

Diaphragm valve 2/2-way servo-assisted

- Servo-assisted diaphragm valve with a diameter up to DN 20
- Body material in brass, stainless steel and plastic
- Explosion-proof variants
- Damped design for low noise

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

Can be combined with

	Type 2507 Cable plug, form B according to industry standard	►
	Type 2516 Cable plug, form C according to DIN EN 175301-803	►

Type description

The Type 6211 is a servo-assisted normally closed 2/2-way solenoid valve with a servo diaphragm for use especially with neutral fluids and gaseous media. The range of housing includes brass, stainless steel and plastic. The valve has a low power consumption, low weight and a compact body. The valve is normally closed by spring force. Energized, the solenoid opens the pilot valve first. Then the medium pressure opens the main valve due to the pressure drop above the diaphragm. The valve opens. The special design and geometry of the inner parts of the valve result in a soft closing function and cause almost no water hammer.

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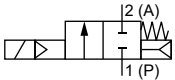
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1. General technical data

Product properties	
Dimensions	Further information can be found in chapter "5. Dimensions" on page 6.
Material	
Seal	NBR, FKM, (EPDM on request)
Body	Brass, stainless steel, PPE/PA
Housing cover	PPE/PA
Orifice	DN 10...DN 20
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
Switching time¹⁾	
DN 10	Opening: 10...25 ms Closing: 100...120 ms
DN 13	Opening: 30...50 ms Closing: 130...200 ms
DN 20	Opening: 100...400 ms Closing: 500...700 ms
Electrical data	
Operating voltage	24 V DC 24 V 50/60 Hz, 120 V 60 Hz, 230 V 50/60 Hz
Power consumption	Further information can be found in chapter "6. Performance specifications" on page 13.
Voltage tolerance	± 10 %
Medium data	
Operating medium	Neutral gaseous and liquid media, which do not attack the body and sealing materials Further information can be found in chapter "4.1. Bürkert resistApp" on page 5.
Medium temperature	
With NBR	0 °C...+ 70 °C (with PPE/PA body 0 °C...+ 50 °C)
With FKM	0 °C...+ 70 °C (with PPE/PA body 0 °C...+ 50 °C)
Viscosity	Max. 21 mm ² /s
Process/Port connection & communication	
Electrical connection	- Cable plug Type 2516 ▶, form C according to DIN EN 175301 - 803 on request Further information can be found in chapter "Cable plug Type 2516, form C according to DIN EN 175301 - 803" on page 17. - Cable plug Type 2507 ▶, form B according to industry standard Further information can be found in chapter "Cable plug Type 2507, form B according to industry standard" on page 16. - Flying leads connection on request
Port connection	G ¼ ...G 1 (NPT on request) Threaded socket G ¾, G ½ (with PPE/PA body) (further information can be found in chapter "Three-part connection set CP03 made of PPE/PA" on page 16)
Approvals and conformities	
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 4.
North America (USA/Canada)	Further information can be found in chapter "3.5. North America (USA/Canada)" on page 4.
Drinking water	Further information can be found in chapter "3.6. Drinking water" on page 5.
Environment and installation	
Installation position	As required, preferably with actuator upright
Ambient temperature	Max. + 55 °C (with PPE/PA body + 50 °C)

1.) Measurement + 20 °C, 6 bar at valve outlet, opening: pressure build-up 0...90 %, closing: pressure drop 100...10 %

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.

3.4. Explosion protection

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

3.5. North America (USA/Canada)

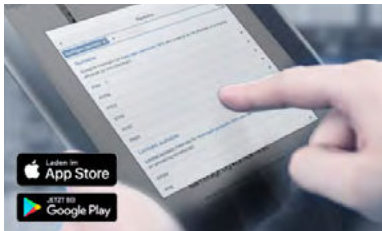
Approval	Description
	Valid for coils: UL Recognized for the USA and Canada The coils are UL Recognized for the USA and Canada according to: - UL 429 (electrically operated valves) - CAN/CSA-C22.2 No. 139

3.6. Drinking water

Conformity	Description
H₂O	Suitable for use in drinking water applications The materials comply with the assessment principles (UBA) for materials in contact with drinking water (TrinkwasserV). PF36: Suitable for products with a maximum temperature of 60 °C (warm water)

4. Materials

4.1. Bürkert resistApp

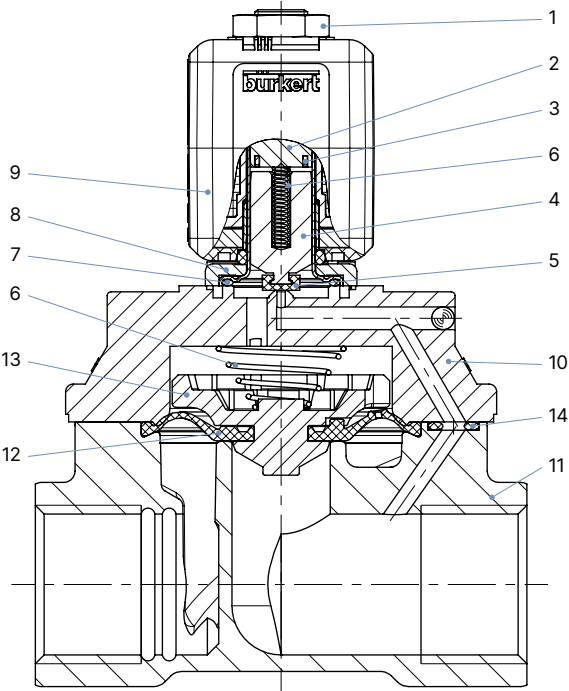


Bürkert resistApp – Chemical resistance chart

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	Locknut	Thick-film passivated surface (brass version) Stainless steel (PPE/PA body, stainless steel body)
2	Stopper	Stainless steel 1.4113
3	Short circuit ring	Copper Silver (with stainless steel body)
4	Core	Stainless steel 1.4113
5	Core seal	NBR, FKM, EPDM
6	Spring	Stainless steel 1.4310
7	O-ring	FKM, EPDM
8	Flange	Thick-film passivated surface (brass version) Nickel-plated surface (PPE/PA body, stainless steel body)
9	Coil	Epoxy
10	Body cover	PPE/PA
11	Body	Brass Stainless steel PPE/PA
12	Diaphragm	NBR, FKM, EPDM
13	Diaphragm holder	PPS in combination with brass or stainless steel parts
14	O-ring	NBR, FKM, EPDM

5. Dimensions

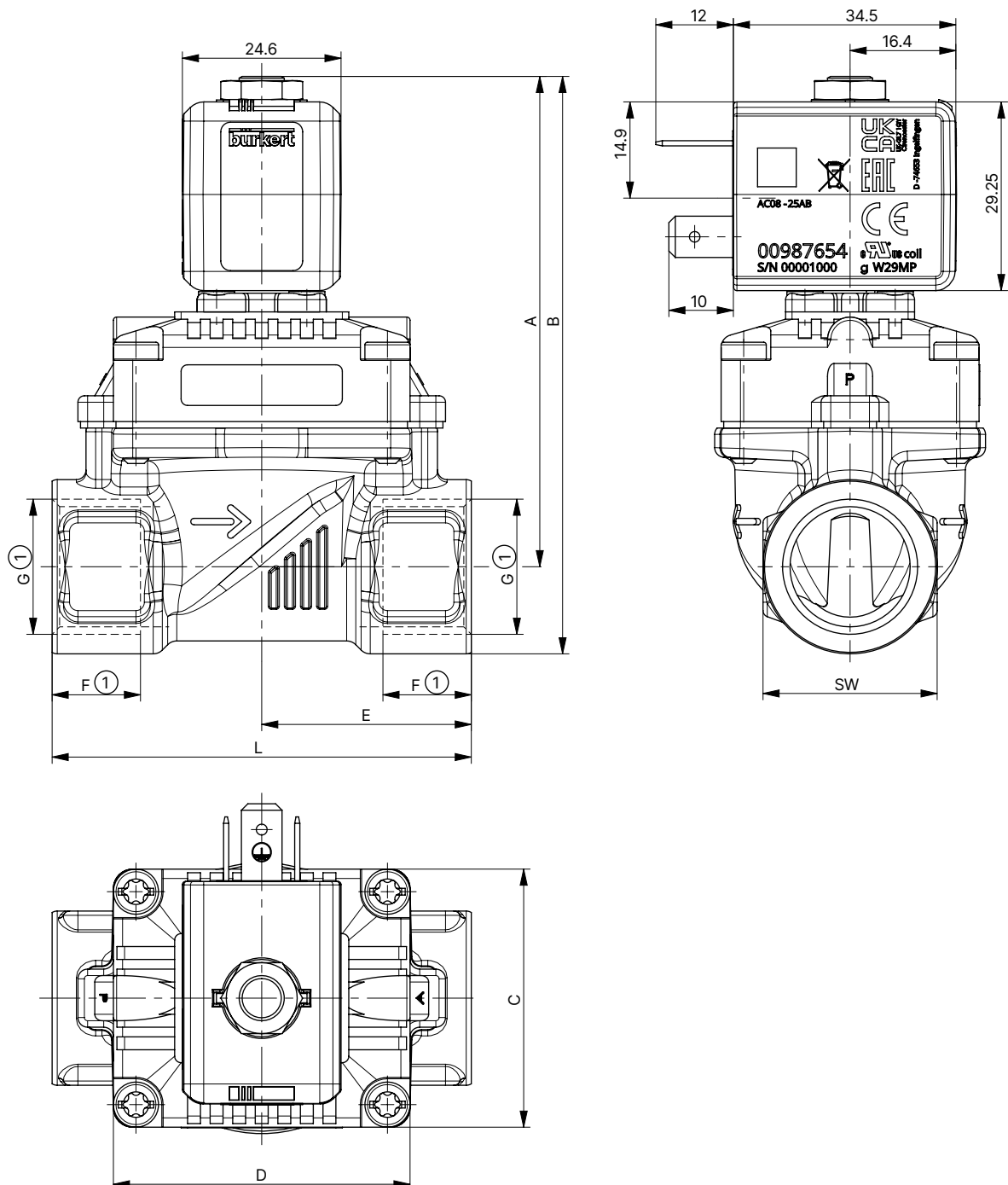
5.1. Standard version

Brass body and stainless steel body

Note:

- Dimensions in mm
- The dimensions F1 and G1 apply to G-threads.
- The dimensions F2 and G2 apply to NPT-threads.
- The dimensions F3 and G3 apply to Rc-threads.

Versions according to industry standard form B



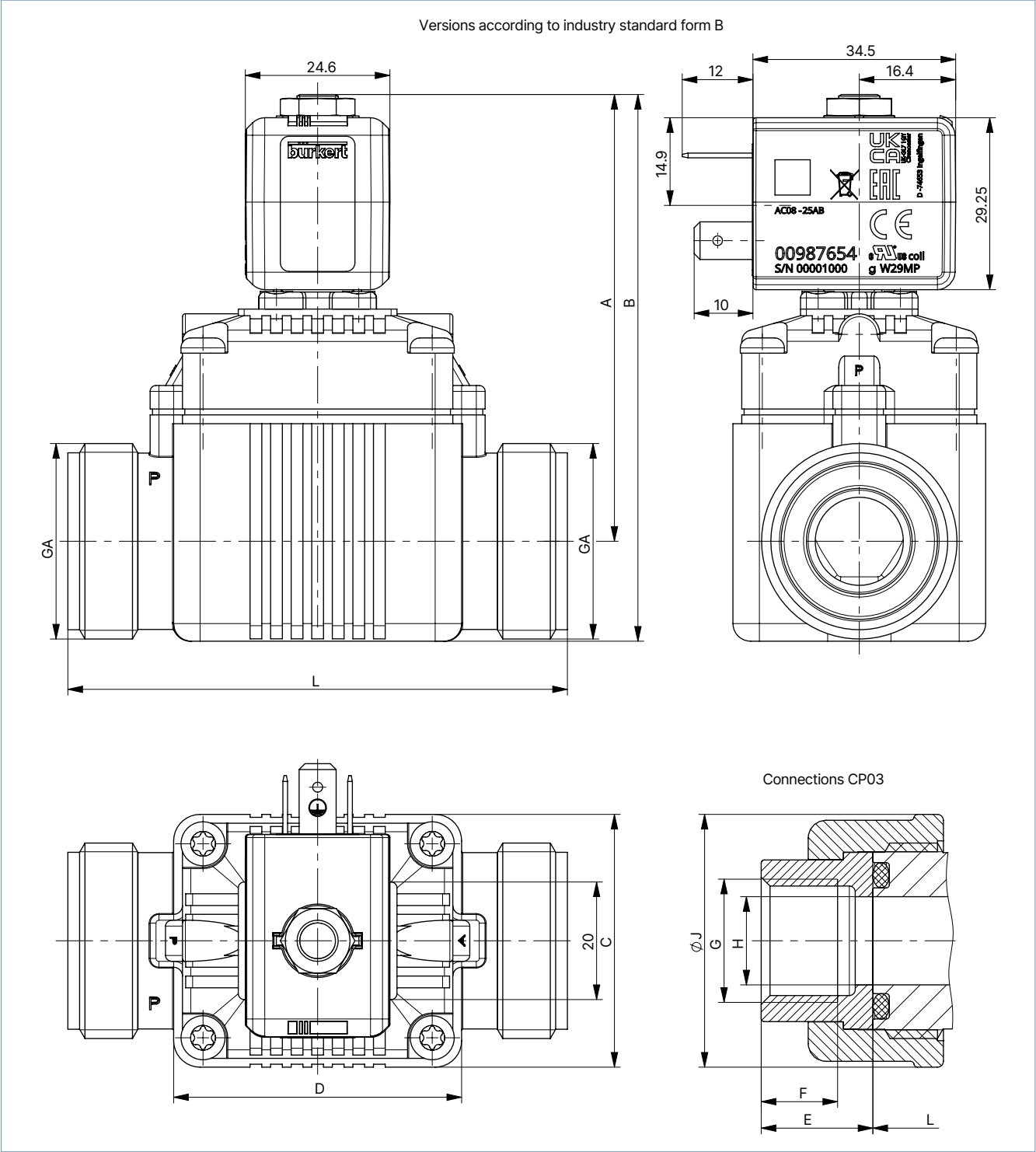
DN	A	B	C	D	E	G		NPT		Rc		L	SW
						F1	G1	F2	G2	F3	G3		
10	71.5	82.5	32	32	22	12	G ¼	10	NPT ¼	–	–	50	22
						12	G ⅜	10.3	NPT ⅜	10.1	Rc ⅜		
10 ^{1.)}	73.5	87			24.5	14	G ½	13.7	NPT ½	–	–	50	27
10 ^{2.)}	73.5	87				24.5	14	G ½	13.7	NPT ½	–	–	55
13 ^{1.)}	76	89.5	42	46	27.25	12	G ⅜	–	–	–	–	58	27
13					32.5	14	G ½	13.7	NPT ½	13.2	Rc ½	65	
					78	94	32.5	16	G ¾	14	NPT ¾	–	
20	85	105.5			60	60	50	16	G ¾	14	NPT ¾	14.5	Rc ¾
			18	G 1				16.8	NPT 1	16.8	Rc 1		

1.) Only threaded brass connection

2.) Only threaded stainless steel connection

Plastic body PPE/PA

Note:
Dimensions in mm

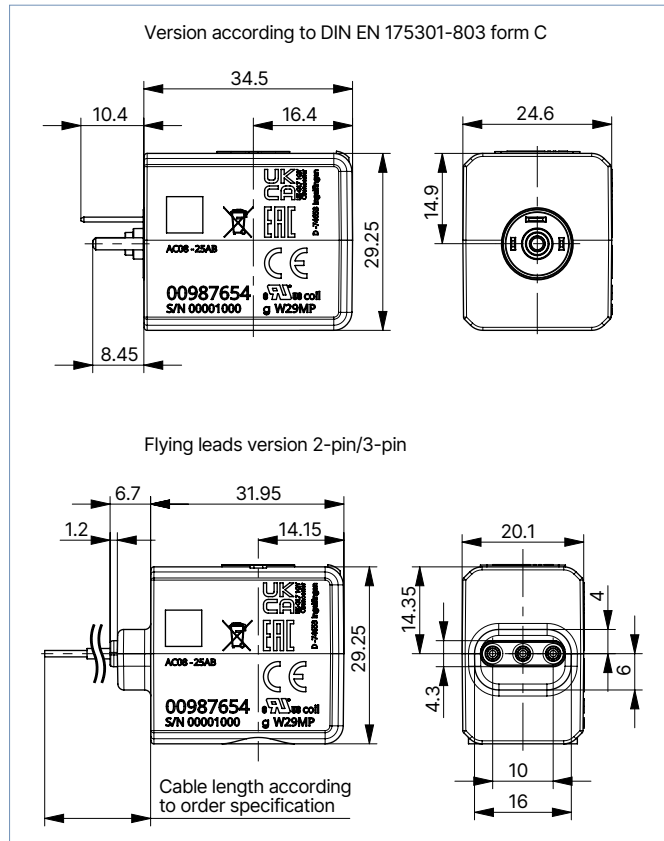


DN	A	B	C	D	GA	L	E	H	G	F	Ø J
10	69.5	83.5	32	32	G ¾	73	17	10	G ¾	13	35
13	76	93	43	49	G 1	85	19	15	G ½	13	43

Further electrical connections

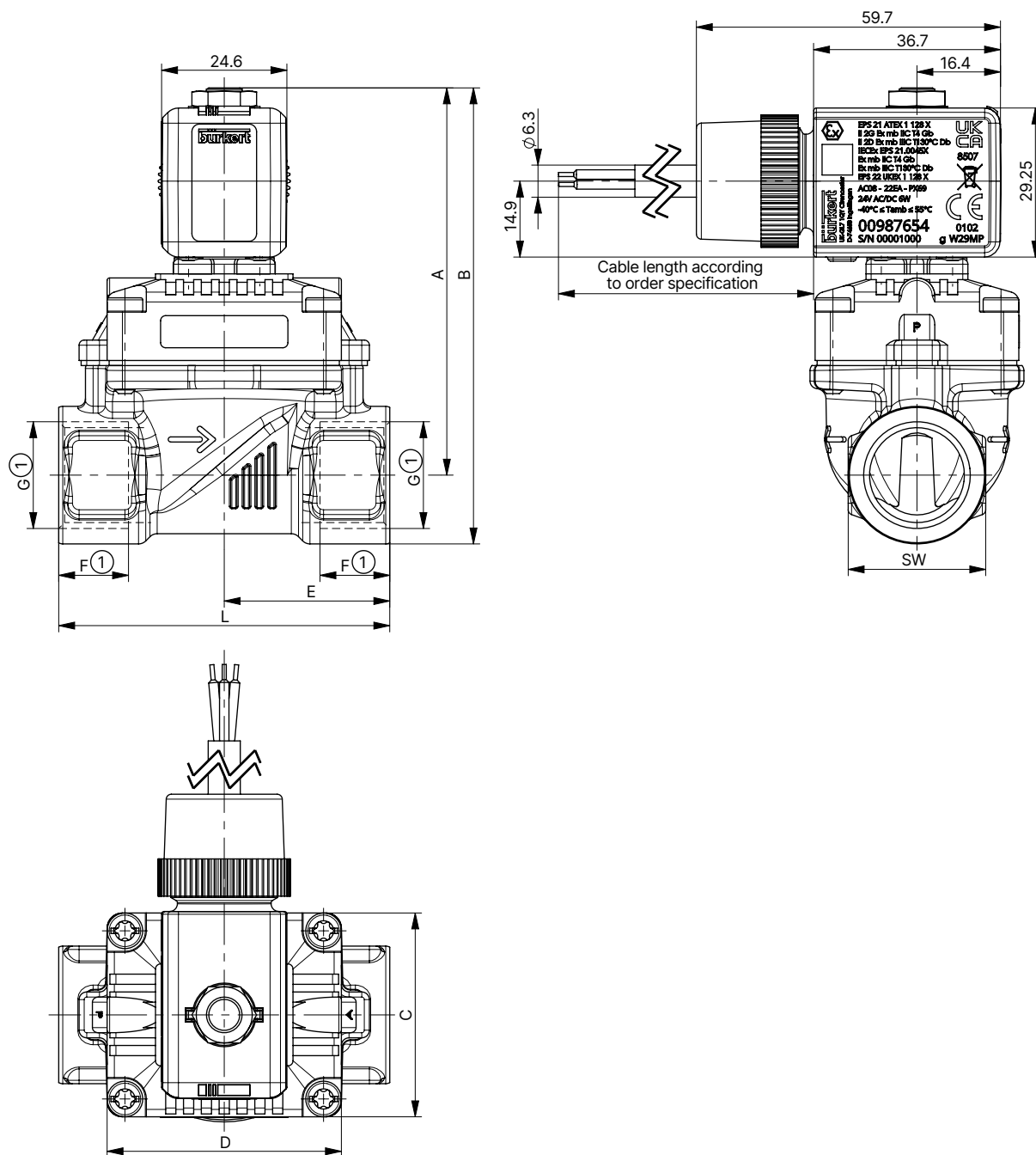
Note:

Dimensions in mm



Brass body and stainless steel body

- Dimensions in mm
- The dimensions F1 and G1 apply to G-threads.
- The dimensions F2 and G2 apply to NPT-threads.
- The dimensions F3 and G3 apply to Rc-threads.



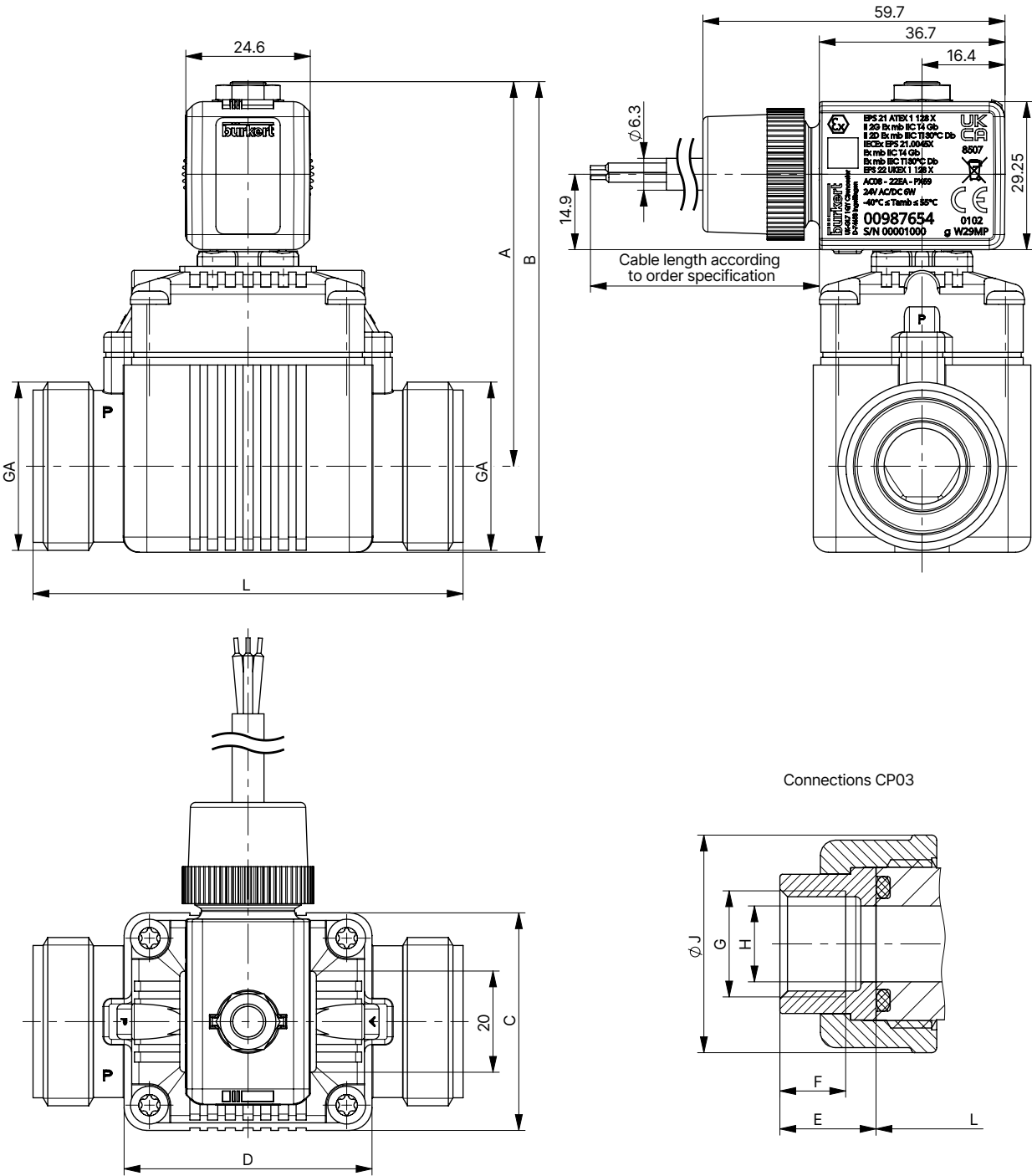
DN	A	B	C	D	E	G		NPT		Rc		L	SW		
						F1	G1	F2	G2	F3	G3				
10	71.5	82.5	32	32	22	12	G ¼	10	NPT ¼	–	–	50	22		
						12	G ⅜	10.3	NPT ⅜	10.1	Rc ⅜				
10 ^{1.)}	73.5	87			42	46	24.5	14	G ½	13.7	NPT ½	–	–	50	27
10 ^{2.)}	73.5	87					24.5	14	G ½	13.7	NPT ½	–	–	55	27
13 ^{1.)}	76	89.5	42	46	27.25	12	G ⅜	–	–	–	–	58	27		
13	78	94			32.5	14	G ½	13.7	NPT ½	13.2	Rc ½	65	32		
					32.5	16	G ¾	14	NPT ¾	–	–	65			
20	85	105.5	60	60	50	16	G ¾	14	NPT ¾	14.5	Rc ¾	100	41		
						18	G 1	16.8	NPT 1	16.8	Rc 1				

1.) Only threaded brass connection

2.) Only threaded stainless steel connection

Plastic body PPE/PA

Note:
Dimensions in mm



DN	A	B	C	D	GA	L	E	H	G	F	Ø J
10	69.5	83.5	32	32	G ¾	73	17	10	G ¾	13	35
13	76	93	43	49	G 1	85	19	15	G ½	13	43

6. Performance specifications

6.1. Power consumption

Coil	Coil size [mm]	Electrical power consumption				
		Inrush AC [VA]	Operation AC [VA] [W]		DC Cold [W] Hot [W]	
AC08	24.5	12	6.5	4	5.5	4.5
AC08 ATEX	24.5	–	–	–	6	5

7. Ordering information

7.1. 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.

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7.2. Bürkert product filter

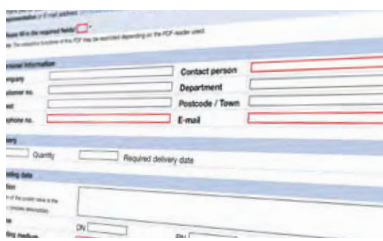


Bürkert product filter – Get quickly to the right product

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.

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7.3. 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.

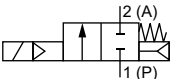
[Fill out the form now](#)

7.4. Ordering chart

Standard version with brass body

Note:

- Complete with coil, plug connection form B (industry standard) for cable plug **Type 2507** ▶ (not included in scope of delivery)
- Please note that the cable plug must be ordered separately, see ["Cable plug Type 2507, form B according to industry standard" on page 16](#) or separate data sheet for **Type 2507** ▶.

Circuit function	Port connection	Orifice	K _v value water ^{1.)}	Pressure range ^{2.)}	Weight	Article no.		
		[mm]	[m³/h]	[bar]	[kg]	024/DC [V/Hz]	024/50...60 [V/Hz]	230/50...60 [V/Hz]
CF A 2/2-way solenoid valve Servo-controlled Normally closed 	Seal material NBR							
	G 3⁄8	10	1.9	0.5...10	0.26	20067544 	20069275 	20069272 
	G 1⁄2		1.9	0.5...10	0.29	20069269 	20069274 	20069273 
	G 1⁄2	13	3.6	0.5...10	0.35	20067546 	20069310 	20069312 
	G 3⁄4		3.6	0.5...10	0.37	20069311 	20069313 	20069314 
	G 3⁄4	20	8.3	0.5...10	1.10	20067549 	20069326 	20069327 
	G 1		8.3	0.5...10	0.90	20069323 	20069325 	20069324 
	Seal material FKM							
	G 3⁄8	10	1.9	0.5...10	0.26	20069305 	20069306 	20069307 
	G 1⁄2		1.9	0.5...10	0.29	20069304 	20069308 	20069309 
	G 1⁄2	13	3.6	0.5...10	0.35	20069317 	20069318 	20069319 
	G 3⁄4		3.6	0.5...10	0.37	20069320 	20069321 	20069322 
	G 3⁄4	20	8.3	0.5...10	1.10	20069329 	20069330 	20069331 
	G 1		8.3	0.5...10	0.90	20069332 	20069333 	20069334 

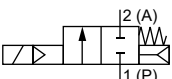
1.) Measurement at +20 °C, 1 bar^{2.)} at valve inlet and free outlet

2.) Pressure data: overpressure to atmospheric pressure

Standard version with stainless steel body

Note:

- Complete with coil, plug connection form B (industry standard) for cable plug **Type 2507** ▶ (not included in scope of delivery)
- Please note that the cable plug must be ordered separately, see ["Cable plug Type 2507, form B according to industry standard" on page 16](#) or separate data sheet for **Type 2507** ▶.

Circuit function	Port connection	Orifice	K _v value water ¹⁾	Pressure range ²⁾	Weight	Article no.		
						024/DC	024/50...60	230/50...60
		[mm]	[m³/h]	[bar]	[kg]	[V/Hz]	[V/Hz]	[V/Hz]
CF A	Seal material FKM							
2/2-way solenoid valve Servo-controlled Normally closed	G 3⁄8	10	1.9	0.5...10	0.26	20069424 	20069425 	20069426 
	G 1⁄2	13	3.6	0.5...10	0.35	20069427 	20069428 	20069429 
	G 3⁄4	20	8.3	0.5...10	1.10	o. r.	o. r.	o. r.
								

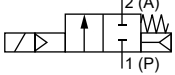
o. r. = on request

1.) Measurement at +20 °C, 1 bar^{2.)} at valve inlet and free outlet

2.) Pressure data: overpressure to atmospheric pressure

Standard version with plastic body PPE/PA
Note:

- Complete with coil, plug connection form B (industry standard) for cable plug **Type 2507** ▶ (not included in scope of delivery)
- Please note that the cable plug must be ordered separately, see [“Cable plug Type 2507, form B according to industry standard” on page 16](#) or separate data sheet for **Type 2507** ▶.
- All valves are delivered with PPE/PA body and without connection set (see [“Three-part connection set CP03 made of PPE/PA” on page 16](#)).

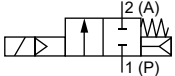
Circuit function	Port connection	Orifice	K _v value water ^{1.)}	Pressure range ^{2.)}	Weight	Article no.		
		[mm]	[m³/h]	[bar]	[kg]	024/DC [V/Hz]	024/50...60 [V/Hz]	230/50...60 [V/Hz]
CF A 2/2-way solenoid valve Servo-controlled Normally closed 	Seal material NBR							
	G 3/8	10	1.8	0.5...10	0.17	20069406 𐀀	20069411 𐀀	20069413 𐀀
	G 1/2	13	3.6	0.5...10	0.21	20069415 𐀀	20069418 𐀀	20069420 𐀀
	Seal material FKM							
	G 3/8	10	1.8	0.5...10	0.17	20069410 𐀀	20069412 𐀀	20069414 𐀀
	G 1/2	13	3.6	0.5...10	0.21	20069417 𐀀	20069419 𐀀	20069421 𐀀

 1.) Measurement at + 20 °C, 1 bar^{2.)} at valve inlet and free outlet

2.) Pressure data: overpressure to atmospheric pressure

ATEX/IECEX cable version with brass body
Note:

- The maximum medium temperature must never exceed the permitted temperature class (T4: + 135 °C) minus 5 K.
- Only single mounting permissible
- Delivery includes 3 metre cable, other lengths are available on request.

Circuit function	Port connection	Orifice	K _v value water ^{1.)}	Pressure range ^{2.)}	Weight	Article no.	
		[mm]	[m³/h]	[bar]	[kg]	024 / AC/DC [V/Hz]	230/50 [V/Hz]
CF A 2/2-way solenoid valve Servo-controlled Normally closed 	Seal material FKM						
	G 3/8	10	1.9	0.5...10	0.43	20071605 𐀀	20071606 𐀀
	G 1/2	13	3.6	0.5...10	0.50	20071607 𐀀	20071608 𐀀
	G 3/4	20	8.3	0.5...10	1.25	o. r.	o. r.

o. r. = on request

 1.) Measurement at + 20 °C, 1 bar^{2.)} at valve inlet and free outlet

2.) Pressure data: overpressure to atmospheric pressure

Further versions on request

 Approval • ATEX and IECEx approval for coils with fixed cable outlet • cURus coil approval	 Process connection NPT
 Electrical connection • Coil with plug connection DIN EN 175301 - 803 form C • Coil with flying leads connections	 Voltage Further voltages
 Material Seal material EPDM	

7.5. Ordering chart accessories

Three-part connection set CP03 made of PPE/PA

Note:

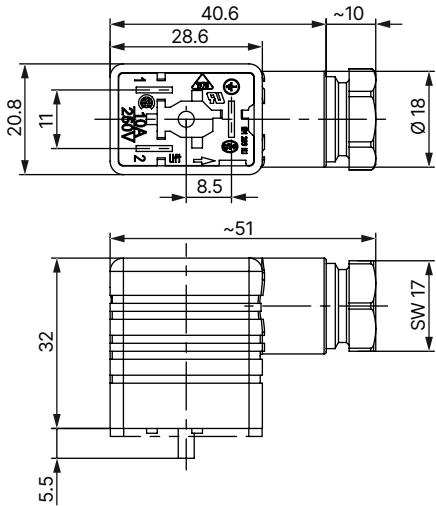
- For one valve you need two connection sets.
- The connection set is not included in the delivery and must be ordered separately.

Accessories	Orifice	Port connection	Seal material	Article no.
	[mm]		(O-ring)	
	10	G 3/8	NBR	142425 
			FKM	142426 
			EPDM	142427 
	13	G 1/2	NBR	142428 
			FKM	142429 
			EPDM	142430 

Cable plug Type 2507, form B according to industry standard

Note:

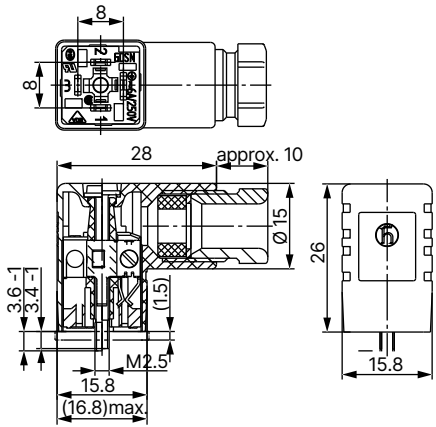
- Delivery of cable plug includes a flat seal and a fixing screw.
- Refer to data sheet **Type 2507**  for more information about the cable plug.

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

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

Note:

- Delivery of cable plug includes a flat seal and a fixing screw.
- See data sheet **Type 2516** ► for more versions.

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 