



Translation of original instructions
Service indicator PiS 3076

Material No. of Instruction Manual
76348650



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2 General safety instructions

2.1 Safety instructions for installation and operating personnel

This Instruction Manual contains important safety instructions which must be heeded at all times during normal operation and maintenance.

Non-observance can result in the following risks to persons and the environment as well as in damage to the machine or system:

- ⇒ Failure of critical functions of the machine or system or of its component parts.
- ⇒ Danger to persons from electrical or mechanical effects as well as from chemical reactions.
- ⇒ Danger to the environment owing to the leakage of hazardous substances.

Before installation/start-up:

- Read the Instruction Manual carefully.
- Make sure that installation and operating personnel are adequately trained.
- Make sure that the contents of the Instruction Manual are fully understood by the responsible persons.
- Define areas of responsibility and competence.
- Prepare a maintenance schedule.

During operation of the system:

- Keep the Instruction Manual handy at the place where the system is used.
- Heed the safety instructions. Always operate the machine/system in accordance with its ratings.

If in doubt:

- Consult the manufacturer.

2.2 Warning structure

Where possible, warnings are structured according to the following system:

Signal word	
Possibly with symbol	Nature and source of the danger ⇒ Potential consequences of non-observance • Action to avert the danger.

2.3 Warning symbols used

 DANGER!
Immediate danger! ⇒ Non-observance will result in serious or fatal injury.
 WARNING!
Potentially dangerous situation! ⇒ Non-observance can result in serious or fatal injury.
 CAUTION!
Potentially dangerous situation! ⇒ Non-observance can result in minor or moderate injuries.
CAUTION! (without a symbol)
Potentially dangerous situation! ⇒ Non-observance can result in property damage.

2.4 Other symbols used

	Danger from high voltage
	Danger information about explosion protection
	Information about environmental protection
	Wear protective clothing!
	Wear goggles!
	Wear a respirator!
	Hand symbol: Indicates general information and recommendations
•	Bullet: Indicates the order in which actions are to be carried out
⇒	Arrow: Indicates responses to actions

3 Glossary

Differential pressure:

Difference between the pressure on the dirty side and the clean side of a filter.

Clean side:

The area downstream of a cartridge after the medium has been cleaned.

Dirty side:

The area upstream of a cartridge before the medium is cleaned.

4 General information

4.1 Manufacturer

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D-74613 Öhringen
Phone +49 7941 6466-0
Fax +49 7941 6466-429
fm.de.sales@filtrationgroup.com
www.filtrationgroup.com

4.2 Information about the Instruction Manual

FG Mat. No.: 76348650
Date: 22.06.17
Version:05

5 Intended application

⚠ DANGER!
<p>PROHIBITED:</p> <ul style="list-style-type: none"> • Use for other purposes without prior consultation with the manufacturer. • Use in potentially explosive atmospheres, unless explicitly mentioned in the contract documentation.
⚠ CAUTION!
<p>This FG service indicator is only allowed to be used in accordance with the operating conditions specified in the contract documentation and in the Instruction Manual. All forms of use which deviate from or exceed the limits of use described above are considered to be contrary to the intended purpose. The manufacturer shall not be liable for any damage resulting from such use.</p>

Standard design for liquid group 2 according to pressure equipment-directive 2014/68/EU article 4 (3) and article 13.

6 Main components

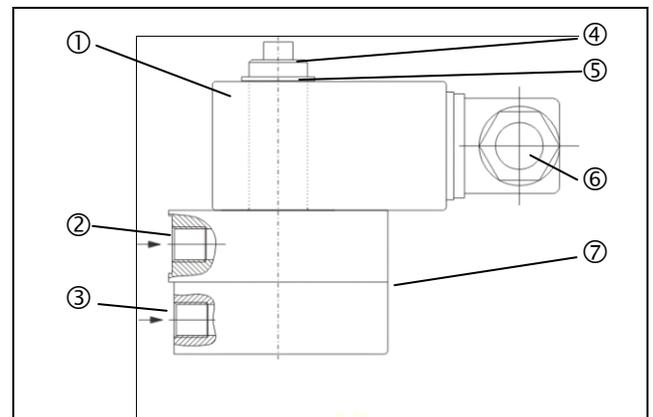


Fig. 1: Diagram of the main components

1	Electrical top part with reed contact
2	Pressure downstream of filter (-), G 1/8" connection
3	Pressure upstream of filter (+), G 1/8" connection
4	Sleeve with visual indication (indicator button)
5	Snap ring
6	Socket outlet (DIN 43650)
7	Differential pressure measuring cell

7 Technical data

7.1 Technical data of the differential pressure measuring cell

Max. static operating pressure:	63 bar
Differential pressure switching point:.....	1.2 bar ± 0.2
..... (depending on mechanical lower part)	
Permissible operating temperature:	-10...+120°C
Max. permissible viscosity:.....	1000 mm ² /s
Material of measuring cell:	Stainless steel 1.4301
Material of membrane:	FPM

7.2 Technical data of the switching contact

Switch type:.....	NO/NC
Switching voltage:	250 V AC/200 V DC
Switching capacity:.....	70 W
Switching current:.....	1 A
Protection class acc. to DIN 40050:	IP65
Electrical connection:	Socket outlet DIN 43650

8 Transport and storage

Transport

- Avoid vibrations

Storage

- Always store in a dry, frost-free room



9 Installation

⚠ WARNING!

If the system is installed by unauthorised persons

- ⇒ Risk of injury
- ⇒ All warranty claims are rendered invalid
- The system must be installed by a suitably trained person!

9.1 Electromechanical connection

⚠ DANGER!



Danger of electric shock!

- ⇒ Risk of serious or fatal injury in case of contact with electrical components.
- All electrical installation work must be carried out by a suitably qualified electrician.



The numbers indicated here correspond to those used in section 6, Fig. 1.

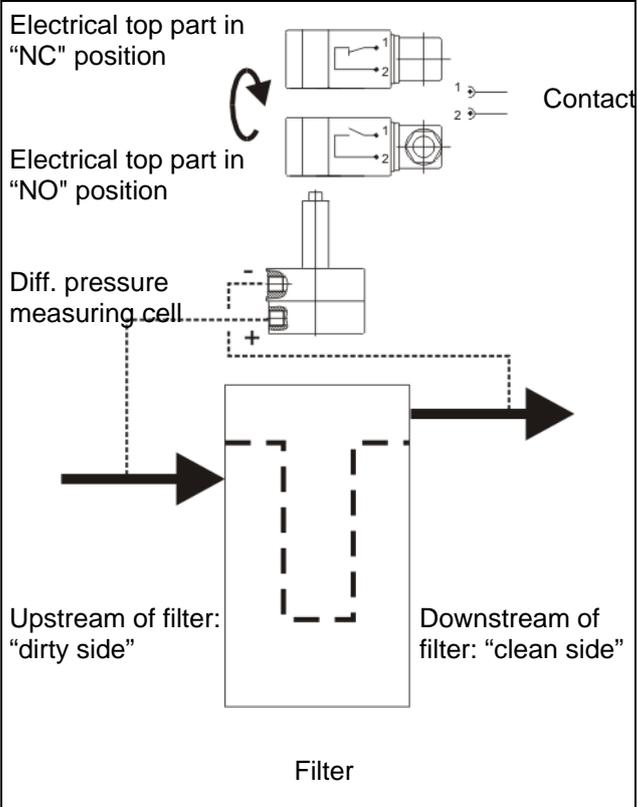


Fig. 2: Circuit diagram

- Mount the service indicator in a suitable position.
- Connect the screwed gland for the "dirty side" to (3).
- Connect the screwed gland for the "clean side" to (2).
- Decide whether the switch contact in the electrical top part (1) is to be used as a normally open or a normally closed contact.
- Release the snap ring (5) if necessary.
- Lift off the electrical top part (1) and fit it on again the other way round. The required contact type must be facing upwards.
- Fit the snap ring back into the groove again.

9.2 Use in hazardous areas

⚠ DANGER!



Explosion hazard!

⇒ Risk of injury to persons or damage to property

- The system is only allowed to be installed, accepted and tested by a suitably qualified person (99/98/EC).
- If the device is used in a hazardous area, it must be operated in an intrinsically safe circuit.

- ⇒ The service indicator has no separate power source.
- If the service indicator is used in a hazardous area, it must be operated in an intrinsically safe circuit.
 - The switching amplifier must be operated with an intrinsically safe circuit.

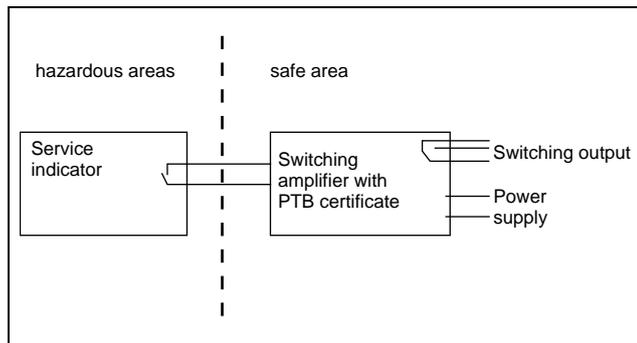


Fig. 3: Use in hazardous areas

10 Start-up

⚠ DANGER!

This FG service indicator is not allowed to be put into operation until it has been established that the machine/system in which it is to be installed complies with the requirements of the applicable EC directives, harmonised standards, European standards or equivalent national standards.

- ⇒ The service indicator is ready for operation as soon as it has been connected to the electrical power supply (refer to section 9.1).

11 Normal operation

- ⇒ The indicator button jumps out of the sleeve when the switching pressure is reached. The electric contact is switched. If the differential pressure drops below the switching point again:
- ⇒ The indicator button remains visible.
- ⇒ The electric contact returns to its normal position.
- To reset the visual indication, press the button back in again (when the system is warm).

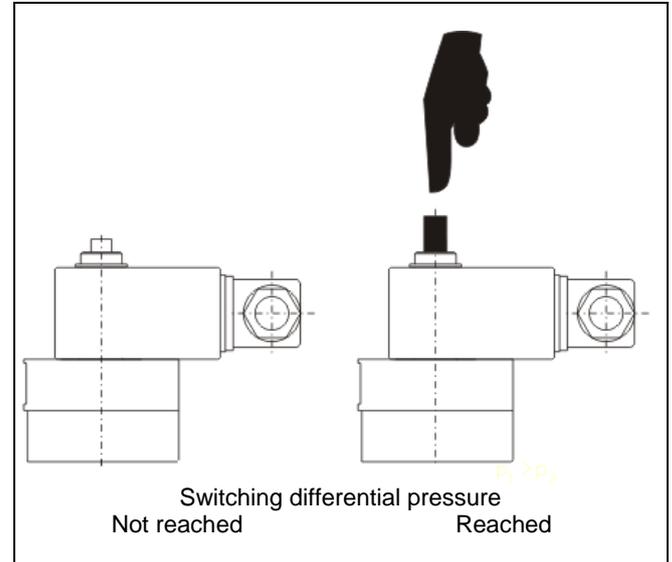


Fig. 4: Resetting the visual indication

12 Troubleshooting

Fault	Possible cause	Remedy
No electrical signal	Cable break	Check cable
	Switching contact defective	Replace switching contact

13 Maintenance

⚠ WARNING!

If the system is maintained by unauthorised persons

⇒ Risk of injury

⇒ All warranty claims are rendered invalid

- The system must be maintained by a suitably trained person!

- The electrical top part can be replaced separately if defective.
- In this case, the complete part should be replaced.

14 Spare parts

No.	Designation	Material no.	Benennung
1	Mounting kit for PiS 3076/3077 (steel)	79787979	Anbausatz für PiS 3076/3077 (Stahl)
2	Mounting kit for PiS 3076/3077 (stainless steel)	76187421	Anbausatz für PiS 3076/3077 (Edelstahl)

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