

Type 6013 Magnetventil

2/2-Way Solenoid Valve
2/2-Wege Magnetventil
Électrovanne à 2/2 voies



International

www.burkert.com → Bürkert → Company → Locations

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.buerkert.fr

Operating Instructions

Bedienungsanleitung
Manuel d'utilisation

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Operating Instructions 1507/23_EU-ml_00803465 /

Original DE

1 OPERATING INSTRUCTIONS

The operating instructions contain important information.

- ▶ Read the instructions carefully and follow the safety instructions in particular, and also observe the operating conditions.
- ▶ Instructions must be available to each user.
- ▶ The liability and warranty for Type 6013 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!

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2.1 Restrictions

If exporting the system/device, observe any existing restrictions.

2.2 Definition of term

In these operating instructions, the term "device" always refers to the solenoid valve Type 6013.

2 INTENDED USE

Incorrect use of the solenoid valve Type 6013 can be dangerous to people, nearby equipment and the environment.

- ▶ The device is designed for blocking, dosing, filling and venting neutral gaseous and liquid media.
- ▶ In the potentially explosion-risk area the device may be used only according to the specification on the separate Ex type label. For use observe the additional information enclosed with the device together with safety instructions for the explosion-risk area.
- ▶ Devices without a separate Ex type label may not be used in a potentially explosive area.
- ▶ Use according to the permitted data, operating conditions and conditions of use specified in the contract documents and operating instructions.
- ▶ The device may be used only in conjunction with third-party devices and components recommended and authorised by Bürkert.
- ▶ 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.

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/risk of fire!

During continuous operation the surface of the device may become hot.

- ▶ Keep the device away from highly flammable substances and media and do not touch the device with bare hands.
- ▶ Do not obstruct the heat release required for operation.

4 TECHNICAL DATA

Destruction of the coil by overheating!

► Connect the coil electrically only when the housing has been installed. In the case of AC voltage pay attention to movable core.

To prevent injury, ensure that:

- Do not supply the medium connectors of the system with aggressive or flammable mediums.
- Do not make any external modifications to the device bodies. 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 pneumatic supply, ensure that the process is restarted in a defined or controlled manner.
- Do not put any loads on the body.
- Observe the general regulations of technology.

4.1 Conformity

In accordance with the EC Declaration of conformity, the solenoid valve Type 6013 is compliant with the EC Directives (if applicable).

4.2 Standards

The applied standards, which verify conformity with the EC Directives, can be found on the EC-Type Examination Certificate and / or the EC Declaration of Conformity (if applicable).

4.3 Operating conditions



WARNING!

Heat sources and temperature fluctuations may cause malfunctions or leaks!

- If the device is used outdoors, do not expose it unprotected to the weather conditions.
- Avoid heat sources which may cause the allowable temperature range to be exceeded.

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Medium temperature:

Operating principles	Sealing material	Medium temperature
CFA	FKM	-10 ... +100 °C (PA Coil) -10 ... +120 °C (Epoxy Coil)
	PTFE/Graphite	-10 ... +180 °C
CFB	FKM	-10 ... +100 °C (AC) -10 ... +120 °C (DC)

Ambient temperature: -10 ... +55 °C

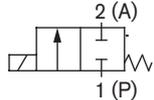
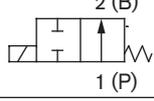
Viscosity: 21 mm/s

Protection class: IP65 in accordance with EN 60529 with cable plug

Media: neutral gaseous and liquid media, which do not attack body and sealing materials (see table of resistance under www.burkert.com)

Check resistance in individual cases

4.4 Fluidic data

Operating principle		
A (NC)		2/2-way valve, normally closed
B (NO)		2/2-way valve, normally open

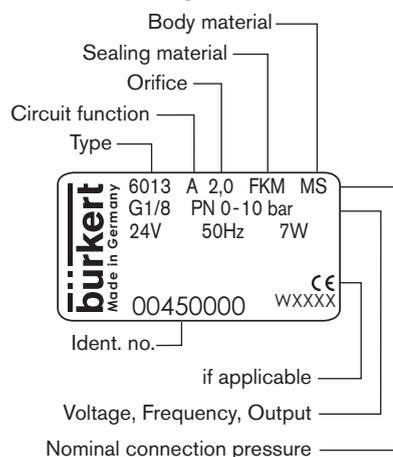
Pressure range: see type label

Line connectors: Type 6013: G1/8, G1/4, G3/8, Flange
Type 6013A: G1/8, G1/4



Note the information specified on the type label for voltage, type of current, and pressure.

4.5 Type label (example)



4.6 Electrical data

Connections: DIN EN 175301-803 Form A for cable plug Type 2508

Supply voltage: Type 6013: 24 V DC ± 10 %
max. residual ripple 10 %
24 V / 50 Hz
230 V / 50 Hz

Type 6013A: 24 V DC ± 10 %
max. residual ripple 10 %
230 V / 50 Hz

Voltage tolerance: ± 10 %

Nominal output: CFA: 8 W (5 W, 10 W)
CFB AC: 7 W (9 W)
DC: 8 W

Impulse version DC: 7 W

Nominal operating mode: 100 % continuous operation for block installation:
5 W continuous operation on request a. A.
8 W intermittent operation 60 % (30 min)

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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 Fluid installation

Installation position: any, actuator preferably upwards.

Procedure:

- Clean any possible dirt off the pipelines and flange connections.
- Install a dirt trap to prevent malfunctions (0.2 ... 0.4 mm).



Pay attention to the flow direction of the valve: from 1 (P) → 2(A) (CFA) or from 1(P) → 2(B) (CFB).

Valve with threaded connection:

- Use PTFE tape as sealing material.

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.

Valve with flanged connection:

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

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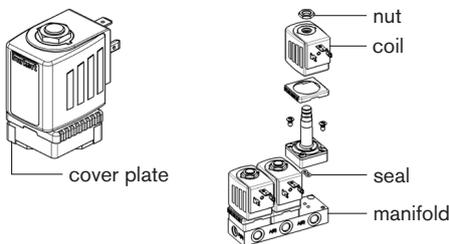
WARNING!

Danger – escaping medium!

Leaking connections if seals not seated properly, if manifold uneven or if surface quality of the manifold inadequate.

- ▶ Make certain the seals included with delivery are properly seated in the valve.
- ▶ Ensure that the manifold is even.
- ▶ Ensure that the surface quality of the manifold is adequate.

- Insert the seal into the body.
- Screw the body onto the manifold (max. 1.5 Nm).
- Attach the coil and screw on the nut (max. 5 Nm).



5.3 Electric installation



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.



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

Procedure:

- Check that the seal is correctly seated.
- Screw cable plug tightly onto coil (max. 1 Nm).

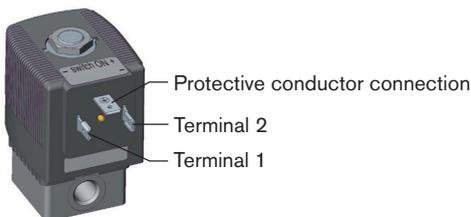
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Control of pulse version



Correct polarity is essential to ensure that the device functions: Note identification on the upper side of the coil. Pulse duration at least 50 ms.



Polarity	Specifications	Terminal connections
- Switch ON +	Valve (P seat) will be opened	(+) on terminal 2, (-) on terminal 1
+ Switch OFF -	Valve (P seat) will be closed	(+) on terminal 1, (-) on terminal 2



Use only cable plug without electrical wiring for pulse versions.

5.4 Rotation of coil



WARNING!

Electric shock!

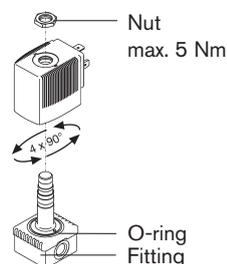
If the protective conductor contact between the coil and body is missing, there is danger of electrical shock!

- ▶ Check protective conductor contact after installing the coil.

Overheating, Risk of fire!

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

- ▶ Connect the coil with assembled valve only.



The coil can be turned by 4 x 90° (for block installation only 2 x 180°).

Procedure:

- Loosen nut.
- Turn coil.
- Tighten nut with a open-end wrench (max. 5 Nm).

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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:

- the line connectors,
- the operating pressure,
- the power supply and valve control.

If the valve still does not switch, please contact your Bürkert Service.

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7 DISASSEMBLY

7.1 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 disassembly!

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

7.2 Disassembly

- Turn off the pressure and vent the lines.
- Switch off the power supply.
- Loosen the cable plug.

Valve with threaded connection:

- Hold the device with the open-end wrench on the body and screw off the pipeline.

Valve with flanged connection:

- Loosen the nut on the coil and remove coil.
- Loosen the body from the manifold.

8 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.
- Coil and fitting can be ordered complete by quoting the identification number of the device.
- Wearing part set on request.

9 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 - 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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