

# Operating Manual

ME69

Pressure Transmitter

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## 1 Safety guidelines

### 1.1 General Information



This operating manual contains instructions fundamental to the installation, operation and maintenance of the instrument that must be observed unconditionally. It must be read by the assembler, operator and the specialized personnel in charge of the device before it is installed and put into operation.

This operating manual is part of the product and therefore must be kept close to the device in a place that is easily accessible for the responsible personnel.

The following sections, in particular the instructions about assembly, commissioning and maintenance, contain important safety information, non-observance of which, could lead to risks to people, animals, the environment and objects.

### 1.2 Personnel Qualification

The instrument may only be installed and commissioned by specialized personnel familiar with the installation, commissioning and operation of this product.

Specialized personnel are persons who can assess the work they have been assigned and recognize potential dangers by virtue of their specialized training, their skills and experience and their knowledge of the pertinent standards.



### 1.3 Risks due to Non-Observance of Safety Instructions

Non-observance of these safety instructions, the intended use of the device or the limit values given in the technical specifications can be hazardous or cause harm to persons, the environment or the plant itself.

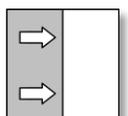
Claims for damages from the manufacturer are excluded in this case.

### 1.4 Safety Instructions for the Operating Company and the Operator

The safety instructions on correct operation of the device shall be observed. The operating company must make them available to the installation, maintenance, inspection and operating personnel.

Dangers arising from electrical components, energy discharged by the medium, escaping medium and incorrect installation of the instrument must be eliminated. For more information, please refer to the applicable national and international regulations.

In Germany these are the DIN EN, UVV and, in industry-specific cases, the DVGW-, Ex-, GL-, etc., the VDE guidelines and the regulations of the local power utility companies.



## 1.5 Unauthorised Modification

Modifications of or other technical alterations to the instrument by the customer are not permitted. This also applies to replacement parts. Any modifications / alterations required shall be carried out by Fischer Mess- und Regeltechnik GmbH only.

## 1.6 Inadmissible Modes of Operation

The operational safety of this device can only be guaranteed if it is used as intended. The device model must be suitable for the medium used in the system. The limit values given in the technical data may not be exceeded.

## 1.7 Safe working practices for maintenance and installation work

The safety instructions given in this operating manual, any nationally applicable regulations on accident prevention and any of the operating company's internal work, operating and safety guidelines must be observed.

The operating company is responsible for ensuring that all required maintenance, inspection and installation work is carried out by qualified specialized personnel.

## 1.8 Explanation of the symbols



### WARNING!

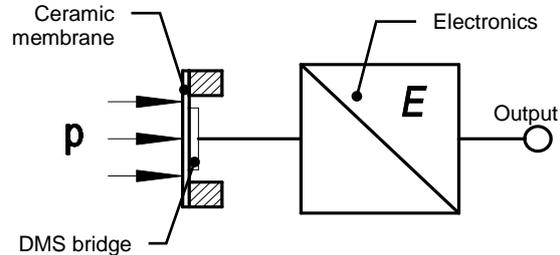
... indicates a potentially dangerous situation, non-observance of which could endanger persons, animals, the environment or objects.

## 2 Intended use

The pressure transmitter ME69 is used for over-pressure measurements of acidic or alkali media that are compatible with the materials listed in the technical data. If in doubt, compatibility with the media must be tested for the specific application.

## 3 Description of the product and functional description

### 3.1 Function diagram



### 3.2 Design and mode of operation

The pressure to be measured acts directly on a ceramic membrane, thus deforming it. This alters the output signal of the DMS bridge on the rear of the ceramic membrane. Electronics integrated into the device convert these bridge signals into standardized electrical signals 4...20mA or 0-10 VDC um.

## 4 Installation and assembly

A standard, the pressure transmitter is designed for mounting to pipes (flange/union nut). The union nut is part of the pressure transmitter.

### 4.1 Process connection

- By authorized and qualified specialized personnel only.
- The connection must be effected for the intended mechanical process connection only.
- Isolate the pipes before connecting the instrument.
- Do not install the device if there are standing water columns, and take appropriate steps to protect it from pressure surges.
- Use only with media suitable for operation.
- Observe the maximum pressure.
- Check that the pressure connections do not leak before commissioning.

All supply lines are arranged so that there are no mechanical forces acting on the device.

The pressure sensing lines must be installed on an incline so that no condensation pools can form.

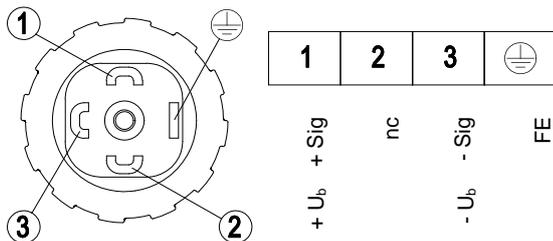
The pressure sensing lines need to be kept as short as possible and installed without sharp bends to avoid interfering delay times.

## 4.2 Electronic connection

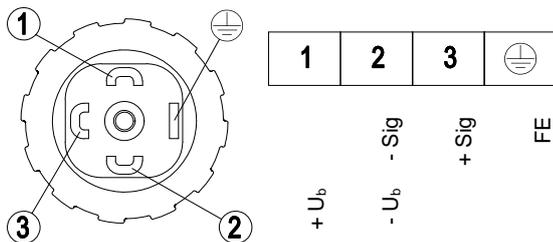
- By authorized and qualified specialized personnel only.
- The electrical connection of the device shall be performed according to relevant VDE and local electricity board regulations.
- Disconnect the system from the mains before connecting the device.
- Add a fuse adapted to the energy requirements.

## 4.3 Connection diagram

### 4.3.1 2 wire (code B)



### 4.3.2 3 wire (code C)



## 5 Commissioning

All electrical supply, operating and measuring lines and the pressure connections must have been correctly installed before commissioning.

## 6 Maintenance

The device is maintenance-free.

We recommend regular inspections to guarantee reliable operation and a long life cycle, such as:

- Checking the function in combination with downstream components.
- Checking the leak-tightness of the pressure connection lines.
- Checking the electrical connections.

The exact test cycles are adapted to the operating and ambient conditions. The operating manuals of any other connected device components shall also be observed.

## 7 Transport

The device must not be exposed to mechanical shocks. It shall be transported only in packaging specifically intended for transport.

## 8 Service

All damaged or faulty devices shall be directly sent to our repair department. Please coordinate the return of any device with our sales department.



Process media residues in and on dismantled instruments can be a hazard to people, animals and the environment. Take adequate preventive measures. If required the devices shall be thoroughly cleaned.

## 9 Accessories

n/a

## 10 Disposal

For the sake of the environment ....



Please help to protect our environment and dispose of or recycle used devices as required by the applicable regulations.

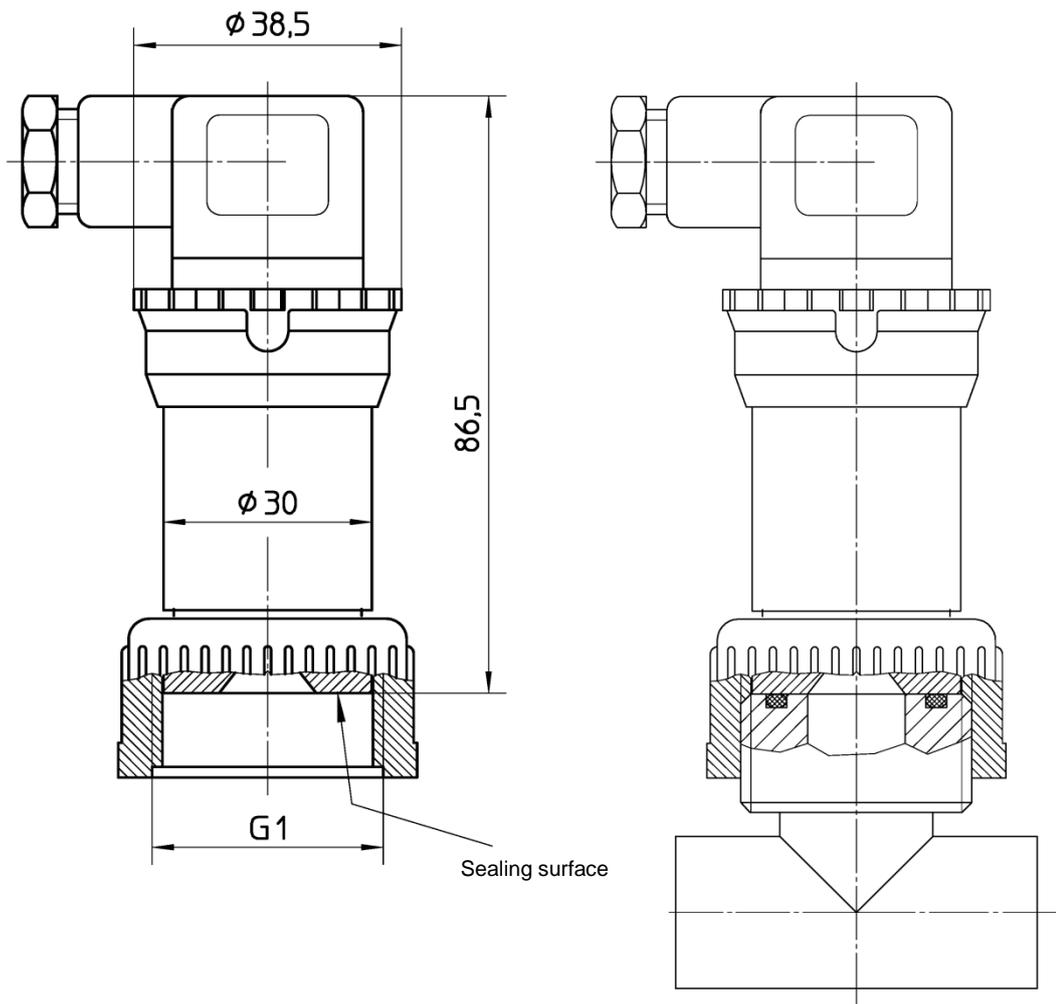
## 11 Technical data

Measuring range in bar	0-1,6	0-2,5	0-4	0-6	0-10
Overload pressure safety in bar	3.2	5	8	12	20

	<b>General points</b>	
Linearity	< 1% of the measuring range	
Hysteresis	< 0.5% of the measuring range	
Admissible ambient temperature	0° to 60°C	
Permissible medium temperature	0° to 60°C	
Pressure connection	Flange union nut G1" plastic	
Electrical connection	Standard plug DIN EN 175 301-803-A	
Type of protection	IP 65 as per DIN EN 60 529	
	<b>Material</b>	
Materials in contact with media	PP-plastic Ceramic 96% Al <sub>2</sub> O <sub>3</sub> Parylene coated Seal: Viton® B	
Casing	PP-plastic	
	<b>Electrical data</b>	
Nominal voltage	24 V DC	
Operating voltage	6..30 V DC	12..30 V DC
Electrical connection type	Two-wire	Three-wire
Output signal	4 -20 mA	0-10 V DC
Apparent ohmic resistance	(U <sub>B</sub> -6 V) / 0.02 A	U <sub>B</sub> < 14 V 10kΩ U <sub>B</sub> > 14 V 2 kΩ
Voltage/current limit	ca. 26 mA	approx. 12 V DC
Temperature drift, zeropoint	0.4 % FS/10 K	
Temperature drift, measuring range	0.05 % FS/10 K	

The transmitter is equipped with short-circuit and false wiring protection devices.

**12 Dimensional drawings** (all dimensions in mm unless otherwise specified)



### 13 Order Codes

#### Pressure Transmitter

ME69 

		M	A	9		H	9
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**Measuring ranges**

- 0... 1.6 bar .....> 0 3
- 0... 2.5 bar .....> 0 4
- 0... 4 bar .....> 0 5
- 0... 6 bar .....> 0 6
- 0... 10 bar .....> 0 7

**Measuring accuracy**

- Characteristic curve deviation relative pressure 1.0 .....> M

**Pressure connection**

- Plastic screw connection DN20 – G 1B.....> A 9

**Electrical output signal**

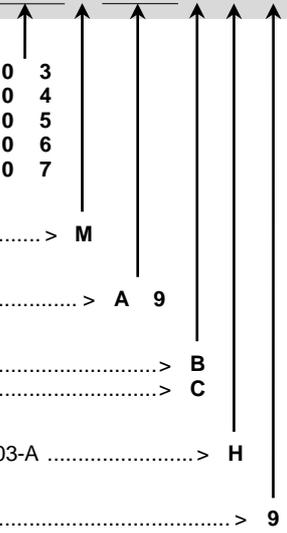
- 4 – 20 mA 2-line .....> B
- 0 – 10 VDC 3-line .....> C

**Electrical connection**

- Plug connection 4-pole, standard plug DIN EN 175 301-803-A .....> H

**Operating voltage**

- 24VDC ±10%.....> 9



## 14 Declaration of conformity

### EG-Konformitätserklärung

Wir erklären in alleiniger Verantwortung, dass nachstehend genannte Produkte

### EC Declaration of Conformity

We declare under our sole responsibility that the products mentioned below

#### Drucktransmitter / Pressure Transmitter

**ME69 #####**

gemäß gültigem Datenblatt übereinstimmen mit der

#### EG-Richtlinie

2004/108/EG (EMV)

Die Produkte wurden entsprechend den folgenden Normen geprüft (Störfestigkeit für Industriebereich, Störausendung für Wohnbereich):

DIN EN 61326-1:2004-05  
DIN EN 61326-2-3  
DIN EN 61010-1:2002-08

Die Geräte werden gekennzeichnet mit:

Bad Salzuflen, 07.01.2008  
(Ort, Datum / place, date)

specified by the actual data sheet complies with the

#### EC Directive

2004/108/EC (EMC)

The instruments have been tested in compliance with the norms (Immunity for industrial environments, emission for residential environments)

DIN EN 61326-1:2004-05  
DIN EN 61326-2-3  
DIN EN 61010-1:2002-08

The gauges are marked with:



(rechtsverb. Unterschrift / authorized signature)

