bürkert
FLUID CONTROL SYSTEMS

Direct-acting 2/2-way plunger valve

- Push-over solenoid system
- Compact design, up to DN 6
- Housing made of brass or stainless steel with threaded connection

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 1087
Timer,
form A according to
DIN EN 175301-803

Type description

The direct-acting plunger solenoid valve Type 0255 is also suitable for high pressures and high temperatures.

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Visit product website

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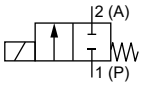
1. General technical data

Product properties	
Dimensions	Further information can be found in chapter "5. Dimensions" on page 6.
Material	
Seal	FKM, PTFE, stainless steel (others on request)
Body	Brass with stainless steel seat 1.4305, stainless steel body 1.4581
Coil	Epoxy
Orifice	DN 1.0...DN 6.0
Circuit function	A Further information can be found in chapter "2. Circuit functions" on page 3.
Thermal insulation class of solenoid	Epoxy coil class H
Performance data	
Duty cycle	100 % continuous operation
Switching time[1.)]	
AC	Opening: 10 ms...20 ms Closing: 20 ms...30 ms
DC	Opening: 20 ms...80 ms Closing: 20 ms...30 ms
Electrical data	
Operating voltage	24 V DC, 24 V 50 Hz, 110 V 50 Hz, 230 V 50 Hz (further voltages on request)
Voltage tolerance	± 10 %
Medium data	
Operating medium	
With FKM	Hot air, hot oils, oils with additives, per-solutions
With PTFE	Water, steam, fuels, hydraulic materials, alcohol, organic solvents, waste gas
Medium temperature	
With FKM	- 10 °C...+ 130 °C
With PTFE	- 40 °C...+ 180 °C
With stainless steel	Up to + 210 °C (on request)
Viscosity	Max. 21 mm^2/s (21 cSt)
Product connections	
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 12 (supplied as standard).
Port connection	G ¼, G ⅜, G ½, NPT on request
Approvals and conformities	
Degree of protection	IP65 with cable plug for standard devices IP50 without cable plug for high temperature devices
North America (USA/Canada)	Further information can be found in chapter "3.4. North America (USA/Canada)" on page 4.
Environment and installation	
Installation position	As required, preferably with actuator upright
Ambient temperature	Max. + 55 °C (+ 210 °C on request, see "7.4. Ordering chart" on page 11)

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

2. Circuit functions

Symbol	Description
	**Circuit function A (CF A)** 2/2-way solenoid valve Direct-acting 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 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. North America (USA/Canada)

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

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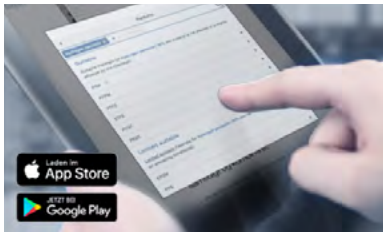
4. Materials

4.1. Bürkert resistApp

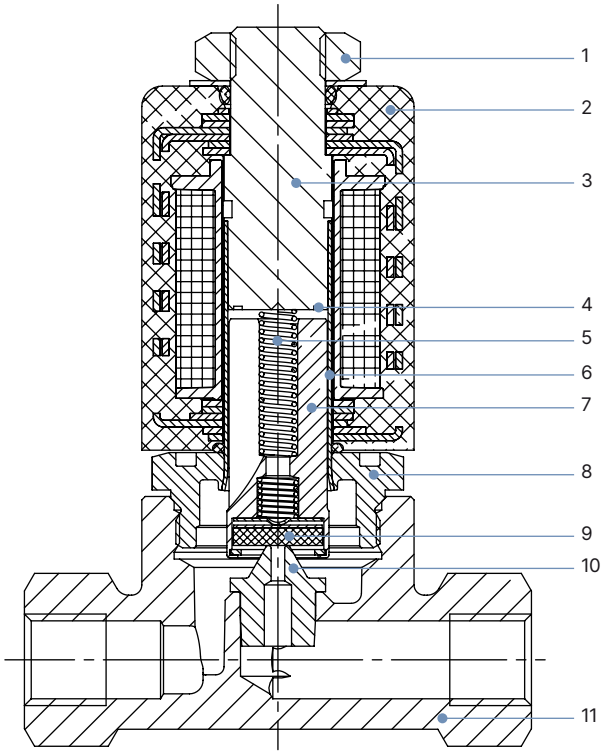


Bürkert resistApp – Chemical resistance chart

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	Nut	Steel (thick-film passivated acc. to RoHS)
2	Coil	Epoxy, steel (High temperature variant)
3	Stopper	Stainless steel 1.4105
4	Shading ring	Copper (brass variant), only AC Silver (stainless steel variant), only AC
5	Spring	Stainless steel 1.4310
6	Guide tube	Stainless steel 1.4571
7	Plunger	Stainless steel 1.4105
8	Hexagon nut	Stainless steel 1.4401 or stainless steel 1.4571
9	Seal	FKM, PTFE, stainless steel
10	Valve Seat	Stainless steel 1.4305 or stainless steel 1.4112 (only brass body)
11	Body	Brass or stainless steel 1.4581

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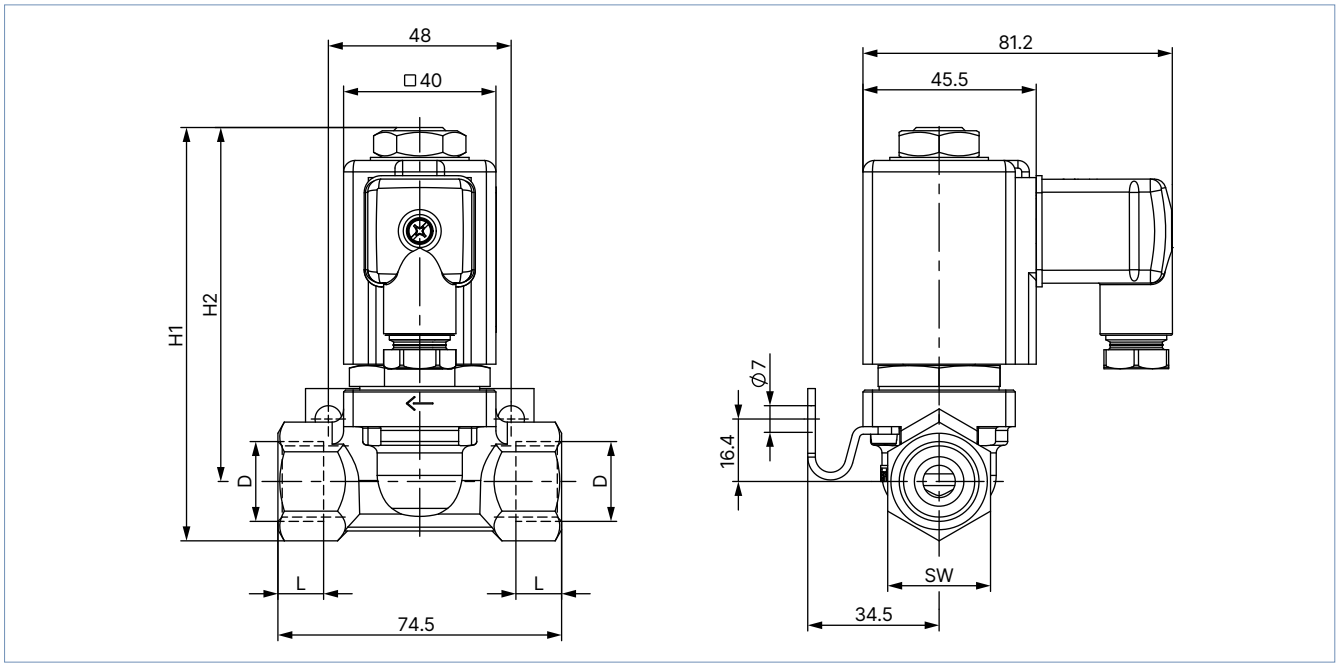
5. Dimensions

5.1. Standard variant

Stainless steel variant

Note:
Dimensions in mm



D	L	H1	H2	SW
G ½	14	108.5	93	27
G ¼	12	106		22
NPT ½	13.5	108.5		27
NPT ¼	10	106		22

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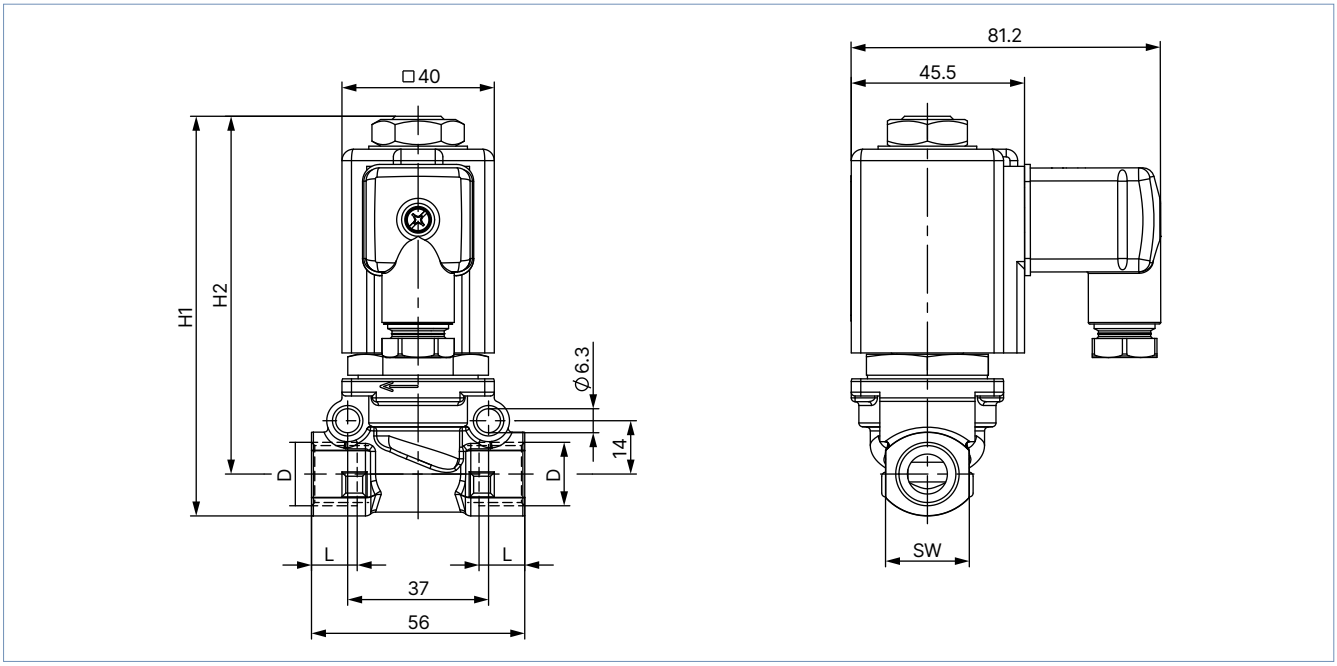
Brass variant

Note:
Dimensions in mm



D	L	H1	H2	SW
G ½	14	107	93	27
G ¼	12	105	94	22
G ⅜				
NPT ½	13.5	107	93	27
NPT ¼	10	105	94	22
NPT ⅜	10.3			

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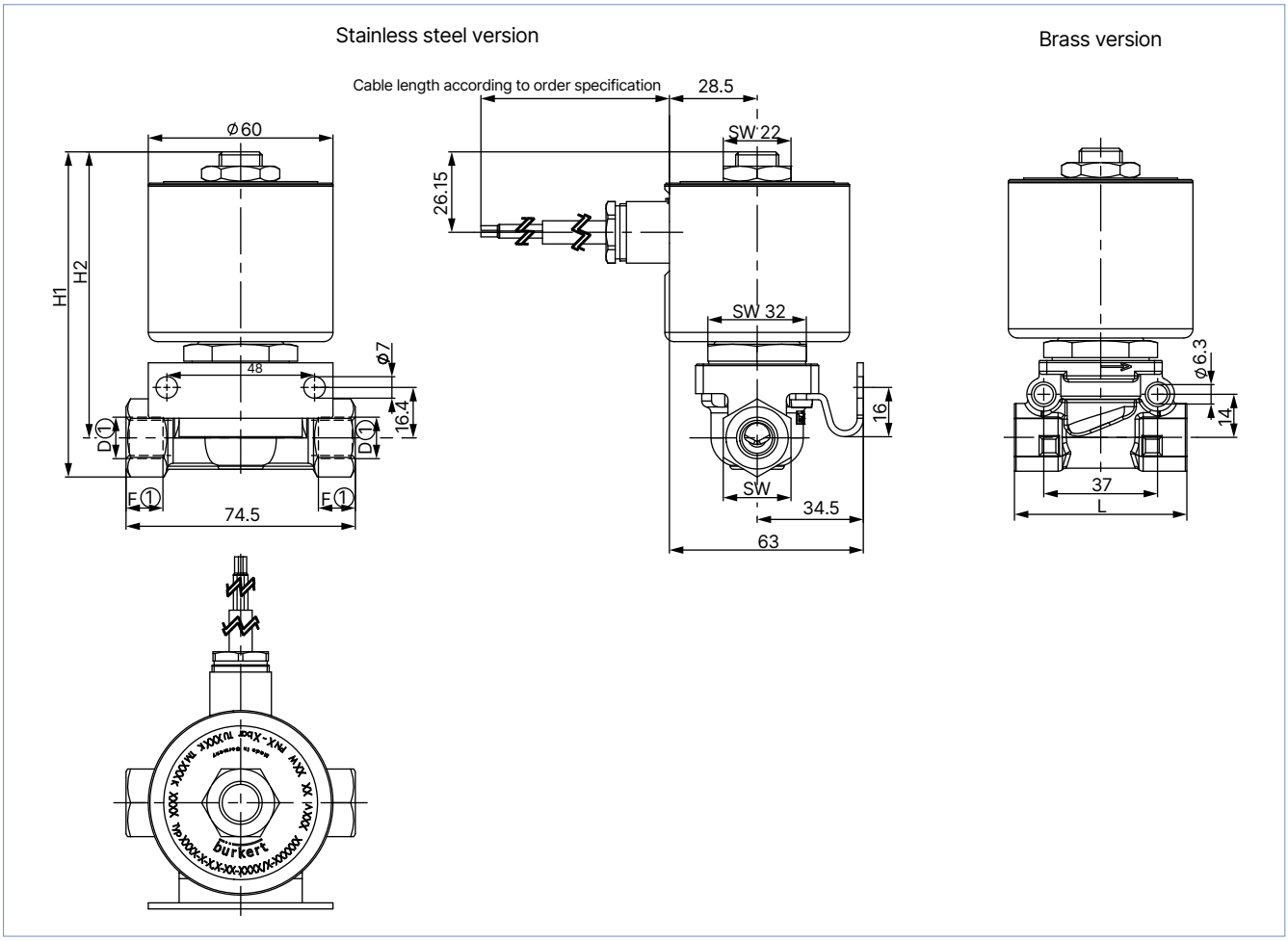
5.2. High temperature variant

Note:
Dimensions in mm



Body material	D1	F1	D2	F2	L	H1	H2	SW
Brass variant	G ⅜	12	NPT ⅜	10.3	56	105	94	22
	G ¼	12	NPT ¼	10	56	105	94	22
	G ½	14	NPT ½	13.5	74.5	107	93	27
Stainless steel variant	G ¼	12	NPT ¼	10	74.5	106	93	22
	G ½	14	NPT ½	13.5	74.5	108.5	93	27

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6. Performance specifications

6.1. Power consumption

Standard variant

Orifice	Electrical power consumption			Switching times			
	Inrush	Hold (warm coil) 1.)		Opening		Closing	
	AC	AC	DC	AC	DC	AC	DC
[mm]	[VA]	[VA/W]	[W]	[ms]	[ms]	[ms]	[ms]
1.0...6.0	35...40	16/10	approx. 12 (13)	10...20	20...80	20...30	20...30

1.) Value in brackets corresponds to a coil temperature of + 20 °C
2.) Switching times for standard and high temperature devices

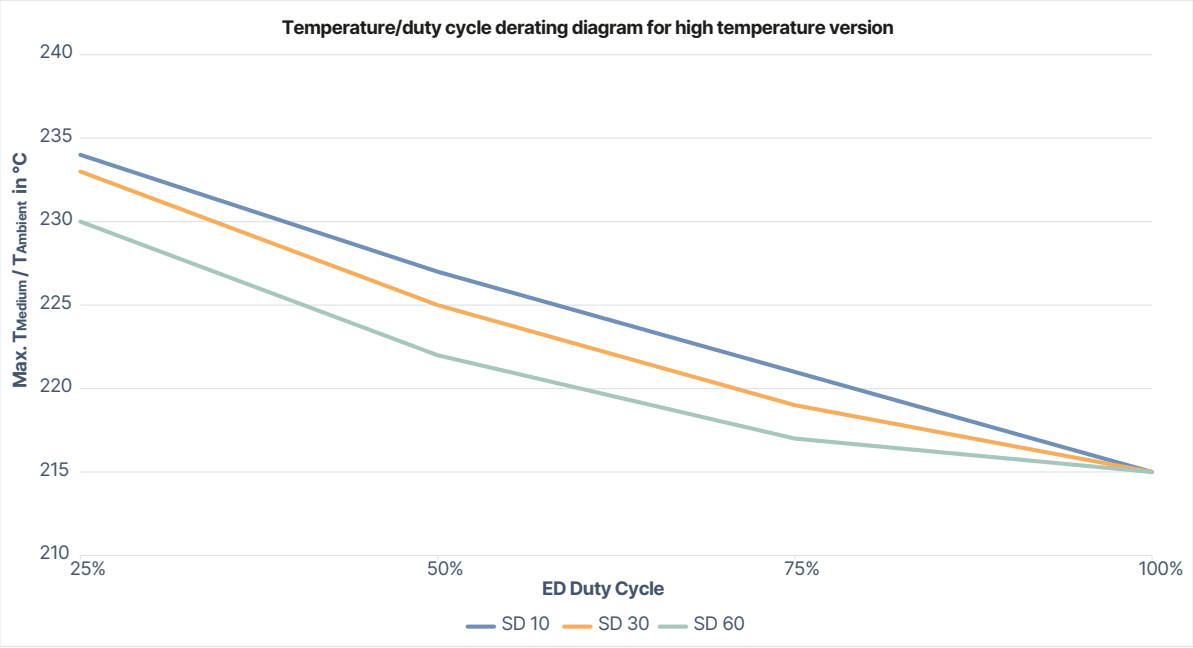
High temperature variant

Orifice	Electrical power consumption			
	CF42 up to + 210 °C ambient temperature		CF09 up to + 180 °C ambient temperature	
	Cold performance 1.)	Warm performance 2.)	Cold performance 1.)	Warm performance 2.)
[mm]	[W]	[W]	[W]	[W]
1.0...6.0	10	6	13	7

1.) Cold performance refers to a coil temperature of + 20 °C
2.) Warm performance at max. ambient temperature and 100 % duty cycle

6.2. Temperature/duty cycle derating diagram for high temperature variant

Depending on the duty cycle (ED) and the cycle time (SD), the medium and ambient temperature can be increased for the CF42 variant with steel sealing.



ED [%]
SD [min]
T_{Medium} = Medium temperature
$T_{Ambient}$ = Ambient temperature

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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

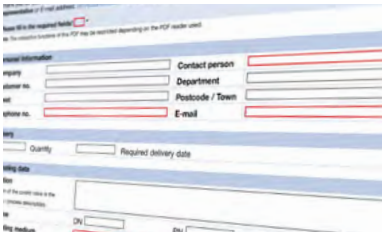
7.2. Bürkert product filter

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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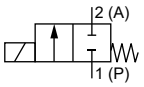
7.4. Ordering chart

Standard variant

Note:

- All valves are delivered with a stainless steel seat.
- A cable plug is included in the delivery.
- Further variants are available on request.

Circuit function	Port connection	Orifice	K_v value water [1.]	Pressure range [2.]			Seal material	Article no.			
				liquids and gases	liquids	gases					
				DC	AC			024/DC	024/50	110/50	230/50
		[mm]	[m³/h]	[bar]	[bar]	[bar]		[V/Hz]	[V/Hz]	[V/Hz]	[V/Hz]
CF A 2/2-way solenoid valve Direct-acting Normally closed  	**Brass body**										
	G ¼	1.0	0.03	0...100	0...100	0...100	PTFE	058360	020755	–	067692
		2.0	0.12	0...20	0...35	0...60	FKM	089888	020033	020101	064119
		3.0	0.25	0...10	0...16	0...25	PTFE	052872	058421	058888	046865
		4.0	0.5	0...4	0...10	0...12	PTFE	058796	065454	023897	053188
		5.0	0.65	0...2	0...6	0...7	PTFE	020164	049194	049830	050879
		5.0	0.65	0...2	0...6	0...7	FKM	–	–	–	052424
	G ⅜	4.0	0.5	0...4	0...10	0...12	PTFE	065438	059100	046886	051143
		5.0	0.65	–	0...6	0...16	FKM	–	022551	–	025885
		5.0	0.65	0...2	0...6	0...7	PTFE	020664	057644	023581	050880
		6.0	0.8	0...1	0...4	0...5	PTFE	053764	050389	066222	051324
	G ½ [3.]	4.0	0.5	0...4	0...10	0...12	PTFE	089404	–	089403	076551
		6.0	0.8	0...1	0...4	0...5	FKM	135958	135959	135947	135950
	Stainless steel body										
	G ¼ [3.]	1.0	0.03	0...100	0...100	0...100	PTFE	018004	078420	–	019862
		3.0	0.25	0...10	0...16	0...25	PTFE	021554	018593	–	061010
		4.0	0.5	0...4	0...10	0...12	PTFE	021251	020468	–	023279
		5.0	0.65	0...2	0...6	0...7	PTFE	125097	019991	086924	025250
	G ½ [3.]	3.0	0.25	0...10	0...16	0...25	PTFE	019204	059254	–	055506
		4.0	0.5	0...4	0...10	0...12	PTFE	065684	066932	–	054473
		6.0	0.8	0...1	0...4	0...5	FKM	022504	052859	067990	054811

– = not available

1.) Measurement at + 20 °C, 1 bar at the valve inlet and free outlet

2.) Pressure data: overpressure to atmospheric pressure (the pressure rates for liquids are specified on the type plate)

3.) All variants with mounting bracket included

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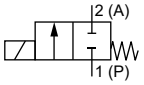
High temperature variant

Circuit function	Port connection	Orifice	K_V value water [1.]	Pressure range liquids and gases [2.]	Seal material	Article no. 024/DC
		[mm]	[m³/h]	[bar]		[V/Hz]
CF A 2/2-way solenoid valve Direct-acting Normally closed 	**Stainless steel body with CF09 coil (medium temperature up to + 180 °C)**					
	G ¼	2.0	0.12	0...20	PTFE	085968
		3.0	0.25	0...10	PTFE	141961
		4.0	0.5	0...4	PTFE	020734
	Stainless steel body with CF42 coil (medium temperature up to + 210 °C)					
	G ¼	3.0	0.25	0...10	Steel	20032425
		4.0	0.5	0...4	Steel	20032423
		5.0	0.65	0...2	Steel	20043309

1.) Measurement at + 20 °C, 1 bar at the valve inlet and free outlet

2.) Pressure data: overpressure to atmospheric pressure (the pressure rates for liquids are specified on the type plate)

Further variants on request

Approval
Further information can be found in chapter "3.4. North America (USA/Canada)" on page 4.

Voltage
Further voltages are available on request.

Temperature
High temperature variant up to + 210 °C

Pressure
High performance variant with high power electronic for higher pressures.

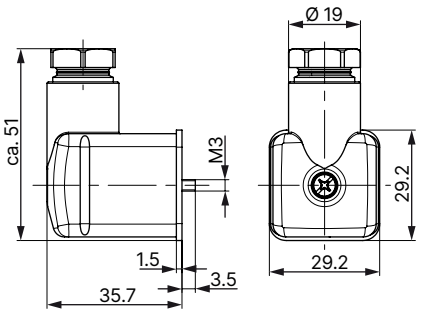
Material
Seal material EPDM, NBR, steel

7.5. 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

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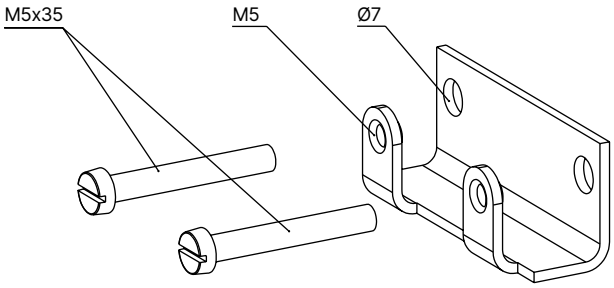
Mounting set brass body

Note:

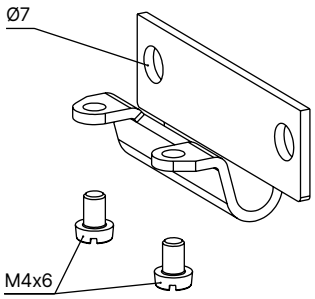
- A mounting clamp and 2 cheese head screws M5 × 35 are included in the scope of delivery.
- Only for brass variant
- 37 mm separation between the M5 threaded holes
- 48 mm separation between the Ø 7 bores
- Valve mounting with mounting set see **"Brass variant" on page 7**.

Description	Article no.
	151287

Mounting set stainless steel body

Note:

- A mounting clamp and 2 cheese head screws M4 × 6 are included in the scope of delivery.
- Only for stainless steel variant
- 29 mm separation between the M4 threaded holes
- 48 mm separation between the Ø 7 bores
- Valve mounting with mounting set see **"Stainless steel variant" on page 6**.

Description	Article no.
	260250

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