



3/2-way rocker solenoid valve with media separation

- 3/2-way rocker solenoid valve with universal circuit function up to DN 4
- Separating diaphragms for chemical resistance and full back pressure tightness thanks to rocker principle
- Fast diaphragm change without the need for tools
- Push-In and flange version, stackable
- Approval/conformities for use in the food sector

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

Type description

Direct-acting, media-separated rocker valve for the dosing, filling, mixing and distribution of neutral and aggressive liquids and gases. The medium is exclusively in contact with the body and seal material. The tried-and-tested rocker technology is characterised by full back pressure tightness, good flushability and a low internal volume. The unique service concept allows the valve to be opened quickly and inspected, and the separation diaphragm to be changed if needed, without the need for tools. The solenoid can be loosened and aligned in any position. The Type 7017 is available in a wide variety of technical variants and provides perfect adaptation in fluidics application with the aid of different body options. The valve programme includes approval as per NSF169 and complies with Commission Regulation (EC) 1935/2004 and FDA. The valves comply with degree of protection IP20.

Table of contents

| | |
|--|-----------|
| 1. General technical data | 3 |
| 2. Product versions | 4 |
| 3. Circuit functions | 4 |
| 4. Approvals and conformities | 4 |
| 4.1. General notes | 4 |
| 4.2. Conformity | 4 |
| 4.3. Standards..... | 4 |
| 4.4. North America (USA/Canada) | 5 |
| 4.5. Foods and beverages/Hygiene | 5 |
| 5. Materials | 6 |
| 5.1. Burkert resistApp | 6 |
| 5.2. Material specifications | 6 |
| Flange version | 6 |
| Push-in version | 6 |
| 6. Dimensions | 7 |
| 6.1. Flange version | 7 |
| 6.2. Flange pattern | 8 |
| 6.3. Push-in version | 9 |
| 7. Device/Process connections | 10 |
| 7.1. Pin assignment..... | 10 |
| 8. Performance specifications | 10 |
| 8.1. Power consumption | 10 |
| Standard version with flat pin terminal, coil size 24.5 mm | 10 |
| 9. Product installation | 11 |
| 9.1. Mounting options..... | 11 |
| 10. Product design and assembly | 12 |
| 10.1. Product features | 12 |
| Orientation of the coil..... | 12 |
| Replacement of the separating diaphragm | 13 |
| 11. Ordering information | 14 |
| 11.1. Burkert eShop | 14 |
| 11.2. Burkert product filter..... | 14 |
| 11.3. Burkert Product Enquiry Form..... | 14 |
| 11.4. Ordering chart | 15 |
| Standard version with flat pin terminal, coil size 24.5 mm | 15 |
| 11.5. Ordering chart accessories..... | 15 |
| Separating diaphragm for Type 7017 | 15 |

1. General technical data

| Product properties | |
|---|--|
| Dimensions | Further information can be found in chapter " 6. Dimensions " on page 7. |
| Material | |
| Seal | FKM, EPDM |
| Housing | Polyphenylene sulphide (PPS) |
| Weight | |
| Push-in housing ¹⁾ | 154 g |
| Flange housing ¹⁾ | 140 g |
| Orifice | DN 3, DN 4 |
| Circuit function | T (universal) Further information can be found in chapter " 3. Circuit functions " on page 4. |
| Thermal insulation class of solenoid coil | Epoxy coil class H |
| Performance data | |
| Duty cycle/single valve | 50 % duty cycle/2 min (at max. + 65 °C ambient temperature) (Limited switching behaviour at 100 % duty cycle) |
| Switching time ²⁾ | DN 3.0 mm: Open/close 25 ms |
| Electrical data | |
| Operating voltage | 24 V DC |
| Nominal power | 11 W |
| Voltage tolerance | ± 3 % |
| Medium data | |
| Operating medium | Neutral and aggressive gases and liquids (e.g. air, water, coffee, milk) (see chapter " 5.1. Burkert resistApp " on page 6) |
| Medium temperature | + 5 °C...+ 80 °C |
| Viscosity | Max. 21 mm ² /s |
| Process/Port connection & communication | |
| Electrical connection | Flat pin terminal (6.3 × 0.8) as protection class III device |
| Port connection | Flange Push-in housing (hose outer diameter 6 mm) |
| Approvals and conformities | |
| Degree of protection | IP20 |
| North America (USA/Canada) | Further information can be found in chapter " 4.4. North America (USA/Canada) " on page 5. |
| Foods and beverages/Hygiene | Further information can be found in chapter " 4.5. Foods and beverages/Hygiene " on page 5. |
| Environment and installation | |
| Installation position | As required, preferably with actuator upright |
| Ambient temperature | Max. + 65 °C |

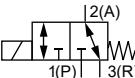
1.) Standard version 24.5 mm solenoid coil

2.) Measurement at + 20 °C, 1.5 bar at the valve outlet acc. to DIN ISO 12238:2001, opening: pressure build-up 0...10 %, closing: pressure reduction 100...90 %

2. Product versions



3. Circuit functions

| Symbol | Description |
|---|---|
|  | Circuit function T (CF T) 3/2-way solenoid valve Direct-acting Flow direction optional Normally closed |

4. Approvals and conformities

4.1. 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.

4.2. Conformity

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

4.3. 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.

4.4. North America (USA/Canada)

Note:

The approval coil UL Recognized applies to this Type as standard. If you require a further certificate, please contact your Bürkert partner.

| Approval | Description |
|---|--|
|  | <p>Valid for coils: UL Recognized for the USA and Canada</p> <ul style="list-style-type: none"> The coils are UL Recognized for the USA and Canada according to: UL 429 (electrically operated valves) CAN/CSA-C22.2 No. 139 |

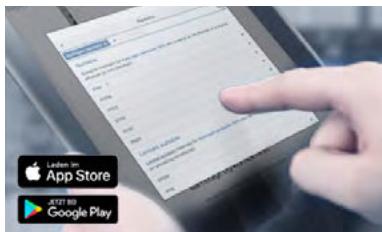
4.5. Foods and beverages/Hygiene

| Approval | Description |
|---|---|
|  | <p>NSF/ANSI 169 (valid for the variable code PL05) The products are approved according to NSF/ANSI 169 (special purpose food equipment and devices).</p> |

| Conformity | Description |
|---|--|
| FDA | <p>FDA – Code of Federal Regulations (valid for the variable code PL02, PL03) All wetted materials are compliant with the Code of Federal Regulations published by the FDA (Food and Drug Administration, USA) according to the manufacturer's declaration.</p> |
| USP | <p>United States Pharmacopeial Convention (USP) (valid for the variable code PL04) All wetted materials are biocompatible according to the manufacturer's declaration.</p> |
|  | <p>EC Regulation 1935/2004 of the European Parliament and of the Council (valid for the variable code PL01, PL02) All wetted materials are compliant with EC Regulation 1935/2004/EC according to the manufacturer's declaration.</p> |

5. Materials

5.1. Burkert resistApp



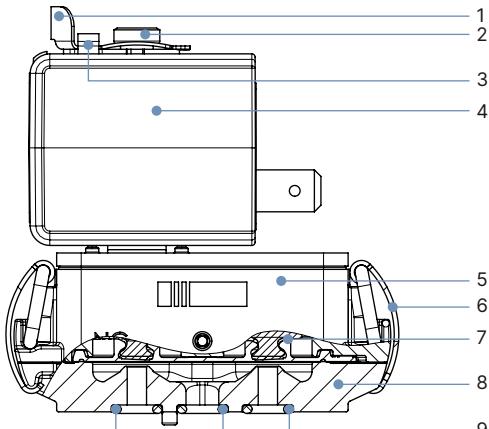
Burkert resistApp – Chemical resistance chart

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](#)

5.2. Material specifications

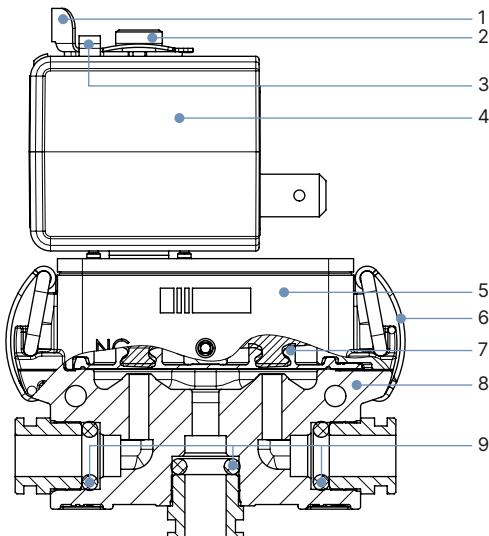
Flange version



| No. | Element | Material |
|----------|------------------------------------|------------------------------|
| 1 | Pushover plate | Stainless steel 1.4310 |
| 2 | Stopper | Stainless steel 1.4113 |
| 3 | Retaining plate | Stainless steel 1.4301 |
| 4 | Coil | Epoxy |
| 5 | Actuator housing | Polyphenylene sulphide (PPS) |
| 6 | Tension clamp | Stainless steel 1.4310 |
| 7 | Separating diaphragm ¹⁾ | FKM |
| 8 | Fluid housing ¹⁾ | Polyphenylene sulphide (PPS) |
| 9 | O-rings ¹⁾ | EPDM |

1.) in contact with medium

Push-in version



| No. | Element | Material |
|----------|------------------------------------|------------------------------|
| 1 | Pushover plate | Stainless steel 1.4310 |
| 2 | Stopper | Stainless steel 1.4113 |
| 3 | Retaining plate | Stainless steel 1.4301 |
| 4 | Coil | Epoxy |
| 5 | Actuator housing | Polyphenylene sulphide (PPS) |
| 6 | Tension clamp | Stainless steel 1.4310 |
| 7 | Separating diaphragm ¹⁾ | FKM |
| 8 | Fluid housing ¹⁾ | Polyphenylene sulphide (PPS) |
| 9 | O-rings ¹⁾ | EPDM |

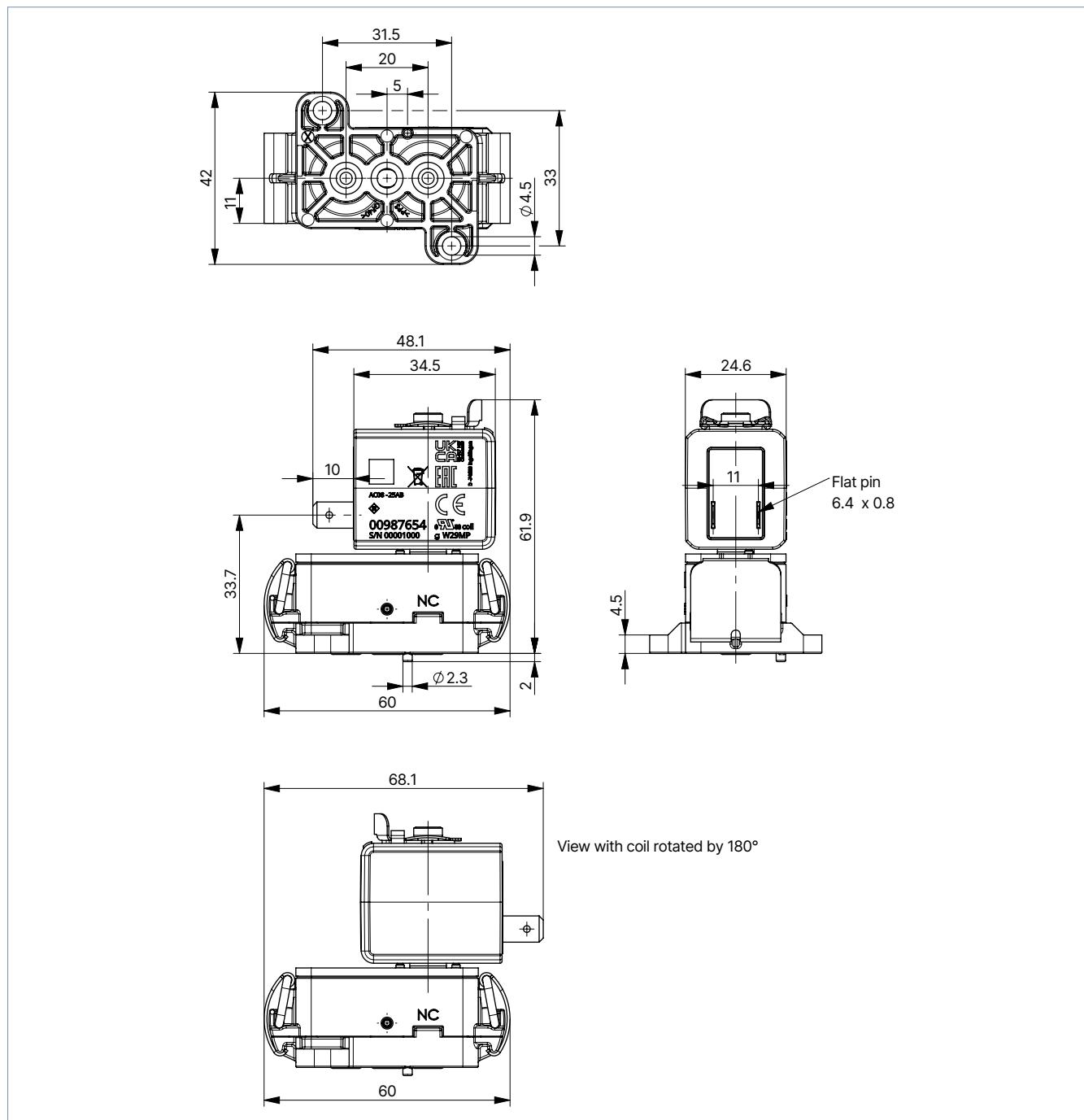
1.) in contact with medium

6. Dimensions

6.1. Flange version

Note:

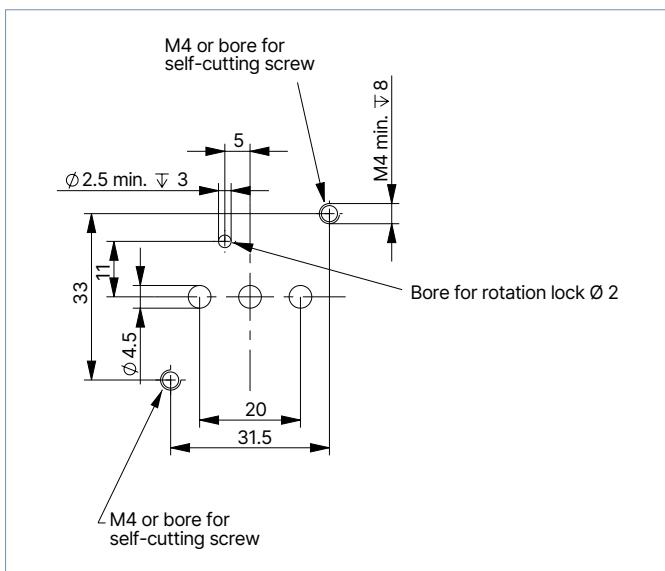
Dimensions in mm



6.2. Flange pattern

Note:

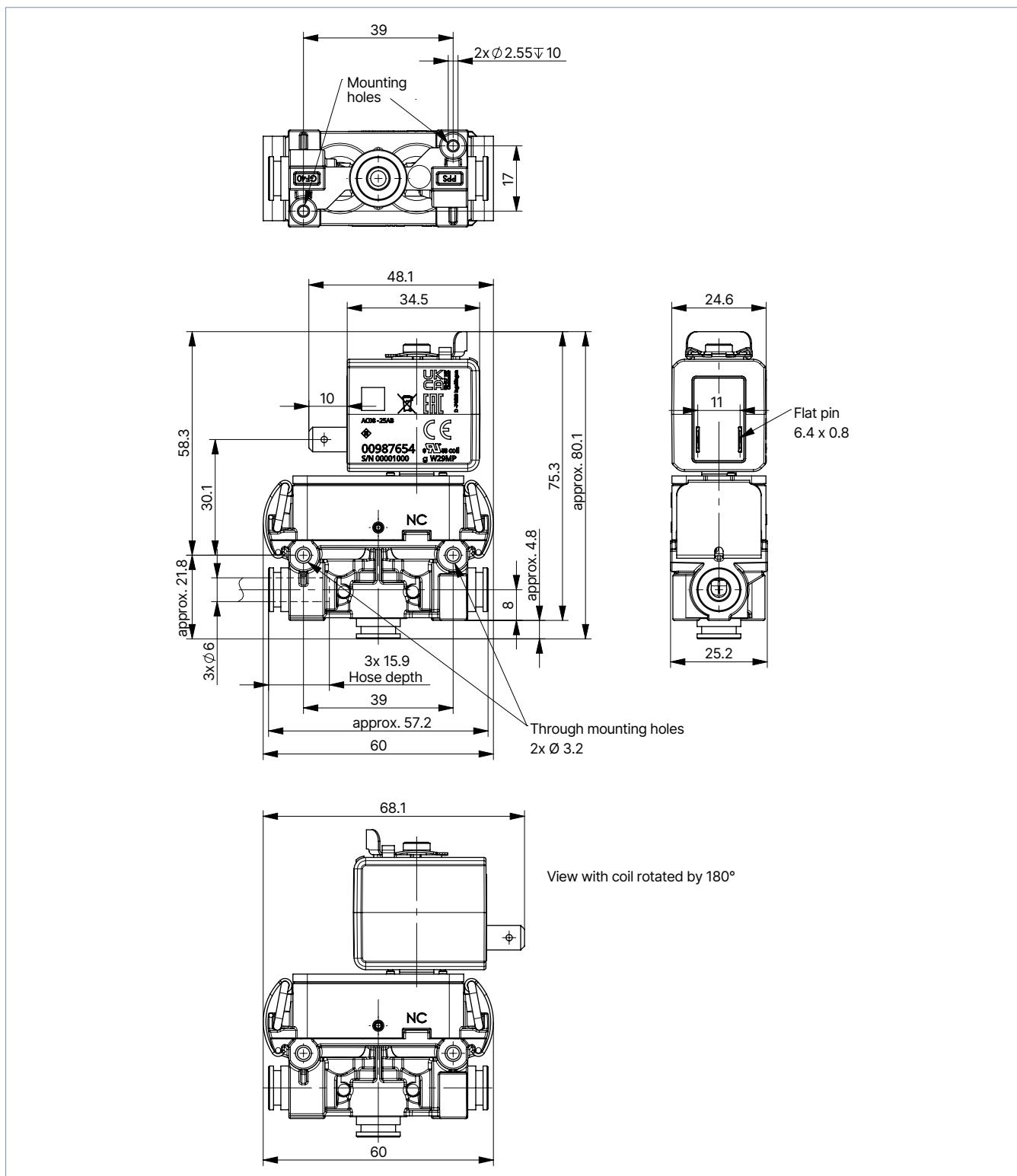
Dimensions in mm



6.3. Push-in version

Note:

Dimensions in mm



7. Device/Process connections

7.1. Pin assignment

The valve Type 7017 is available with circuit function T (3/2-way valve; universally applicable). Depending on the application, the valve must be connected fluidically accordingly:

Application example

Mixing valve:

Two different media A and B are connected to the NC and NO ports respectively. Depending on the switching position of the valve, medium A or medium B is released to the middle/common connection.

Distribution valve:

A medium is applied to the middle/common connection. Depending on the switching position of the valve, the medium is released to the NC or NO connection.

8. Performance specifications

8.1. Power consumption

Standard version with flat pin terminal, coil size 24.5 mm

| Coil | Orifice [mm] | Electrical power | | Switching times ¹⁾ | |
|------------------|-----------------|------------------|----------|-------------------------------|-----------------|
| | | DC cold [W] | warm [W] | Opening [ms] | Closing [ms] |
| 24 V / DC / 11 W | 3.0 | 11 | 7.5 | approx. 25 | approx. 25 |
| | 4.0 | | | | |

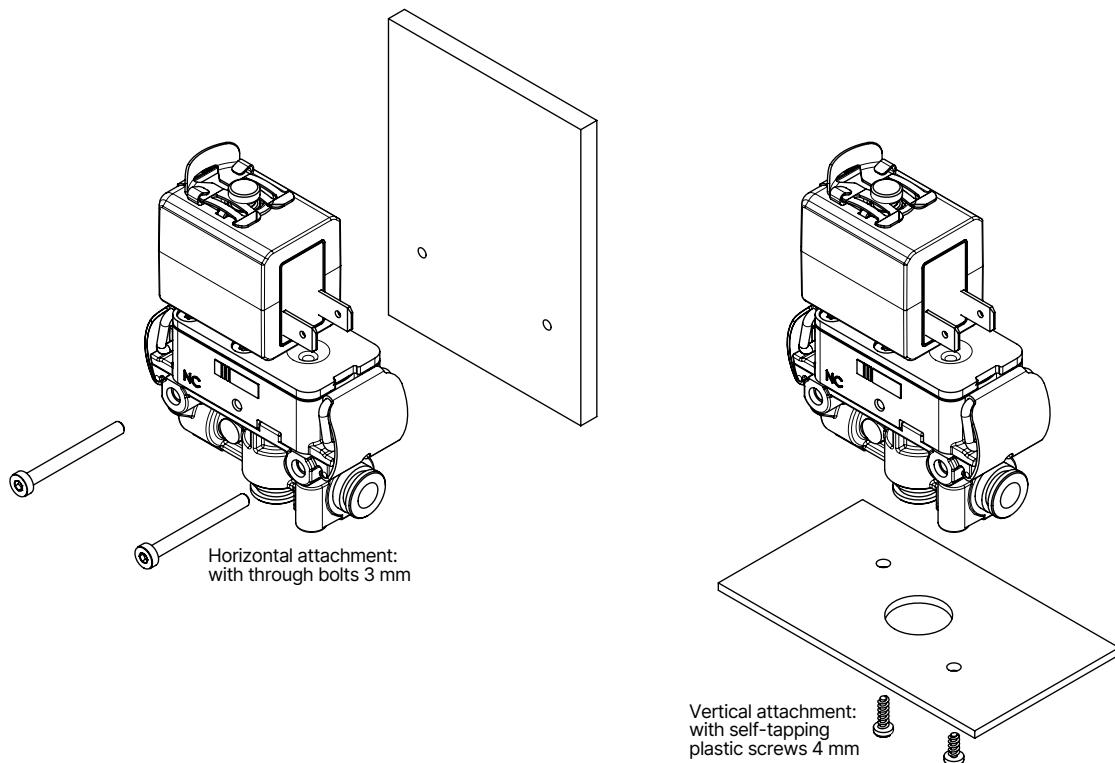
1.) Measurement at + 20 °C, nominal pressure²⁾ at the valve outlet acc. to DIN ISO 12238:2001, opening: pressure build-up 0...10 %, closing: pressure reduction 100...90 %

2.) Pressure data: overpressure to atmospheric pressure and air as a medium

9. Product installation

9.1. Mounting options

The push-in version can be fastened using both self-tapping screws and through screws.

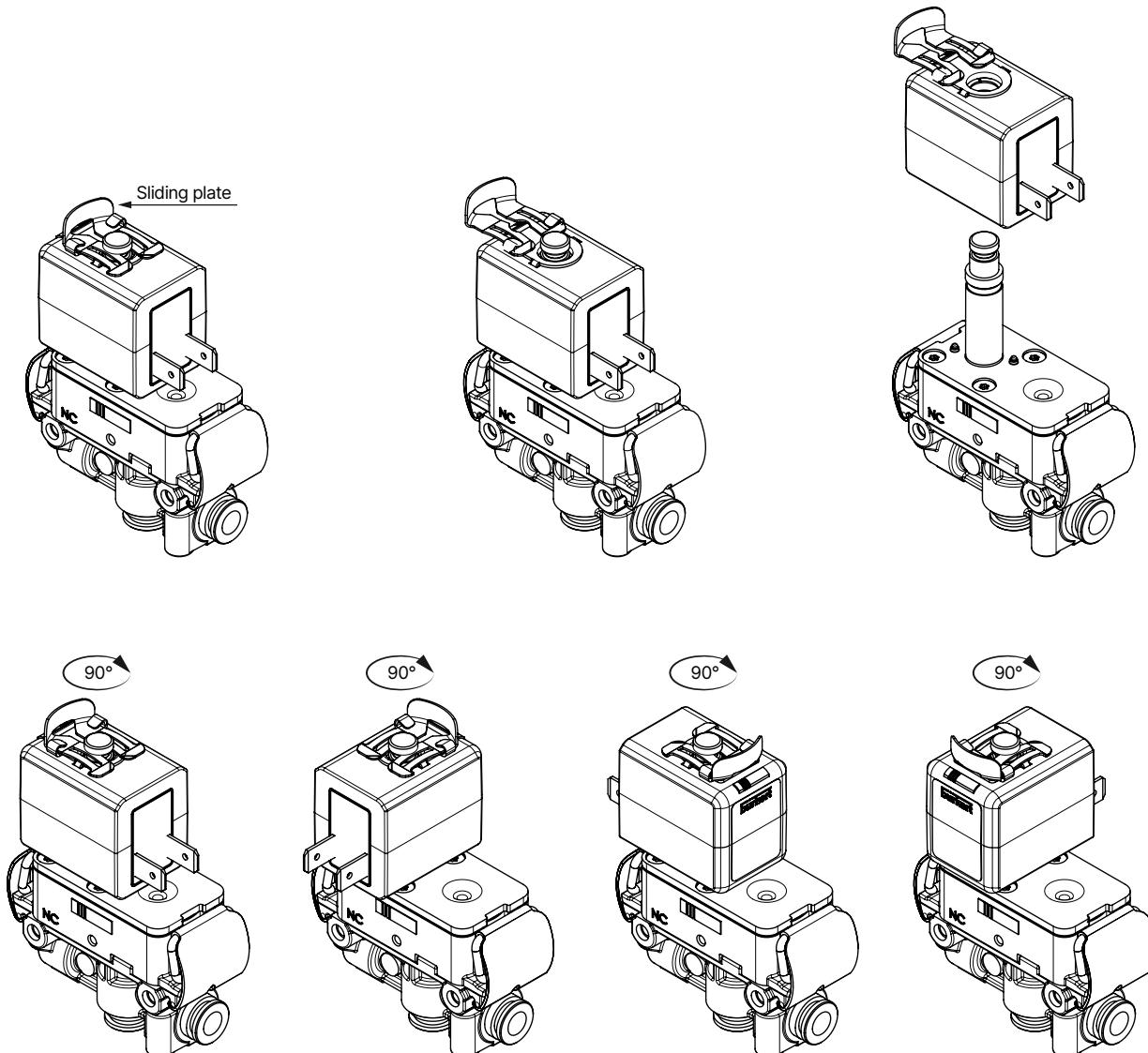


10. Product design and assembly

10.1. Product features

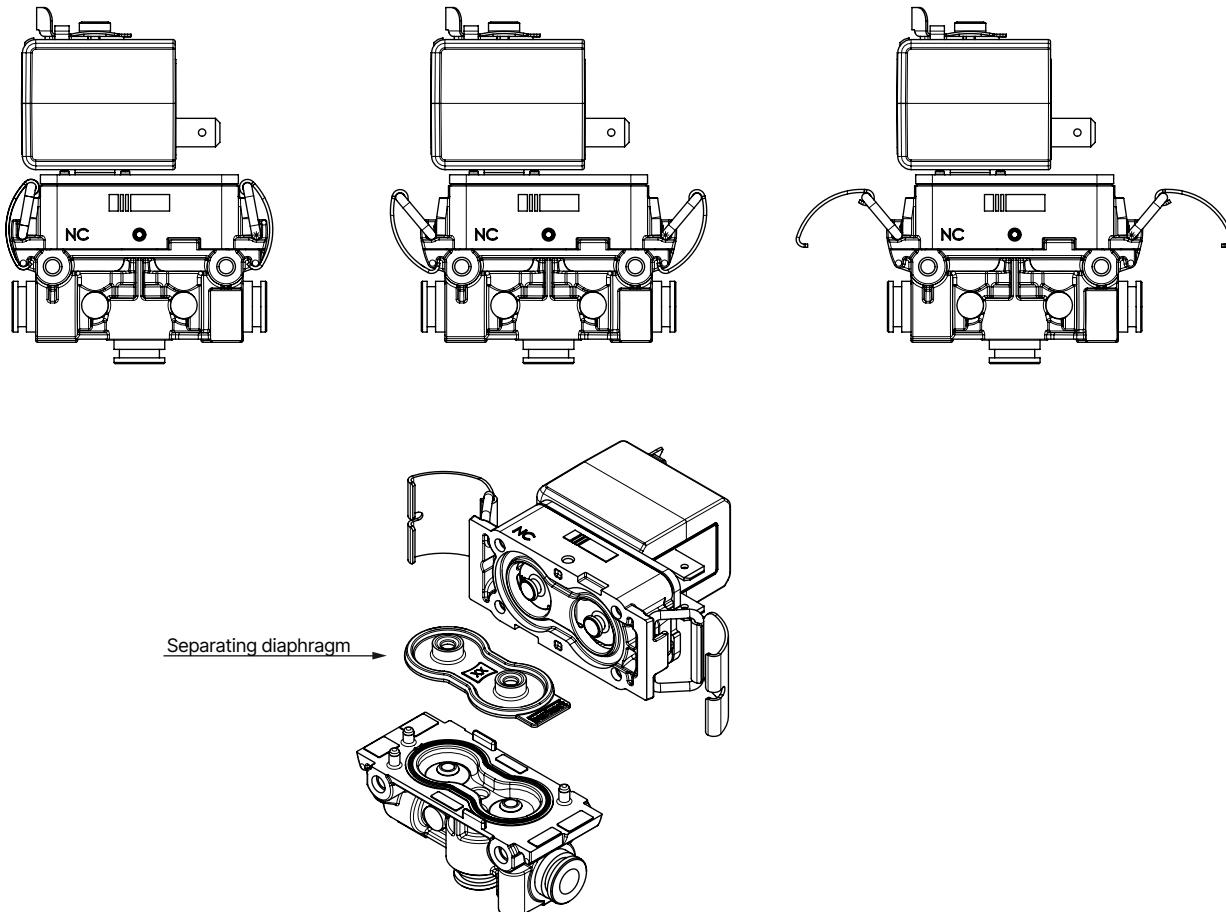
Orientation of the coil

By loosening the sliding plate, the solenoid coil can be removed and, if necessary, the orientation of the solenoid coil can be changed.



Replacement of the separating diaphragm

By opening the clamps, the solenoid valve can be separated from the fluid housing. In this state, the separating diaphragm can be inspected and easily replaced if necessary.



11. Ordering information

11.1. 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](#)

11.2. Bürkert product filter

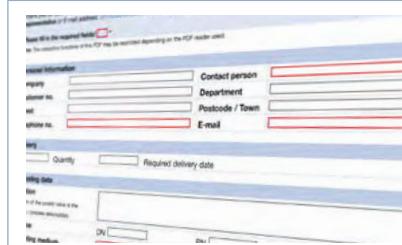


Bürkert product filter – Get quickly to the right product

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](#)

11.3. 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](#)

11.4. Ordering chart

Standard version with flat pin terminal, coil size 24.5 mm

Note:

All valves are delivered without cable plug.

| Circuit function | Port connection | Orifice | Q _{Nn} value air ^{1.)} | K _v value water ^{2.)} | Voltage/ Frequency | Pressure range | Max. pressure difference | Seal material | Body material | Article no. |
|--|-------------------|---------|---|--|-----------------------|-------------------|--------------------------------|------------------|------------------|--|
| | | [mm] | [l/min] | [m ³ /h] | | | | | | |
| CF T 3/2-way solenoid valve Direct-acting Flow direction optional Normally closed | Bürkert flange | 3 | 180 | 0.17 | 024/DC | Vac...1.5 | 1.5 | FKM | PPS | 20024083  |
| | | 4 | 220 | 0.21 | | -0.3...0.3 | 0.3 | | | 20043058  |
| | Push-in | 3 | 180 | 0.17 | | Vac...1.5 | 1.5 | | | 20024085  |

1.) Measurement at + 20 °C, 6 bar at the valve outlet and 1 bar pressure difference

2.) Measurement at + 20 °C, 1 bar^{3.)} at the valve inlet and free outlet

3.) Pressure data: overpressure to atmospheric pressure and air as a medium

11.5. Ordering chart accessories

Separating diaphragm for Type 7017

| Description | Packaging unit | Seal material | Article no. |
|----------------------|----------------|---------------|--|
| Separating diaphragm | 10 pcs. | FKM | 20042932  |
| | 100 pcs. | | 20032094  |