DATA SHEET

Type 6211

bürkert
FLUID CONTROL SYSTEMS

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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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
Housing cover	PPE/PA
Orifice	DN 10…DN 20
Circuit function	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 time [1.)]	
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 8.
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	32 °F…+158 °F
With FKM	32 °F…+158 °F
Viscosity	Max. 21 cSt
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 11. • 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 10. • Flying leads connection on request
Port connection	NPT ¼ …NPT 1
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 4.
Environment and installation	
Installation position	As required, preferably with actuator upright
Ambient temperature	Max. +131 °F

1.) Measurement +68 °F, 87 psi at valve outlet, opening: pressure build-up 0…90 %, closing: pressure drop 100…10 %

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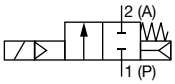
2. Circuit functions

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
H_2O	**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)

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4. Materials

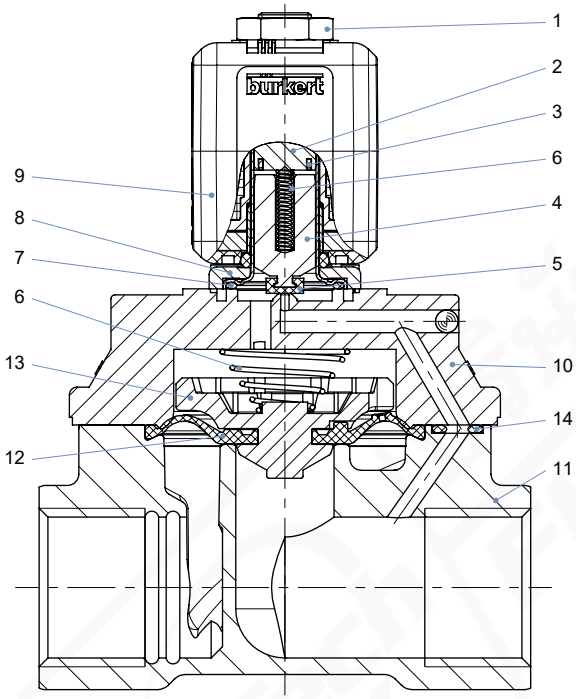
4.1. Bürkert resistApp

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 (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 (stainless steel body)
9	Coil	Epoxy
10	Body cover	PPE/PA
11	Body	Brass Stainless steel
12	Diaphragm	NBR, FKM, EPDM
13	Diaphragm holder	PPS in combination with brass or stainless steel parts
14	O-ring	NBR, FKM, EPDM

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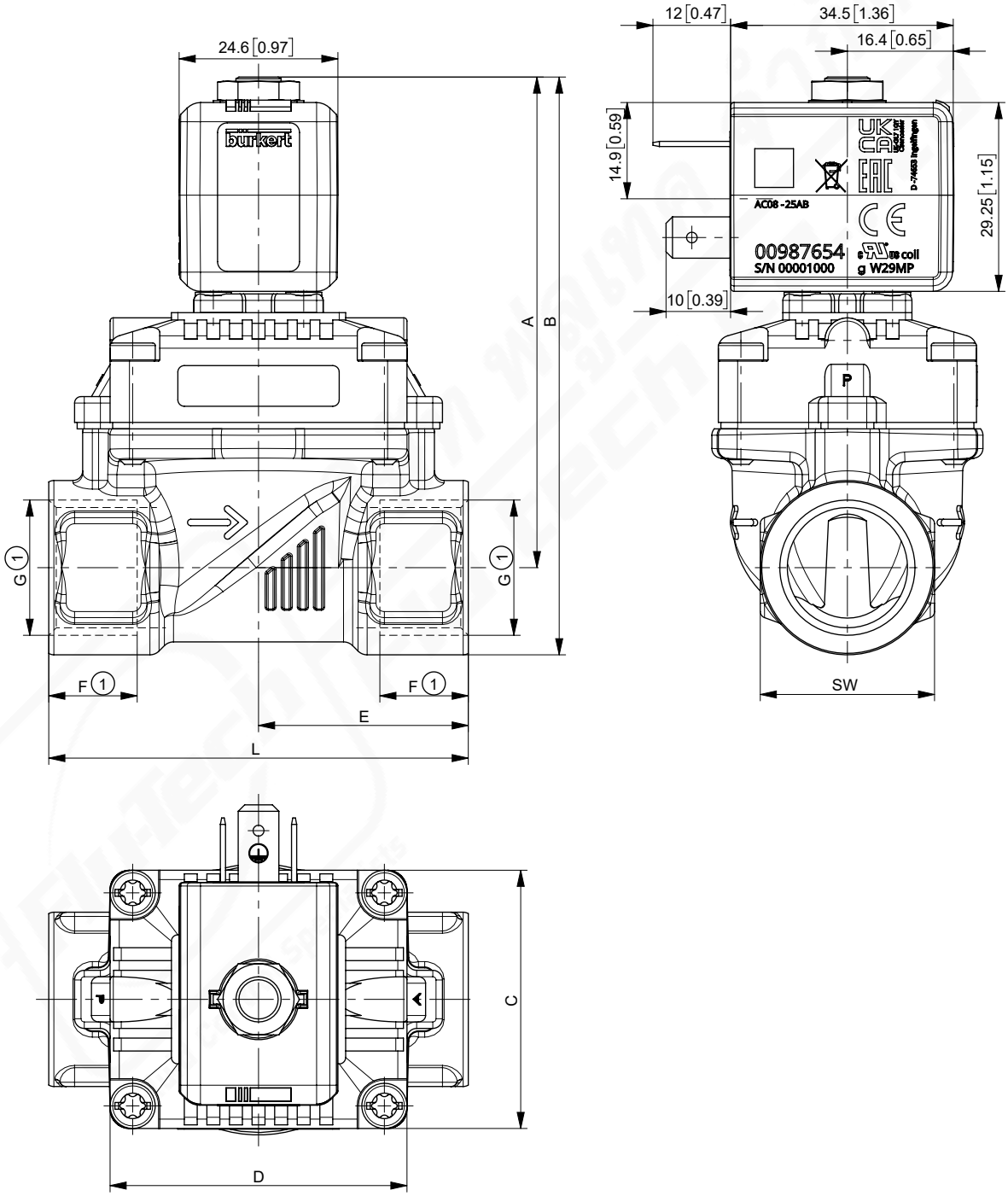
5. Dimensions

5.1. Standard version

Brass body and stainless steel body

Note:
Dimensions in mm [inch]

Versions according to industry standard form B



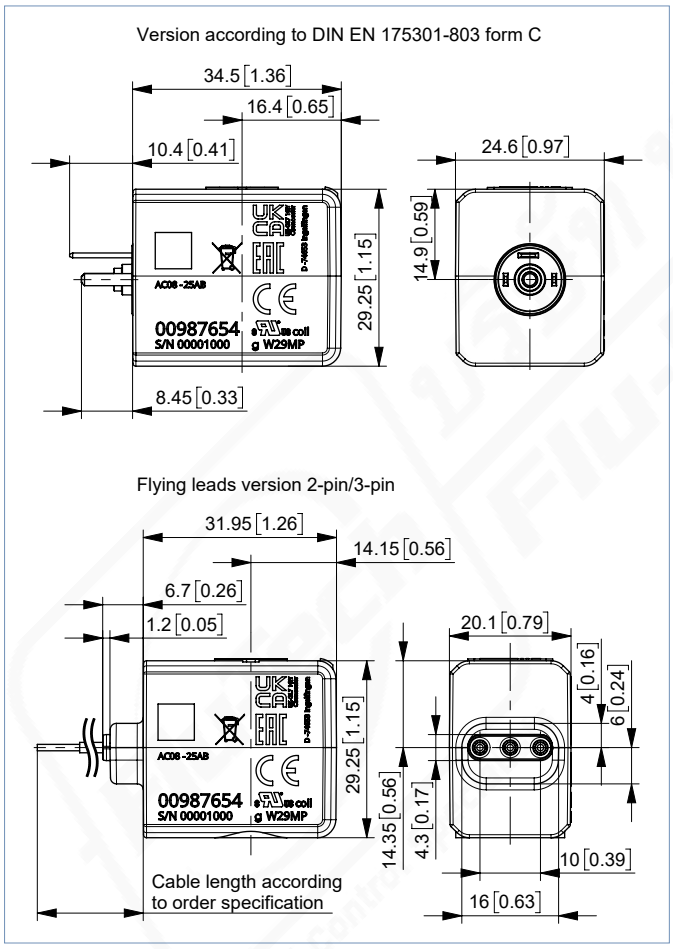
DN	A		B		C		D		E		F		G	L		SW	
	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[Zoll]	[mm]	[in]	[mm]	[in]
10	71.5	2.81	82.5	3.25	32	1.26	32	1.26	22	0.87	10	0.39	NPT ¼	50	1.97	22	0.87
											10.3	0.41	NPT ⅜				
10 [1.)]	73.5	2.89	87	3.43					24.5	0.96	13.7	0.54	NPT ½	50	1.97	27	1.06
10 [2.)]	73.5	2.89	87	3.43					24.5	0.96	13.7	0.54	NPT ½	55	2.17	27	1.06
13	76	2.99	89.5	3.52	42	1.65	46	1.81	32.5	1.28	13.7	0.54	NPT ½	65	2.56	27	1.06
	78	3.07	94	3.70							14	0.55	NPT ¾	65	2.56	32	1.26
20	85	3.35	105.5	4.15	60	2.36	60	2.36	50	1.97	14	0.55	NPT ¾	100	3.94	41	1.61
											16.8	0.66	NPT 1				

1.) Only threaded brass connection

2.) Only threaded stainless steel connection

Further electrical connections

Note:
Dimensions in mm [inch]



6. Performance specifications

6.1. Power consumption

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

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.

Order online now

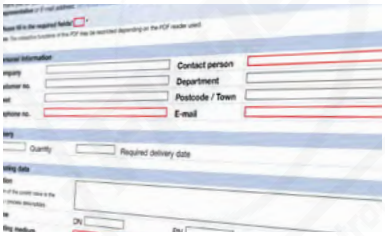
7.2. Bürkert product filter

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.

Try out our product filter

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

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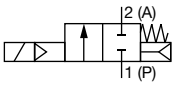
7.4. Ordering chart

Standard version with brass body, coil UL Recognized (cURus)

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 10** or separate data sheet for **Type 2507** ▶.

Circuit function	Port connection	Orifice	C_v value water[1.]	Pressure range[2.] (MAWP[3.])	Weight	Article no.		
						024/DC	024/50…60	120/60
		[mm]	[gal/min]	[psi]	[lb]	[V/Hz]	[V/Hz]	[V/Hz]
CF A 2/2-way solenoid valve Servo-controlled Normally closed  	**Seal material NBR**							
	NPT ⅜	10	2.2	7…145	0.57	20069436	20069437	20069439
	NPT ½		2.2	7…145	0.64	o. r.	o. r.	o. r.
	NPT ½	13	4.2	7…145	0.77	20069450	20069452	20069454
	NPT ¾		4.2	7…145	0.82	o. r.	o. r.	o. r.
	NPT ¾	20	9.6	7…145	2.43	o. r.	o. r.	o. r.
	NPT 1		9.6	7…145	1.98	o. r.	o. r.	o. r.
	Seal material FKM							
	NPT ⅜	10	2.2	7…145	0.57	20069447	20069448	20069449
	NPT ½		2.2	7…145	0.64	o. r.	o. r.	o. r.
	NPT ½	13	4.2	7…145	0.77	20069444	20069445	20069446
	NPT ¾		4.2	7…145	0.82	o. r.	o. r.	o. r.
	NPT ¾	20	9.6	7…145	2.43	o. r.	o. r.	o. r.
	NPT 1		9.6	7…145	1.98	o. r.	o. r.	o. r.

o. r. = on request

1.) Flow coefficient at +60 °F and pressure drop of 1 psi[2.]

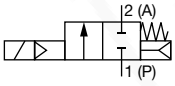
2.) Pressure data: overpressure to atmospheric pressure

3.) Maximum allowable working pressure

Standard version with stainless steel body, coil UL Recognized (cURus)

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 10** or separate data sheet for **Type 2507** ▶.

Circuit function	Port connection	Orifice	C_v value water[1.]	Pressure range[2.] (MAWP[3.])	Weight	Article no.		
						024/DC	024/50…60	120/60
		[mm]	[gal/min]	[psi]	[lb]	[V/Hz]	[V/Hz]	[V/Hz]
CF A 2/2-way solenoid valve Servo-controlled Normally closed  	**Seal material FKM**							
	NPT ⅜	10	2.2	7…145	0.57	o. r.	o. r.	o. r.
	NPT ½	13	4.2	7…145	0.77	20069440	20069442	20069443
	NPT ¾	20	9.6	7…145	2.43	o. r.	o. r.	o. r.

o. r. = on request

1.) Flow coefficient at +60 °F and pressure drop of 1 psi[2.]

2.) Pressure data: overpressure to atmospheric pressure

3.) Maximum allowable working pressure

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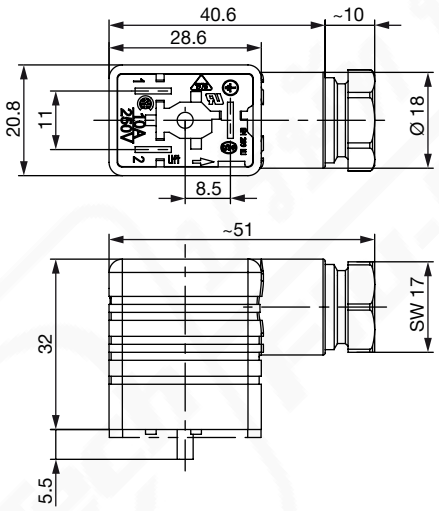
Further versions on request	
Approval • ATEX and IECEx approval for coils with fixed cable outlet • cURus coil approval	**Process connection** NPT
Electrical connection • Coil with plug connection DIN EN 175301-803 form C • Coil with flying leads connections	**Voltage** Further voltages
Material Seal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

7.5. Ordering chart accessories

Cable plug Type 2507, form B according to industry standard

Note:

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

Cable plug	Dimensions	Version	Voltage	Article no.
		Without circuitry (standard)	2…250 V AC/DC	423845
		With LED	24 V AC/DC	423849
		With LED and free-wheeling diode	12…24 V AC/DC	423851
		With rectifier, LED and varistor	12…24 V AC/DC	423853
			2…250 V AC/DC	423854

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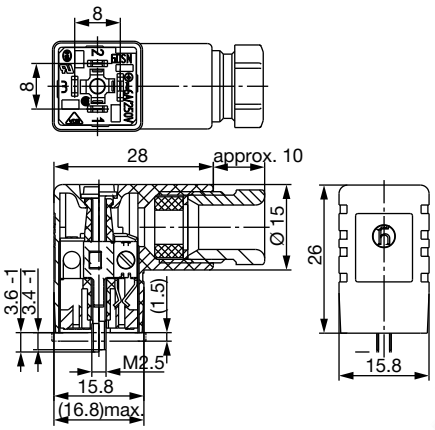
Cable plug Type 2516, form C according to DIN EN 175301-803

Note:

- Dimensions in mm
- Delivery of cable plug includes a flat seal and a fixing screw.
- 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

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