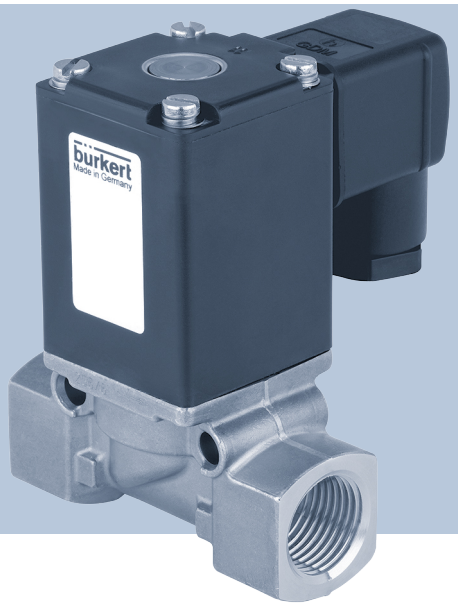
bürkert
FLUID CONTROL SYSTEMS

MAN 1000298667 EN Version: E Status: RL (released | freigegeben) printed: 20.01.2026

Type 0256/0285

2/2-way solenoid valve

Type 0285: DVGW approval in accordance with DIN EN 161



Operating Instructions

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Technical documentation 2507/08_GBen_00893067_1022153099_9007200277022347 / 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 0256/0285

1.3 Manufacturer

Bürkert Fluid Control Systems

Christian-Bürkert-Str. 13–17

74653 Ingelfingen

GERMANY

The contact addresses are available at Contact.

Need more information or additional products?

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2 Safety

2.1 Intended use

Improper use of Type 0256 and 0285 may be hazardous to persons, systems in the vicinity and the environment.

- The device is designed for controlling, shutting off and dosing media. Type 0285 is approved in accordance with DIN EN 161, Group 2, Class A for gas of the 1st, 2nd and 3rd gas family.
- With a properly connected and assembled cable plug, e.g. Bürkert Type 2508, the device complies with IP65 protection class in accordance with DIN EN 60529/ IEC 60529.
- When using the device, observe the authorised data, and the operating and usage conditions specified in the contract documents and in the operating instructions.
- Prerequisites for safe and trouble-free operation include correct transport, storage and installation as well as careful operation and maintenance.
- Use the device only as intended.

2.2 Basic safety instructions

These safety instructions do not take into account any unforeseen circumstances or events that occur during installation, operation and maintenance.

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

Danger – high pressure

- Before loosening lines and valves, turn 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 it against reactivation.
- Observe the applicable accident prevention and safety regulations for electrical devices.

Risk of burns and fire due to hot device surface if device is in continuous operation

- Keep the 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 causes the coil to overheat, which leads to functional failure.

- Monitor the working process for proper function.

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

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

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General dangerous situations

- Do not make any internal or external modifications to Type 0256 and 0285. Secure the system/ device against unintentional activation.
- Installation and maintenance must be performed by authorised technicians and with the appropriate tools.
- The process must be restarted in a defined or controlled manner after an interruption in the power supply or fluid supply.
- Do not subject the body/housing to mechanical stress.
- Observe general technological rules of thumb.

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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

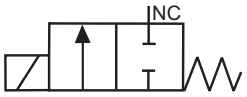
3.2 Operating conditions

The following values are indicated on the type label (see Type label [▶ 11]):

- Voltage (tolerance ± 10%)/current type
- Coil power (active power in W – at operating temperature)
- Pressure range
- Body material brass (MS), stainless steel (VA)
- Seal material: FKM, EPDM, NBR, steel

Ambient temperature	Type 0256: max. +55 °C Type 0285: 0 to +60 °C
Storage temperature	-40 °C to +80 °C
Protection class	IP65 in accordance with DIN EN 60529/IEC 60529 with cable plug, e.g. Bürkert Type 2508

Circuit function

A (NC)		2/2-way valve, normally closed

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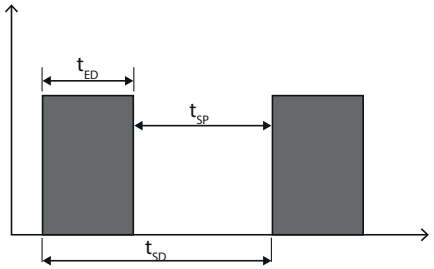
Electrical operating conditions

	With AC/DC high-performance electronics	No electronics 50 Hz, 60 Hz
Ambient temperature (for intermittent operation, see the following image)	Maximum +70 °C	Maximum +55 °C
Operating mode (acc. to DIN VDE 0580)	Continuous operation Intermittent operation (for determining the permissible operating parameters, see the following figures)	Continuous operation Intermittent operation
Temperature protection switch	The device has a resetting temperature protection switch that shuts off the device in case of impermissible heating during intermittent operation. Switch on again only after cooling down and new switch request.	without

Intermittent operation for variant with AC/DC high-performance electronics

Characteristic values (acc. to DIN VDE 0580)



$$t_{SD}[s] = \frac{60}{SH\left[\frac{1}{min}\right]}$$

$$t_{ED}[s] = \frac{ED[\%]}{100} \times t_{SD}[s]$$

$$t_{SP}[s] = t_{SD}[s] - t_{ED}[s]$$

Fig. 1: Intermittent operation characteristics for variant with AC/DC high-performance electronics

t_{SD} – cycle time
t_{ED} – duty cycle
t_{SP} – currentless break
ED – relative duty cycle
SH – switching frequency

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Permissible operating parameters

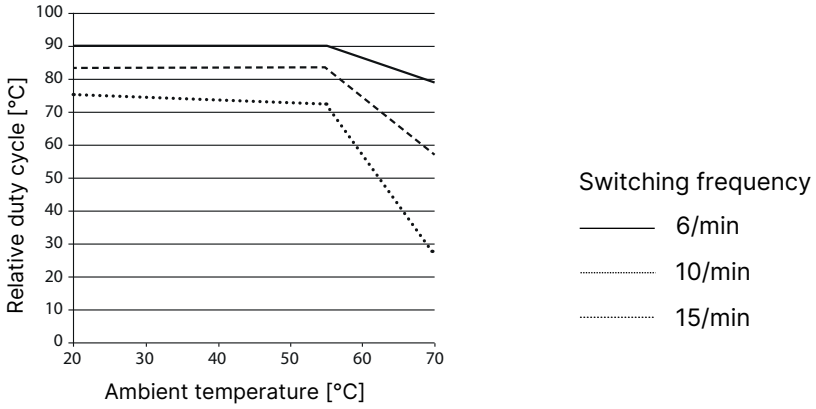

Fig. 2: Relative duty cycle dependent upon switching frequency

3.3 Usage conditions

Operating duration	Unless otherwise specified on the type label, the solenoid actuator is suitable for continuous operation
Service life	High switching frequency and high pressure will reduce overall service life

Important information to ensure functional reliability during continuous operation!
During a long downtime it is recommended to actuate at least 1–2 switching operations per day.

Permitted temperatures

Seal material	Medium temperature Type 0256	Medium temperature Type 0285
NBR	–10 to +90 °C	0 to +80 °C
FKM	–10 to +130 °C	0 to +80 °C
EPDM	–40 to +130 °C	
Steel/FKM	–10 to +130 °C	
Steel/EPDM	–40 to +130 °C	

Tab. 1: Permissible medium temperature depending on seal material

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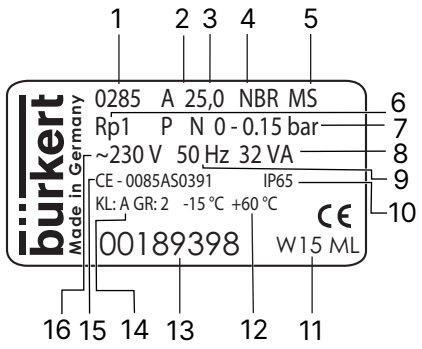
Permitted media

Seal material	Permitted media Type 0256	Permitted media Type 0285
NBR	Neutral media such as compressed air, water, hydraulic oil, oils and greases without additives	Propane, butane, town gas, mains gas, liquefied petroleum gas
FKM	Oxygen, hot air, hot oils, oils with additives, per solutions	Like NBR, but with aggressive components such as aromatics, hydrogen sulphide, natural gas, methane
EPDM	Oil- and grease-free media, e.g. hot water, alkaline washing and bleaching lyes	
Steel/FKM	Hot oils, hydrocarbons, aromatics	
Steel/EPDM	Oil- and grease-free media, e.g. hot water, steam	

Tab. 2: Permissible media depending on the seal material:

3.4 Type label



1	Type	2	Circuit function
3	Orifice	4	Sealing material
5	Body material	6	Connection type
7	PN	8	Power
9	Frequency	10	Protection class
11	Manufacture code	12	Temperature range
13	Article number	14	Classification
15	Type-examination certificate	16	Voltage

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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 bleed the lines.

DANGER!

Risk of injury from electric shock

- Before reaching into the device or the system, switch off the power supply and secure it against 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.
- Ensure a controlled restart after installation.

4.2 Before installation

Installation position: any, preferably with actuator on top.

Approach:

- Clean pipelines of any contamination.
- Install a dirt trap upstream of the valve inlet (≤ 500 µm).

4.3 Installation

NOTICE!

Breaking hazard

- Do not use the coil as a lever arm.

- Hold the device on the housing using an open-ended spanner and screw into the pipeline.
- Observe the flow direction: the arrow on the housing indicates the flow direction.

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4.4 Electrical connection of cable plug

WARNING!

Risk of injury from electric shock

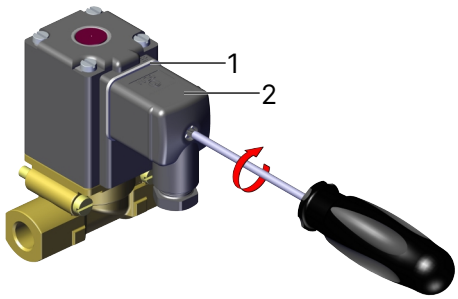
Risk of electric shock if protective conductor not connected.

- Before reaching into the device or the system, switch off the power supply and secure it against reactivation!
- Observe the applicable accident prevention and safety regulations for electrical devices.
- Always connect protective conductor and check electrical continuity between coil and housing.

Approach:

- Screw on the cable plug (see data sheet for approved types), observing the maximum tightening torque of 1 Nm.
- Check that the valve seat is correctly fitted.
- Connect protective conductor and check electrical continuity between coil and housing.

Observe voltage and current type in accordance with type label.



1 Seal	2 Approved cable plug, e.g. Type 2518 or other suitable cable plug in accordance with DIN EN 175301-803

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5 Maintenance, troubleshooting

5.1 Safety instructions

WARNING!

Risk of injury due to improper maintenance work

- Maintenance may only be performed by authorised technicians and with the appropriate tools.

WARNING!

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

- Secure the system against unintentional activation.
- Ensure a controlled restart after maintenance is completed.

5.2 Troubleshooting

If faults occur, check whether:

- the device is installed in accordance with 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,
- the pipelines are clean,
- the power supply is strong enough.

Valve does not actuate

Possible cause:

- Short circuit or coil interrupted.
- Inadequate power supply.
- Core or core area contaminated.
- Operating pressure outside the permitted pressure range.

Valve does not close

Possible cause:

- Interior of the valve soiled.

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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 the device and the surrounding area.

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

6.1 Ordering spare parts

Spare part sets

- Type 0256
  Order the spare parts kits, quoting the position numbers (Item 1: Coil set; Item 2: Wearing part set) and the identification number of the device.
- Type 0285
  If defective, replace the valve completely or have it repaired by Bürkert Service.

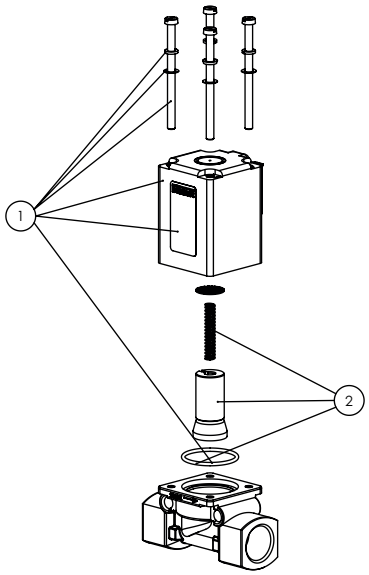

Fig. 3: Overview of spare parts for Type 0256

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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 from damage with protective caps.
- Observe 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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