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.
The German or English (EU) data sheet is the master version. Other language versions may be temporarily out of date and will be updated accordingly.

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
direct-acting 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.

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FLUID CONTROL SYSTEMS

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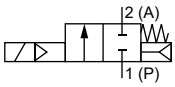
1. General technical data

Product properties	
Dimensions	Further information can be found in chapter "5. Dimensions" on page 7.
Material	
Seal	EPDM
Housing	Stainless steel 1.4404/316L
Coil	Epoxy
Tightness [1.)]	
Internal leakage rate	1×10^{-4} atm cc/s (> 21.8 psi differential pressure)
External leakage rate	1×10^{-4} atm cc/s
Pressure	
Pressure level	DN 6/DN 8: PN 580 psi DN 12/DN 16: PN 363 psi The maximum switchable differential pressure can be found in chapter "8. Ordering information" on page 17.
Burst pressure	> 3625 psi for flange and threaded body > 1813 psi for cartridge body DN 6, DN 8 > 1595 psi for cartridge body DN 12
Orifice	DN 6, DN 8, DN 12, DN 16
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 [2.)]	
DN 6, DN 8	Opening: 10...20 ms Closing: 40...50 ms
DN 12, DN 16	Opening: 20...30 ms Closing: 120...200 ms
Electrical data	
Power consumption	Further information can be found in chapter "6. Performance specifications" on page 17.
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) Optimized for hydrogen
Medium temperature	- 40 °F...+ 194 °F
Viscosity	Max. 21 cSt
Product connection	
Electrical connection	• Plug contacts according to DIN EN 175301 - 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 23. • Plug contacts according to DIN EN 175301 - 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 23. 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
Port connection	Cartridge, flange, G ¼, G ⅜, G ½, G ¾, NPT ¼, NPT ⅜, NPT ½, NPT ¾, SAE UNF 9⁄16 - 18, SAE UNF ¾ - 16

Approvals and conformities	
Degree of protection	Standard: IP65 with cable plug **Type 2518** ▶ NEMA 4X with cable plug **Type 2509** ▶ for stainless steel variants UL HazLoc Class I, Div 2 with terminal box or cable variant (other variants 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 °F...+ 131 °F/+ 167 °F for stationary applications depending on performance level - 40 °F...+ 185 °F for mobile applications [3.]

1.) The limit values listed do not apply to valves with lower tightness requirements (var. code PC93). This restriction does not include a standard helium leak test.
2.) Measurement at + 68 °F, 87 psi at the valve outlet, opening: pressure build-up 0...90 %, closing: pressure reduction 100...10 %
3.) 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 variants can be supplied with the approvals or conformities indicated below.

3.2. Conformity

In accordance with the EU 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.

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3.4. Explosion protection

Approval	Description
	Optional: Explosion protection according to Category 2 (Zone 1/21) Ex marking of the components according to the following table:

Coil Type AC10	Coil Type AC19
Coil with cable outlet	
ATEX: EPS 18 ATEX 1232 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db **IECEx:** IECEx EPS 18.0110 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db	**ATEX:** EPS 16 ATEX 1072 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db **IECEx:** IECEx EPS 16.0030 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db
Coil with terminal box	
ATEX: EPS 18 ATEX 1232 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db **IECEx:** IECEx EPS 18.0110 X Ex eb mb IIC T4 Gb Ex mb tb IIIC T130 °C Db	**ATEX:** EPS 16 ATEX 1072 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db **IECEx:** IECEx EPS 16.0030 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db

Optional: Explosion protection according to Category 3 (Zone 2/22)

Ex marking of the components according to the following table:

Coil Type AC10	Coil Type AC19
Coil with plug contacts form A and cable plug Type 2509	
ATEX: EPS 21 ATEX 1234 X II 3G Ex ec IIC T4 Gc II 3D Ex tc IIIC T135 °C Dc **IECEx:** IECEx EPS 21.0078X Ex ec IIC T4 Gc Ex tc IIIC T135 °C Dc	**ATEX:** EPS 22 ATEX 1136 X II 3G Ex ec IIC T3 Gc II 3D Ex tc IIIC T200 °C Dc **IECEx:** IECEx EPS 22.0018 X Ex ec IIC T3 Gc Ex tc IIIC T200 °C Dc

3.5. North America (USA/Canada)

Approval	Description
	Optional: UL Hazardous Locations – Explosion Protection (valid for coils) 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
	Optional: CSA for Canada and the USA (valid for valves) The valves are CSA approved for Canada and the USA as a Safety Shutoff Valve for hydrogen according to: • UL 429 (electrically operated valves) • CSA 139 (electrically operated valves)

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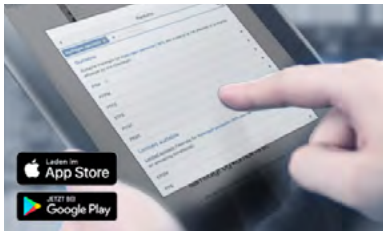
3.6. Others

DNV classification

Approval	Description
TYPE APPROVED PRODUCT DNV DNV.COM/AF	**Optional: DNV classification – Ships, offshore units, and high speed and light craft** The products are accepted for installation on all vessels classed by DNV.

4. Materials

4.1. Bürkert resistApp

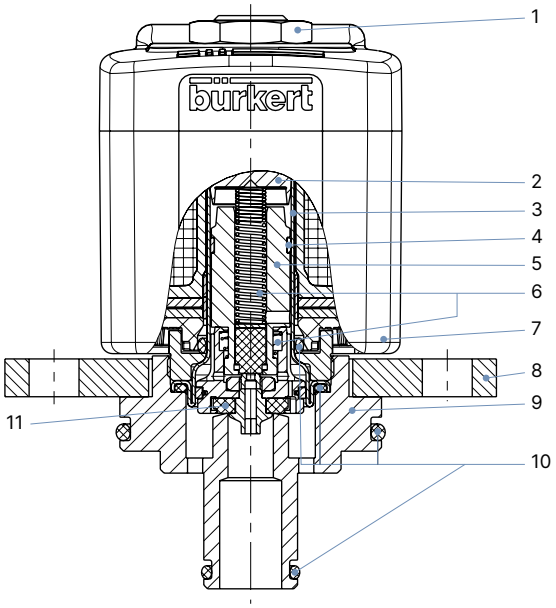


Bürkert resistApp – Chemical resistance chart

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	Spring	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

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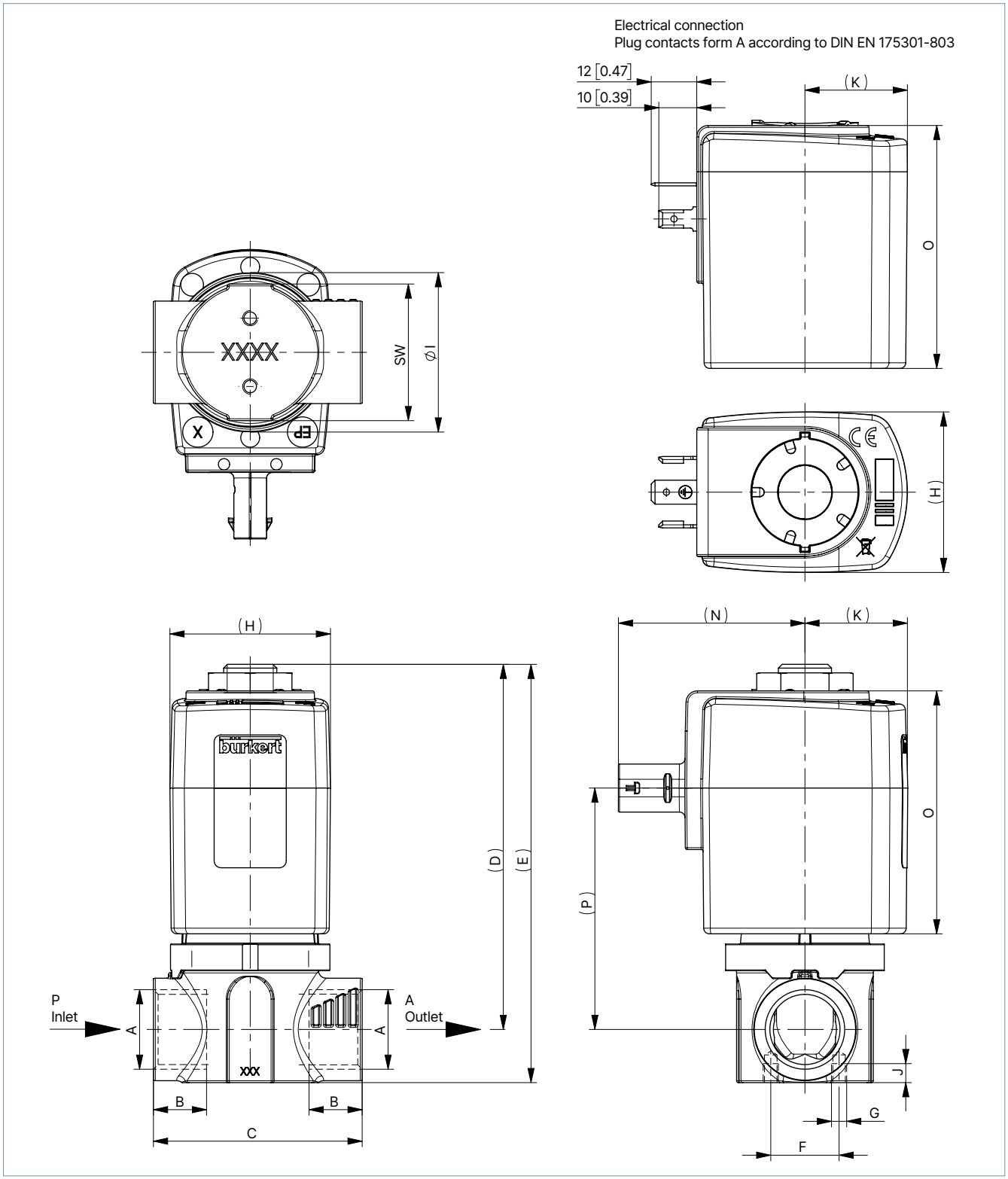
5. Dimensions

5.1. Threaded variant

Complete valve

Note:

- Dimensions in mm [inch]
- 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)		F		G	I		J		(P)		SW	
	[inch]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]
6	G ¼	12	0.47	40	1.57	61	2.40	71	2.80	18	0.71	M4	27	1.06	4.5	0.18	41.5	1.63	24	0.94
	NPT ¼	10	0.39																	
	Rc ¼	9.7	0.38																	
8	G ¼	12	0.47	50	1.97	62	2.44	74	2.91								42.5	1.67		
	NPT ¼	10	0.39																	
	Rc ¼	9.7	0.38																	
	SAE 9/16 - 18 UNF- 2B	12.7	0.50																	
6/8	G ⅜	12	0.47																	
	NPT ⅜	10.3	0.41																	
	RC⅜	10.1	0.40																	
12	G ½	14	0.55	55	2.17	96	3.78	110	4.33				42	1.65	5	0.20	62	2.44	36	1.42
	NPT ½	13.7	0.54																	
	RC½	13.2	0.52																	
	SAE ¾ - 16 UNF- 2B	14.3	0.56																	
16	G ¾	16	0.63			99	3.90	115	4.53	–	–	–			–	–				
	NPT ¾	14	0.55																	
	RC¾	14.5	0.57																	

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)		(K)		(N)		O	
			[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]
6/8	Form A according to DIN EN 175301 - 803	5	32	1.26	21	0.83	–	–	41	1.61
		6	40	1.57	24	0.94	–	–		
	Plug KOSTAL MLK1.2 / TE MCON 1.2, 2-pin, coding A (male)						48	1.89		
12/16	Form A according to DIN EN 175301 - 803	K	42	1.65	27	1.06	–	–	64	2.52
	Plug KOSTAL MLK1.2 / TE MCON 1.2, 2-pin, coding A (male)						49	1.93		

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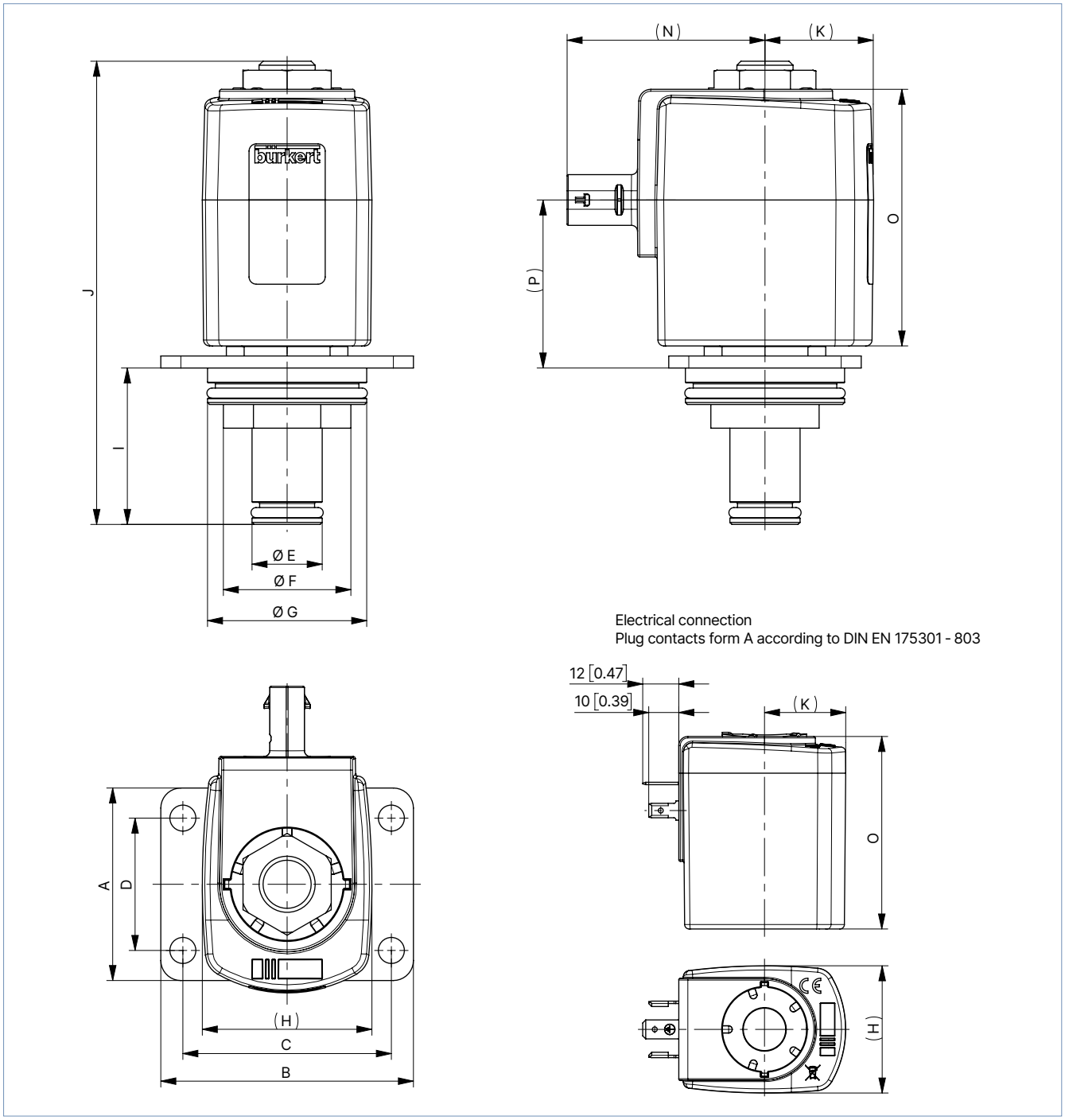
5.2. Cartridge variant

Complete valve

Note:

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



DN	Port conn.	A		B		C		D		Ø E		Ø F		Ø G		I		(J)		(P)	
		[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]
6/8	FC16	55	2.17	55	2.17	52	2.05	–	–	12.4	0.49	23.9	0.94	34.6	1.36	25.4	1.00	76	2.99	31	1.22
12	FC17	48	1.89	63	2.48	52	2.05	33	1.30	17.5	0.69	31.8	1.25	39.7	1.56	39	1.54	113	4.45	42	1.65

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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]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]
6/8	Form A according to DIN EN 175301 - 803	5	32	1.26	21	0.83	–	–	41	1.61
		6	40	1.57	24	0.94	–	–		
	Plug KOSTAL MLK1.2 / TE MCON 1.2, 2-pin, coding A (male)						48	1.89		
12	Form A according to DIN EN 175301 - 803	K	42	1.65	27	1.06	–	–	64	2.52
	Plug KOSTAL MLK1.2 / TE MCON 1.2, 2-pin, coding A (male)						49	1.93		

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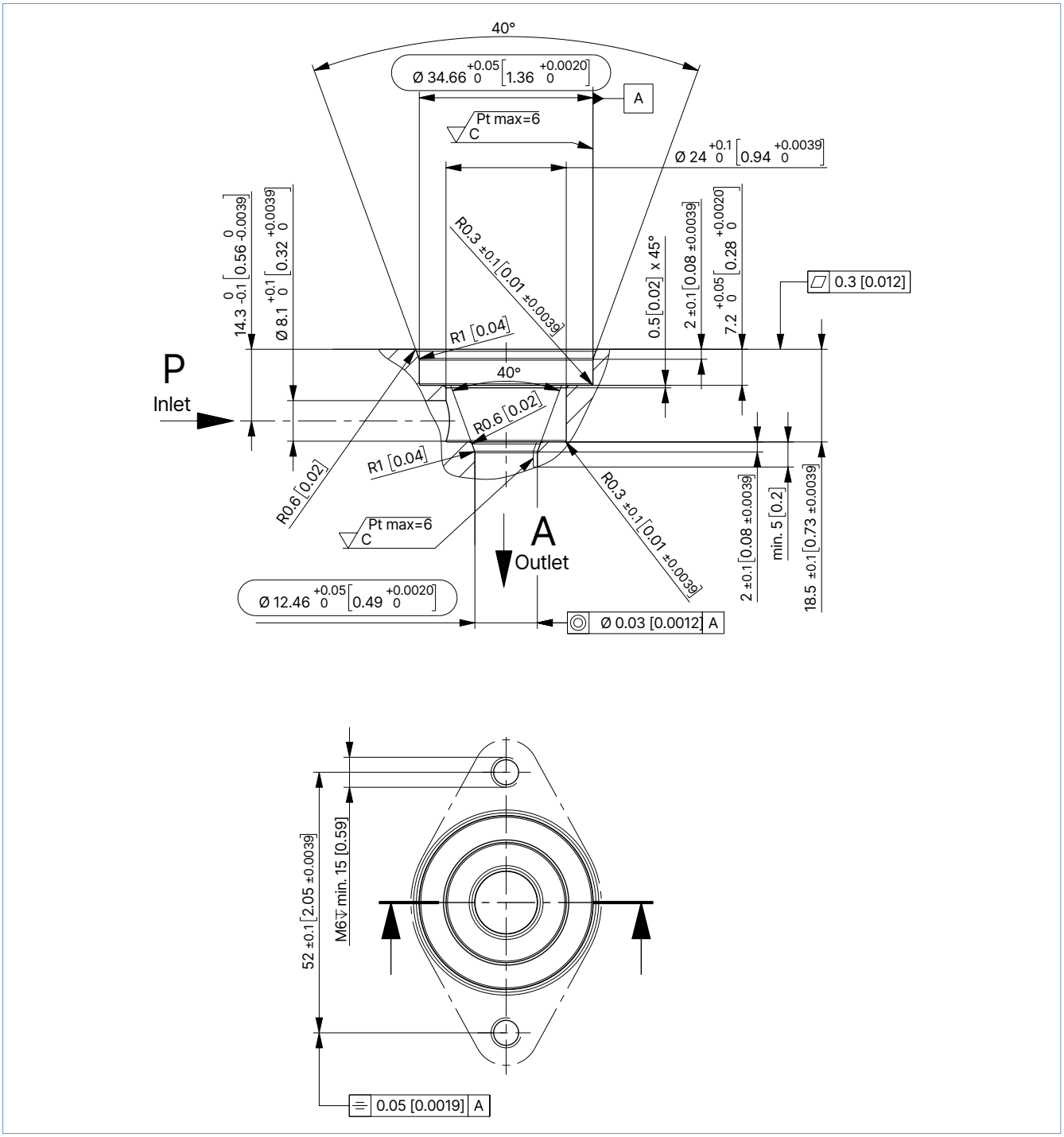
Cartridge connection diagram

Note:
Dimensions in mm [inch]

Connection contour FC16



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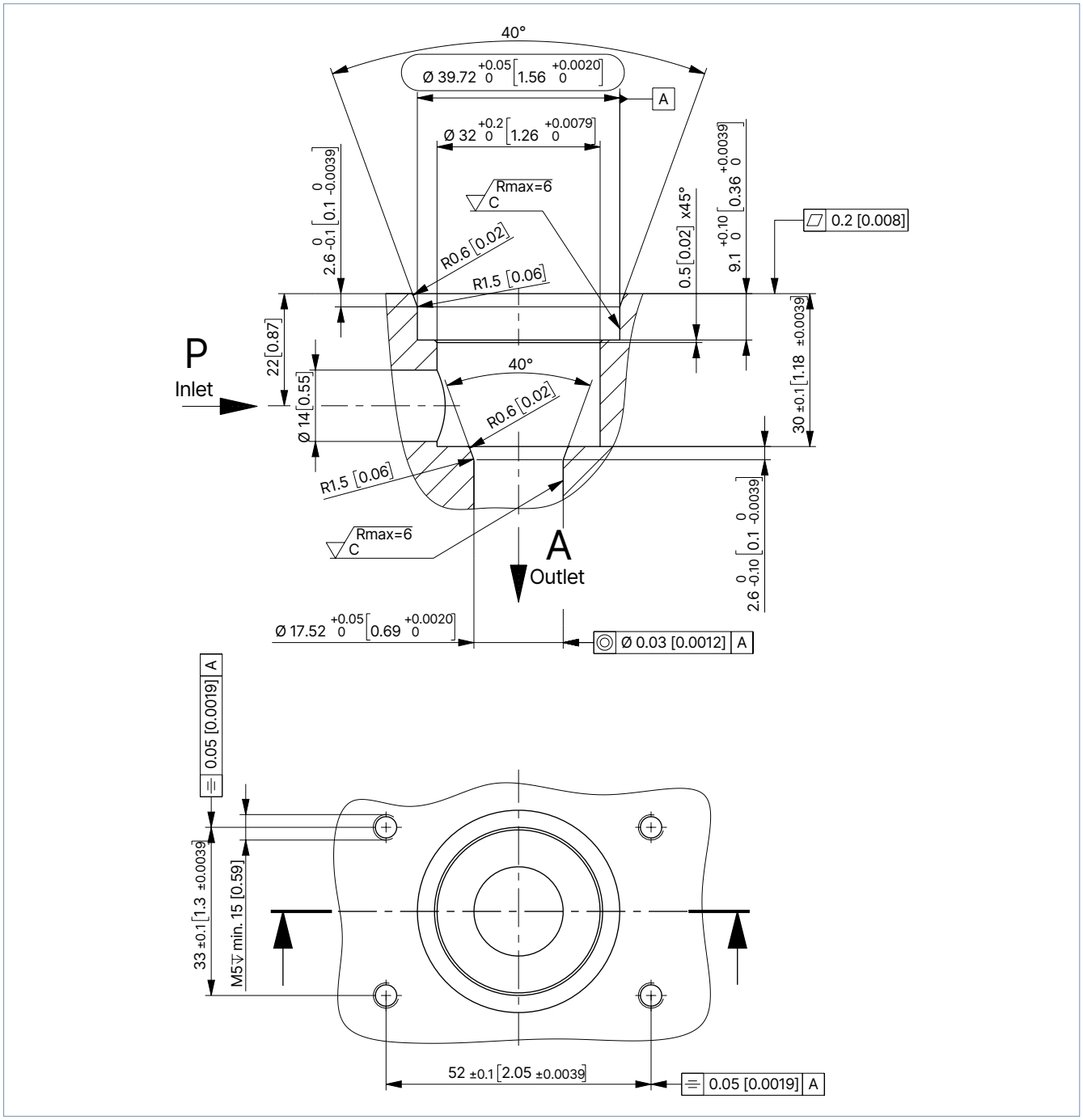
Connection contour FC17



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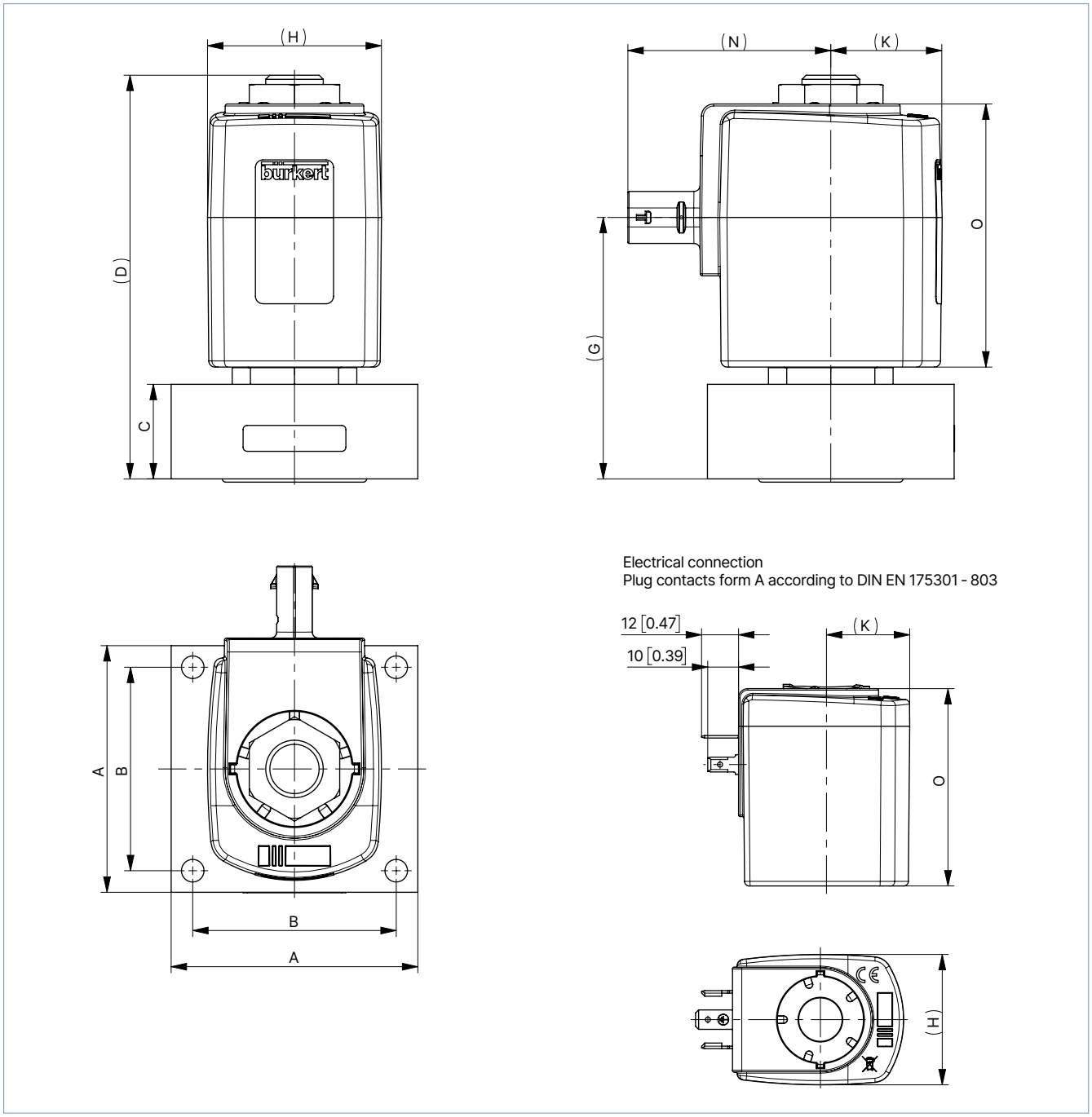
5.3. Flange variant

Complete valve

Note:

- Dimensions in mm [inch]
- The flow openings (P) of the valve body and connection block must be arranged one above the other in order to be able to achieve the K_V value specified in the data sheet. If this is not the case, there may be minor restrictions in the K_V value.
- The corresponding dimensions of the solenoid coil can be found in chapter "Solenoid coil dimensions" on page 14.



DN	Port connection	A		B		C		(D)		(G)	
		[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]
6/8	FK14	55	2.17	46	1.81	13	0.51	58	2.28	38.5	1.52
12	FK17	60	2.36	49.5	1.95	23	0.91	98	3.86	64	2.52

Solenoid coil dimensions

Note:
The corresponding dimensions to the letters mentioned can be found in chapter "Complete valve" on page 13.

DN	Electrical connection	Coil size	(H)		(K)		(N)		O	
			[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]
6/8	Form A according to DIN EN 175301 - 803	5	32	1.26	21	0.83	–	–	41	1.61
		6	40	1.57	24	0.94	–	–		
	Plug KOSTAL MLK1.2 / TE MCON 1.2, 2-pin, coding A (male)						48	1.89		
12	Form A according to DIN EN 175301 - 803	K	42	1.65	27	1.06	–	–	64	2.52
	Plug KOSTAL MLK1.2 / TE MCON 1.2, 2-pin, coding A (male)						49	1.93		

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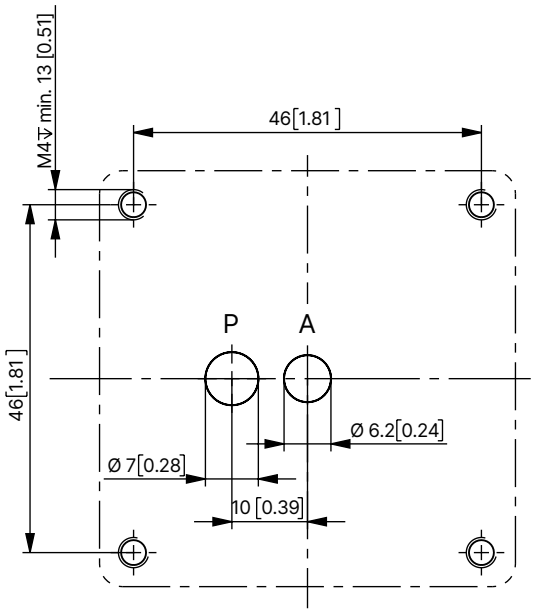
Flange connection diagram

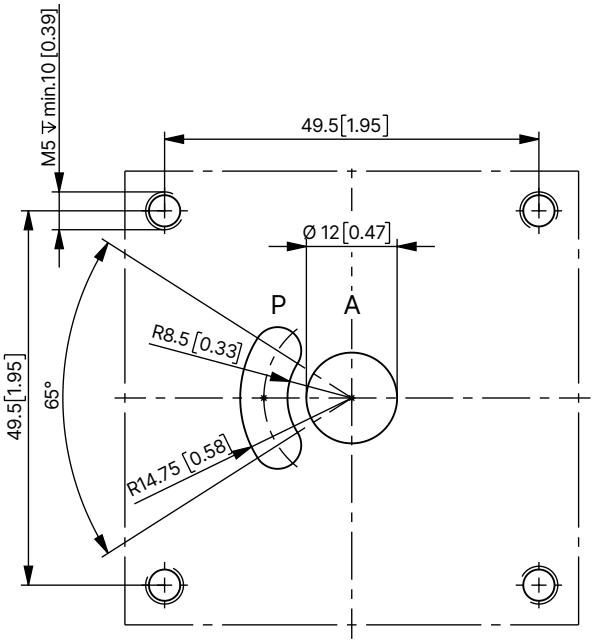
Note:

- Dimensions in mm [inch]
- 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.

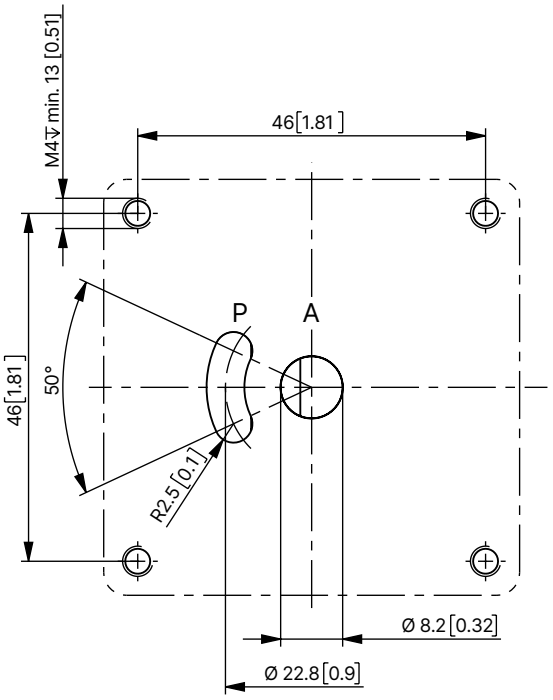
Connection contour FK14 DN 6



Connection contour FK17

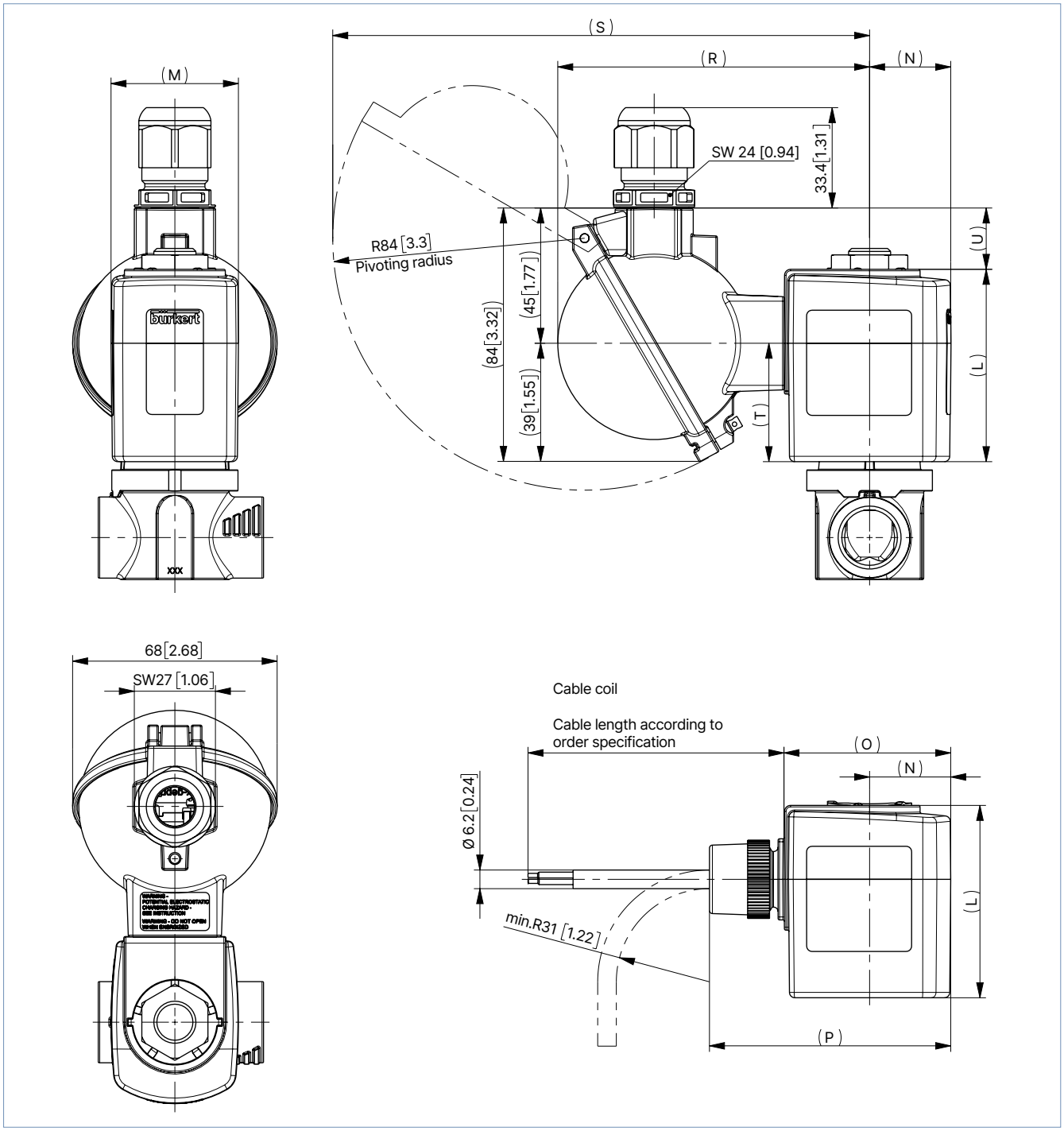


Connection contour FK14 DN 8



5.4. UL Listed coil for hazardous locations, Class I, Division 2

Note:
Dimensions in mm [inch]



Var. Code	Coil size	(M)		(N)		(O)		(P)		(L)		(R)		(S)		(T)		(U)	
		[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]
PX58	6	40	1.57	24	0.94	52	2.05	75	2.95	41	1.61	103	4.06	178	7.01	26	1.02	30	1.18
PX38	K	42	1.65	27	1.06	56	2.20	80	3.15	64	2.52	105	4.13	180	7.09	40	1.57	20	0.79

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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	Warm power	Cold power Inrush power	Cold power Holding power	Warm power Holding power
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	–	–	–
12/16	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. Special tool to turn the terminal box

Note:
Refer to chapter "Special tool to turn the terminal box" on page 23 for more order information.

8. Ordering information

8.1. Bürkert eShop

Bürkert eShop – Easy ordering and quick delivery

Want to find the Bürkert product or spare part you need 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 – Find the right product quickly

Want to select products conveniently 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

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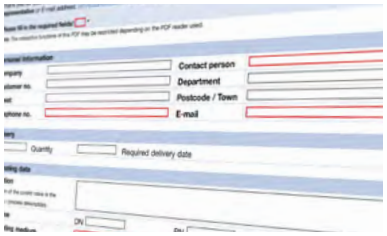
8.3. Bürkert Product Enquiry Form



Bürkert Product Enquiry Form – Create a quick and compact enquiry

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

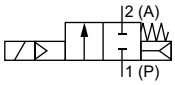
Fill out the form now

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

Standard variant with coil UL recognized (cURus)

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 23 or separate data sheet **Type 2518** ▶.
- Further variants with alternative voltages, G or RC internal threads are available on request.

Circuit function	Port connection	Orifice	C_v value water	Coil power	Pressure range (MAWP [1.])		Coil size	Article no.
					Ambient temperature +167 °F	Ambient temperature +131 °F		024/DC
		[mm/inch]	[gal/min]	[W]	[psi]	[psi]	[mm/inch]	[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**							
	NPT ¼	6.0/0.24	0.70	12	0...290	–	32/1.26	o. r.
				14	0...363	–	40/1.57	o. r.
		8.0/0.31	1.28	12	–	0...290	32/1.26	o. r.
					0...232	–		o. r.
				14	0...363	–	40/1.57	o. r.
	NPT ⅜	6.0/0.24	0.70	12	0...290	–	32/1.26	o. r.
				14	0...363	–	40/1.57	o. r.
	NPT ¾	16.0/0.63	4.06	32 [2.]	0...290	–	42/1.65	o. r.
	SAE UNF 9/16 - 18	8.0/0.31	1.28	12	–	0...290	32/1.26	o. r.
					0...232	–		o. r.
				14	0...363	–	40/1.57	o. r.
	SAE UNF ¾ - 16	12.0/0.47	2.56	21	–	0...290	42/1.65	o. r.
					0...232	–		o. r.
				32 [2.]	0...290	–		o. r.
	Cartridge body							
	FC16	6.0/0.24	0.80	12	0...290	–	32/1.26	o. r.
				14	0...363	–	40/1.57	o. r.
		8.0/0.31	1.28	12	–	0...290	32/1.26	o. r.
					0...232	–		o. r.
				14	0...363	–	40/1.57	o. r.
	FC17	12.0/0.47	2.65	21	–	0...290	42/1.65	o. r.
					0...232	–		o. r.
				32 [2.]	0...290	–		o. r.

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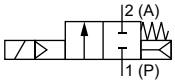
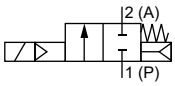
Circuit function	Port connection	Orifice	C_V value water	Coil power	Pressure range (MAWP [1.])		Coil size	Article no.
					Ambient temperature +167 °F	Ambient temperature +131 °F		024/DC
		[mm/inch]	[gal/min]	[W]	[psi]	[psi]	[mm/inch]	[V/Hz]
CF A 2/2-way solenoid valve Servo-controlled Normally closed  	**Flange body**							
	FK14	6.0/0.24	0.70	12	0...290	–	32/1.26	o. r.
				14	0...363	–	40/1.57	o. r.
		8.0/0.31	0.92	12	–	0...290	32/1.26	o. r.
					0...232	–		o. r.
				14	0...363	–	40/1.57	o. r.
	FK17	12.0/0.47	2.77	21	–	0...290	42/1.65	o. r.
					0...232	–		o. r.
				32 [2.]	0...290	–		o. r.
	Installation in valve block [3.]							
	FC25	16.0/0.63	4.06	32 [2.]	0...290	–	42/1.65	o. r.

o. r. = on request
1.) Maximum allowable working pressure
2.) Maximum 50 % duty cycle permitted
3.) The FC25 variant is designed for direct integration into a valve block. This results in an improved C_V value of 4.64 gal/min for the orifice DN16. If you are interested, please contact your local Bürkert sales department.

Standard variant with CSA certified Safety Shutoff approval

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 23 or separate data sheet **Type 2518** ▶.
- Further variants with alternative voltages, G or RC internal threads are available on request.

Circuit function	Port connection	Orifice	C_V value water	Coil power	Pressure range (MAWP [1.])		Coil size	Article no.
					Ambient temperature +167 °F	Ambient temperature +131 °F		024/DC
		[mm/inch]	[gal/min]	[W]	[psi]	[psi]	[mm/inch]	[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**							
	NPT ¼	6.0/0.24	0.70	12	0...290	–	32/1.26	o. r.
				14	0...363	–	40/1.57	o. r.
		8.0/0.31	1.28	12	–	0...290	32/1.26	o. r.
					0...232	–		o. r.
				14	0...363	–	40/1.57	o. r.
	NPT ⅜	6.0/0.24	0.70	12	0...290	–	32/1.26	o. r.
				14	0...363	–	40/1.57	o. r.
	NPT ¾	16.0/0.63	4.06	32 [2.]	0...290	–	42/1.65	20148517
	SAE UNF 9/16 - 18	8.0/0.31	1.28	12	–	0...290	32/1.26	o. r.
					0...232	–		o. r.
				16	0...363	–	40/1.57	20113685
	SAE UNF ¾ - 16	12.0/0.47	2.56	21	–	0...290	42/1.65	o. r.
					0...232	–		20113688
				32 [2.]	0...290	–		o. r.
	Cartridge body							
	FC16	6.0/0.24	0.80	12	0...290	–	32/1.26	o. r.
				14	0...363	–	40/1.57	o. r.
		8.0/0.31	1.28	12	–	0...290	32/1.26	o. r.
					0...232	–		20148497
				14	0...363	–	40/1.57	20148500
	FC17	12.0/0.47	2.65	21	–	0...290	42/1.65	o. r.
					0...232	–		20148507
				32 [2.]	0...290	–		20148511

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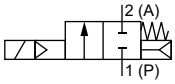
Circuit function	Port connection	Orifice	C_V value water	Coil power	Pressure range (MAWP 1.) Ambient temperature +167 °F	Pressure range (MAWP 1.) Ambient temperature +131 °F	Coil size	Article no. 024/DC
		[mm/inch]	[gal/min]	[W]	[psi]	[psi]	[mm/inch]	[V/Hz]
CF A 2/2-way solenoid valve Servo-controlled Normally closed 	**Flange body**							
	FK14	6.0/0.24	0.70	12	0...290	–	32/1.26	o. r.
				14	0...363	–	40/1.57	o. r.
		8.0/0.31	0.92	12	–	0...290	32/1.26	o. r.
					0...232	–		20148499
				16	0...363	–	40/1.57	20148501
	FK17	12.0/0.47	2.77	21	–	0...290	42/1.65	o. r.
					0...232	–		20148503
				32 2.	0...290	–		20148504
	Installation in valve block 3.							
	FC25	16.0/0.63	4.06	32 2.	0...290	–	42/1.65	o. r.

o. r. = on request

1.) Maximum allowable working pressure

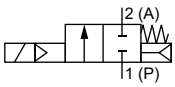
2.) Maximum 50 % duty cycle permitted

3.) The FC25 variant is designed for direct integration into a valve block. This results in an improved C_V value of 4.64 gal/min for the orifice DN16. If you are interested, please contact your local Bürkert sales department.

Variant with Kick and Drop coil with coil UL recognized (cURus)

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 23 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 variants with alternative voltages, G or RC internal threads are available on request.

Circuit function	Port connection	Orifice	C_V value water	Coil power Starting power	Coil power Holding power	Pressure range (MAWP 1.) Ambient temperature +167 °F	Coil size	Article no. 024/DC
		[mm/inch]	[gal/min]	[W]	[W]	[psi]	[mm/inch]	[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**							
	NPT ¼	6.0/0.24	0.70	20	2	0...363	40/1.57	o. r.
		8.0/0.31	1.28					o. r.
	NPT ⅜	6.0/0.24	0.70	20	2	0...363	40/1.57	o. r.
	NPT ¾	16.0/0.63	4.06			0...290	42/1.65	o. r.
	SAE UNF 9/16 - 18	8.0/0.31	1.28			0...363	40/1.57	o. r.
	SAE UNF ¾ - 16	12.0/0.47	2.56	44	6.5	0...290	42/1.65	o. r.
	Cartridge body							
	FC16	6.0/0.24	0.80	20	2	0...363	40/1.57	o. r.
	FC16	8.0/0.31	1.28	20	2	0...363	40/1.57	o. r.
	FC17	12.0/0.47	2.65	44	6.5	0...290	42/1.65	o. r.
	Flange body							
	FK14	6.0/0.24	0.70	20	2	0...363	40/1.57	o. r.
	FK14	8.0/0.31	0.92	20	2	0...363	40/1.57	o. r.
	FK17	12.0/0.47	2.77	44	6.5	0...363	42/1.65	o. r.
	Installation in valve block 2.							
	FC25	16.0/0.63	4.06	44	6.5	0...290	42/1.65	o. r.

o. r. = on request

1.) Maximum allowable working pressure

2.) The FC25 variant is designed for direct integration into a valve block. This results in an improved C_V value of 4.64 gal/min for the orifice DN16. If you are interested, please contact your local Bürkert sales department.

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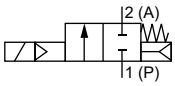
ATEX/IECEx cable variant with coil UL-listed (cULus) for hazardous locations, Class I, Division 2

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 variant, the cable length is 3 m. Other lengths are available on request.
- Further variants with alternative voltages, G or RC internal threads are available on request.
- ATEX/IECEx variants with terminal box are available on request.

Circuit function	Port connection	Orifice	C_v value water	Coil power		Pressure range (MAWP 1.))	Coil size	Article no.
				Starting power	Holding power	Ambient temperature +131 °F		024/DC
		[mm/inch]	[gal/min]	[W]	[W]	[psi]	[mm/inch]	[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**							
	NPT ¼	6.0/0.24	0.70	9	–	0...232	40/1.57	o. r.
		8.0/0.31	1.28					o. r.
	NPT ⅜	6.0/0.24	0.70	9	–	0...232	40/1.57	o. r.
	NPT ¾	16.0/0.63	4.06	15	–	0...145	42/1.65	o. r.
				44	6.5	0...290		o. r.
	SAE UNF 9/16 - 18	8.0/0.31	1.28	9	–	0...232	40/1.57	o. r.
	SAE UNF ¾ - 16	12.0/0.47	2.56	15	–	0...145	42/1.65	o. r.
				44	6.5	0...290		o. r.
	Cartridge body							
	FC16	6.0/0.24	0.80	9	–	0...232	40/1.57	o. r.
	FC16	8.0	1.28	9	–	0...232	40/1.57	o. r.
	FC17	12.0/0.47	2.65	15	–	0...145	42/1.65	o. r.
				44	6.5	0...290		o. r.
	Flange body							
	FK14	6.0/0.24	0.70	9	–	0...232	40/1.57	o. r.
		8.0/0.31	0.92	9	–	0...232		o. r.
	FK17	12.0/0.47	2.77	15	–	0...145	42/1.65	o. r.
				44	6.5	0...290		o. r.
	Installation in valve block 2.)							
	FC25	16.0/0.63	4.06	15	–	0...145	42/1.65	o. r.
				44	6.5	0...290		o. r.

o. r. = on request

1.) Maximum allowable working pressure

2.) The FC25 variant is designed for direct integration into a valve block. This results in an improved C_v value of 4.64 gal/min for the orifice DN16. If you are interested, please contact your local Bürkert sales department.

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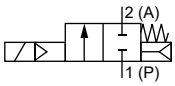
8.5. Ordering chart of mobile applications with automotive plug (IP6K9K coil)

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 variants with alternative voltages, NPT or RC internal threads are available on request.

Circuit function	Port connection	Orifice	C_v value water	Coil power [1.]	Pressure range (MAWP [2.])	Coil size	Article no.	
					Ambient temperature + 185 °F [3.]		012/DC	024/DC
		[mm/inch]	[gal/min]	[W]	[psi]	[mm/inch]	[V/Hz]	[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**							
	NPT ¼	6.0/0.24	0.70	14	0...363	40/1.57	o. r.	o. r.
		8.0/0.31	1.28	14	0...363	40/1.57	o. r.	o. r.
	NPT ⅜	6.0/0.24	0.70	14	0...363	40/1.57	o. r.	o. r.
	NPT ¾	16.0/0.63	4.06	32	0...290	42/1.65	o. r.	o. r.
	SAE UNF 9/16 - 18	8.0/0.31	1.28	14	0...363	40/1.57	o. r.	o. r.
	SAE UNF ¾ - 16	12.0/0.47	2.56	21	0...232	42/1.65	o. r.	o. r.
				32	0...290		o. r.	o. r.
	Cartridge body							
	FC16	6.0/0.24	0.70	14	0...363	40/1.57	o. r.	o. r.
		8.0/0.31	1.27	14	0...363	40/1.57	o. r.	o. r.
	FC17	12.0/0.47	2.65	21	0...232	42/1.65	o. r.	o. r.
		12.0/0.47	2.65	32	0...290	42/1.65	o. r.	o. r.
	Flange body							
	FK14	6.0/0.24	0.70	14	0...363	40/1.57	o. r.	o. r.
		8.0/0.31	0.92	14	0...363	40/1.57	o. r.	o. r.
	FK17	12.0/0.47	2.65	21	0...232	42/1.65	o. r.	o. r.
		12.0/0.47	2.65	32	0...290	42/1.65	o. r.	o. r.
	Installation in valve block [4.]							
	NPT ¾	16.0/0.63	4.06	32	0...290	42/1.65	o. r.	o. r.

o. r. = on request

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).

4.) The FC25 variant is designed for direct integration into a valve block. This results in an improved C_v value of 4.64 gal/min for the orifice DN16. If you are interested, please contact your local Bürkert sales department.

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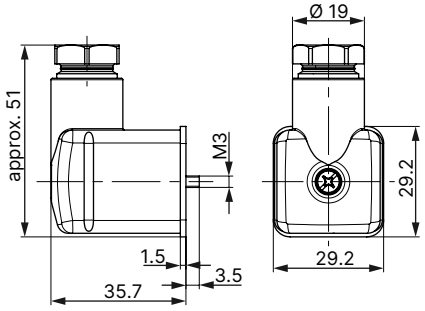
8.6. Ordering chart accessories

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

Note:

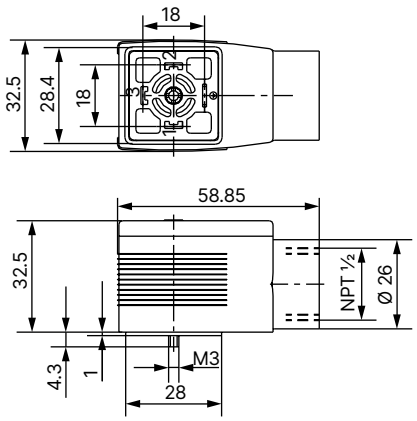
- Dimensions in mm
- For further variants see data sheet **Type 2518** ▶.

Cable plug	Dimensions	Variant	Voltage	Article no.
		Without wiring (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 wiring (AC/DC) with silicone seal for higher ambient temperature, e.g. steam variant (NA07)	0...250 V AC/DC	361687

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

Note:

- Dimensions in mm
- Without wiring (standard)
- The cable plug Type 2509 meets the requirements of UL hazloc Div. 2.
- The cable plug Type 2509 meets the requirements of 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	Variant	Voltage	Article no.
		Without wiring	0...250 V AC/DC	137943

Special tool to turn the terminal box

Note:
This special tool is not supplied with the valve.

Description	Components of the set	Article no.
Set SC02-AC10 	• Special tool • Service manual	293488

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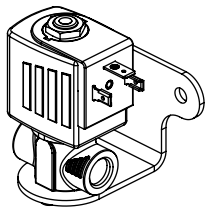
Mounting bracket

Note:

- The mounting bracket, 2 cylinder screws M4×8 and 2 spring lock washers 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

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