2/2-way flipper solenoid valve with media separation

- Only 4.5 mm wide
- Medium isolation, for aggressive fluids
- Direct-acting
- Vacuum up to 7 bar
- Short response times

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

Can be combined with

Type 2504
Cable Plug for Bürkert Solenoid Valve Type 6650

Type 8763
Pressure controller for precise time-pressure dosing

Type description

With a width of only 4.5 mm, Type 6650 sets a new standard in medium isolation miniature solenoid valves. The optimized design enables reproducible and precise dosing, good rinsing capability and is suitable for the application of aggressive chemicals owing to the high quality of the materials used. With the two nominal sizes of 0.4 and 0.8 mm it is ideal for applications where the highest fluid performances are required in the smallest space. Type 6650 opens up new possibilities, owing to the 4.5 mm station width, in particular in connection with dosing in 384-well microtiterplates. Based on the well-known flipper principle of the Type 0330, it is tied to the success history of the legendary Type 0127.

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Visit product website

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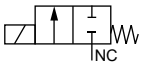
1. General technical data

Product properties	
Dimensions	Further information can be found in chapter "5. Dimensions" on page 5.
Material	
Seal	FFKM (Simriz)
Body	PEEK
Internal volume	
Fluid chamber	Approx. 30 µl
2/2-way	Approx. 37 µl
Orifice	DN 0.4 and DN 0.8
Circuit function	A Further information can be found in chapter "2. Circuit functions" on page 3.
Performance data	
Duty cycle	100 % continuous operation only with external power reduction [1.)]
Switching time	< 5 ms (according to ISO 12238)
Electrical data	
Operating voltage	24 V DC (12 V on request)
Nominal power	5.7 W inrush power 0.7 W holding power with power reduction. For 100 % duty cycle the power must be reduced externally. Uniform polarity must be ensured when aligning the devices [1.)] See chapter "5.2. Cable plug type 2504 with integrated booster and power reduction electronics" on page 5 for more information about the power electronics.
Switching frequency	80 Hz (for mechanical limit observe maximum temperature) [1.)] 15 Hz (continuous operation only with external power reduction) [1.)]
Voltage tolerance	± 10 %
Medium data	
Operating medium	Resistant to neutral and aggressive gases and liquids (see chapter "4.1. Bürkert resistApp" on page 4)
Medium temperature	+ 15 °C...+ 50 °C
Product connections	
Electrical connection	Cable plug **Type 2504** ▶ Further information can be found in chapter "Cable plug Type 2504" on page 7.
Port connection	Sub-base
Approvals and conformities	
Degree of protection	IP65
Environment and installation	
Installation position	As required, with side by side connection standard polarity is adhered to
Ambient temperature	+ 10 °C...+ 50 °C

1.) Refer to **operating instructions Type 6650** ▶ for more information.

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 verions can be supplied with the below mentioned approvals or conformities.

3.2. Conformity

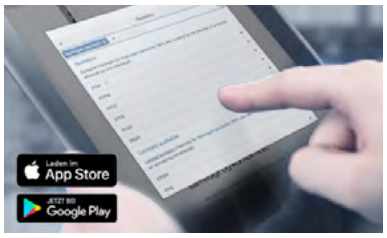
In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

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.

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

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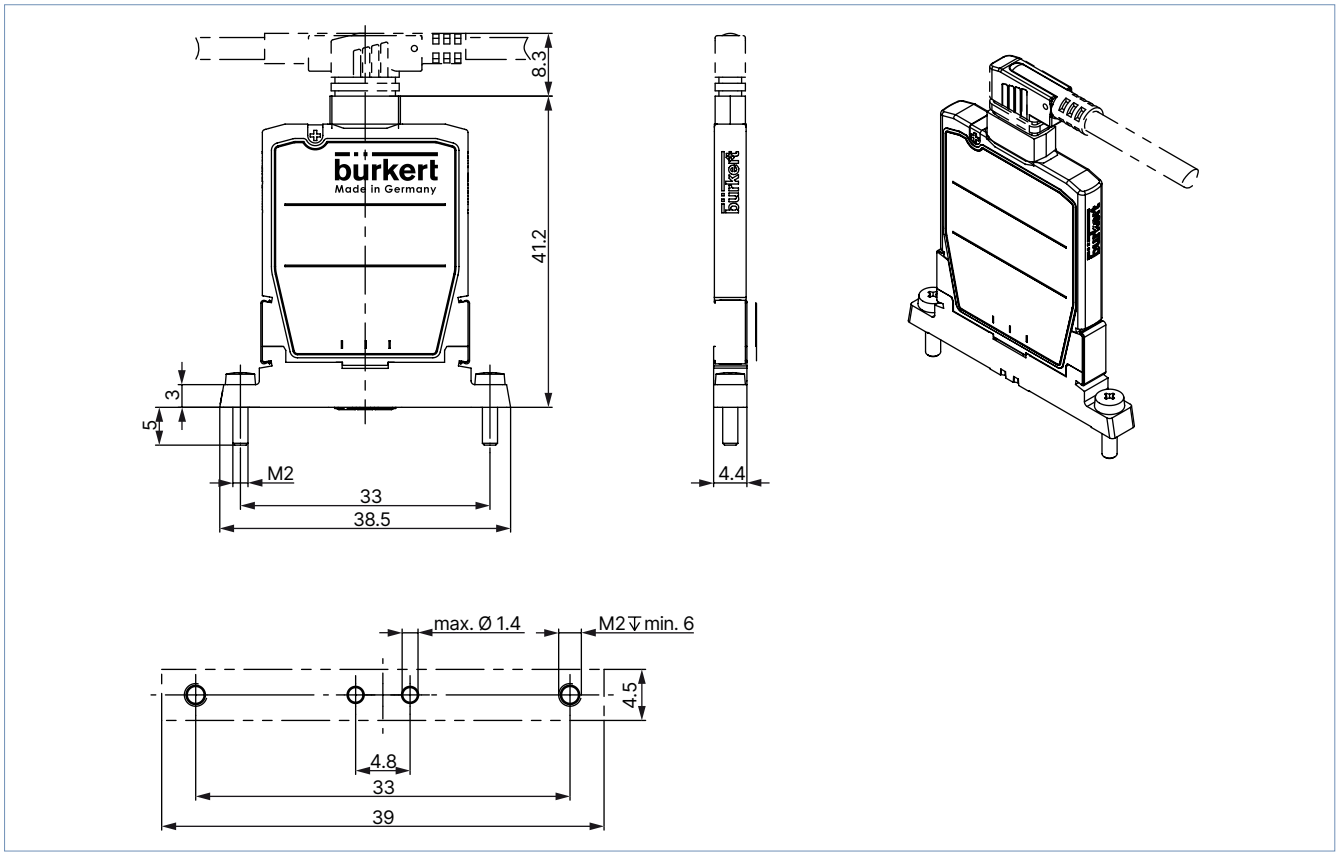
5. Dimensions

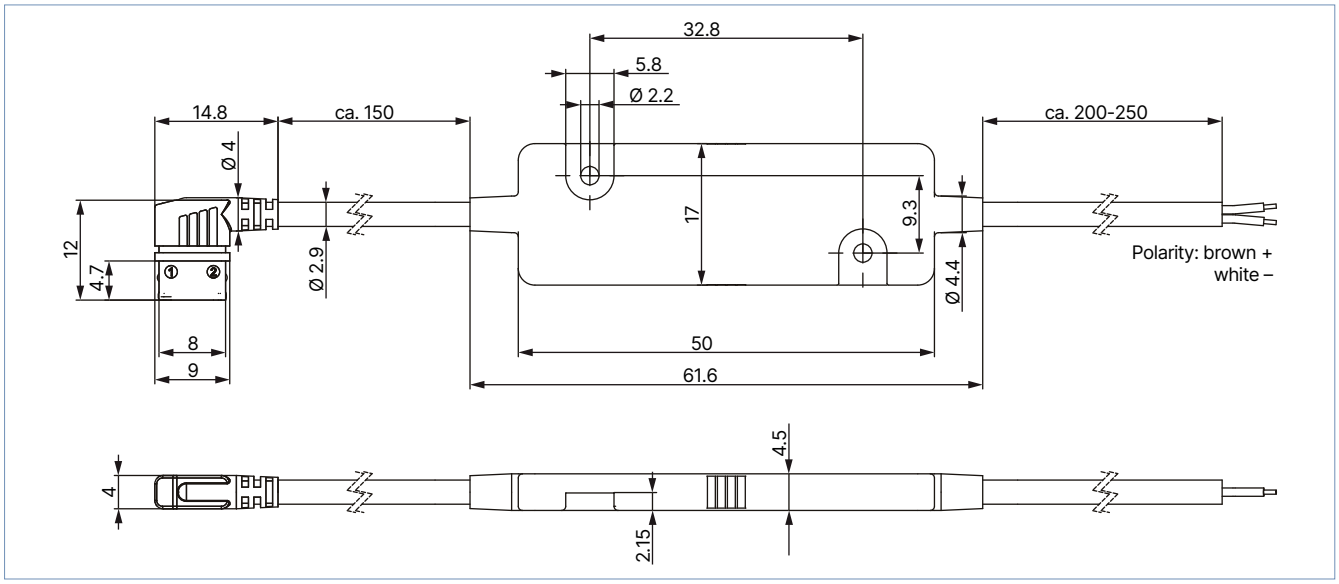
5.1. Valve

Note:
Dimensions in mm



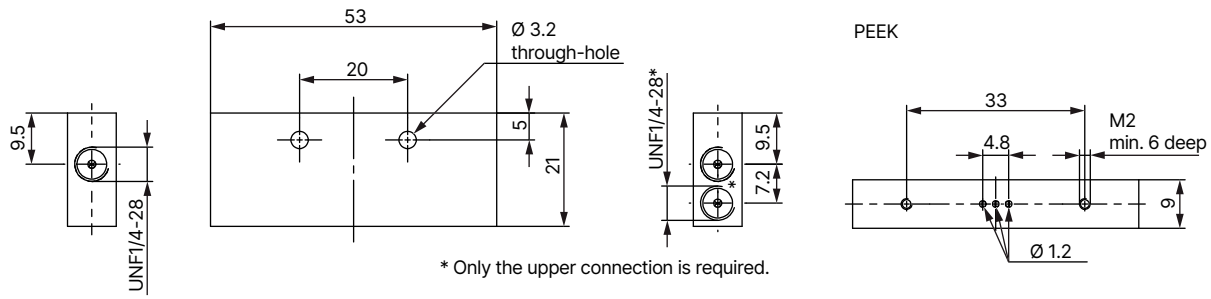
5.2. Cable plug type 2504 with integrated booster and power reduction electronics

Note:
Dimensions in mm



5.3. Single manifold made of PEEK for Bürkert sub-base interface 3-way

Note:
Dimensions in mm



Description	Article no.
Single manifold material PEEK	670181

6. Ordering information

6.1. 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

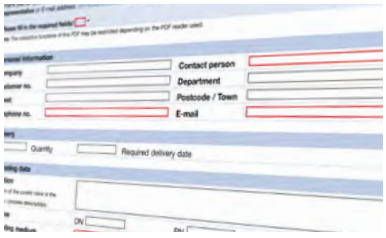
6.2. Bürkert product filter

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

6.3. 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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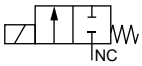
6.4. Ordering chart

Note:
Fastening screws: stainless steel, 2 x M2 × 8 (included in scope of delivery)

Circuit function	Orifice	K_v value water	Voltage	Nominal power		Pressure range	Max. pressure difference	Article no.
				Inrush power	Holding power			
	[mm]	[m³/h] 1.)	[V]	[W]	[W]	[bar] 2.)	[bar]	
CF A 2/2-way solenoid valve Direct-acting Normally closed 	0.4 3.)	0.004	24	5.7	0.7	Vac.- 7	7	182284
	0.8 4.)	0.010	24	5.7	0.7	Vac.- 3	3	226664

1.) Measurement at + 20 °C, 1 bar at the valve inlet and free outlet
2.) Pressure data: overpressure to atmospheric pressure
3.) With orifice 0.4 mm flow permitted in both directions
4.) With orifice 0.8 mm observe the flow direction according to the type plate

Further variants on request

Voltage
12 V on request (external power reduction necessary, not possible with Article no. 670178)

6.5. Ordering chart accessories

Cable plug Type 2504

Accessories	Description	Article no.
	Cable plug with cable, 2-pin, with integrated booster and power reduction electronics assembly, 24 V DC, cable length: 500 mm, power reduction to 0.7 W after 5 ms (Type 2504)	670178
	Cable plug with cable, 2-pin, single cable, cable length: 500 mm (Type 2504) 1.)	670164
	Cable plug with cable, 2-pin, single cable, cable length: 5000 mm (Type 2504) 1.)	680840

1.) The valve must be controlled with nominal voltage. After 5 ms the voltage is reduced to 0.35x nominal voltage in hold mode or switched to a PWM signal (20 kHz, duty cycle 33 %). If the available integrated electronics are not used, the power must be reduced accordingly on the control side. If no power reduction is used, the permissible duty cycle is reduced, see **operating instructions Type 6650** ▶.

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