bürkert
FLUID CONTROL SYSTEMS

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 adaption 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

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	
Nominal operating mode/ 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. Bürkert resistApp" on page 6**)
Medium temperature	+5 °C…+80 °C
Viscosity	Max. 21 mm²/s
Process/Port connection & communication	
Electrical connection	Flat pin terminal (6.3 x 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

Flange version	Push-in version
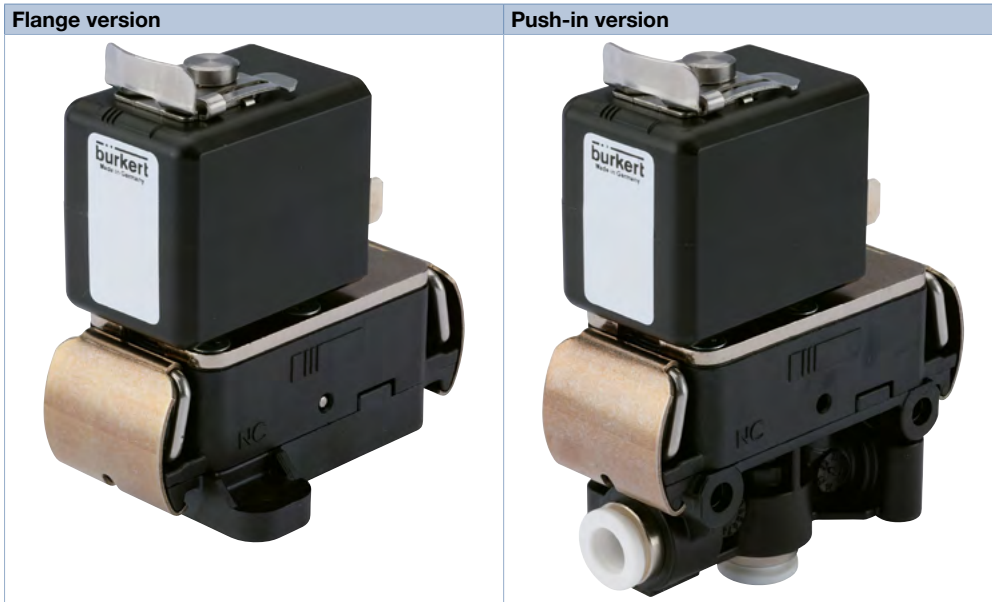
3. Circuit functions

Symbol	Description
2(A) ↑ ↓ 1(P) 3(R)	**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
cULus	**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

### 4.5. Foods and beverages/Hygiene

Approval	Description
NSF COMPONENT	**NSF/ANSI 169 (valid for the variable code PL05)** The products are approved according to NSF/ANSI 169 (special purpose food equipment and devices).

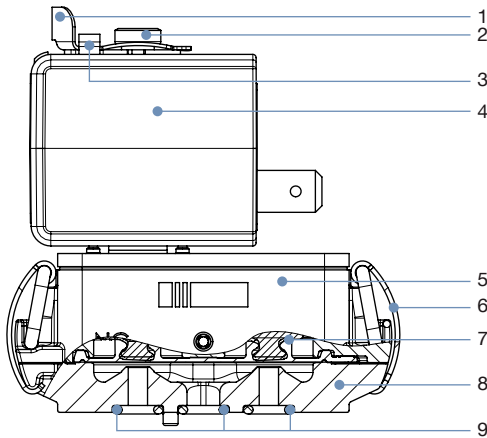| Conformity	Description
FDA	**FDA – Code of Federal Regulations (valid for the variable code PL02, PL03)** All wetted materials are compliant with the Code of Federal Regulations published by the FDA (Food and Drug Administration, USA) according to the manufacturer's declaration.
USP	**United States Pharmacopeial Convention (USP) (valid for the variable code PL04)** All wetted materials are biocompatible according to the manufacturer's declaration.
(glass-fork symbol)	**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.

5. Materials

5.1. Bürkert resistApp
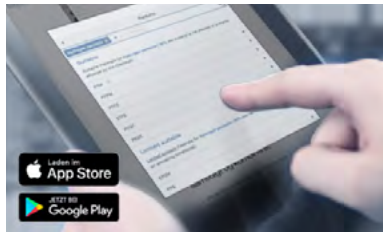
Bürkert resistApp – Chemical resistance chart

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.

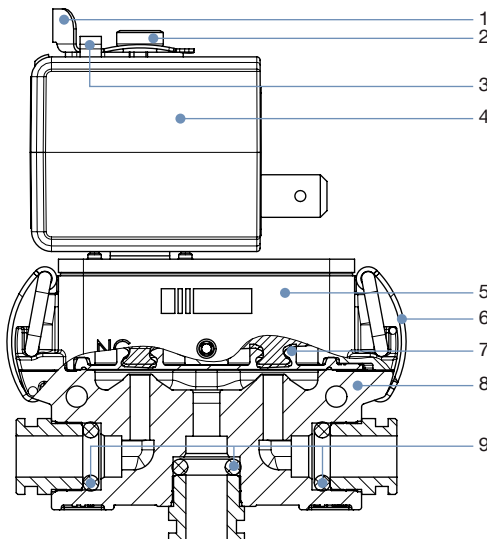**Start chemical resistance check**

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

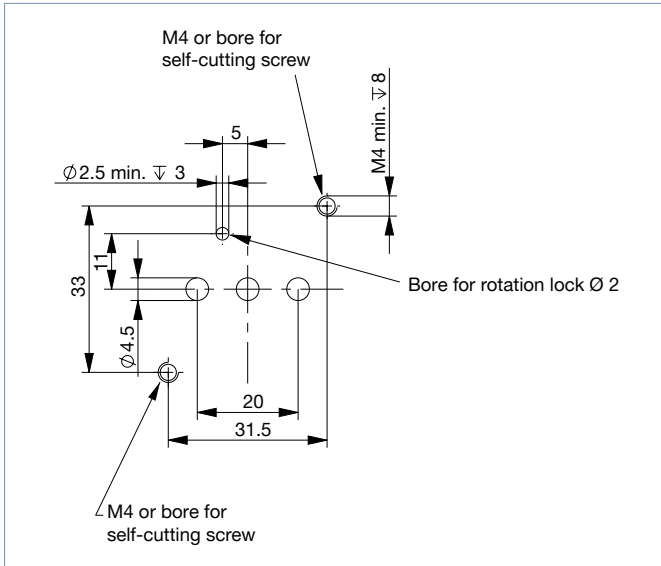# 6. Dimensions

6.1. Flange version

Note:
Dimensions in mm

View with coil rotated by 180°
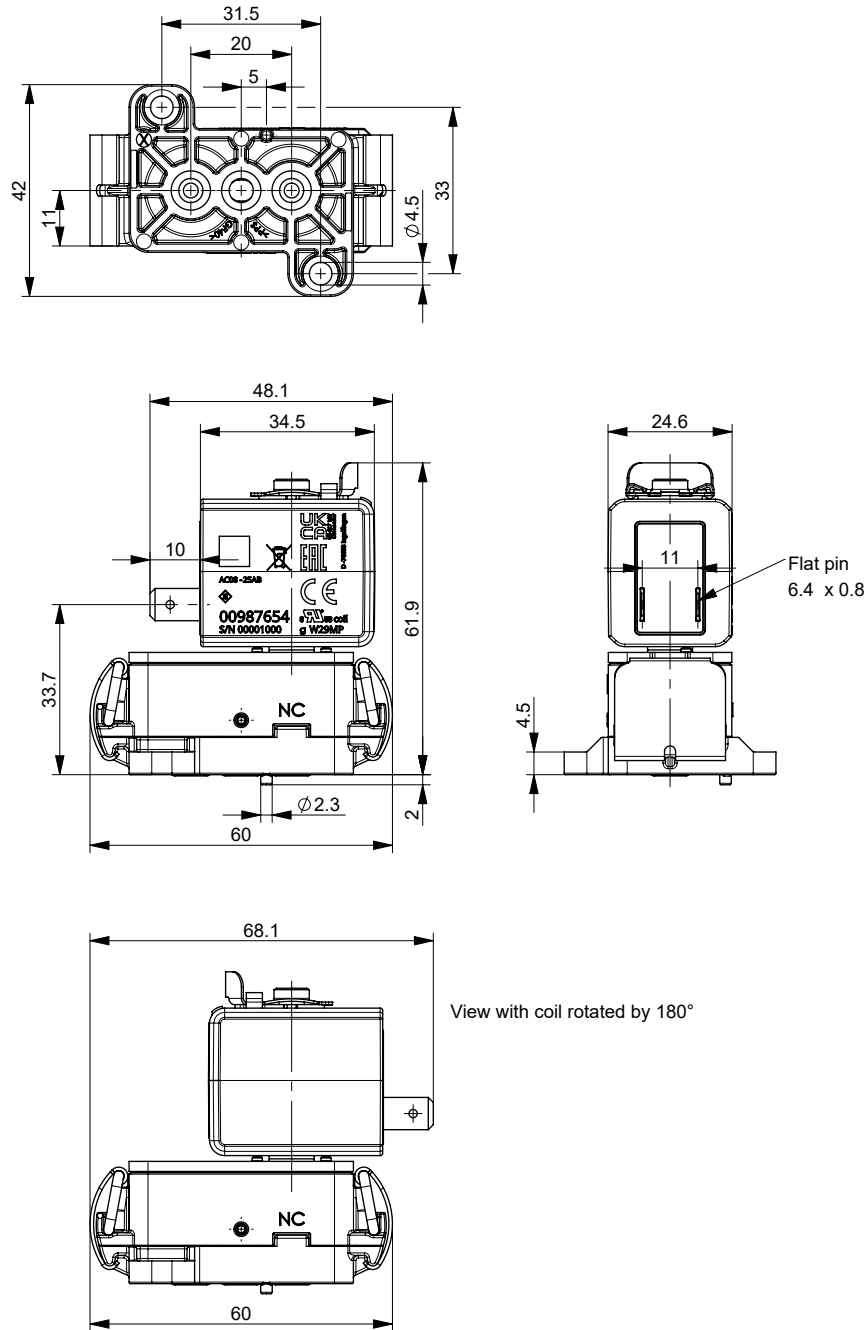
Type 7017

6.2. Flange pattern

Note:
Dimensions in mm

M4 or bore for self-cutting screw

M4 min. ⩛ 8

5

⌀ 2.5 min. ⩛ 3

Bore for rotation lock Ø 2

33

11

⌀ 4.5

20

31.5

M4 or bore for self-cutting screw

6.3. Push-in version

Note:
Dimensions in mm

View with coil rotated by 180°

Flat pin 6.4 x 0.8

Mounting holes

2x ⌀ 2.55 ▽ 10

Through mounting holes 2x ⌀ 3.2

3x 15.9 Hose depth

3x ⌀ 6

NC
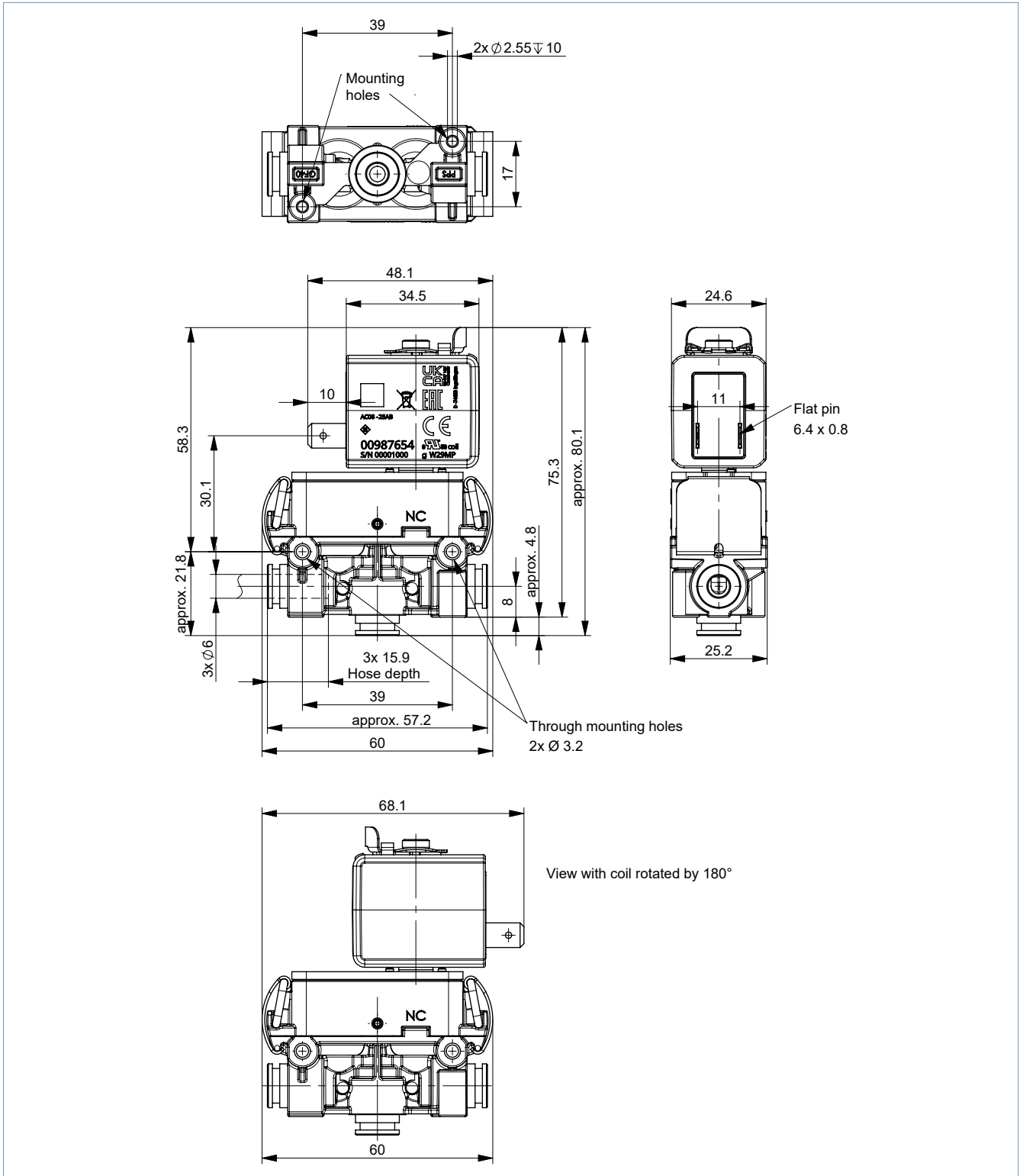
7. Device/Process connections

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

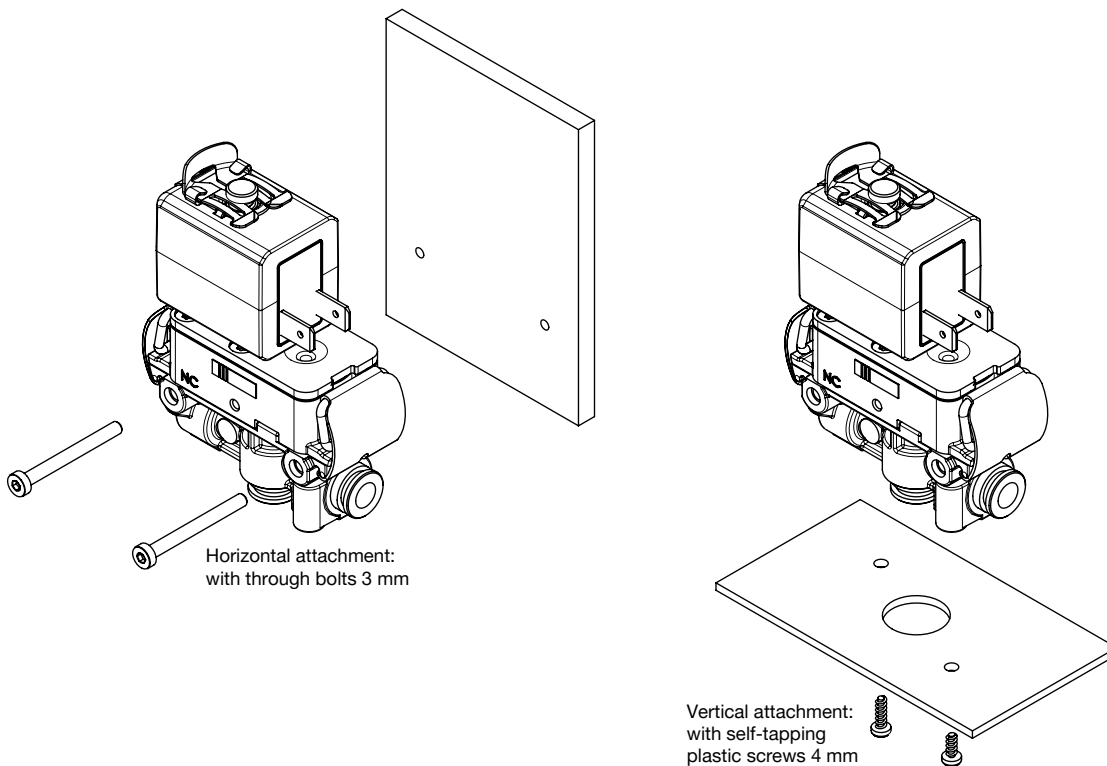| Coil	Orifice	Electrical power		Switching times [1]	
		DC		Opening	Closing
	[mm]	cold [W]	warm [W]	[ms]	[ms]
24 V/DC/11 W	3.0	11	7.5	approx. 25	approx. 25
	4.0				

1.) Measurement at +20 °C, nominal pressure [2] 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.

Horizontal attachment:
with through bolts 3 mm

Vertical attachment:
with self-tapping
plastic screws 4 mm

# 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.

Sliding plate
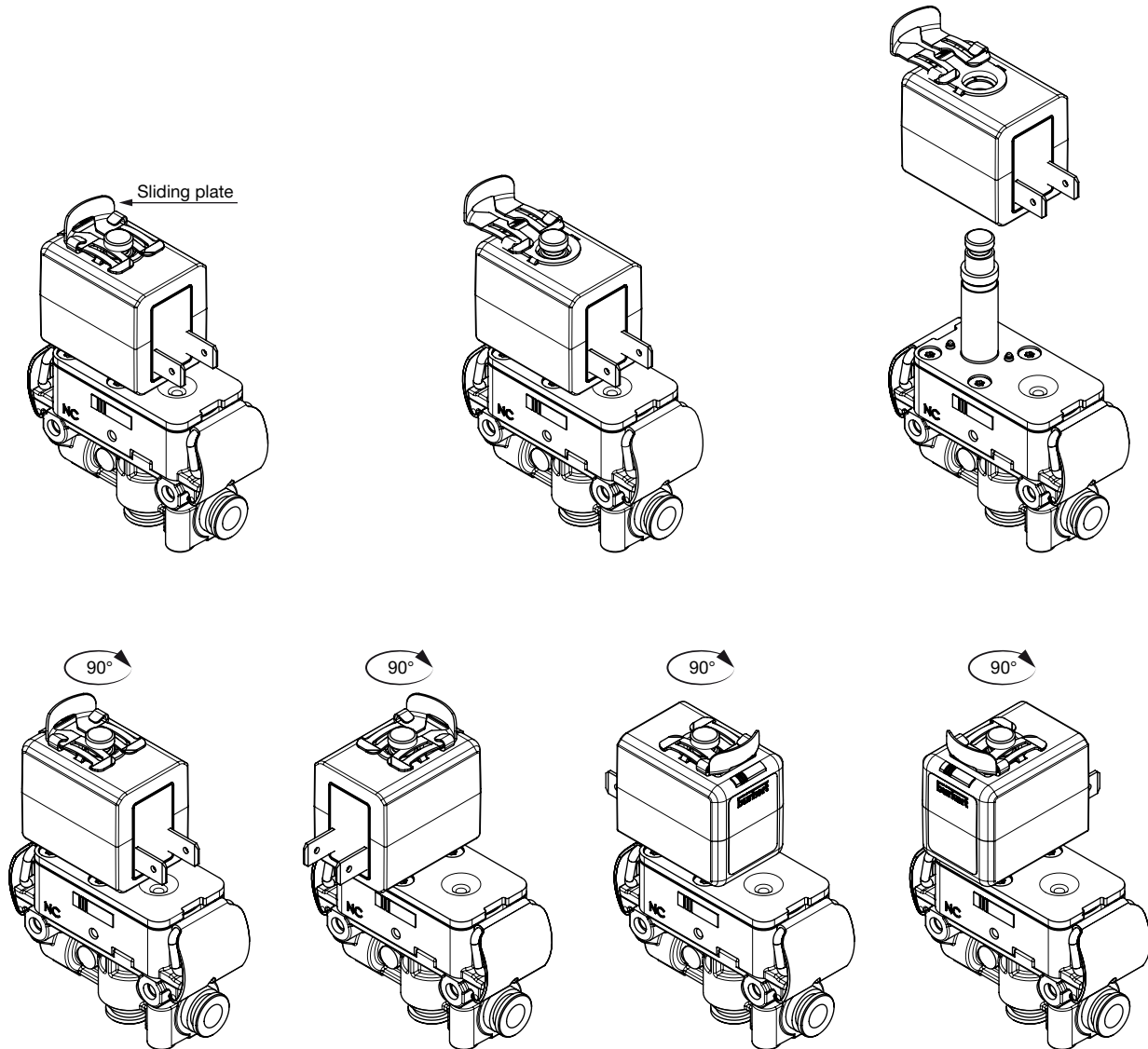
Replacement of the separating diaphragm

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.

Separating diaphragm
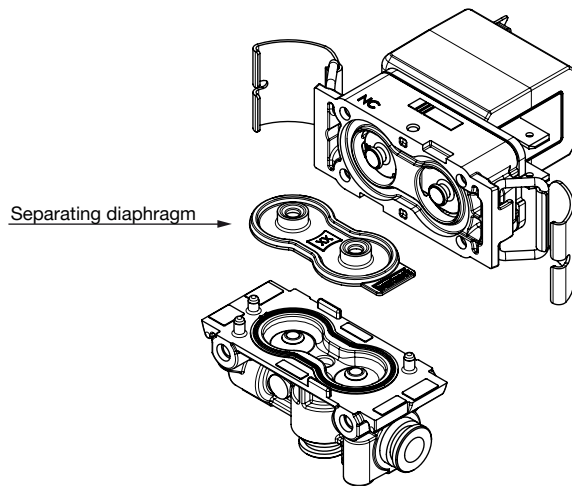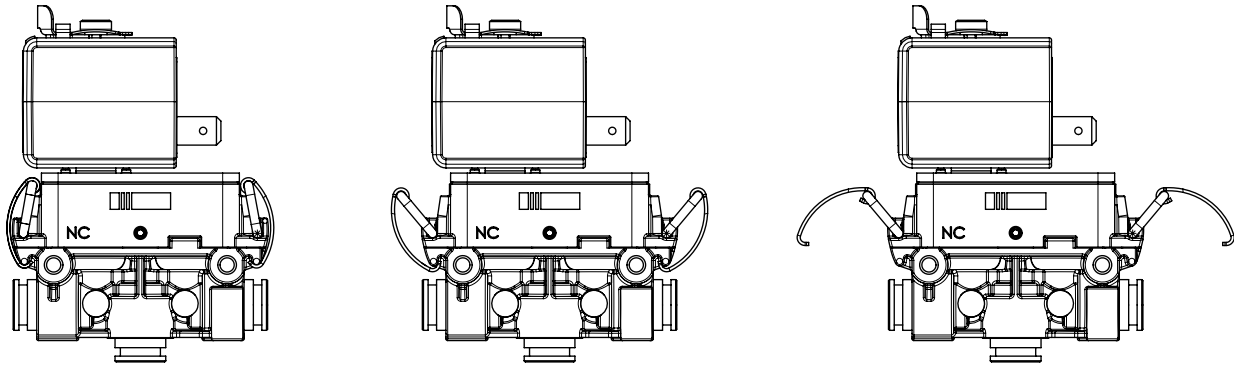
11. Ordering information

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.
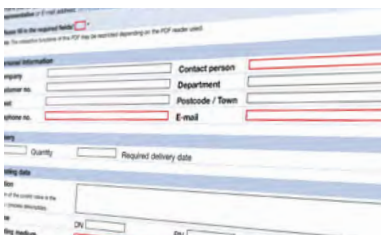
Order online now

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]	[m³/h]	[V/Hz]	[bar]	[bar]			
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 🛒