bürkert
FLUID CONTROL SYSTEMS

MAN 1000449172 EN Version: C Status: RL (released | freigegeben) printed: 21.01.2026

Type 7012

3/2-way solenoid valve

Operating Instructions

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Technical documentation 2511/03_GBen_00815362_1024160907_1024276363 / Original DE

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1 About this document

The document is an important part of the product and guides the user to safe installation and operation. The information and instructions in this document are binding for the use of the product.

- Before using the product for the first time, read and observe the whole safety chapter.
- Before starting any work on the product, read and observe the respective sections of the document.
- Keep the document available for reference and give it to the next user.
- Contact the Bürkert sales office for any questions.

Further information concerning the product at Products.

- Enter the article number from the type label in the search bar.

The illustrations in these instructions may vary depending on the product variant.

1.1 Symbols

DANGER!

Warns of a danger that leads to death or serious injuries.

WARNING!

Warns of a danger that can lead to death or serious injuries.

CAUTION!

Warns of a danger that can lead to minor injuries.

NOTICE!

Warns of property damage on the product or the installation.

Indicates important additional information, tips and recommendations.

Refers to information in this document or in other documents.

- Indicates a step to be carried out.

✓ Indicates a result.

Menu Indicates a software user-interface text.

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1.2 Terms and abbreviations

The terms and abbreviations are used in this document to refer to following definitions.

Product	Solenoid valve Type 7012

1.3 Manufacturer

Bürkert Fluid Control Systems

Christian-Bürkert-Str. 13–17

74653 Ingelfingen

GERMANY

The contact addresses are available at Contact.

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2 Safety

2.1 Intended use

The 3/2-way solenoid valve Type 7012 is designed for blocking, dosing, filling and ventilating neutral gaseous and liquid media.

- The device must only be used for its intended purpose. Non-intended use of the device may be put people, nearby equipment and the environment at risk.
- Do not use the device outdoors.
- Observe the permissible data, operating conditions and usage conditions of the respective devices or products. These specifications can be found in the contract documents, the operating instructions and on the type label.
- Use the device only in conjunction with third-party devices and components recommended and authorised by Bürkert.
- The device must only be used when in perfect condition; always ensure proper storage, transportation, installation and operation.

2.2 Basic safety instructions

These safety instructions do not take into account any unforeseen circumstances or incidents which may arise during installation, operation and maintenance.

The operator is responsible for observing the location-specific safety regulations, also with reference to personnel.

Risk of injury due to high pressure in the system or device

- Before working on the system or device, switch off the pressure and ventilate and empty the lines.

Risk of injury from electric shock

- Before working on the system or device, switch off the power supply and secure against reactivation.
- Observe any applicable accident prevention and safety regulations for electrical devices.

Risk of burns or fire from hot device surfaces due to prolonged activation time

- Keep device away from highly flammable substances and media and do not touch with bare hands.

Risk of injury from malfunctioning valves with alternating current (AC)

A seized core will cause the coil to overheat, which leads to functional failure.

- Monitor the working process for proper function.

General dangerous situations

Ensure the following to prevent injuries:

- Use the device only when it is in a perfect state and in accordance with the operating instructions.
- Do not make any internal or external modifications to the device and do not subject it to mechanical stress.

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- Secure the device and system to prevent unintentional activation.
- Ensure that only trained technicians carry out installation and maintenance work.
- Install the valves according to the regulations applicable in the respective country.
- After an interruption in the power supply, ensure that the process is restarted in a controlled manner.
- Comply with generally accepted engineering standards.

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3 Technical data

3.1 Standards and directives

This product complies with the legal requirements applicable at the time of placing on the market and has been developed and tested in accordance with the relevant European directives/regulations and harmonized standards. The conformity is documented and, if necessary, supported by evidence. The EU Declaration of Conformity can be found behind the respective type on the home page country.burkert.com

3.2 Operating conditions

WARNING!

Risk of injury due to malfunction if used outdoors

- Do not use the device outdoors.
- Avoid heat sources that could lead to the permissible temperature range being exceeded.

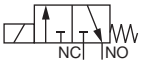
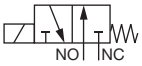
Ambient temperature	See Type label [▶ 9]
Storage temperature	–40...+80°C
Medium temperature	See data sheet
Media	Neutral gaseous and liquid media that do not attack the body and seal materials at country.burkert.com
Viscosity	max. 21 mm²/s
Degree of protection	IP65 according to EN 60529 with cable plug

3.3 Mechanical data

Dimensions	See data sheet
Body material	See Type label [▶ 9]
Seal material	See Type label [▶ 9]

3.4 Fluidic data

Circuit functions

C (NC)		3/2-way valve, normally closed, outlet A relieved
D (NO)		3/2-way valve, outlet B pressurised in rest position

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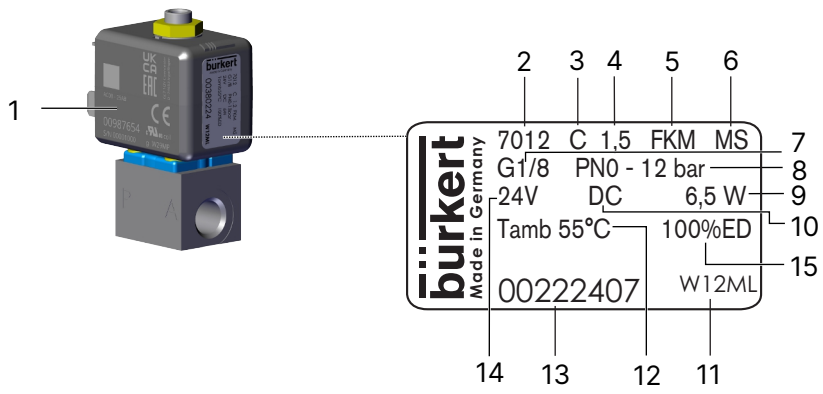
Pressure range	See Type label [▶ 9]
Port connections	See Type label [▶ 9]

3.5 Electrical data

Solenoid dimensions	Solenoid 20 mm (SG2) Solenoid 24.5 mm (SG3)
Connections	DIN EN 175301-803 design C: for cable plug 2516 Industry standard, design B: for cable plug 2507 Flat-pin terminal as protection class III Strand connection on request
Operating voltage	see Type label [▶ 9]
Voltage tolerance	±10%
Nominal power	2 W to 6.5 W (SG2) 2 W to 7 W (SG3)
Nominal operating mode	Continuous operation 100% duty cycle

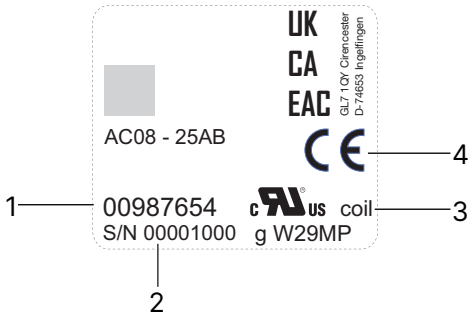
3.6 Device identification

3.6.1 Type label



1	Laser engraving of solenoid	2	Type
3	Circuit function	4	Orifice
5	Sealing material	6	Body material
7	Supply connection	8	Pressure range
9	Power	10	Frequency
11	Manufacture code	12	Max. ambient temperature
13	Article number	14	Voltage
15	Max. duty cycle		

3.6.2 Laser engraving of solenoid AC08



1	Article number	2	Serial number
3	Approval as per US and Canadian terms	4	CE marking

3.7 Approvals

All AC08 solenoids labelled with cURus are certified in accordance with US and Canadian terms.

The labelling on the solenoid is not necessarily linked to the valve's approval.

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4 Installation

4.1 Safety instructions

DANGER!

Risk of injury due to high pressure in the system or device

- Before working on the system or device, switch off the pressure and ventilate and empty the lines.

DANGER!

Risk of injury from electric shock

- Before working on the system or device, switch off the power supply and secure against reactivation.
- Observe any applicable accident prevention and safety regulations for electrical devices.
- Only connect protection class III devices (without protective conductor) to SELV or PELV power sources.
- Only use cable plug for matching solenoid variant. Cable plug B must not be used for a protection class III device.

WARNING!

Risk of injury due to improper installation

- Installation must always be carried out by trained technicians with the appropriate tools.
- Secure the system against unintentional activation.
- Ensure a controlled restart after installation.

4.2 Create the fluidic connections to the device

Installation position: any, preferably solenoid facing upward.

- Check pipelines for soiling, clean if required.
- Install a dirt trap to protect against disruptions (mesh width: 0.2...0.4 mm).

Note the flow direction. Letters on the housing indicate the flow direction: from 1(P) → 2(A).

4.2.1 Devices with threaded connection

NOTICE!

Breaking hazard

- Do not use the solenoid as a lever arm.

- Seal threads with PTFE tape.
- Hold the device on the body using an open-end wrench and screw into the pipeline.

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4.2.2 Devices with flange connection

- Remove the cover plate.
- Loosen nut and remove coil.

WARNING!

Risk of injury due to escaping medium

- Ensure that the seals supplied fit the valve properly.
- Ensure that the manifold is level.
- Ensure sufficient surface quality of the manifold.

- Insert the seal into the body.
- Screw the body onto the manifold, observing the maximum tightening torque of 1 Nm.
- Place the solenoid on it and fasten the nut, observing the maximum tightening torque of 2.8 Nm.

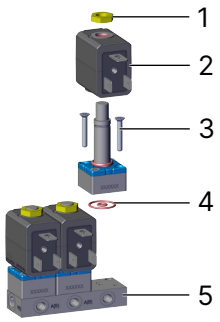
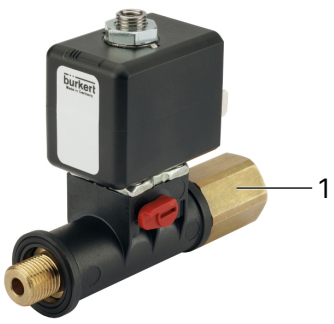


Fig. 1: Installation of devices with flange connection

1	Nut	2	Coil
3	Fastening screw	4	Seal
5	Manifold		

4.2.3 Devices with hollow screw

When tightening the hollow screw, maintain a tightening torque of 4–5 Nm.



1	Hollow screw

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4.3 Electrically connecting the device

WARNING!

Risk of injury from electric shock

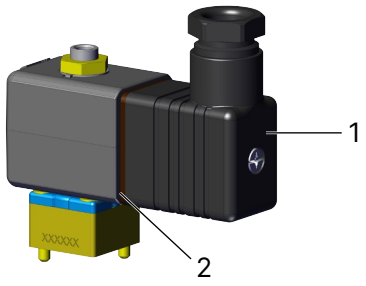
- Before working on the system or device, switch off the power supply and secure against reactivation.
- Observe any applicable accident prevention and safety regulations for electrical devices.

WARNING!

Risk of electric shock if protective conductor not connected

- Always connect the protective conductor.
- Check electrical continuity between the solenoid and the body.

- Connect the protective conductor.
- Attach seal and check that it fits properly.
- Screw on the cable plug (see data sheet for approved types), observing the maximum tightening torque of 0.3 Nm.
- Check electrical passage.



1	Type 2507	2	Seal

4.4 Rotate the coil

WARNING!

Risk of injury from electric shock

If there is no protective conductor function between the solenoid and the body, there is a risk of electric shock.

- Check the protective conductor function after installing the solenoid.

WARNING!

Risk of injury due to overheating or fire hazard

Connecting the coil without a pre-assembled armature will cause overheating and destroy the coil.

- Only connect the coil after the armature has been installed.

The solenoid can be rotated by 4 x 90°. 2 x 180° in case of a block installation.

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- Loosen the nut.
- Rotate the solenoid.
- Screw in the nut with an open-end wrench, observing the maximum tightening torque of 2.8 Nm.

Fig. 2: Rotating the solenoid

1	Nut (max. 2.8 Nm)	2	O-ring
3	Armature		

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5 Disassembly

DANGER!

Risk of injury due to high pressure in the system or device

- Before working on the system or device, switch off the pressure and ventilate and empty the lines.

DANGER!

Risk of injury from electric shock

- Before working on the system or device, switch off the power supply and secure against reactivation.

DANGER!

Risk of injury due to improper disassembly

- Disassembly may be carried out by authorised technicians only.

- Shut off the pressure and vent the lines.
- Switch off electrical voltage.
- Remove the cable plug.

Devices with threaded connection

- Hold the device on the housing using an open-end wrench and screw out from the pipeline.

Devices with flange connection

- Loosen nut and remove coil.
- Remove the valve body from the manifold.

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6 Maintenance, troubleshooting

DANGER!

Risk of injury if maintenance work is not carried out correctly

- Maintenance may only be performed by trained technicians and with the appropriate tools.
- Secure the system against unintentional activation.
- Ensure a controlled restart after maintenance is completed.

6.1 Troubleshooting

Check in case of faults:

- Port connections
- Operating pressure
- Power supply.

If the valve still does not actuate, contact your local Bürkert Service representative.

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7 Spare parts

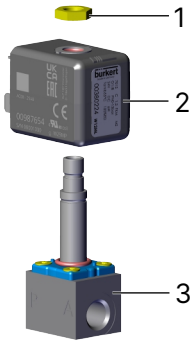
CAUTION!

Risk of injury and/or damage to property due to incorrect parts

Incorrect accessories and unsuitable spare parts may cause injuries and damage the device and the surrounding area.

- Use only original spare parts from Bürkert.

The solenoid and armature can be ordered using the device's identification number. Wearing part set on request.



1	Nut (max. 2.8 Nm)	2	Coil
3	Armature		

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8 Logistics

8.1 Transport and storage

- Protect the device against moisture and dirt in the original packaging during transportation and storage.
- Avoid UV radiation and direct sunlight.
- Protect connections, if present, from damage with protective caps.
- Observe the permitted storage temperature.

8.2 Return

No work or tests will be carried out on the device until a valid Contamination Declaration has been received.

- To return a used device to Bürkert, contact the Bürkert sales office. A return number is required.

8.3 Disposal

Environmentally friendly disposal

- Follow national regulations regarding disposal and the environment.
- Collect electrical and electronic devices separately and dispose of them as special waste.

Further information at country.burkert.com

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