bürkert
FLUID CONTROL SYSTEMS

MAN 1000642578 EN Version: A Status: RL (released | freigegeben) printed: 21.01.2026

Type 6212

2/2 solenoid valve

Operating Instructions

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Technical documentation 2512/18_GBen_00800598_951948939_952046731 / 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 6212

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 Authorised Use

Improper use of Type 6212 may be dangerous to persons, systems in the vicinity and the environment.

- The device is designed for controlling, shutting off and dosing neutral media with a viscosity of up to 21 mm²/s.
- With a properly connected and assembled cable plug, e.g. Bürkert Type 2516, the device complies with degree of protection IP65 in accordance with DIN EN 60529/ IEC 60529.
- For use, observe the authorised data, and the operating and usage conditions specified in the contract documents and in the operating instructions (see Technical data [▶ 8])
- Prerequisites for safe and trouble-free operation are correct transport, correct storage and installation as well as careful operation and maintenance.
- Only use the device for its intended purpose.

2.1.1 Foreseeable misuse

- In potentially explosive atmosphere, the device may only be used if an appropriate additional marking is affixed to the type label.
- Do not place the housing under mechanical stress (e.g. by placing objects on it or standing on it).
- Do not make any external alterations to the device housings. Do not paint body parts or screws.
- The solenoid must not be thermally insulated, as it heats up during operation. Ensure adequate aeration of the solenoid.

2.1.2 Restrictions

If required, observe existing restrictions when exporting the system/device.

2.2 Basic safety instructions

These safety instructions do not take account of any:

- unforeseen occurrences or events that may arise during installation, operation or maintenance of the devices.
- local safety regulations that are within the operator's scope of responsibility, including those relating to the installation personnel.

Danger from high pressure

▸ Before loosening lines or valves, switch off the pressure and vent the lines.

Danger due to electrical voltage

▸ Before reaching into the device or the system, switch off the power supply and secure to prevent reactivation.

▸ Observe the applicable accident prevention and safety regulations for electrical devices.

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Risk of burns/fire due to hot device surface if device operated continuously

- Keep the device away from highly flammable substances and media and do not touch with bare hands.
- Do not thermally insulate the device and ensure adequate aeration.

Risk of short circuit/escape of medium due to leaking fittings

- Make sure valve seats are properly seated
- Screw valve and connection lines together carefully.

General dangerous situations

To prevent injuries, observe the following:

- The system cannot be activated unintentionally.
- Installation and maintenance must be performed by authorised technicians using the appropriate tools.
- The process must be restarted in a defined or controlled manner after an interruption to the power supply or pneumatic supply.
- The device may only be operated in perfect condition and in accordance with the operating instructions.
- The generally accepted engineering standards must be followed when planning and operating the device.

Electrostatically sensitive components/assemblies

The device contains electronic components that are susceptible to the effects of electrostatic discharging (ESD). Components that come into contact with electrostatically charged persons or objects are at risk. In the worst-case scenario, they will be destroyed immediately or will fail after start-up.

- Observe the requirements in accordance with EN 61340-5-1 and 5-2 to minimise or avoid the possibility of damage caused by a sudden electrostatic discharge!
- Ensure that you do not touch the electronic components when the power supply voltage is applied!

Type 6212 has been developed with due consideration given to the accepted safety rules and is state-of-the-art. Nevertheless, dangerous situations can still occur.
Non-observance of these operating instructions and the information contained therein and unauthorised tampering with the device will release us from any liability and also invalidate the warranty covering devices and accessories!

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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

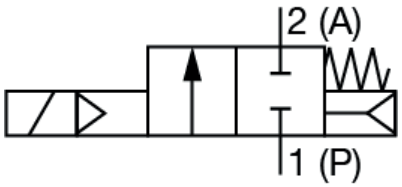
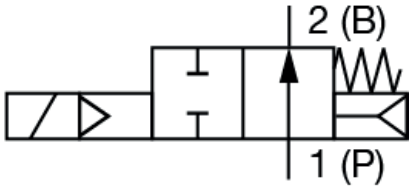
3.2 Operating conditions

The following values are indicated on the type label:

- Voltage (tolerance ± 10%) / current type
- Coil power
  (Active power in W, at operating temperature)
- Pressure range
- Body material
  Brass (MS) or stainless steel (VA) or PA/PPE (PA)
- Seal material
  FKM, EPDM, NBR

Storage temperature	–40 °C...+80 °C
Degree of protection:	IP65 according to DIN EN 60529 / IEC 60529 with socket

Circuit function 2/2-way solenoid valve

A (NC)	
B (NO)	

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3.3 Usage conditions

Ambient temperature:	0 °C...+55 °C 0 °C...+50 °C with PPE/PA body Heat-emitting energy sources must not cause the device to heat up further.
Permissible medium temperature depending on seal material	0 to...+50 °C (FKM) 0...+50 °C (NBR) –10...+50 °C (EPDM)
Media:	Neutral and slightly aggressive gaseous and liquid media that do not attack the body or seal materials (see resistance table).
Nominal operating mode:	Continuous operation 100% duty cycle (with 24 V/DC) Intermittent operation 40% (20 min) (with 110-120 V/UC, 230-240 V/UC)
Service life:	High switching frequency and high pressure will reduce overall service life.

NOTICE!

Important information to ensure functional reliability during continuous operation

- During a long period of downtime at least 1–2 switching operations per day are recommended.

3.4 Type label

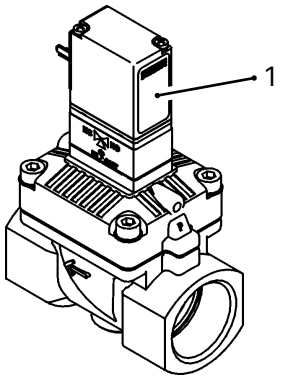

Fig. 1: Position of the type label

1	Type label

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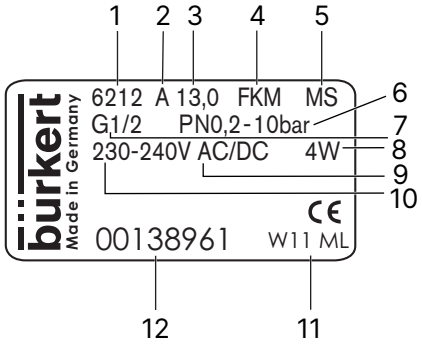

Fig. 2: Type label description

1	Type	2	Circuit function
3	Orifice	4	Sealing material
5	Body material	6	PN
7	Connection type	8	Power
9	Frequency	10	Voltage
11	Manufacture code	12	Article number

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4 Installation

4.1 Safety instructions

DANGER!

Risk of injury from high pressure in the system

- Before loosening lines or valves, switch off the pressure and vent the lines.

DANGER!

Risk of injury from electric shock

- Before reaching into the device or the system, switch off the power supply and secure to prevent reactivation.
- Observe the applicable accident prevention and safety regulations for electrical devices.

WARNING!

Risk of injury due to improper installation

- Installation must be carried out by authorised technicians only and with the appropriate tools.

WARNING!

Risk of injury due to unintentional activation of the system and uncontrolled restart.

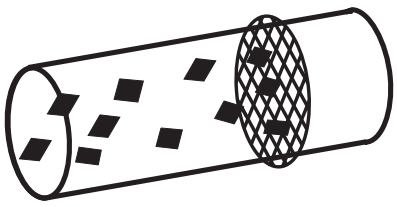
- Secure the system against unintentional activation.
- Ensure a controlled restart after installation.

4.2 Before installation

Installation position: the installation position is flexible.
Preferably: actuator at the top.

- Check pipelines for soiling and clean if required.

Dirt trap: for safe operation of the solenoid valve, a dirt trap (≤ 500 µm) must be installed before the valve inlet.



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4.3 Installation

- Hold the device on the body using the appropriate tool (open-end wrench) and screw into the pipeline.

NOTICE!

Breaking hazard

- The solenoid must not be used as a lever arm.

- Pay attention to flow direction:
  The arrow on the body indicates the flow direction (no function in opposite flow direction).

4.4 Electrical connection of cable plug

DANGER!

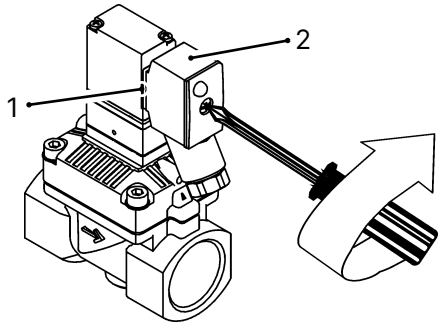
Risk of injury from electric shock

- Before reaching into the device or the system, switch off the power supply and secure to prevent reactivation.
- Observe the applicable accident prevention and safety regulations for electrical devices.

DANGER!

Risk of electric shock if protective conductor not connected.

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



DIN EN 175301-803 form Cmax. 0

Fig. 3: Electrical connection of cable plug

1 Seal	2 Approved cable plug, e.g. Type 2516 or other suitable cable plug in accordance with

Observe the voltage and current type according to the type label.

- Screw cable plug tight (for approved types see data sheet), ensuring a maximum torque of 0.4 Nm.
- Check that the valve seal is correctly seated.
- Connect protective conductor and check electrical continuity between solenoid and body.

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5 Maintenance, troubleshooting

5.1 Safety instructions

DANGER!

Risk of injury from high pressure in the system

- Before loosening lines and valves, turn off the pressure and vent the lines.

DANGER!

Risk of injury from electric shock

- Before reaching into the device or the system, switch off the power supply and secure to prevent reactivation.
- Observe the applicable accident prevention and safety regulations for electrical devices.

WARNING!

Risk of injury due to improper installation

- Installation must be carried out by authorised technicians only and with the appropriate tools.

WARNING!

Risk of injury from unintentional activation of the system and uncontrolled restart

- Secure the system against unintentional activation.
- Following installation, ensure a controlled restart.

5.2 Installing the pilot valve

DANGER!

Escaping medium

Medium may leak if a firmly fastened nut is loosened.

- Do not continue turning a firmly fastened nut.

DANGER!

Electric shock

Risk of electric shock if protective conductor not connected.

- Check the protective conductor function after installing the solenoid.

NOTICE!

Excessive tightening torque can damage the device

- Observe the nuts' maximum tightening torque.

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NOTICE!

Device damage due to incorrect tool

- Always tighten nuts using a suitable tool. Using other tools (e.g. pliers) may damage the device.

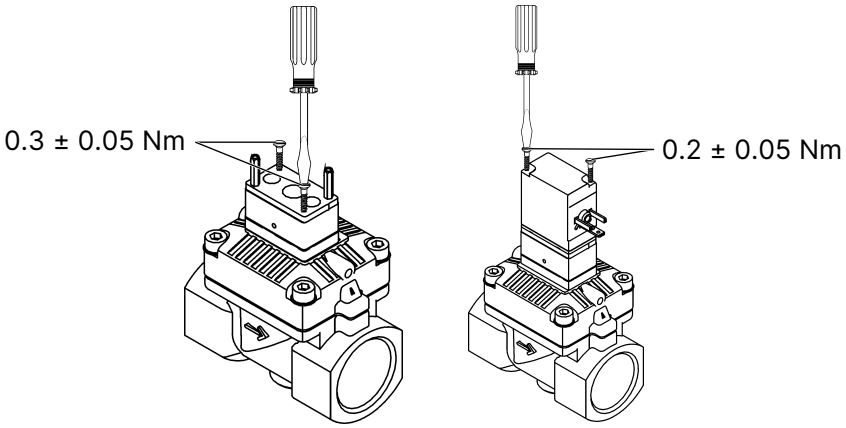

Fig. 4: Installing the pilot valve

- Attach the pilot valve to the armature: Tighten the nuts to 0.2 ± 0.05 Nm.

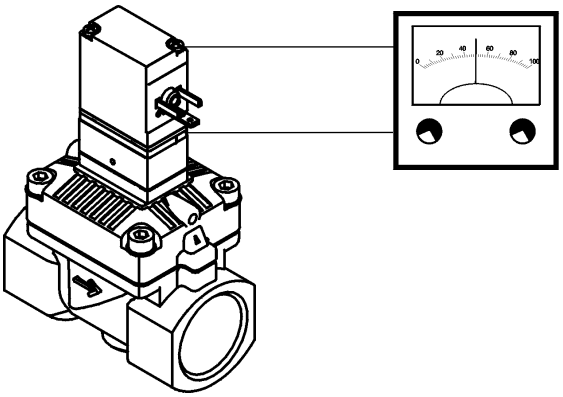

Fig. 5: Protective conductor function

- Check the protective conductor function.

Resistor	Test voltage	Test current
max. 0.1 Ω	12 V	1 A

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5.3 Troubleshooting

If faults occur, check whether:

- the device is installed according to regulations,
- the electrical and fluid connections have been properly set up,
- the device is not damaged,
- all screws have been tightened,
- voltage and pressure have been applied,
- and the pipelines are clean.

Fault	Possible cause
Valve does not actuate	Short circuit or solenoid interrupted
	Operating pressure outside the permissible pressure range
	Interior of the valve contaminated
Valve does not close	Interior of the valve contaminated
	Diaphragm defective

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6 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 to the device and the area around it

- Use only original accessories and original spare parts from Bürkert.

6.1 Ordering spare parts

- When ordering spare part sets, always give the spare part set number and the identification number of the device.
- The identification number of the device can be found on the type label (see Type label [▶ 9])

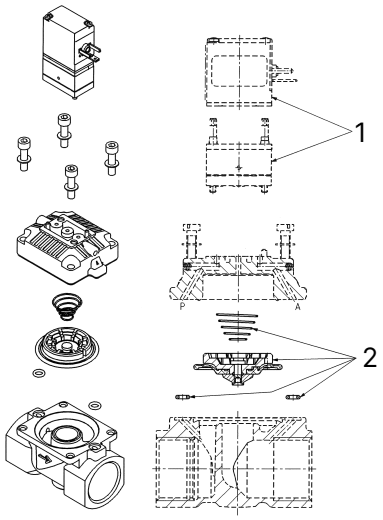

Fig. 6: Overview of spare parts

1	Pilot valve	2	SET3: Wearing part set

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7 Logistics

7.1 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.

7.2 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.

7.3 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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