



Servo-assisted 2/2-way piston valve

- Safety shut-off valve in fuel cell systems and other hydrogen applications
- Very compact solenoid valve with reliably high tightness and service life
- Available for up to orifice 12 mm and pressure range 40 bar
- Available as flange or cartridge variant for quick system integration
- Degree of protection IP65 or IP6K9K with automotive plug

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

Can be combined with

	Type 2518 Cable plug, form A according to DIN EN 175301 - 803	▶
	Type 2509 Cable plug, form A according to DIN EN 175301 - 803	▶
	Type 6020 Direct-acting 2-way proportional valve	▶
	Type 6030 Direct-acting 2/2-way plunger valve	▶

Type description

The valve 6440 is a servo-assisted piston valve. The stopper and the core guide tube are welded together to increase pressure resistance and leak-tightness. The coils are moulded with highly chemically resistant epoxy. Sliding rings increase the service life for dry gases. Cartridge and flange connections, and solenoids with automotive plugs (IP6K9K), are available for optimised use in fuel cells.

Table of contents

1. General technical data	3
2. Circuit functions	4
3. Approvals and conformities	4
3.1. General notes.....	4
3.2. Conformity	4
3.3. Standards.....	4
3.4. Explosion protection	5
3.5. North America (USA/Canada)	5
3.6. Others	6
DNV GL classification	6
4. Materials	6
4.1. Bürkert resistApp	6
4.2. Material specifications	6
5. Dimensions	7
5.1. Threaded version	7
Complete valve	7
Solenoid coil dimensions	8
5.2. Cartridge version.....	9
Complete valve	9
Solenoid coil dimensions	10
Cartridge connection diagram	10
5.3. Flange version.....	11
Complete valve	11
Solenoid coil dimensions	12
Flange connection diagram	13
5.4. ATEX/IECEX version (PX58 and PX38).....	14
6. Performance specifications	15
6.1. Power consumption	15
7. Product accessories	15
7.1. Cable glands for ATEX/IECEX terminal box	15
7.2. Special tool to turn the terminal box.....	15
8. Ordering information	16
8.1. Bürkert eShop	16
8.2. Bürkert product filter.....	16
8.3. Bürkert Product Enquiry Form	16
8.4. Ordering chart for stationary applications, cable plug form A according to DIN EN 175301 - 803 (IP65 coil).....	17
Standard version	17
Version with Kick and Drop coil	19
ATEX/IECEX-cable version	20
8.5. Ordering chart of mobile applications with automotive plug (IP6K9K coil).....	20
8.6. Ordering chart accessories.....	21
Cable plug Type 2518, form A according to DIN EN 175301 - 803	21
Cable plug Type 2509, form A according to DIN EN 175301 - 803	22
Cable glands for ATEX/IECEX terminal box	22
Mounting bracket.....	22

DTS 1000578533 EN Version: E Status: RL (released | freigegeben | validé) printed: 09.07.2024

1. General technical data

Product properties	
Dimensions	Further information can be found in chapter “5. Dimensions” on page 7.
Material	
Seal	EPDM
Housing	Stainless steel 1.4404/316L
Coil	Epoxy
Tightness	1x 10 ⁻⁴ mbar l/s (> 1 bar pressure difference)
Pressure	
Pressure level	PN 40 bar
Burst pressure	250 bar for flange and threaded body 125 bar for cartridge body DN 6, DN 8 110 bar for cartridge body DN 12
Differential pressure	Further information can be found in chapter “8. Ordering information” on page 16.
Orifice	DN 6, DN 8, DN 12
Circuit function	A Further information can be found in chapter “2. Circuit functions” on page 4.
Thermal insulation class of solenoid coil	Epoxy coil class H
Performance data	
Duty cycle	100 % continuous operation Power must be reduced to 25 % of the nominal power (holding phase) with the aid of current control or PWM signal after max. 500 ms (switch-on pulse) for mobile applications with increased ambient temperature.
Switching time ¹⁾	
DN 6, DN 8	Opening: 10...20 ms Closing: 40...50 ms
DN 12	Opening: 20...30 ms Closing: 120...200 ms
Electrical data	
Power consumption	Further information can be found in chapter “6. Performance specifications” on page 15.
Voltage tolerance	
Mobile applications	12 V: 9 V...16 V 24 V: 18 V...32 V
Stationary applications	± 10 %
Medium data	
Operating medium	Neutral gases (e.g. compressed air, nitrogen) Optimised for hydrogen
Medium temperature	-40 °C...+120 °C
Viscosity	Max. 21 mm ² /s (21 cSt)
Process/Port connection & communication	
Electrical connection	<ul style="list-style-type: none"> Plug contacts according to DIN EN 175 301 - 803 form A for cable plug Type 2518 ▶. Further information can be found in chapter “Cable plug Type 2518, form A according to DIN EN 175301 - 803” on page 21. Plug contacts according to DIN EN 175 301 - 803 form A for cable plug Type 2509 ▶. Further information can be found in chapter “Cable plug Type 2509, form A according to DIN EN 175301 - 803” on page 22. <p>Automotive plugs for IP6K9K coil variants: Plug KOSTAL MLK1.2, 2-pin, coding A (male) Plug TE MCON 1.2, 2-pin, coding A (male) Other plug shapes on request</p>
Port connection	Cartridge, flange, G ¼, G ⅜, G ½, NPT ¼, NPT ⅜, NPT ½

Approvals and conformities

Degree of protection	Standard: IP65 with cable plug Type 2518 ▶ NEMA 4X with cable plug Type 2509 ▶ for stainless steel versions (other versions on request) Automotive Coil: IP6K acc. to ISO 20653:2013 IPX7 acc. to ISO 20653:2013 (submersion test acc. to ISO 16750-4:2010) IPX9K acc. to ISO 20653:2013 This degree of protection can only be guaranteed as long as the coil is not removed from the valve.
Explosion protection	Further information can be found in chapter “3.4. Explosion protection” on page 5.
North America (USA/Canada)	Further information can be found in chapter “3.5. North America (USA/Canada)” on page 5.
Others	Further information can be found in chapter “3.6. Others” on page 6.

Environment and installation

Installation position	As required, preferably with actuator upright
Ambient temperature	-40 °C...+55 °C/+75 °C for stationary applications depending on performance level -40 °C...+85 °C for mobile applications ^{2.)}

1.) Measurement at +20 °C, 6 bar at the valve outlet, opening: pressure build-up 0...90%, closing: pressure reduction 100...10%
2.) Power must be reduced to 25% of the nominal power (holding phase) with the aid of current control or PWM signal after max. 500 ms (switch-on pulse).

2. Circuit functions

Symbol	Description
	Circuit function A (CF A) 2/2-way solenoid valve Servo-controlled Normally closed

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.

DTS 1000578533 EN Version: E Status: RL (released | freigegeben | validé) printed: 09.07.2024

3.4. Explosion protection

Approval	Description										
 	<p>Optional: Explosion protection according to category 2 (zone 1/21)</p> <p>Ex marking of the components according to the following table:</p> <table border="1"> <thead> <tr> <th>Coil Type AC10</th> <th>Coil Type AC19</th> </tr> </thead> <tbody> <tr> <td colspan="2">Coil with cable outlet</td> </tr> <tr> <td> <p>ATEX: EPS 18 ATEX 1232 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db</p> </td> <td> <p>ATEX: EPS 16 ATEX 1072 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 16.0030 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> </td> </tr> <tr> <td colspan="2">Coil with terminal box</td> </tr> <tr> <td> <p>ATEX: EPS 18 ATEX 1232 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 18.0110 X Ex eb mb IIC T4 Gb Ex mb tb IIIC T130 °C Db</p> </td> <td> <p>ATEX: EPS 16 ATEX 1072 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 16.0030 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db</p> </td> </tr> </tbody> </table>	Coil Type AC10	Coil Type AC19	Coil with cable outlet		<p>ATEX: EPS 18 ATEX 1232 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db</p>	<p>ATEX: EPS 16 ATEX 1072 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 16.0030 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p>	Coil with terminal box		<p>ATEX: EPS 18 ATEX 1232 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 18.0110 X Ex eb mb IIC T4 Gb Ex mb tb IIIC T130 °C Db</p>	<p>ATEX: EPS 16 ATEX 1072 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 16.0030 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db</p>
	Coil Type AC10	Coil Type AC19									
	Coil with cable outlet										
	<p>ATEX: EPS 18 ATEX 1232 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db</p>	<p>ATEX: EPS 16 ATEX 1072 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 16.0030 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p>									
Coil with terminal box											
<p>ATEX: EPS 18 ATEX 1232 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 18.0110 X Ex eb mb IIC T4 Gb Ex mb tb IIIC T130 °C Db</p>	<p>ATEX: EPS 16 ATEX 1072 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 16.0030 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db</p>										
	<p>Optional: Explosion protection according to category 3 (zone 2/22)</p> <p>Ex marking of the components according to the following table:</p> <table border="1"> <thead> <tr> <th>Coil Type AC10</th> <th>Coil Type AC19</th> </tr> </thead> <tbody> <tr> <td colspan="2">Coil with plug contacts form A and cable plug Type 2509</td> </tr> <tr> <td> <p>ATEX: EPS 18 ATEX 1232 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db</p> </td> <td> <p>ATEX: EPS 16 ATEX 1072 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 16.0030 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> </td> </tr> </tbody> </table>	Coil Type AC10	Coil Type AC19	Coil with plug contacts form A and cable plug Type 2509		<p>ATEX: EPS 18 ATEX 1232 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db</p>	<p>ATEX: EPS 16 ATEX 1072 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 16.0030 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p>				
Coil Type AC10	Coil Type AC19										
Coil with plug contacts form A and cable plug Type 2509											
<p>ATEX: EPS 18 ATEX 1232 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db</p>	<p>ATEX: EPS 16 ATEX 1072 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p> <p>IECEX: IECEX EPS 16.0030 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db</p>										


3.5. North America (USA/Canada)

Approval	Description
	<p>Optional: UL Hazardous Locations – Explosion Protection (valid for coils)</p> <p>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>Optional: CSA for Canada and the USA (valid for valves)</p> <p>The valves are CSA approved for Canada and the USA as a Safety Shutoff Valve for hydrogen according to:</p> <ul style="list-style-type: none"> • UL 429 (electrically operated valves) • CSA 139 (electrically operated valves)

DTS 1000578533 EN Version: E Status: RL (released | freigegeben | valide) printed: 09.07.2024

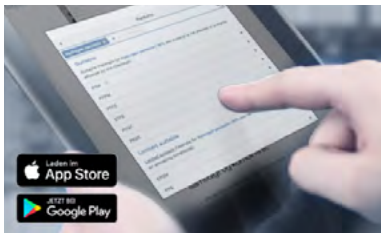
3.6. Others

DNV GL classification

Approval	Description
	Optional: DNV GL classification – Ships, offshore units, and high speed and light craft The products are accepted for installation on all vessels classed by DNV GL.

4. Materials

4.1. Bürkert resistApp

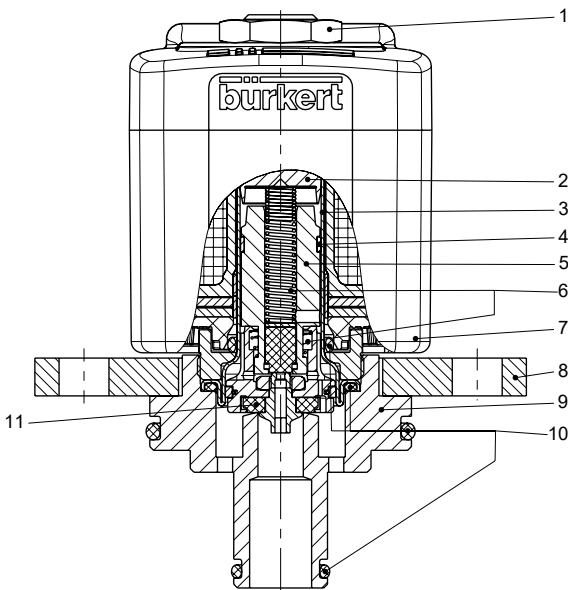


Bürkert resistApp – Chemical resistance chart

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



No.	Element	Material
1	Nut	Stainless steel 1.4305/303 ^{1.)} , PTFE-coated
2	Stopper	Stainless steel 1.4113/434 ^{1.)}
3	Core guide tube	Stainless steel 1.4303/305 ^{1.)} /308 ^{1.)}
4	Guide ring	PTFE carbon-filled
5	Core	Stainless steel 1.4113/434 ^{1.)}
6	Springs	Stainless steel 1.4310/301 ^{1.)}
7	Coil	Epoxide
8	Retaining plate	Stainless steel 1.4301/304 ^{1.)}
9	Body	Stainless steel 1.4404/1.4571/316L ^{1.)} /316Ti ^{1.)}
10	External seal	EPDM
11	Whole piston	Stainless steel 1.4305/303 ^{1.)} PPS PTFE carbon-filled EPDM

1.) Material designation according to AISI

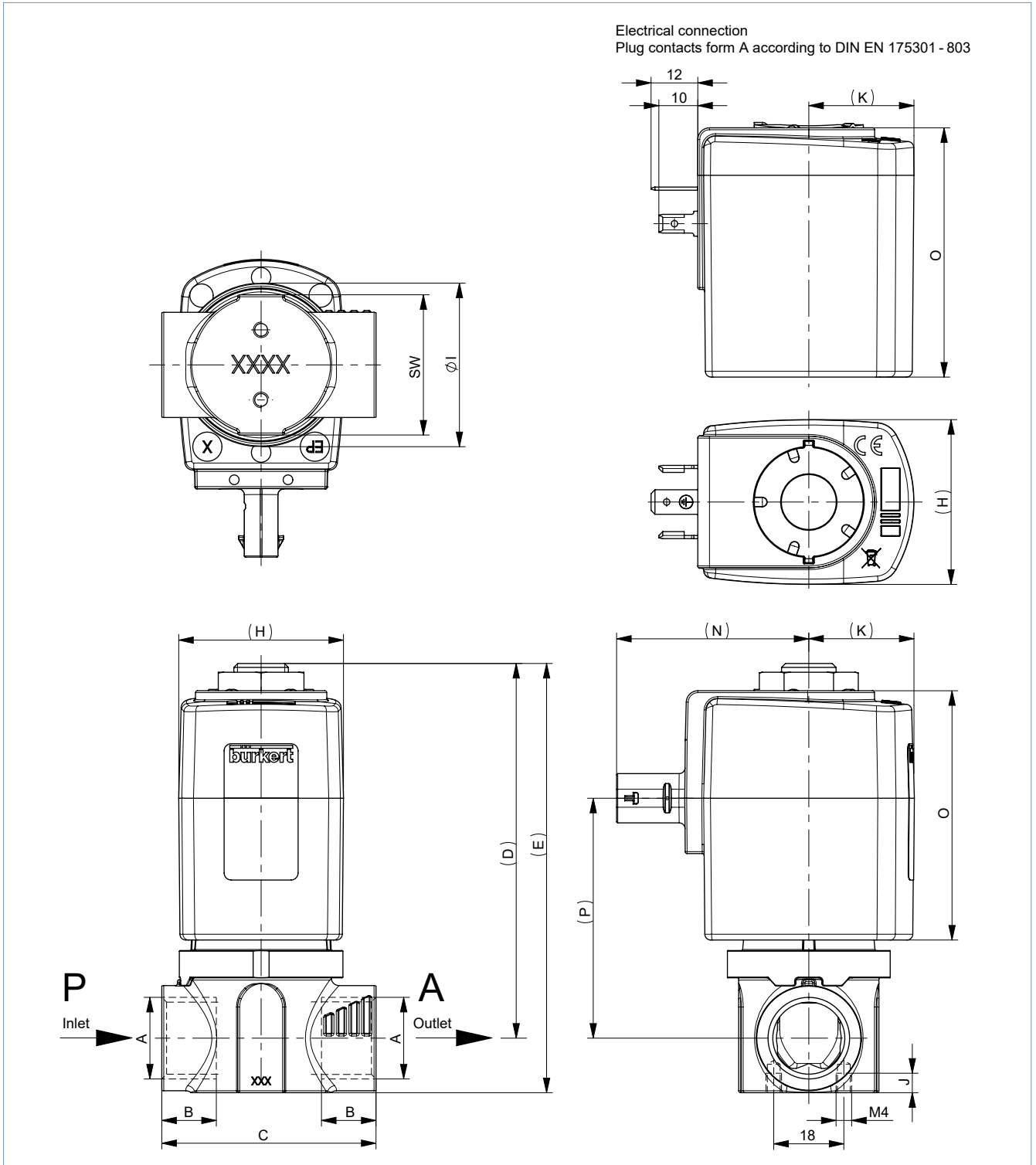
5. Dimensions

5.1. Threaded version

Complete valve

Note:

- Dimensions in mm
- The corresponding dimensions of the solenoid coil can be found in chapter **“Solenoid coil dimensions”** on page 8.



DN	A (port connection)	B	C	(D)	(E)	I	J	(P)	SW	
6/8	G ¼	12	40	61	71	27	4.5	41.5	24	
	NPT ¼	10								
	RC ¼	9.7								
	G ⅜	12	50	62	74	42	5	62	36	
		NPT ⅜								10.3
		RC ⅜								10.1
12	G ½	14	55	96	110	42	5	62	36	
	NPT ½	13.7								
	RC ½	13.2								

Solenoid coil dimensions

Note:

The corresponding dimensions to the letters mentioned can be found in chapter [“Complete valve” on page 7](#).

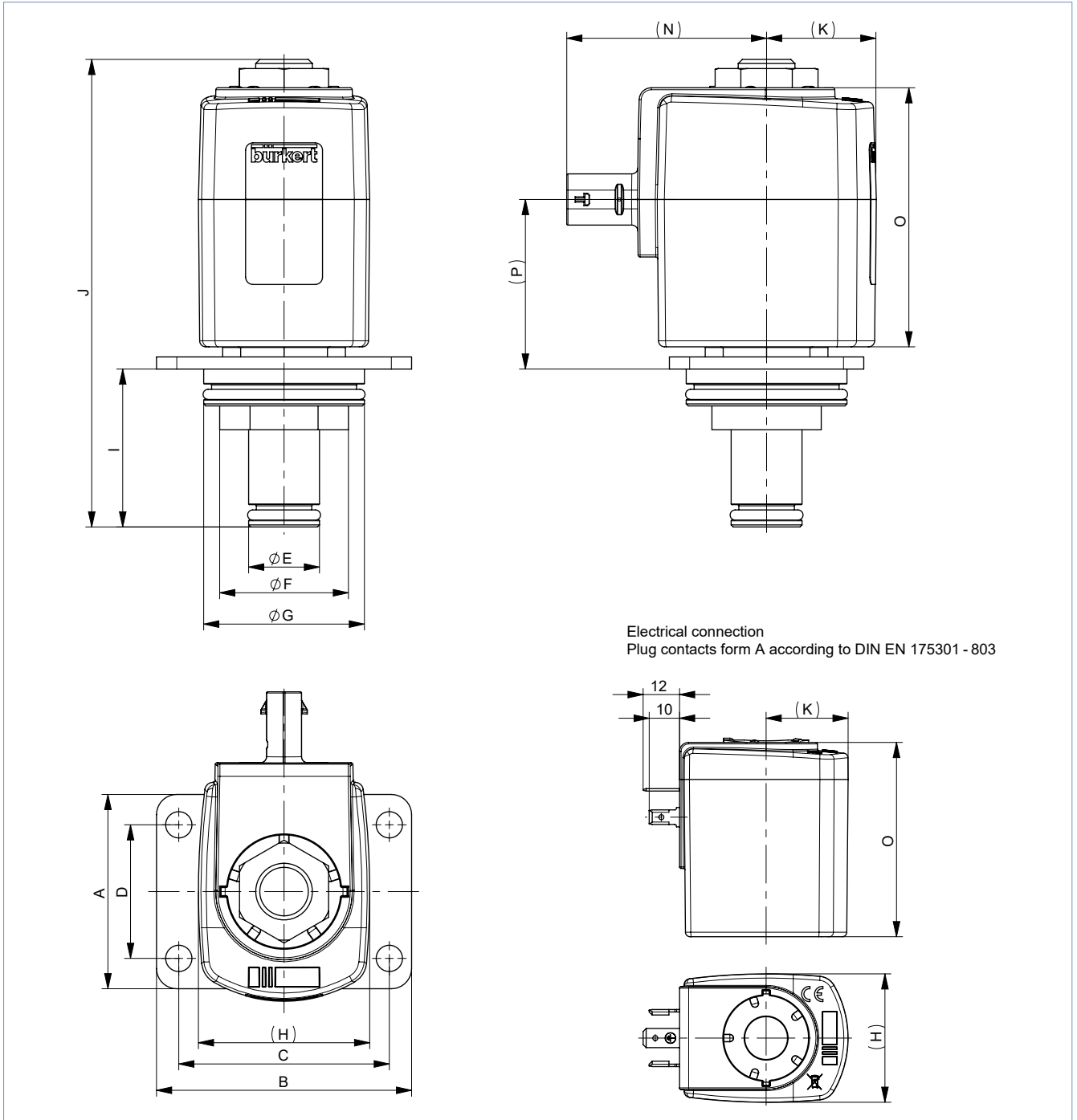
DN	Electrical connection	Coil size	(H) [mm]	(K) [mm]	(N) [mm]	O [mm]
6/8	Form A according to DIN EN 175301 - 803	5	32	21	–	41
	Plug KOSTAL MLK1.2 / TE MCON 1.2, 2-pin, coding A (male)	6	40	24	–	
						48
12	Form A according to DIN EN 175301 - 803	K	42	27	–	64
	Plug KOSTAL MLK1.2 / TE MCON 1.2, 2-pin, coding A (male)				–	
						49

5.2. Cartridge version

Complete valve

Note:

- Dimensions in mm
- The corresponding dimensions of the solenoid coil can be found in chapter **"Solenoid coil dimensions"** on page 10.



Electrical connection
Plug contacts form A according to DIN EN 175301 - 803

DN	Port connection	A	B	C	D	ØE	ØF	ØG	I	(J)	(P)
6/8	FC16	55	55	52	-	12.4	23.9	34.6	25.4	76	31
12	FC17	48	63	52	33	17.5	31.8	39.7	39	113	42

DTS 1000578533 EN Version: E Status: RL (released | freigegeben | valide) printed: 09.07.2024

Solenoid coil dimensions

Note:

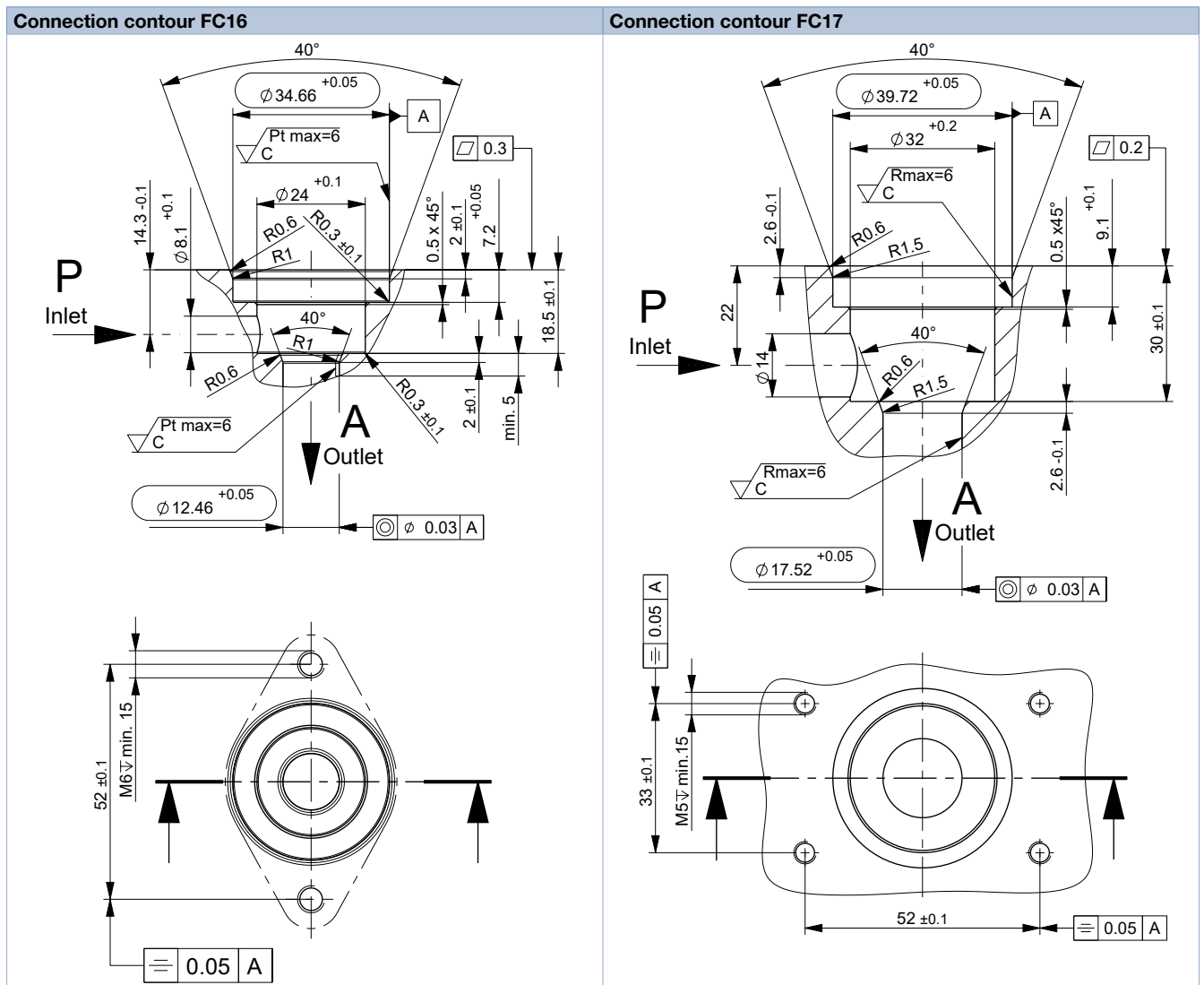
The corresponding dimensions to the letters mentioned can be found in chapter **“Complete valve”** on page 9.

DN	Electrical connection	Coil size	(H)	(K)	(N)	O
			[mm]	[mm]	[mm]	[mm]
6/8	Form A according to DIN EN 175301 - 803	5	32	21	-	41
	Plug KOSTAL MLK1.2 / TE MCON 1.2, 2-pin, coding A (male)	6	40	24	-	48
12	Form A according to DIN EN 175301 - 803	K	42	27	-	64
	Plug KOSTAL MLK1.2 / TE MCON 1.2, 2-pin, coding A (male)				49	

Cartridge connection diagram

Note:

Dimensions in mm



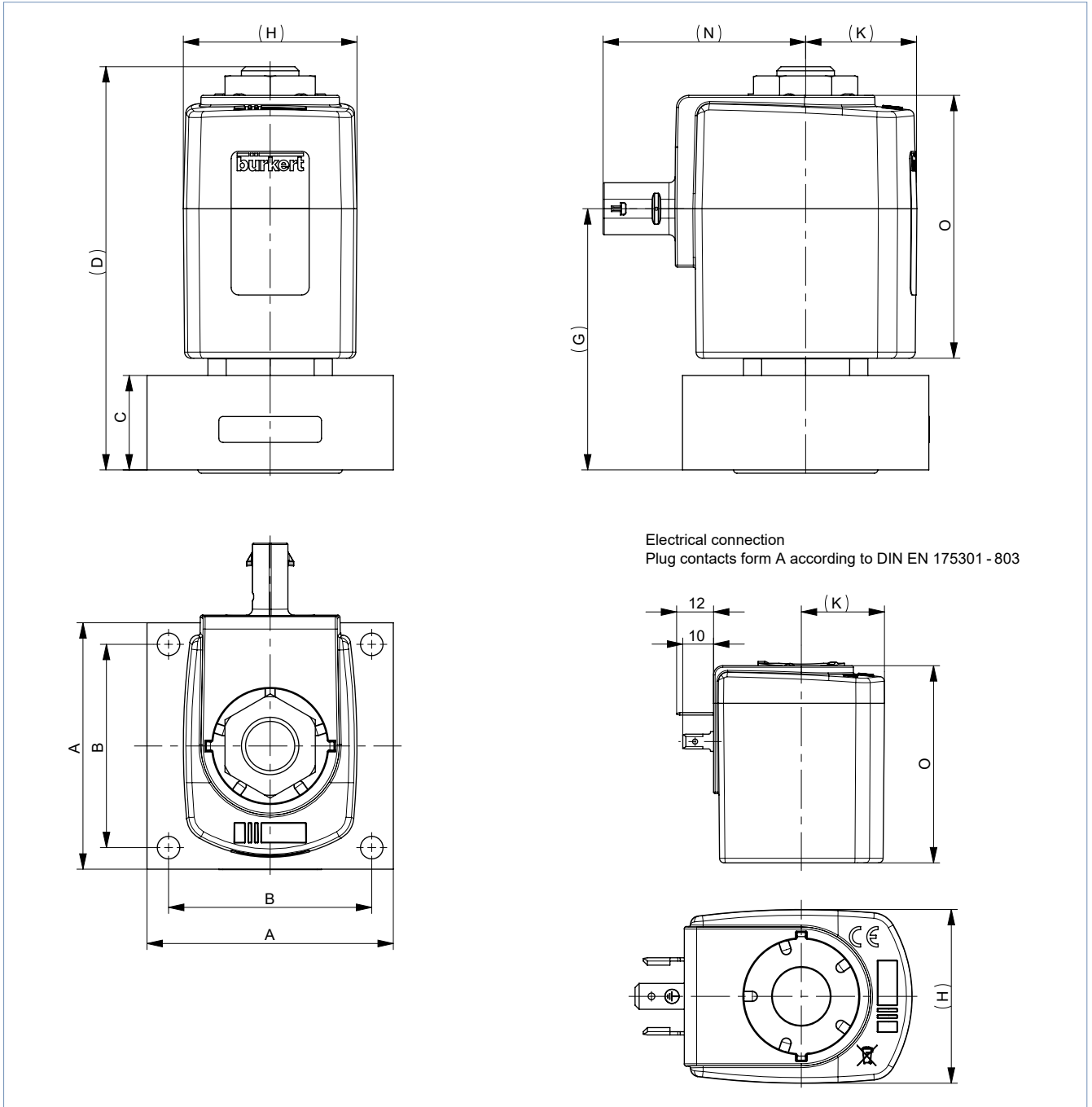
DTS 1000578533 EN Version: E Status: RL (released | freigegeben | validé) printed: 09.07.2024

5.3. Flange version

Complete valve

Note:

- Dimensions in mm
- The corresponding dimensions of the solenoid coil can be found in chapter **"Solenoid coil dimensions"** on page 12.



DN	Port connection	A	B	C	(D)	(G)
6/8	FK14	55	46	13	58	38.5
12	FK17	60	49.5	23	98	64

DTS 1000578533 EN Version: E Status: RL (released | freigegeben | validé) printed: 09.07.2024

Solenoid coil dimensions

Note:

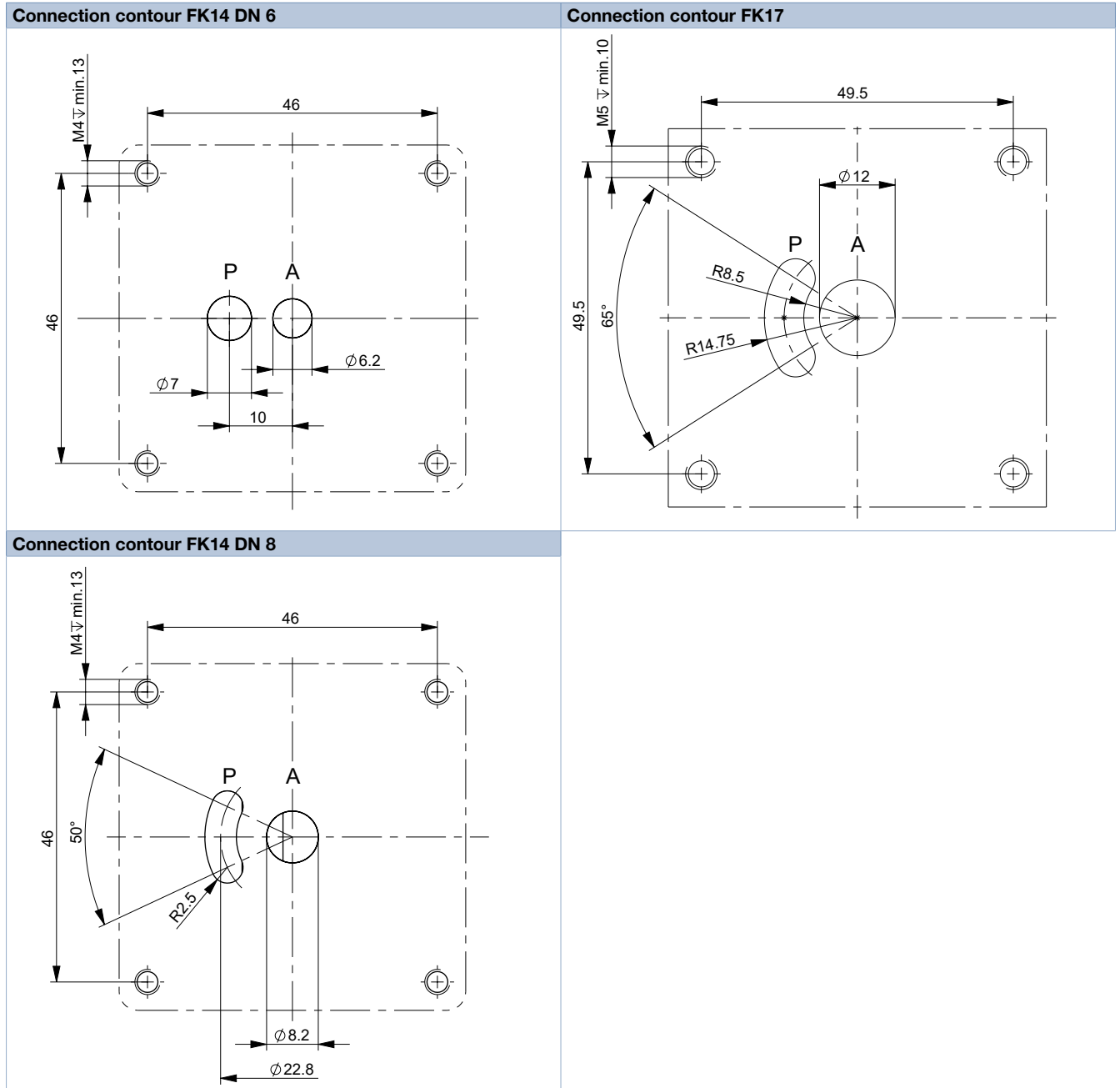
The corresponding dimensions to the letters mentioned can be found in chapter [“Complete valve” on page 11](#).

DN	Electrical connection	Coil size	(H)	(K)	(N)	O
			[mm]	[mm]	[mm]	[mm]
6/8	Form A according to DIN EN 175301 - 803	5	32	21	–	41
	Plug KOSTAL MLK1.2 / TE MCON 1.2, 2-pin, coding A (male)	6	40	24	–	
12	Form A according to DIN EN 175301 - 803	K	42	27	–	64
	Plug KOSTAL MLK1.2 / TE MCON 1.2, 2-pin, coding A (male)				49	

Flange connection diagram

Note:

- Dimensions in mm
- P = Inlet, A = Outlet
- The flow openings (P) of the valve body and connection block must be arranged one above the other in order to achieve the K_v value specified in the data sheet. If this is not the case, minor restrictions in the K_v value may occur.

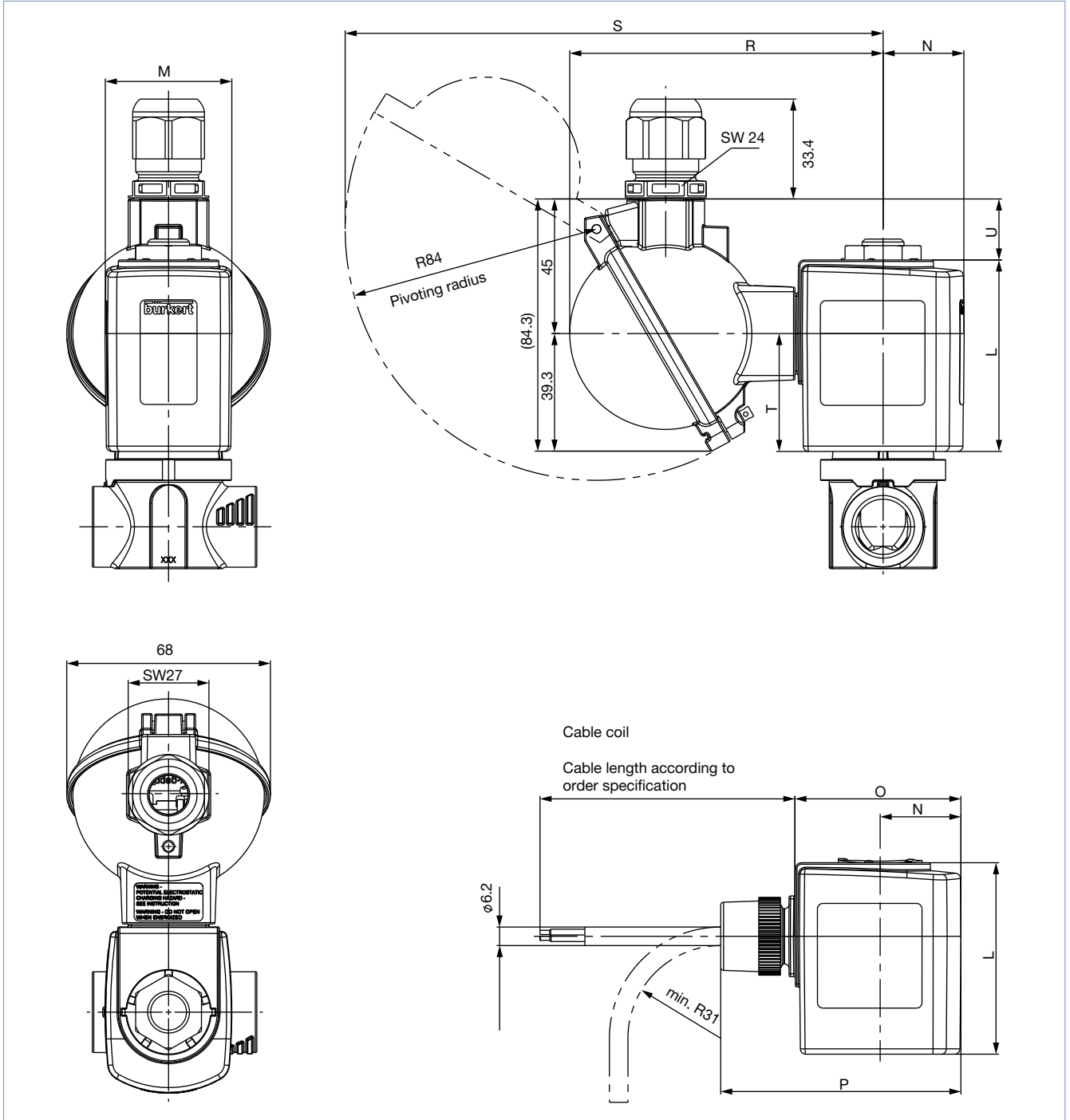


DTS 1000578533 EN Version: E Status: RL (released | freigegeben | valide) printed: 09.07.2024

5.4. ATEX/IECEx version (PX58 and PX38)

Note:

Dimensions in mm



Var. Code	Coil size	(M)	(N)	(O)	(P)	(L)	(R)	(S)	(T)	(U)
PX58	6	40	24	52	75	41	103	178	26	30
PX38	K	42	27	56	80	64	105	180	40	20

6. Performance specifications

6.1. Power consumption

Note:

The Kick and Drop coil (AC/DC) features integrated electronics for short-term power increase and decrease in double coil technology.


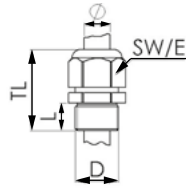

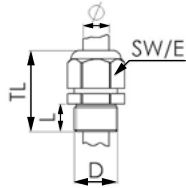
Orifice	Coil size	DC		Kick and Drop coil AC/DC		
		Cold power [W]	Warm power [W]	Cold power inrush [W] 500 ms	Cold power hold [W]	Warm power hold [W]
DN	[mm]	[W]	[W]	[W] 500 ms	[W]	[W]
6/8	32 (5)	12	10	-	-	-
	40 (6)	14	12	-	-	-
		16	14	-	-	-
		-	-	20	2	2
40 (6) EX	9	7.5	-	-	-	
12	42 (K)	21	16	-	-	-
		32	20	-	-	-
		-	-	44	6.5	5.5
	42 (K) EX	15	12	44	6.5	5.5

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 22.](#)

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 22.](#)

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

DTS 1000578533 EN Version: RL (released | freigegeben | validé) printed: 09.07.2024

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

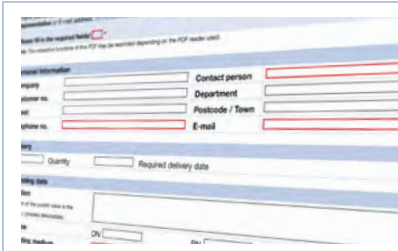


Bürkert product filter – Get quickly to the right product

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 for stationary applications, cable plug form A according to DIN EN 175301 - 803 (IP65 coil)

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 21 or separate data sheet Type 2518 ▶.
- Further versions with alternative voltages, NPT or RC internal threads are available on request.

Circuit function	Port connection	Orifice [mm]	K _v value water [m ³ /h]	Coil power [W]	Pressure range (MAWP ¹⁾)		Coil size [mm]	Article no. 024/DC		
					Ambient temperature + 75 °C [bar]	Ambient temperature + 55 °C [bar]				
					[V/Hz]					
Stainless steel body, seal material EPDM/EPDM										
CF A 2/2-way solenoid valve Servo-controlled Normally closed 	Threaded connection with G internal thread									
	G ¼	6.0	0.6	12	-	0...20	32	20092724		
					0...20	-		20044959		
					14	-	0...35	40	20092725	
						0...30	-		20092726	
						16	-		0...35	20092727
							0...35		-	20064879
		8.0	12	1.1	-	0...20	32	20092742		
					0...16	-		20092743		
					14	-	0...30	40	20092744	
			0...25	-		20092745				
			16	-		0...35	20092746			
				0...30	-	20092747				
	G ⅜	6.0	0.6	12	-	0...20	32	20092732		
					0...20	-		20092733		
					14	-	0...35	40	20092734	
						0...30	-		20081285	
						16	-		0...35	20092735
							0...35		-	20093014
		8.0	12	1.1	-	0...20	32	20092751		
					0...16	-		20092752		
					14	-	0...30	40	20092753	
			0...25	-		20092754				
			16	-		0...35	20092756			
0...30				-	20092757					
G ½	12.0	2.2	21	-	0...20	42	20092760			
				0...16	-		20044518			
				32	-	0...35	20064878			

DTS 1000578533 EN Version: E Status: RL (released | freigegeben | validé) printed: 09.07.2024

Circuit function	Port connection	Orifice [mm]	K _v value water [m ³ /h]	Coil power [W]	Pressure range (MAWP ^{1.)}		Coil size [mm]	Article no. 024/DC			
					Ambient temperature + 75 °C [bar]	Ambient temperature + 55 °C [bar]					
					[V/Hz]						
CF A 2/2-way solenoid valve Servo-controlled Normally closed 	Cartridge body										
	FC16	6.0	0.7	12	-	0...20	32	20092764			
					0...16	-		20044961			
				14	-	0...35	40	20092766			
					0...30	-		20092767			
				16	-	0...35	40	20092768			
					0...35	-		20092769			
		8.0	12	-	0...20	32	20092775				
				0...16	-		20092776				
			14	-	0...30	40	20092777				
				0...25	-		20092778				
			16	-	0...35	40	20092779				
				0...30	-		20066111				
	FC17	12.0	2.3	21	-	0...20	42	20092782			
					0...16	-		20043705			
				32	-	0...25	42	20092783			
					-	-		-			
				Flange body							
				FK14	6.0	0.6	12	-	0...20	32	20092790
	0...20	-	20044960								
	14	-	0...35				40	20092791			
		0...30	-					20092792			
	16	-	0...35				40	20092793			
		0...35	-					20092795			
8.0	12	-	0...20		32	20092802					
		0...16	-			20044960					
	14	-	0...30		40	20092803					
		0...25	-			20078761					
	16	-	0...35		40	20092805					
		0...30	-			20083232					
FK17	12.0	2.4	21	-	0...20	42	20043704				
				0...16	-		20092811				
			32	-	0...35	42	20092812				

1.) Maximum allowable working pressure

Version with Kick and Drop coil

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 21](#) or separate data sheet [Type 2518](#) ▶.
- The Kick and Drop coil (AC/DC) features integrated electronics for short-term power increase and decrease in double coil technology.
- Further versions with alternative voltages, NPT or RC internal threads are available on request.

Circuit function	Port connection	Orifice	K _v value water	Coil power		Pressure range (MAWP ^{1.)})	Coil size	Article no.	
				Starting power	Holding power	Ambient temperature + 75 °C		024/DC	
								[W]	[W]
		[mm]	[m ³ /h]	[W]	[W]	[bar]	[mm]	[V/Hz]	
Stainless steel body, seal material EPDM/EPDM									
CF A 2/2-way solenoid valve Servo-controlled Normally closed 	Threaded connection with G internal thread								
	G ¼	6.0	0.6	20	2	0...35	40	20089275	
		8.0	0.8					20092748	
	G ⅜	6.0	0.6	20	2	0...35	40	20092737	
		8.0	1.1					20092758	
	G ½	12.0	2.2	44	6.5	0...35	42	20079934	
	Cartridge body								
	FC16	6.0	0.7	20	2	0...35	40	20092770	
	FC16	8.0	1.1	20	2	0...35	40	20092781	
	FC17	12.0	2.3	44	6.5	0...25	42	20067340	
	Flange body								
	FK14	6.0	0.6	20	2	0...35	40	20092796	
	FK14	8.0	0.8	20	2	0...35	40	20083228	
	FK17	12.0	2.4	44	6.5	0...35	42	20092814	

1.) Maximum allowable working pressure

DTS 1000578533 EN Version: E Status: RL (released | freigegeben | valide) printed: 09.07.2024

ATEX/IECEEx-cable version

Note:

- The Kick and Drop coil (AC/DC) features integrated electronics for short-term power increase and decrease in double coil technology.
- In the standard version, the cable length is 3 m. Other lengths are available on request.
- Further versions with alternative voltages, NPT or RC internal threads are available on request.
- ATEX/IECEEx versions with terminal box are available on request.

Circuit function	Port connection	Orifice [mm]	K _v value water [m ³ /h]	Coil power		Pressure range (MAWP ^{1.)} Ambient temperature +55 °C [bar]	Coil size [mm]	Article no.
				Starting power [W]	Holding power [W]			024/DC [V/Hz]
				Stainless steel body, seal material EPDM/EPDM				
CF A 2/2-way solenoid valve Servo-controlled Normally closed 	Threaded connection with G internal thread							
	G ¼	6.0	0.6	9	-	0...16	40	20092728
		8.0	0.8					20092888
	G ⅜	6.0	0.6	9	-	0...16	40	20092738
		8.0	0.8					20092889
	G ½	12.0	2.2	15	-	0...10	42	20083956
				44	6.5	0...35	42	20087819
	Cartridge body							
	FC16	6.0	0.7	9	-	0...16	40	20092771
	FC16	8.0	1.1	9	-	0...16	40	20083955
	FC17	12.0	2.3	15	-	0...10	42	20092784
				44	6.5	0...25	42	20081150
	Flange body							
	FK14	6.0	0.6	9	-	0...16	40	20092797
		8.0	0.8	9	-	0...16	40	20092807
	FK17	12.0	2.4	15	-	0...10	42	20092816
				44	6.5	0...35	42	20084225

1.) Maximum allowable working pressure

8.5. Ordering chart of mobile applications with automotive plug (IP6K9K coil)

Note:

- Power must be reduced to 25 % of the nominal power (holding phase) with the aid of current control or PWM signal after max. 500 ms (switch-on pulse).
- Further versions with alternative voltages, NPT or RC internal threads are available on request.

Circuit function	Port connection	Orifice [mm]	K _v value water [m ³ /h]	Coil power ^{1.)} [W]	Pressure range (MAWP ^{2.)} Ambient temperature +85 °C ^{3.)} [bar]	Coil size [mm]	Article no.		
							012/DC [V/Hz]	024/DC [V/Hz]	
							Stainless steel body, seal material EPDM/EPDM		
CF A 2/2-way solenoid valve Servo-controlled Normally closed 	Threaded connection with G internal thread								
	G ¼	6.0	0.6	14	0...30	40	20092730	20028364	
				16	0...35		20030083	20092731	
		8.0	0.8	14	0...30	40	20092882	20092749	
				16	0...35	20092750	20092884		
		G ⅜	6.0	0.6	14	0...30	40	20092739	20092740
					16	0...35	20056555	20092741	
	8.0	0.8	14	0...30	40	20092885	20092886		
			16	0...35	20092759	20092883			
	G ½	12.0	2.2	21	0...16	42	20092761	20069635	
				32	0...35	20056552	20092762		

DTS 1000578533 EN Version: E Status: RL (released | freigegeben | valide) printed: 09.07.2024

Circuit function	Port connection	Orifice [mm]	K _v value water [m ³ /h]	Coil power ^{1.)} [W]	Pressure range (MAWP ^{2.)} Ambient tempera- ture +85 °C ^{3.)} [bar]	Coil size [mm]	Article no.	
							012/DC	024/DC
							[V/Hz]	[V/Hz]
CF A 2/2-way solenoid valve Servo-controlled Normally closed 	Cartridge body							
	FC16	6.0	0.6	14	0...30	40	20092772	20028366
		6.0	0.6	16	0...35	40	20064143	20092773
		8.0	1.1	14	0...30	40	20092890	20069567
		8.0	1.1	16	0...35	40	20064149	20066111
	FC17	12.0	2.3	21	0...16	42	20092785	20092787
		12.0	2.3	32	0...25	42	20056554	20092789
	Flange body							
	FK14	6.0	0.6	14	0...30	40	20092798	20092799
		6.0	0.6	16	0...35	40	20039221	20092801
		8.0	0.8	14	0...30	40	20092809	20028365
		8.0	0.8	16	0...35	40	20064963	20092810
	FK17	12.0	2.4	21	0...16	42	20092887	20050001
		12.0	2.4	32	0...35	42	20092818	20080617

- 1.) The stated power represents the required power of the pick-up phase. Power must be reduced by min. 75% by means of current control or PWM signal after max. 500 ms (switch-on pulse) (holding phase).
- 2.) Maximum allowable working pressure
- 3.) Use at this ambient temperature is only guaranteed if power is reduced to 25% of the nominal power by means of current control or PWM signal after max. 500 ms (switch-on pulse).

8.6. Ordering chart accessories

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
		With LED (AC/DC)	12...24 V AC/DC	314812
		With LED and varistor (AC/DC)	12...24 V AC/DC	314820
		With rectifier, LED and varistor	12...24 V AC/DC	314816
		Without circuitry (AC/DC) with silicone seal for higher ambient temperature, e.g. steam version (NA07)	0...250 V AC/DC	361687

DTS 1000578533 EN Version: E Status: RL (released | freigegeben | valide) printed: 09.07.2024

Cable plug Type 2509, form A according to DIN EN 175301 - 803

Note:

- Dimensions in mm
- Without circuitry (standard)
- The cable plug Type 2509 meets the requirements in accordance with ATEX Cat. 3 GD in assembly with a Bürkert solenoid valve.
- The cable plug Type 2509 meets the requirements in accordance with UL Listed (UL 429) in assembly with a Bürkert solenoid valve.
- Refer to data sheet **Type 2509** ▶ for more information about the cable plug.

Cable plug	Dimensions	Version	Voltage	Article no.
		Without circuitry	0...250 V AC/DC	137943 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 15 for more information about Ex cable glands.
- Refer to **"7.2. Special tool to turn the terminal box"** on page 15 for more information about special wrench.

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

1.) Cable diameter

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

Mounting bracket

Note:

- The mounting bracket, two cylinder screws M4x8 and two spring rings are included in the scope of delivery.
- The mounting bracket can be used for all threaded housings up to orifice DN 12.

Description	Article no.
Mounting bracket for Type 6020/6027/6240/6440	282304 𐀀

DTS 1000578533 EN Version: E Status: RL (released | freigegeben | validé) printed: 09.07.2024