

## Type 0256, 0285

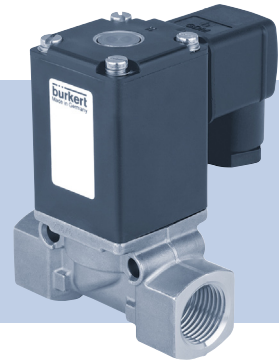
2/2-way solenoid valve  
2/2-Wege-Magnetventil  
Électrovanne 2/2 voies

Type 0285: DVGW approval according to DIN EN 161  
Typ 0285: DVGW Zulassung nach DIN EN 161  
Type 0285 : Homologation DVGW selon DIN EN 161

## Operating Instructions

Bedienungsanleitung  
Manuel d'utilisation

MAN 1000298667 EN Version: CStatus: RL (released | freigegeben) printed: 27.04.2021



# 1 OPERATING INSTRUCTIONS

The operating instructions contain important information.

- ▶ Read the operating instructions carefully and follow the safety instructions in particular, and also observe the operating conditions.
- ▶ Operating instructions must be available to each user.
- ▶ The liability and warranty for the product / device are void if the operating instructions are not followed.

## 1.1 Symbols

- ▶ Designates an instruction to prevent risks.  
→ designates a procedure which you must carry out.

**Warning of injuries:**



**DANGER!**

Imminent danger! Serious or fatal injuries.



**WARNING!**

Potential danger! Serious or fatal injuries.



**CAUTION!**

Danger! Minor or moderately severe injuries.

**Warns of damage to property:**

**NOTE!**

# 2 INTENDED USE

**Incorrect use of the solenoid valve Type 0256 and 0285 can be dangerous to people, nearby equipment and the environment.**

- ▶ The device is designed for controlling, shutting off and dosing media. Type 0285 is authorized for gas the 1st, 2nd and 3rd gas family according to DIN EN 161, Group 2, Class A.
- ▶ Provided the cable plug is connected and installed correctly, e.g. Bürkert Type 2508, the device satisfies protection class IP65 in accordance with DIN EN 60529 / IEC 60529.
- ▶ Use according to the permitted data, operating conditions and conditions of use specified in the contract documents and operating instructions.
- ▶ Correct transportation, correct storage and installation and careful use and maintenance are essential for reliable and problem-free operation.
- ▶ Use the device only as intended.

## 2.1 Definition of term

In these operating instructions, the term “device” always refers to the Type 0256 and 0285.

### 3 BASIC SAFETY INSTRUCTIONS

These safety instructions do not consider any contingencies or incidents which 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 the pipes and valves, turn off the pressure and vent the pipes.

#### **Risk of electric shock.**

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

#### **Risk of burns/risk of fire if used for a prolonged switch-on time through hot device surface.**

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

#### **Risk of injury due to malfunction of valves with alternating current (AC).**

Sticking core causes coil to overheat, resulting in a malfunction.

- ▶ Monitor process to ensure function is in perfect working order.

#### **Risk of short-circuit/escape of media through leaking screw joints.**

- ▶ Ensure seals are seated correctly.
- ▶ Carefully screw valve and connection lines together.



#### **To prevent injury, ensure that:**

- ▶ Do not make any internal or external changes to Type 0256 and 0285. Ensure that the system cannot be activated unintentionally.
- ▶ Installation and repair work may be carried out by authorized technicians only and with the appropriate tools.
- ▶ After an interruption in the power supply or fluidic supply, ensure that the process is restarted in a defined or controlled manner.
- ▶ Do not put any loads on the body.
- ▶ The general rules of technology apply to application planning and operation of the device.

### 3.1 Warranty

The warranty is only valid if the device is used as intended in accordance with the specified application conditions.

### 3.2 Information on the internet

The operating instructions and data sheets for type 0256 and 0285 can be found on the internet at:

[www.burkert.com](http://www.burkert.com) → Type 0256, 0285

## 4 TECHNICAL DATA

### 4.1 Operating conditions



The following values are indicated on the type label:

- Voltage (Tolerance  $\pm 10\%$ ) / Current type
- Coil power consumption (active power in W - at operating temperature)
- Pressure range
- Body material: Brass (MS), Stainless steel (VA)
- Seal material: FKM, EPDM, NBR, Steel

Operating principle



2/2-way valve, normally closed

Protection class

IP65 in accordance with DIN EN 60529 / IEC 60529 with cable plug, e. g. Bürkert Type 2508

## Electrical operating conditions

	With high-performance electronics AC/DC	Without electronics 50 Hz, 60 Hz
Ambient temperature (for intermittent duty see „Fig. 2“)	max. +70 °C	max. +55 °C
Operating mode (according to DIN VDE 0580)	Long-term operation Intermittent duty (Determination of the permitted operating parameters see „Fig. 1“ and „Fig. 2“)	Long-term operation Intermittent duty
Temperature protection switch	Device has a resettable temperature protection switch which switches the device off if unacceptable heating occurs during intermittent duty. Switches on again only after cooling down and after a new switching request.	without

Tab. 1: Electrical operating conditions

## Intermittent operation for version with high-performance electronics AC/DC

Characteristic values (according to DIN VDE 0580)

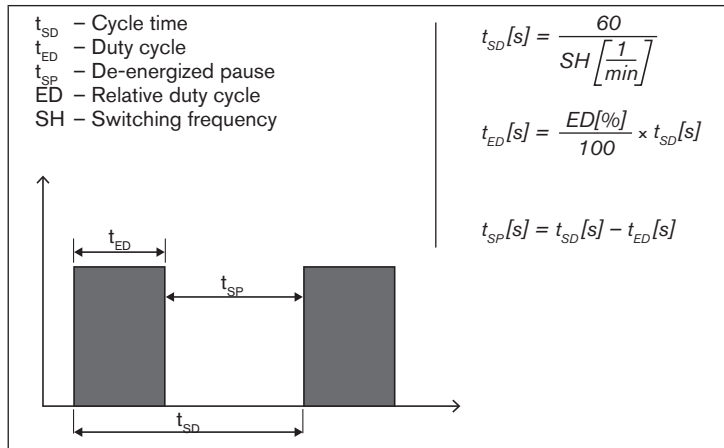


Fig. 1: Characteristic values intermittent operation for version with high-performance electronics AC/DC

## Permitted operating parameters

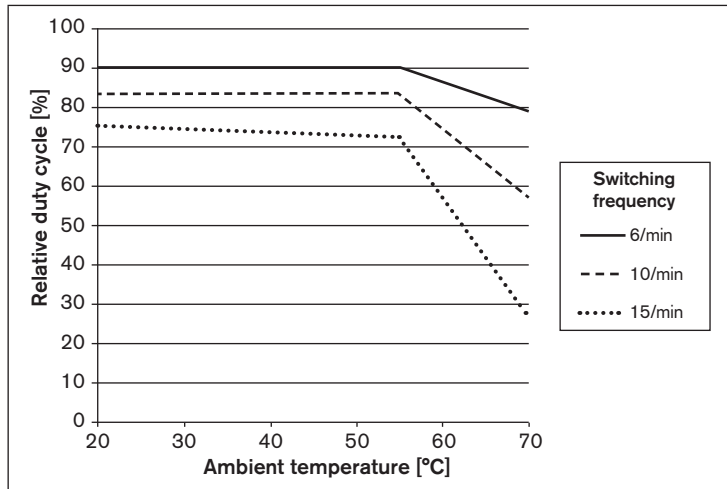


Fig. 2: Relative duty cycle (ED) depending on switching frequency and ambient temperature

## 4.2 Application conditions

Ambient temperature      Type 0256: max. +55 °C  
 Type 0285: 0 ... +60 °C

Operating duration      Unless otherwise indicated on the type label, the solenoid system is suitable for continuous operation

**!** Important information for functional reliability during continuous operation! If standstill for a long period at least 1-2 operation per day are recommended.

Service life      High switching frequency and high pressures reduce the service life

Permitted medium temperature depending on seal material

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

Permitted media depending on seal material

Type 0256:

Seal material	Permitted media
NBR	Neutral media, such as compressed air, water, hydraulic fluid, oils and greases without additives
FKM	Oxygen, hot air, hot oils, oils with additives, peroxide solutions
EPDM	Oil and grease-free media, e.g. hot water, alkaline suds and bleaching lyes
Steel/FKM	Hot oils, hydrocarbons, aromatic compounds
Steel/EPDM	Oil and grease-free media, e.g. hot water, steam

Type 0285:

Seal material	Permitted media
NBR	Propane, butane, town gas, grid gas, liquefied gas
FKM	Same as NBR, however with aggressive constituents, e.g. aromatic compounds, hydrogen sulfide, natural gas, methane

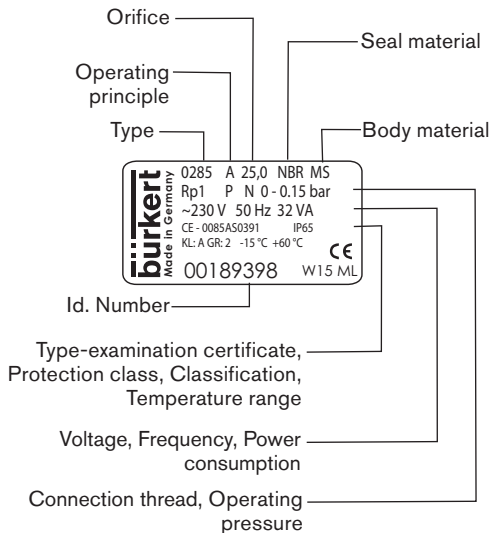
### 4.3 Conformity

In accordance with the EU Declaration of conformity, the solenoid valve Type 0256 and 0285 is compliant with the EU Directives.

### 4.4 Standards

The applied standards, which verify conformity with the EU Directives, can be found on the EU Type Examination Certificate and / or the EU Declaration of Conformity.

## 4.5 Type label



## 5 INSTALLATION

### 5.1 Safety instructions



#### **DANGER!**

##### **Risk of injury from high pressure in the equipment.**

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

##### **Risk of injury due to electrical shock.**

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



#### **WARNING!**

##### **Risk of injury from improper installation.**

- ▶ Installation may be carried out by authorized technicians only and with the appropriate tools.

##### **Risk of injury from unintentional activation of the system and an uncontrolled restart.**

- ▶ Secure system from unintentional activation.
- ▶ Following installation, ensure a controlled restart.



## 5.2 Before installation

Installation position: any, actuator preferably upwards.

### Procedure:

- Check pipelines for dirt and clean.
- Install a dirt filter before the valve inlet ( $\leq 500 \mu\text{m}$ ).

## 5.3 Installation

### NOTE!

#### Caution risk of breakage!

- Do not use the coil as a lifting arm.

- Hold the device with a open-end wrench on the body and screw into the pipeline.
- Observe direction of flow:  
The arrow on the body indicates the direction of flow.

## 5.4 Electrical connection of the cable plug



### WARNING!

#### Risk of injury due to electrical shock.

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

If the protective conductor contact between the coil and body is missing, there is danger of electrical shock.

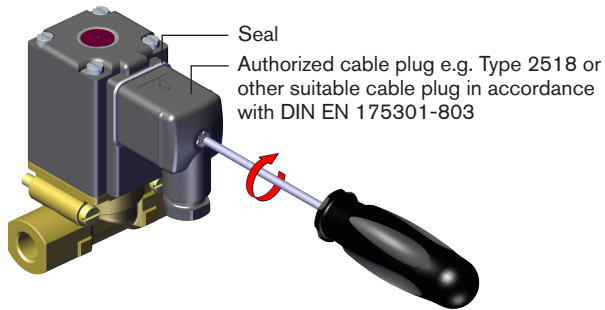
- ▶ Always connect protective conductor.
- ▶ Check electrical continuity between coil and body.

### Procedure:

- Tighten cable plug (for permitted types see data sheet), observing max. torque 1 Nm.
- Check that seal is fitted correctly.
- Connect protective conductor and check electrical continuity between coil and body.



Note the voltage and current type as specified on the type label.



## 6 MAINTENANCE, TROUBLESHOOTING

### 6.1 Safety instructions



#### WARNING!

##### Risk of injury from improper maintenance.

- ▶ Maintenance may be carried out by authorized technicians only and with the appropriate tools!

##### Risk of injury from unintentional activation of the system and an uncontrolled restart.

- ▶ Secure system from unintentional activation.
- ▶ Following maintenance, ensure a controlled restart.

### 6.2 Malfunctions

#### If malfunctions occur, check whether:

- the device has been installed according to the instructions,
- the electrical and fluid connections are correct,
- the device is not damaged,
- all screws have been tightened,
- the voltage and pressure have been switched on,

- the pipelines are clean,
- the power supply is adequately high.

### Valve does not switch

Possible cause:

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

### Valve does not close

Possible cause:

- Internal space of the valve is dirty.

## 7 SPARE PARTS



### CAUTION!

**Risk of injury and/or damage by the use of incorrect parts!**

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

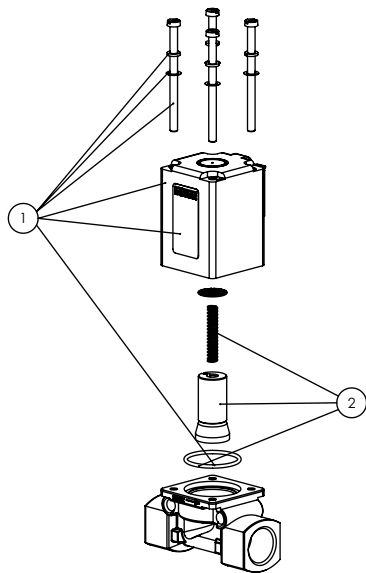
- ▶ Use only original accessories and original spare parts from Bürkert.

### 7.1 Ordering spare parts

#### Replacement part sets

- Type 0256  
Order the spare parts sets specifying the positions (Pos. 1: coil set, Pos. 2: wearing parts set) and the identification number of the device.
- Type 0285  
If defective, replace valve completely or have it repaired by Bürkert Service.

## 7.2 Replacement part sets Type 0256



## 8 TRANSPORT, STORAGE, DISPOSAL

### NOTE!

#### Transport damages.

Inadequately protected equipment may be damaged during transport.

- During transportation protect the device against wet and dirt in shock-resistant packaging.
- Avoid exceeding or dropping below the allowable storage temperature.

#### Incorrect storage may damage the device.

- Store the device in a dry and dust-free location.
- Storage temperature: -40 °C ... +80 °C.

#### Damage to the environment caused by device components contaminated with media.

- Dispose of the device and packaging in an environmentally friendly manner.
- Observe applicable disposal and environmental regulations.
- Observe national regulations on the disposal of waste.

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### **International address**

[www.burkert.com](http://www.burkert.com)

Manuals and data sheets on the Internet: [www.burkert.com](http://www.burkert.com)  
Bedienungsanleitungen und Datenblätter im Internet: [www.buerkert.de](http://www.buerkert.de)  
Instructions de service et fiches techniques sur Internet : [www.burkert.fr](http://www.burkert.fr)

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