





## 2/2 or 3/2 way Rocker-Solenoid Valve with separating diaphragm

- For maximum chemical resistance requirements
- Compact design with 16 mm width and Cv ratings up to 0.058
- Flexible design for custom manifold assemblies
- High back pressure tightness, excellent cleanability and 100 % duty cycle
- Normally closed, normally open and universal function

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

### Can be combined with

|   |  |   |
|---|--|---|
|   | <b>Type 2516</b><br>Cable plug DIN EN 175301-803 - form C          | ▶ |
|  | <b>Type 2505</b><br>10 mm socket for Bürkert small solenoid valves | ▶ |

### Type description

The direct-acting rocker solenoid valves with isolating diaphragm of Type 6606 (2/2- and 3/2-way) are high quality valves for analytical technology. They have minimal dead volume and internal volume with few crevices making them easy to flush out. The fluid only comes into contact with the body material and the FFKM seal. The heat transfer to the medium is minimal. The fluid path is isolated from the coil by a stainless steel plate. The valves are ideal for dosing, filling, mixing and distributing of small quantities of fluid for medical, analytical and laboratory applications.

## Table of contents

|   |           |
|---|-----------|
| <b>1. General technical data</b>  | <b>3</b>  |
| 1.1. General data .....   | 3         |
| 1.2. Medium pressure .....  | 4         |
| 1.3. Medium temperature.....  | 4         |
| 1.4. Internal volume .....  | 4         |
| <b>2. Circuit functions</b>   | <b>5</b>  |
| <b>3. Materials</b>   | <b>5</b>  |
| 3.1. Chemical Resistance Chart – Bürkert resistApp.....                 | 5         |
| 3.2. Material specifications .....                                      | 5         |
| <b>4. Dimensions</b>  | <b>6</b>  |
| 4.1. Threaded port version G 1/8" with rectangular plug Type 2505 ..... | 6         |
| 4.2. Threaded port version UNF 1/4"-28 cable plug on top Type 2516..... | 6         |
| 4.3. Tube connection with Rectangular plug Type 2505.....               | 7         |
| 4.4. Sub-base version with flying leads .....                           | 8         |
| Bürkert sub-base interface 3-way standard .....                         | 8         |
| Bürkert sub-base interface 2-way standard .....                         | 9         |
| Bürkert sub-base interface 2-way (low dead volume) .....                | 9         |
| <b>5. Ordering information</b>  | <b>10</b> |
| 5.1. Bürkert eShop – Easy ordering and quick delivery.....              | 10        |
| 5.2. Bürkert product filter .....                                       | 10        |
| 5.3. Ordering chart.....  | 10        |
| 5.4. Ordering chart accessories.....                                    | 11        |
| Rectangular cable plug Type 2505 .....                                  | 11        |
| Cable plug Type 2516, Form C according to DIN EN 175301 -803 .....      | 11        |
| Fittings and hoses.....   | 11        |
| Multiple manifolds for Bürkert sub-base interface 2-way.....            | 12        |

## 1. General technical data

### 1.1. General data

| Product properties                      |   |
|---|---|
| Dimensions                              | Detailed information can be found in chapter <b>"4. Dimensions"</b> on page 6.  |
| Material                                |   |
| Seal                                    | FFKM  |
| Fluid housing                           | PEEK (PVDF on request)  |
| Internal volume                         | Sub-base: starting at 44 µl<br>G 1/8": starting at 100 µl<br>UNF 1/4"-28: starting at 25 µl<br>Tube connection: starting at 35 µl<br>< 10 µl available on request<br>Detailed information can be found in chapter <b>"1.4. Internal volume"</b> on page 4 |
| Orifice                                 | DN 0.8...DN 1.6   |
| Circuit function                        | Detailed information can be found in chapter <b>"2. Circuit functions"</b> on page 5.   |
| Performance data                        |   |
| Switching time <sup>1.)</sup>           | Open: ca. 25 ms (Pressure rise 0...10 %)<br>Closing: ca. 25 ms (Pressure drop 100...90 %)   |
| Electrical data                         |   |
| Operating voltage                       | 12/24 V DC, (other voltages on request)   |
| Duty cycle                              | 100 % continuous rating<br>Manifold mounting: If media or ambient temperatures are above +40 °C:<br>intermittent operation 40 % (minimum 10 min)  |
| Nominal power                           | 3.4 W   |
| Voltage tolerance                       | ± 10 %  |
| Medium data                             |   |
| Operating medium                        | Resistant to neutral and aggressive liquids and gases<br>(see chapter <b>"3.1. Chemical Resistance Chart – Bürkert resistApp"</b> on page 5)  |
| Medium temperature                      | Max. 0...50 °C<br>Detailed information can be found in chapter <b>"1.3. Medium temperature"</b> on page 4.  |
| Process/Port connection & communication |   |
| Electrical connection <sup>2.)</sup>    | Tag connectors according to DIN EN 175301-803 Form C for cable plug <b>Type 2516</b> ▶ top/lateral<br>Two FEP-leads 0.2 mm <sup>2</sup> (AWG24), length 500 mm<br>Rectangular cable plug, <b>Type 2505</b> ▶  |
| Port connection                         | Bürkert sub-base (16×27 mm)<br>G 1/8"<br>UNF 1/4"-28<br>Tube connection   |
| Approvals and certificates              |   |
| Protection class                        | IP65 with flying leads and cable plug <b>Type 2516</b> ▶<br>IP30 with Rectangular plug <b>Type 2505</b> ▶   |
| Environment and installation            |   |
| Installation                            | As required, preferably with actuator upright   |
| Ambient temperature (max.)              | 50 °C   |

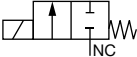
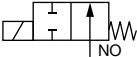
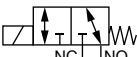
1.) Measured at valve outlet at 2 bar and +20 °C acc. to DIN ISO 12238:2001

2.) Other electric connectors and other cable lengths upon request.

## 1.2. Medium pressure

### Note:

- Overpressure to atmospheric pressure
- Other pressure ranges available on request
- For low dead volume versions, the back pressure is limited to a maximum of 1 bar.

| Circuit functions   | Orifice | Port connection                                      | Max. differential pressure |
|---|---------|--|----------------------------|
|   | [mm]    |  | [bar]                      |
| <b>A, solenoid valve</b><br>2/2 way<br>Direct-acting<br>   | 0.8     | Sub-base   | 0...6                      |
|   | 1.2     | Sub-base   | 0...5                      |
|   | 1.6     | Sub-base<br>G 1/8"<br>Tube connection<br>UNF 1/4"-28 | Vac...2                    |
| <b>B, solenoid valve</b><br>2/2 way<br>Direct-acting<br>Normally opened<br>                        | 0.8     | Sub-base   | 0...6                      |
|   | 1.2     | Sub-base   | 0...5                      |
|   | 1.6     | Sub-base<br>G 1/8"<br>Tube connection<br>UNF 1/4"-28 | Vac...2                    |
| <b>T, solenoid valve</b><br>3/2 way<br>Direct-acting<br>Flow direction optional<br>Universal<br> | 0.8     | Sub-base   | 0...6                      |
|   | 1.2     | Sub-base   | 0...5                      |
|   | 1.6     | Sub-base<br>G 1/8"<br>Tube connection<br>UNF 1/4"-28 | Vac...2                    |

## 1.3. Medium temperature

### Note:

The permissible medium temperature depends on the seal material and orifice.

| Description  | Orifice           | Seal material | Temperature range |
|--|-------------------|---------------|-------------------|
| Medium temperature   | DN 0.8            | FFKM          | +5...+50 °C       |
|  | DN 1.2 and DN 1.6 | FFKM          | +10...+50 °C      |
| Medium temperature with limitation on switching time and life expectancy | DN 0.8            | FFKM          | 0...+50 °C        |
|  | DN 1.2 and DN 1.6 | FFKM          | +5...+50 °C       |

## 1.4. Internal volume

### Note:

The internal volume is depending on fluid housing.

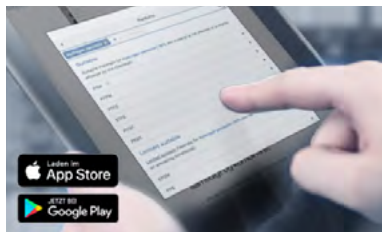
| Body            | 2-way<br>(low dead volume) |        | 2-way         |        | 3-way         |        |
|-----------------|----------------------------|--------|---------------|--------|---------------|--------|
|                 | Fluid chamber              | Total  | Fluid chamber | Total  | Fluid chamber | Total  |
| Sub-base        | 44 µl                      | 54 µl  | 97 µl         | 106 µl | 90 µl         | 106 µl |
| G 1/8"          | –                          | –      | 94 µl         | 207 µl | 88 µl         | 228 µl |
| UNF 1/4"-28     | 25 µl                      | 69 µl  | 55 µl         | 79 µl  | 54 µl         | 95 µl  |
| Tube connection | 35 µl                      | 105 µl | 67 µl         | 135 µl | 73 µl         | 178 µl |

## 2. Circuit functions

| Circuit functions | Description  |
|-------------------|--|
|                   | <b>Type: A, solenoid valve</b><br>2/2 way<br>Direct-acting<br>Normally closed                      |
|                   | <b>Type: B, solenoid valve</b><br>2/2 way<br>Direct-acting<br>Normally open                        |
|                   | <b>Type: T, solenoid valve</b><br>3/2 way<br>Direct-acting<br>Flow direction optional<br>Universal |

## 3. Materials

### 3.1. Chemical Resistance Chart – Bürkert resistApp

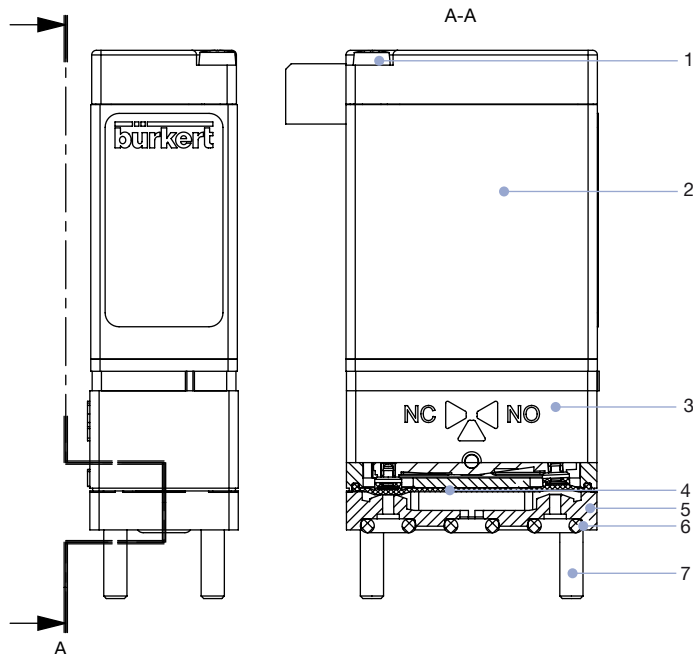


#### Bürkert resistApp – Chemical Resistance Chart

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](#)

### 3.2. Material specifications



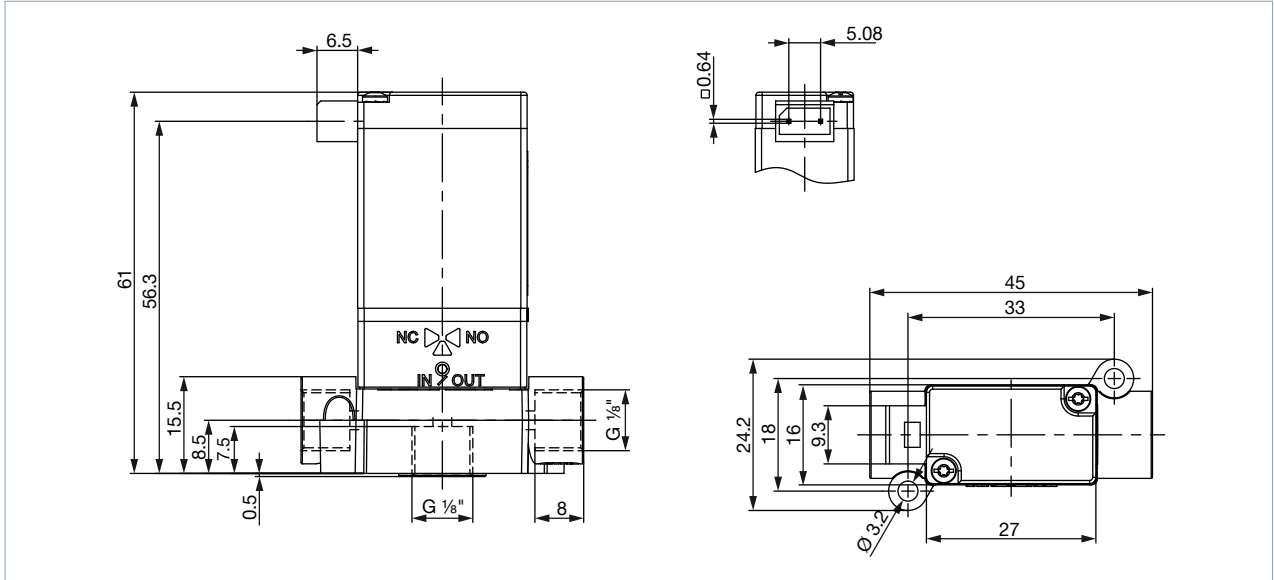
| No. | Element                        | Material               |
|-----|--------------------------------|------------------------|
| 1   | Rounded head screw M2          | Stainless steel        |
| 2   | Coil                           | Epoxy                  |
| 3   | Actuator housing               | PPS                    |
| 4   | Diaphragm (medium contact)     | FFKM                   |
| 5   | Fluid housing (medium contact) | PEEK (PVDF on request) |
| 6   | Flange seal (medium contact)   | FFKM                   |
| 7   | Rounded head screw M2.5        | Stainless steel        |

## 4. Dimensions

### 4.1. Threaded port version G 1/8" with rectangular plug Type 2505

**Note:**

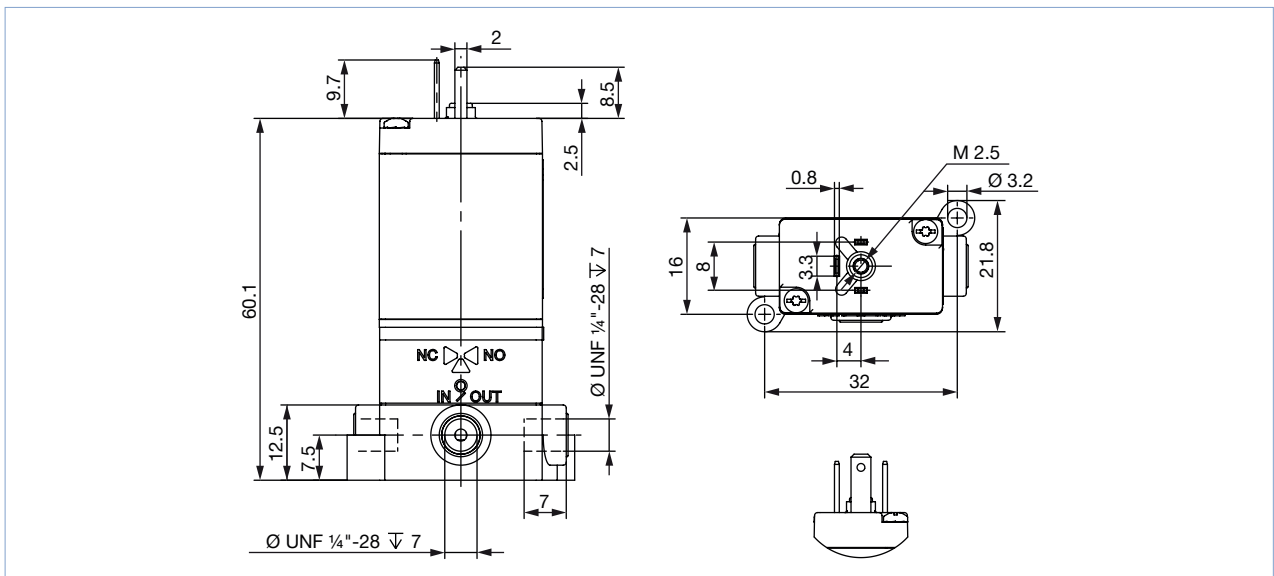
- Dimensions in mm



### 4.2. Threaded port version UNF 1/4"-28 cable plug on top Type 2516

**Note:**

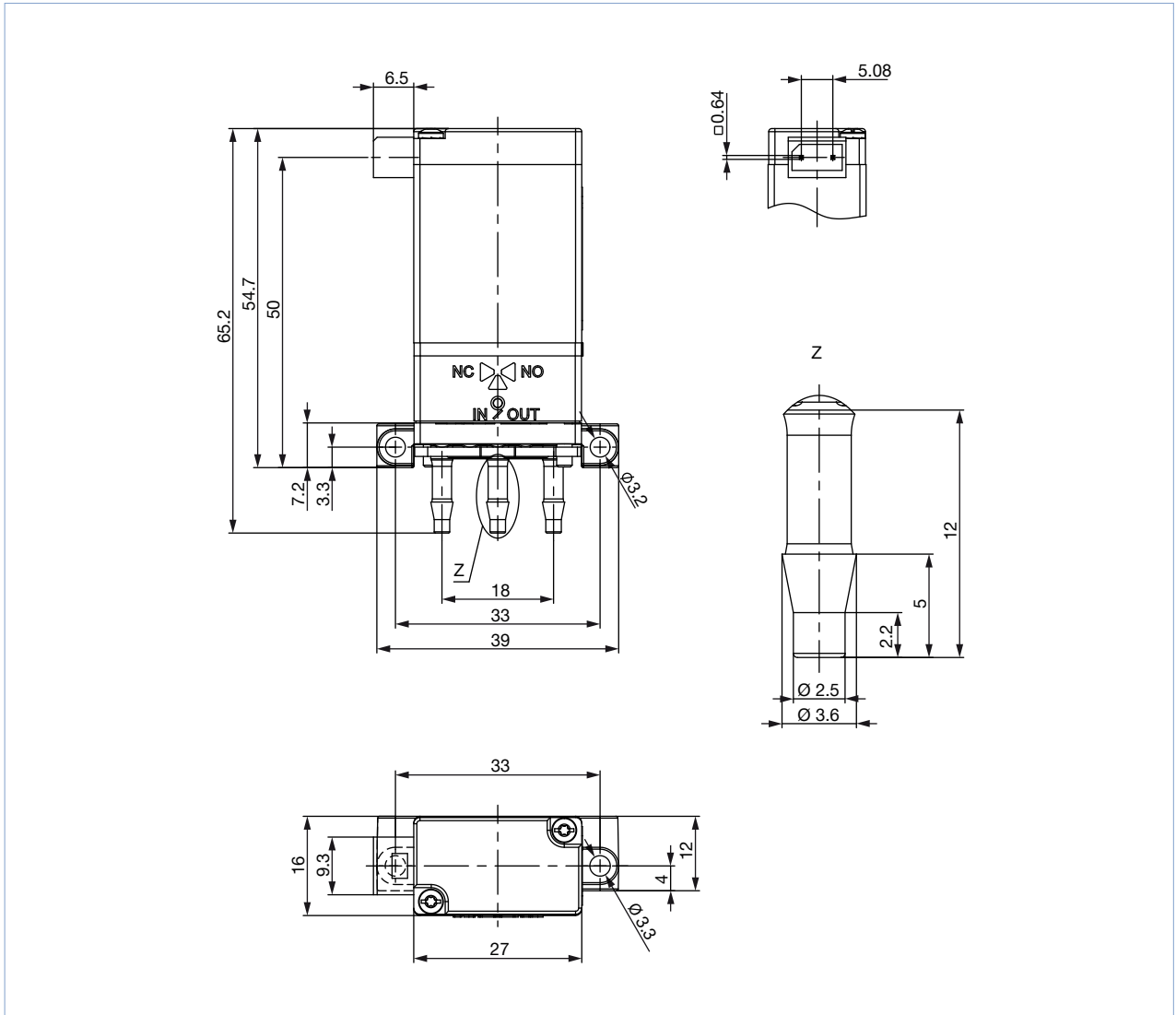
- Dimensions in mm



4.3. Tube connection with Rectangular plug Type 2505

Note:

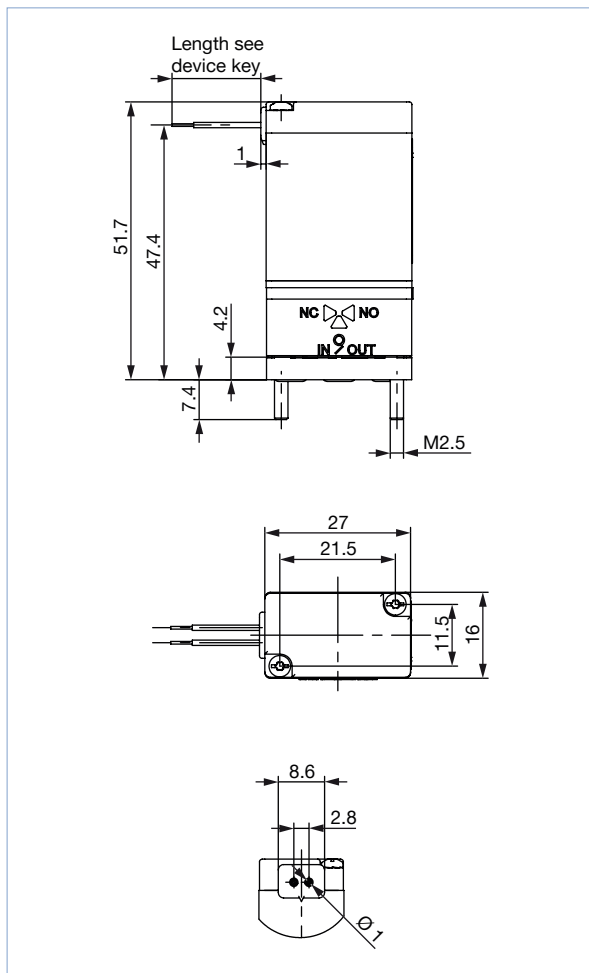
- Dimensions in mm



#### 4.4. Sub-base version with flying leads

**Note:**

- Dimensions in mm
- Other screw length on request
- Self-tapping screws on request

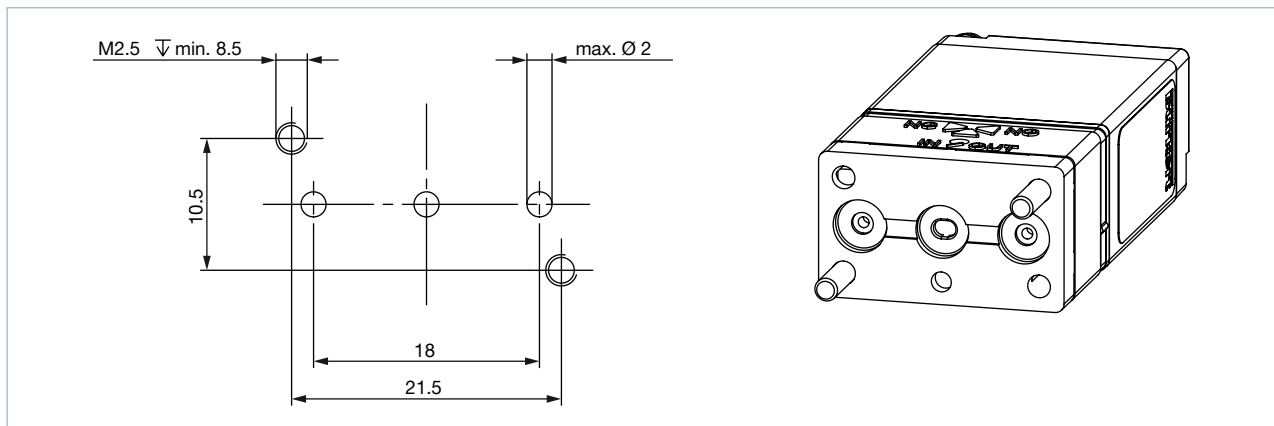


| Classification of fluid connections  |
|--|
| WWA (circuit function: Type A)<br>2/2 way, direct-acting, normally closed energized at NC connection |
| WWB (circuit function: Type B)<br>2/2 way, direct-acting, normally opened energized at NO connection |
| WWT (circuit function: Type T)<br>3/2 way, direct-acting, flow direction optional, universal         |
| See chapter "2. Circuit functions" on page 5   |

#### Bürkert sub-base interface 3-way standard

**Note:**

Dimensions in mm



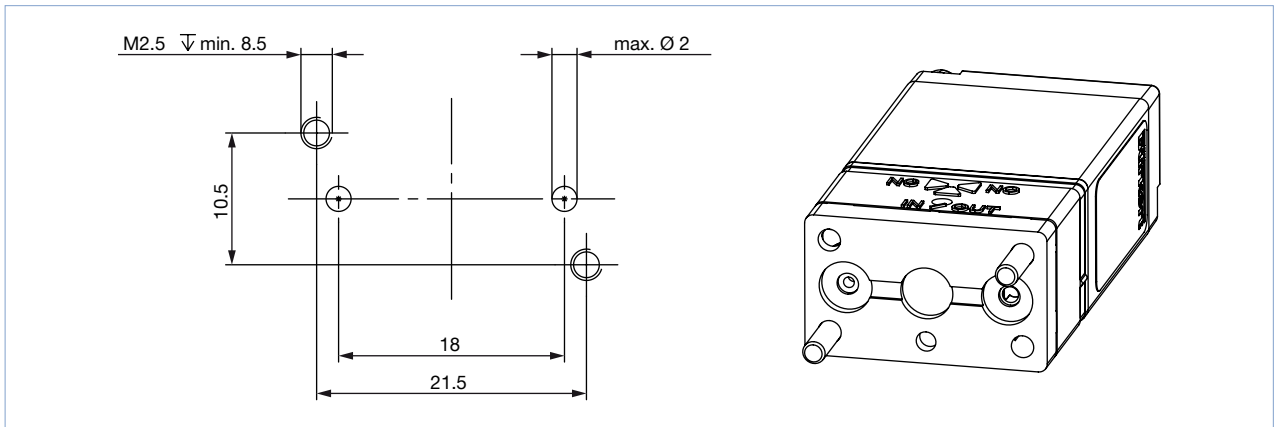
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**Bürkert sub-base interface 2-way standard**

**Note:**

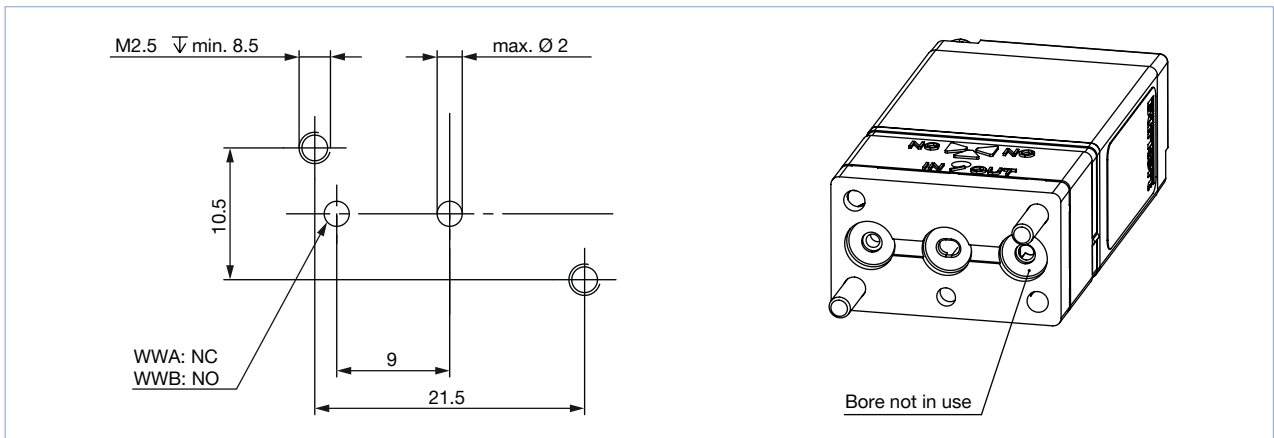
Dimensions in mm



**Bürkert sub-base interface 2-way (low dead volume)**


**Note:**

- Dimensions in mm
- Available on request



## 5. Ordering information

### 5.1. Bürkert eShop – Easy ordering and quick delivery

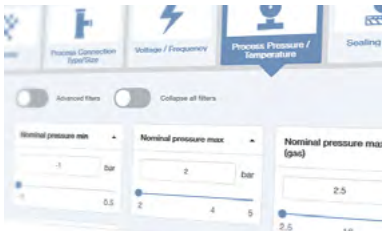


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### 5.2. Bürkert product filter



**Bürkert product filter – Get quickly to the right product**

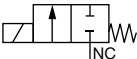
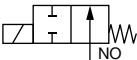
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### 5.3. Ordering chart

**Note:**

- Overpressure with respect to atmospheric pressure
- On request different pressure ranges available
- 2 x M2.5 fixing screws for sub-base versions are included in the scope of delivery.
- Connectors for rectangular plugs and cable plugs are not included in the scope of delivery and must be ordered separately, see [“5.4. Ordering chart accessories” on page 11.](#)

| Circuit function   | Orifice | Port connection | K <sub>v</sub> value water | C <sub>v</sub> value | Q <sub>Nn</sub> value air | Pressure range | Seal material | Fluid housing material | Electrical connection | Voltage/ Frequency | Article no. |
|--|---------|-----------------|----------------------------|----------------------|---------------------------|----------------|---------------|------------------------|-----------------------|--------------------|-------------|
|  | [mm]    |                 | [m <sup>3</sup> /h]        | [gal/min]            | [l/min]                   |                |               |                        |                       | [V/Hz]             |             |
| <b>A, solenoid valve</b><br>2/2 way<br>Direct-acting<br>Normally closed<br> | 1.6     | UNF 1/4"-28     | 0.03                       | 0.035                | 33                        | Vac...2        | FFKM          | PEEK                   | Rectangular plug      | 024/DC             | 258410      |
|  | 1.6     | Sub-base        | 0.045                      | 0.052                | 49                        | Vac...2        | FFKM          | PEEK                   | Leads, 0.5 m          | 012/DC             | 137744      |
|  |         |                 |                            |                      |                           |                |               |                        |                       | 024/DC             | 137745      |
| Spade connector sideways   | 024/DC  | 137741          |                            |                      |                           |                |               |                        |                       |                    |             |
| <b>B, solenoid valve</b><br>2/2 way<br>Direct-acting<br>Normally opened<br> | 1.6     | UNF 1/4"-28     | 0.03                       | 0.035                | 33                        | Vac...2        | FFKM          | PEEK                   | Leads, 0.5 m          | 012/DC             | 270871      |

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| Circuit function  | Orifice | Port connection | K <sub>v</sub> value water | C <sub>v</sub> value | Q <sub>Nn</sub> value air | Pressure range | Seal material | Fluid housing material | Electrical connection    | Voltage/Frequency | Article no. |
|---|---------|-----------------|----------------------------|----------------------|---------------------------|----------------|---------------|------------------------|--------------------------|-------------------|-------------|
|   | [mm]    |                 | [m³/h]                     | [gal/min]            | [l/min]                   |                |               |                        |                          | [V/Hz]            |             |
| <b>T, solenoid valve</b><br>3/2 way<br>Direct-acting<br>Flow direction optional<br>Universal<br> | 1.6     | UNF ¼"-28       | 0.03                       | 0.035                | 33                        | Vac...2        | FFKM          | PEEK                   | Rectangular plug         | 024/DC            | 258287      |
|   | 1.6     | Sub-base        | 0.045                      | 0.052                | 49                        | Vac...2        | FFKM          | PEEK                   | Leads, 0.5 m             | 024/DC            | 137768      |
|   |         |                 |                            |                      |                           |                |               |                        | Rectangular plug         | 024/DC            | 139148      |
|   |         |                 |                            |                      |                           |                |               |                        | Spade connector sideways | 012/DC            | 137766      |
|   | 024/DC  | 137765          |                            |                      |                           |                |               |                        |                          |                   |             |

#### 5.4. Ordering chart accessories

##### Rectangular cable plug Type 2505

###### Note:


For further versions see data sheet [Type 2505](#) ▶.

| Accessories   | Description   | Article no. |
|---|---|-------------|
|    | Rectangular cable plug Type 2505 with 3 m cable           | 252572      |
|   | Rectangular cable plug Type 2505 with 5 m cable           | 255194      |
|  | Rectangular cable plug Type 2505 with 300 mm flying leads | 644068      |
|   | Rectangular cable plug Type 2505 with 600 mm flying leads | 162144      |


##### 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.
- For further versions see data sheet [Type 2516](#) ▶.

| Cable plug  | Version               | Voltage         | Current  | Article no. without cable |
|---|-----------------------|-----------------|----------|---------------------------|
|  | Without circuitry     | 0...250 V AC/DC | Max. 6 A | 303141                    |
|   | With LED              | 12...24 V AC/DC | Max. 3 A | 303145                    |
|   | With LED and varistor | 12...24 V AC/DC | Max. 3 A | 303148                    |

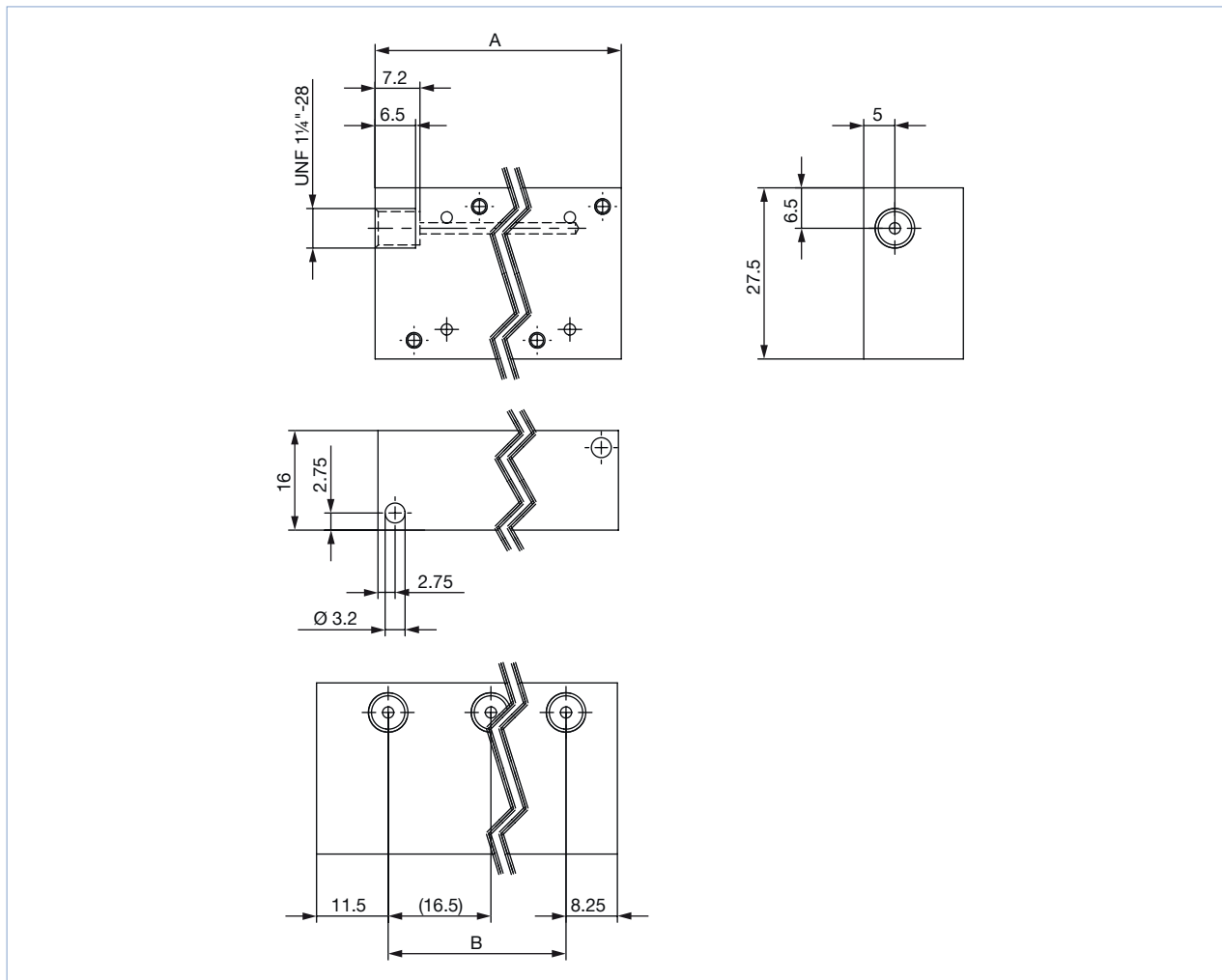
#### Fittings and hoses

| Accessories   | Description  | Article no.                             |
|---|--|---|
|  | Fittings and hoses for UNF connections and hoses see type <a href="#">Type TVU003</a> ▶. | see data sheet <a href="#">TVU003</a> ▶ |

**Multiple manifolds for Bürkert sub-base interface 2-way**

**Note:**

- Dimensions in mm
- Port connection UNF 1/4"-28
- Material PEEK
- Consider the screw protrusion!
- Further versions on request



| Manifold | A      | B     | n | Article no. |
|----------|--------|-------|---|-------------|
| 2-fold   | 36.25  | 16.5  | 2 | 651506      |
| 3-fold   | 52.75  | 33    | 3 | 651510      |
| 4-fold   | 69.25  | 49.5  | 4 | 651507      |
| 5-fold   | 85.75  | 66    | 5 | 651508      |
| 6-fold   | 102.25 | 82.5  | 6 | 651509      |
| 7-fold   | 118.75 | 99    | 7 | 651521      |
| 8-fold   | 135.25 | 115.5 | 8 | 651522      |

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