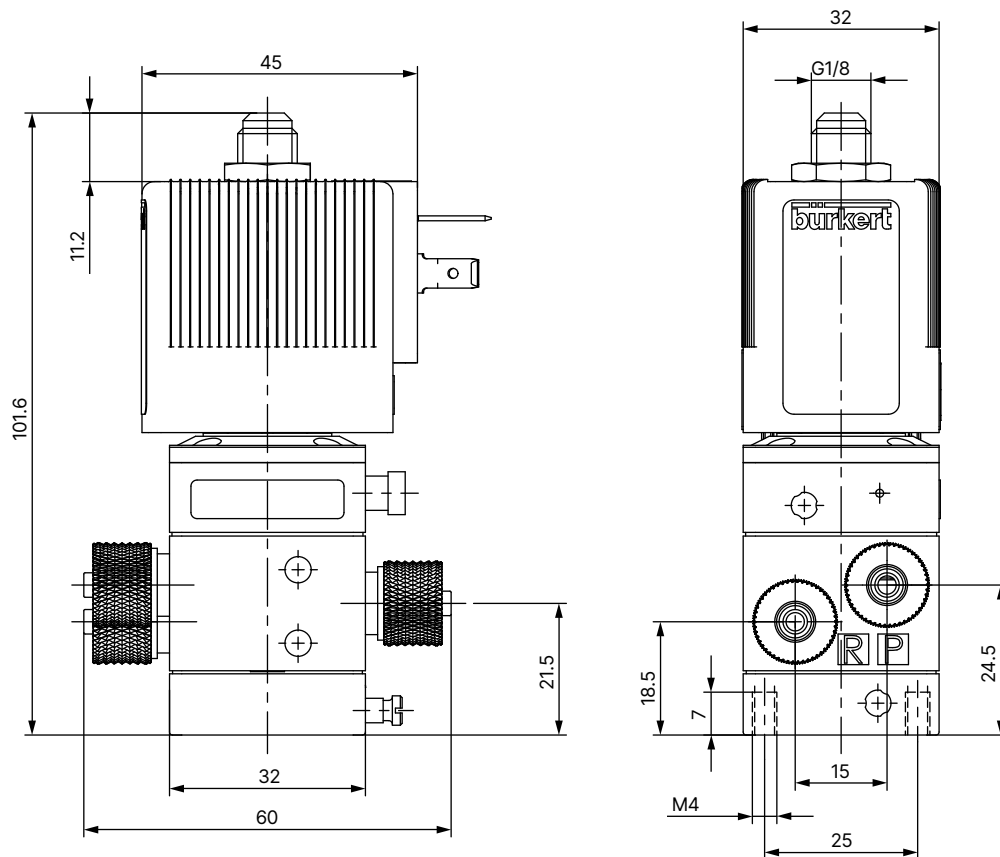
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## 5. Dimensions

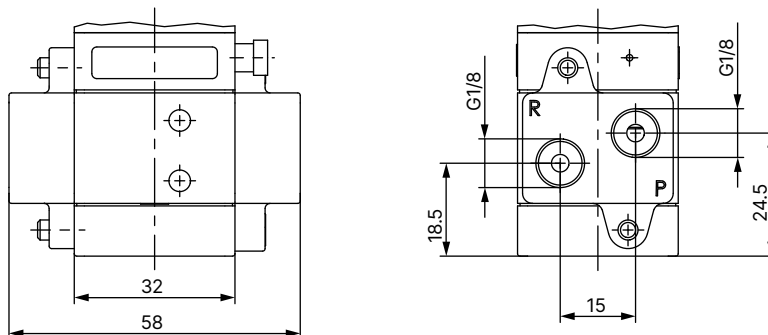
### 5.1. Standard version

**Note:**

- Dimensions in mm
- Hose screw connection for semi-soft plastic hose (external Ø 6 mm, internal Ø 4 mm)
- For battery mounting, the union nuts on the ports 1 and 3 are replaced by O-rings (10 × 2).



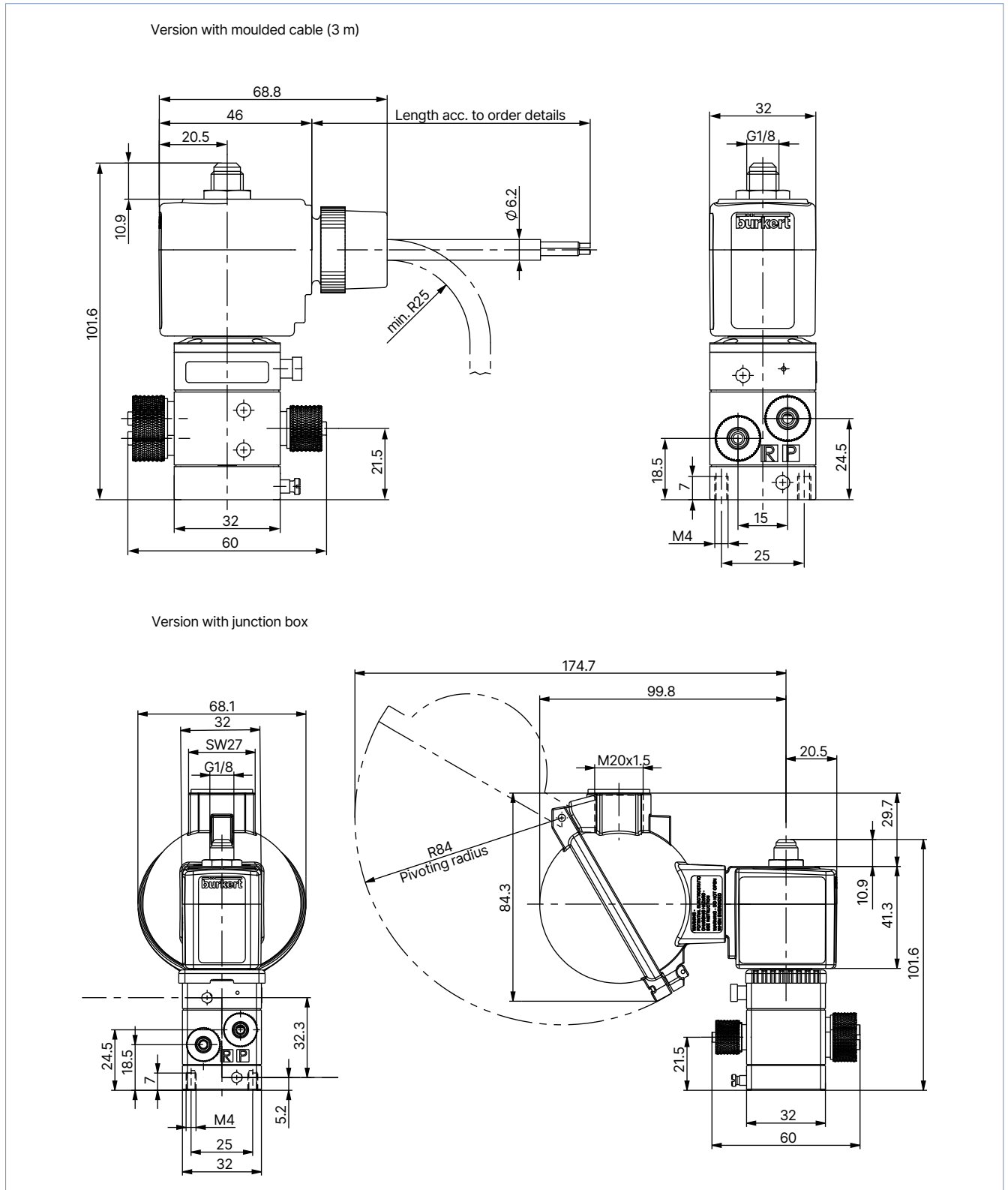
Threaded connection G 1/8



5.2. ATEX/IECEx version

Note:

Dimensions in mm



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## 6. Performance specifications

### 6.1. Power consumption

Orifice [mm]	Q <sub>Nn</sub> value [l/min]	Port connection		Coil power [W]	Pressure range [bar]	Response times <sup>1)</sup>		Weight [kg]
		1 and 3	2 and 4			Opening [ms]	Closing [ms]	
3	200	G 1/8	G 1/8	3	2.5...10	30	20	approx. 0.4
3	200	SL 6/4	SL 6/4	3	2.5...10	30	20	approx. 0.4
3	200	sub-base <sup>1)</sup>	G 1/8	3	2.5...10	30	20	approx. 0.4
3	200	sub-base <sup>2)</sup>	SL 6/4	3	2.5...10	30	20	approx. 0.4

1.) A differential pressure of 2.5 bar is required for full opening.


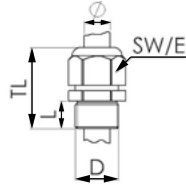

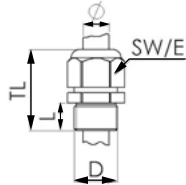
2.) Sub-base for mounting on manifolds

## 7. Product accessories

### 7.1. Cable glands for ATEX/IECEx terminal box

**Note:**

A polyamide cable gland is included in the scope of delivery. A nickel-plated brass version can be ordered for a surcharge, see ["Cable glands for ATEX/IECEx terminal box" on page 11.](#)

Description	Ex approvals		Dimensions										
	Certification	Identification											
Ex cable gland, Nickel-plated brass, 6...13 mm 	PTB 04 ATEX 1112 X, IECEx PTB 13.0027X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68	 <table border="1"> <tr><td>TL</td><td>29...37 mm</td></tr> <tr><td>L</td><td>6 mm</td></tr> <tr><td>D</td><td>20 mm</td></tr> <tr><td>SW</td><td>24 mm</td></tr> <tr><td>E</td><td>27 mm</td></tr> </table>	TL	29...37 mm	L	6 mm	D	20 mm	SW	24 mm	E	27 mm
TL	29...37 mm												
L	6 mm												
D	20 mm												
SW	24 mm												
E	27 mm												
Ex cable gland, Polyamide, 7...13 mm 	PTB 13 ATEX 1015 X, IECEx PTB 13.0034X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68	 <table border="1"> <tr><td>TL</td><td>36...45 mm</td></tr> <tr><td>L</td><td>10 mm</td></tr> <tr><td>D</td><td>20 mm</td></tr> <tr><td>SW</td><td>24 mm</td></tr> <tr><td>E</td><td>28 mm</td></tr> </table>	TL	36...45 mm	L	10 mm	D	20 mm	SW	24 mm	E	28 mm
TL	36...45 mm												
L	10 mm												
D	20 mm												
SW	24 mm												
E	28 mm												

### 7.2. Special tool to turn the terminal box

**Note:**

This special tool is not included in the scope of delivery of the valve, see ["Cable glands for ATEX/IECEx terminal box" on page 11.](#)


Description	Components of the set
Set SC02-AC10 	<ul style="list-style-type: none"> <li>• Special wrench</li> <li>• Service manual</li> </ul>

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## 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**

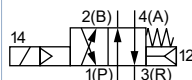
You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

[Try out our product filter](#)

### 8.3. Ordering chart standard version

**Note:**

- Please note that the cable plug must be ordered separately, see [“Cable plug Type 2518, form A according to DIN EN 175301 - 803” on page 11](#) or separate data sheet for **Type 2518** ▶.
- Corrosion-resistant body in polyamide, with coil AC10 (32 mm), 2 W, seal material NBR
- A differential pressure of 2.5 bar is required for toggling.
- The pressure range in the following table is 2.5...10 bar.

Circuit function	Port connection 1 and 3	Port connection 2 and 4	Orifice [mm]	Q <sub>Nn</sub> value air [l/min]	Article no. per voltage/frequency		
					24 DC	24 / 50/60	230 / 50/60
					[V/Hz]	[V/Hz]	[V/Hz]
<b>CF G</b> 4/2-way solenoid valve Servo-controlled 	G 1/8	G 1/8	3.0	200	134622	134623	134625
	Hose fitting 6/4	Hose fitting 6/4	3.0	200	134630	134631	134633
	Flange for manifold	G 1/8	3.0	200	134634	134635	134637
	Flange for manifold	Flange for manifold 6/4	3.0	200	134638	134639	134641

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### 8.4. Ordering chart ATEX/IECEx version

**Note:**

- Please note that the cable plug must be ordered separately, see [“Cable plug Type 2518, form A according to DIN EN 175301-803” on page 11](#) or separate data sheet for **Type 2518** ▶.
- Version according to Ex m II T5, polyamide body with manual override, with moulded cable (3 m)
- The maximum medium temperature must never exceed the permitted temperature class (T4: +135 °C, T5: +100 °C, T6: +85 °C) minus 5 K.
- Terminal box is available on request.
- The pressure range in the following table is 2.5...10 bar.

Circuit function	Port connection 1 and 3	Port connection 2 and 4	Orifice	Q <sub>Nn</sub> value air	Electrical connection application	Article no. per voltage/frequency		
						[mm]	[l/min]	024 UC
			[V/Hz]	[V/Hz]		[V/Hz]		
<b>CF G</b> 4/2-way solenoid valve Servo-controlled 	G 1/8	G 1/8	3.0	200	Single unit	350417 ☒	o. r.	o. r.
	Hose fitting 6/4	Hose fitting 6/4	3.0	200	Single unit	350410 ☒	o. r.	350411 ☒
	Flange for manifold	G 1/8	3.0	200	Block assembly	350414 ☒	350415 ☒	350416 ☒
	Flange for manifold	Flange for manifold 6/4	3.0	200	Block assembly	350412 ☒	o. r.	350413 ☒

o. r. = on request

### 8.5. Ordering chart accessories

**Side by side manifolds made of light metal (aluminium)**

Manifold	Dimensions	A	B	Article no.
		[mm]	[mm]	
2-fold		75	87	005356 ☒
3-fold		108	120	005357 ☒
4-fold		141	153	005372 ☒
5-fold		174	186	005373 ☒
6-fold		207	219	005374 ☒
8-fold		273	285	006553 ☒

**Accessories for manifolds**


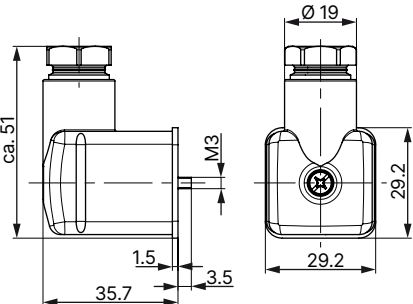
Description	Article no.
Silencer	005424 ☒
Screw plug for unused ports 1 or 4	005390 ☒
Cover, complete, for unused valve positions on manifolds	005432 ☒
Nipple with O-rings for connecting junction plates	005049 ☒

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**Cable plug Type 2518, form A according to DIN EN 175301 - 803**

**Note:**


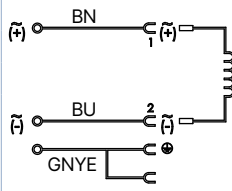
- Dimensions in mm
- For further versions see data sheet **Type 2518** ▶.

Cable plug	Dimensions	Version	Voltage	Article no.
		Without circuitry (AC/DC)	0...250 V AC/DC	314802 𐀀
		With LED (AC/DC)	12...24 V AC/DC	314812 𐀀
		With LED and varistor (AC/DC)	12...24 V AC/DC	314820 𐀀
		With rectifier, LED and varistor	12...24 V AC/DC	314816 𐀀

**Cable plug Type 2513, form A according to DIN EN 175301 - 803**

**Note:**

- The cable plug Type 2513 meets the requirements in accordance with ATEX Cat. 3 GD in assembly with a Bürkert solenoid valve.
- Refer to data sheet **Type 2513** ▶ for more information about the cable plug.

Cable plug	Circuit diagram	Cable length	Article no.
		[mm]	
		12000	260893 𐀀
		5000	260892 𐀀
		3000	260891 𐀀
		300	260890 𐀀

**Cable glands for ATEX/IECEx terminal box**

**Note:**

- A cable gland in polyamide version is included in the delivery. A nickel-plated brass version can be ordered at surcharge.
- Refer to **"7.1. Cable glands for ATEX/IECEx terminal box"** on page 8 for more information about Ex cable glands.
- Refer to **"7.2. Special tool to turn the terminal box"** on page 8 for more information about special wrench.

Description	Article no.
Ex cable gland, nickel-plated brass, 6...13 mm <sup>1)</sup>	773278 𐀀
Ex cable gland, polyamide, 7...13 mm <sup>1)</sup>	773277 𐀀
Set SC02-AC10: special wrench <sup>2)</sup> incl. service manual	293488 𐀀

1.) Cable diameter

2.) Not included in the scope of delivery of the valve