

Type 6027 NC / NO

Safety shut-off device

TÜV certified acc. to DIN EN ISO 23553-1

Sicherheitsabsperreinrichtung

TÜV geprüft nach DIN EN ISO 23553-1

Dispositif d'arrêt de sécurité

Contrôle TÜV selon DIN EN ISO 23553-1

Operating Instructions

Bedienungsanleitung

Manuel d'utilisation

MAN 1000111283 ML Version: GStatus: RL (released | freigegeben) printed: 10.08.2022



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 device are void if the operating instructions are not followed.

1.1 Symbols



DANGER

Imminent danger! Serious or fatal injuries.



WARNING

Potential danger! Serious or fatal injuries.



CAUTION

Danger! Moderate or minor injuries.

NOTE

Warns of damage.

- ▶ designates instructions to avoid danger.
- designates a procedure which you must carry out.

2 INTENDED USE

Non-intended use of the safety shut-off device Type 6027 may be a hazard to people, nearby equipment and the environment.

- ▶ The device, which controls the supply of heating oil to a burner, was specifically designed for furnaces.
 - ▶ Use according to the authorized data, operating and service conditions specified in the contract documents and operating instructions.
 - ▶ Bürkert valves must not be used in combination with valves from other manufacturers.
 - ▶ Correct transportation, storage and installation, and careful use and maintenance are essential for reliable and faultless operation.
 - ▶ Depending on the design, type 6027 valves can either be used in the feed or return flow of the furnace. Specific installation guidelines must therefore be observed (see chapter [“6.2”](#)). The operating instructions provided by the manufacturer of the furnace must also be taken into consideration.
 - ▶ The safety shut-off device is designed for heating oils DIN 51603 Part 1-6 with the following viscosity:

for power ≤ 12 watts:	1.2...22 cST
for power > 12 watts:	1.6...76 cST
- The use of other media is not permitted without a prior agreement with the Bürkert sales office.

- ▶ Provided the following conditions are met, the valve can also be used for mixtures of EL heating oil and FAME (DIN (SPEC) 51603-6) / (EN 14214):
 - Only FAME fuels that comply with the specification according to EN 14214 or are comparable may be used.
 - In order to reduce effects such as deposit formation and fuel ageing, mixtures of EL heating oil and FAME should always be sufficiently additivated. The additive manufacturer's specifications must be observed.

2.1 Definition of term

In these instructions, the term “device” always refers to the safety shut-off device type 6027.

3 BASIC SAFETY INSTRUCTIONS

These safety instructions do not make allowance for any contingencies and events which may arise during installation, operation and maintenance.



Danger – high pressure.

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

Risk of electric 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.

Risk of burns due to hot surface of the device.

- ▶ Do not touch the device with bare hands.

Danger due to incorrect medium.

Non-approved media can impair the tightness and function of the valve.

- ▶ Only use media that are listed in the chapter „[Technical data](#)“.

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 injury due to impaired function after external fire.

- ▶ After an external fire, check the equipment and safety shut-off device.
- ▶ If there is visible damage, replace safety shut-off device.

Risk of escape of media through leaking screw joints.

- ▶ Ensure seals are seated correctly.
- ▶ Carefully screw together coil and cable plug or valve and connection plate.



General Hazardous Situations.

To prevent injuries:

- ▶ Ensure that the system cannot be activated unintentionally.
- ▶ Do not put any loads on the body.
- ▶ Do not make any external modifications to the device bodies.
- ▶ Do not paint the body parts or screws.

- ▶ Installation and maintenance work may only be carried out by authorized technicians with the appropriate tools.
- ▶ After an interruption in the power supply, ensure that the process is restarted in a defined or controlled manner.
- ▶ The device may be installed and operated only when in a perfect condition and in consideration of the operating instructions for the valve and furnace.
- ▶ The general rules of technology must be observed for 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 6027 can be found on the internet at:

www.burkert.com → Type 6027

4 TECHNICAL DATA

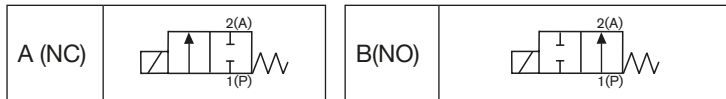


The following values are indicated on the type label:
Ambient and medium temperature, voltage¹⁾ (tolerance $\pm 10\%$), kind of current, pressure.

¹⁾ Use as return flow valve: In combination with a feed flow valve in an electric series connection, the voltage value of the type label is half that of the relevant power supply.

Materials	Body	Brass or stainless steel
	Seat seal	PTFE
	Body seal	FKM
	Coil jacket	Epoxy or polyamide
Media	Heating oils (DIN 51603 Part 1 - 6) and mixtures of EL heating oil and FAME (DIN (SPEC) 51603-6) / (EN 14214) with viscosity: for an output of ≤ 12 watt: 1.2 to 22 cST for an output > 12 watt: 1.6 to 76 cST other media by arrangement with the Bürkert sales office	

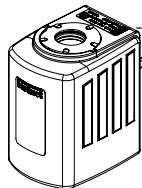
Circuit function 2/2-way valve



Protection class

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

4.1 Type label approval (depending on version)



Certification mark

T med. Max. 160°C
T Umg. -15°C bis 60°C
Reg.Nr. XXXXX

CE0036



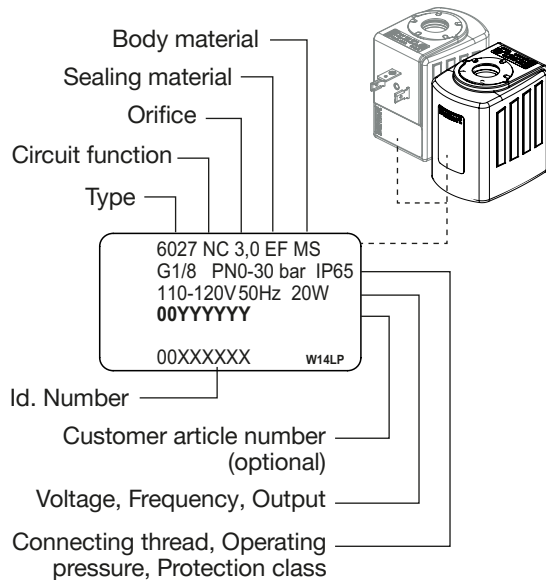
Inspection body

Register number

Permitted ambient temperature

Max. permitted medium temperature

4.2 Type label standard



5 INSTALLATION

5.1 Safety instructions



DANGER

Risk of injury from high pressure in the equipment.

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

Risk of injury due to electrical 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.



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 assembly, ensure a controlled restart.

5.2 Fluid Installation

Installation position: any, actuator preferably upwards.

- Prior to installation check pipelines for dirt and clean if necessary.
- Install a dirt trap to prevent malfunctions (0.2...0.4 mm).
- Only use new seals.
- Hold the device with a open-end wrench on the body and screw into the pipeline.
- Observe flow direction:
When used in the feed flow: from 1 → 2 (from P → A) or in the direction of the arrows.
When used in the return flow: from 2 → 1 (from A → P) or in the opposite direction of the arrows.

NOTE

Caution risk of breakage.

- ▶ Do not use the coil as a lifting arm.

If installed in the wrong direction it can lead to a malfunction of the firing equipment.

- ▶ Observe direction of installation.

5.3 Electrical connection of the cable plug



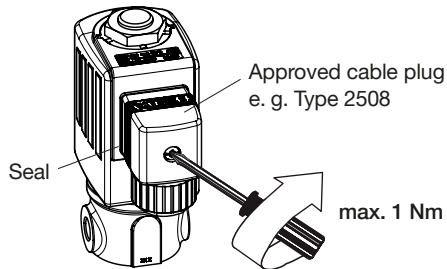
WARNING

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 is not connected, there is a risk of electric shock.

- ▶ Always connect protective conductor and check electrical continuity.



6 MAINTENANCE AND REPAIR

6.1 Safety instructions



DANGER

Risk of injury from improper repair work.

- ▶ Maintenance may only be carried out by authorized technicians 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 Installation of coil



WARNING

Escaping medium.

When a sticking nut is loosened, medium may escape.

- ▶ Do not tighten sticking nut any further.

Overheating, risk of fire.

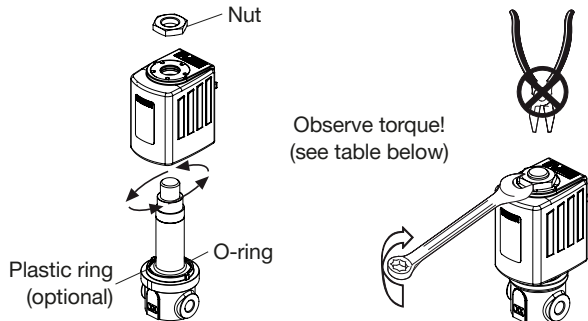
Connection of the coil without pre-assembled fittings will result in overheating and destroy the coil.

- ▶ Connect the coil with pre-assembled fittings only.

Electric shock.

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

- ▶ During installation insert the plastic ring (optional) into the body journal. The plastic ring must not project over the octagonal nipple.
- ▶ Check protective conductor contact after installing the coil.



The rotational position of the coil on the valve body is arbitrary.

Wrench size	Coil installation torque
SW 14	5 Nm
SW 22	15 Nm

6.3 Malfunctions

If malfunctions occur, check whether

- the device has been installed according to the instructions (correct direction of installation),
- the connection has been made properly,
- the device is not damaged,
- all screws have been tightened,
- the voltage and pressure have been switched on,
- the pipelines are clean.

If the magnet is not attracting

Possible causes:

- Short circuit or coil interrupted,
- Core or core area dirty.

After occurrence of an external fire

- After an external fire, check the equipment and safety shut-off device.
- If there is visible damage, replace safety shut-off device.

7 SPARE PARTS

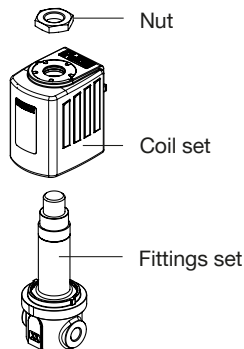


CAUTION

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



Nut and coil set can be ordered completely by quoting the identification number of the device (see type label).

Fittings set on request.

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: -30 ... +80 °C.

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

- ▶ Observe applicable regulations on disposal and the environment.

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Manuals and data sheets on the Internet: www.burkert.com
Bedienungsanleitungen und Datenblätter im Internet: www.buerkert.de
Manuel d'utilisation et fiches techniques sur Internet : www.burkert.fr

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