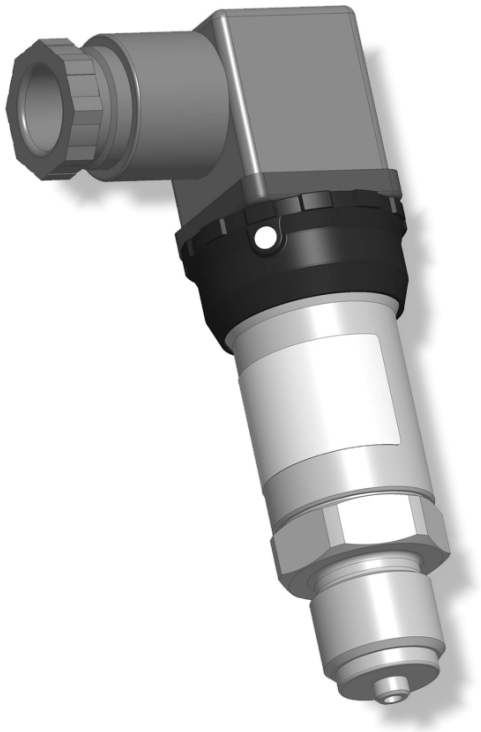
developing solutions

FISCHER MESS- UND REGELTECHNIK

II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIB T125°C Dc
-10°C ≤ T_{amb} ≤ 60°C

RoHS III COMPLIANT

UK CA



Operating manual

ME14

Pressure transmitter

09015448 • BA_EN_ME14 • Rev. ST4-B • 06/24

Masthead

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Version history

Rev. ST4-A 05/24	Version 1 (first edition)
Rev. ST4-B 06/24	Version 2 (Schrader process connection added)

Table of contents

1 Safety instructions

1.1 General

This operating manual contains basic instructions for the installation, operation and maintenance of the device that must be followed without fail. It must be read by the installer, the operator and the responsible specialist personnel before installing and commissioning the device.

This operating manual is an integral part of the product and therefore needs to be kept close to the instrument in a place that is accessible at all times to the responsible personnel.

The following sections, in particular instructions about the assembly, commissioning and maintenance, contain important information, non-observance of which could pose a threat to humans, animals, the environment and property.

The instrument described in these operating instructions is designed and manufactured in line with the state of the art and good engineering practice.

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 Personnel Qualification

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For explosion-proof models the specialized personnel must have received special training or instruction or be authorized to work with explosion-proof instruments in explosion hazard areas.

1.4 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.

The supplier of the equipment will not be liable for damage claims if this should happen.

1.5 Safety Instructions for the Operating Company and the Operator

The safety instructions governing correct operation of the instrument must 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 device must be eliminated. See the information in the applicable national and international regulations.

Please observe the information about certification and approvals in the Technical Data section.

The instrument must be decommissioned and secured against inadvertent re-operation if a situation arises in which it must be assumed that safe operation is no longer possible. Reasons for this assumption could be:

- evident damage to the instrument
- failure of the electrical circuits
- longer storage outside the approved temperature range.
- considerable strain due to transport

Repairs may be carried out by the manufacturer only.

A professional single conformity inspection as per DIN EN 61010, section 1, must be carried out before the instrument can be re-commissioned. This inspection must be performed at the manufacturer's location. Correct transport and storage of the instrument are required.

1.6 Unauthorised Modification

Modifications of or other technical alterations to the instrument by the customer are not permitted. This also applies to replacement parts. Only the manufacturer is authorised to make any modifications or changes.

1.7 Inadmissible Modes of Operation

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

The manufacturer is not liable for damage resulting from improper or incorrect use.

1.8 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.

1.9 Pictogram explanation

⚠ DANGER

Type and source of danger

This indicates a **direct** dangerous situation that could lead to death or **serious injury** (highest danger level).

1. Avoid danger by observing the valid safety regulations.

⚠ WARNING

Type and source of danger

This indicates a **potentially** dangerous situation that could lead to death or **serious injury** (medium danger level).

1. Avoid danger by observing the valid safety regulations.

⚠ CAUTION

Type and source of danger

This indicates a **potentially** dangerous situation that could lead to slight or serious injury, damage or **environmental pollution** (low danger level).

1. Avoid danger by observing the valid safety regulations.

NOTICE

Note / advice

This indicates useful information of advice for efficient and smooth operation.

2 Product and functional description

2.1 Delivery scope

- Pressure transmitter ME14
- Operating Manual

2.2 Use as intended

The ME14 is a pressure transmitter with a ceramic measuring cell for over-pressure and under-pressure measurements and can be used for relative pressure measurements.

The pressure transmitter is suitable for use with non-aggressive liquid and gaseous media. Please see the technical data for the respective measuring ranges.

NOTICE! Please contact the manufacturer before using this unit with dirty or aggressive media because the media compatibility of the unit needs to be checked.

ATEX classification

The pressure transmitter **ME14 ## # ## # # 0 R # # # 0 # #** is suitable as electrical operating equipment

- either for use in areas with flammable gases, Zone 2
- or in areas with flammable dust, Zone 22 – dry dusts.

The devices are marked with

CE Ex II 3G Ex ec IIC T4 Gc

CE Ex II 3D Ex tc IIIB T125°C Dc

-10 °C ≤ T_{amb} ≤ 60 °C

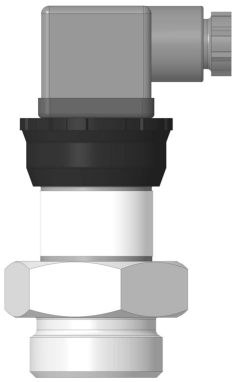
2.3 Product summary

NOTICE! For use in particularly moist areas, all devices are also available in a grouted version.

The following illustrations provide an overview of the different models, process and electrical connection options.

Standard model
Ceramic sensor

up to 100 bar



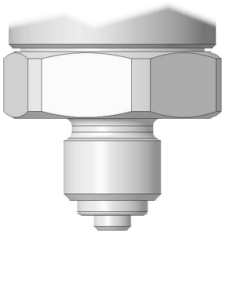
Near flush-mounted
Ceramic sensor

up to 100 bar

Fig. 1: Product summary

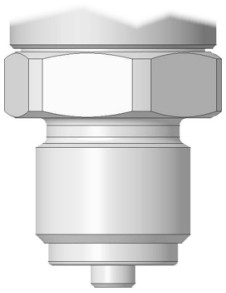
2.3.1 Process connection

Standard



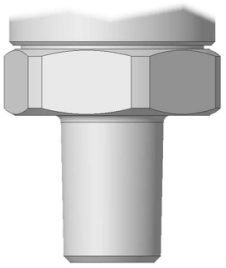
G ¼ B

Code 85



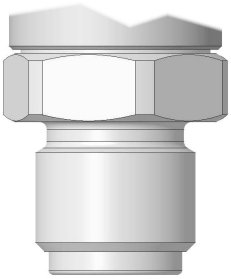
G ½ B

87



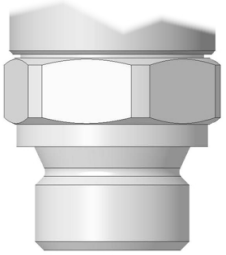
¼ - 18 NPT

88



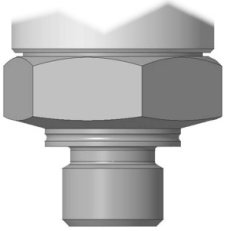
G ½ B
with 9 mm drill hole

S8



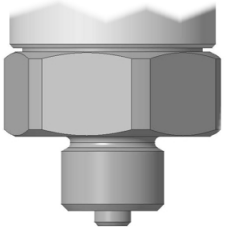
G ½ A
DIN 3852 Form A

Code K1



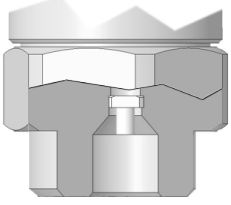
M14 x 1.5
ISO 6149-2

K2



M14 x 1.5
with centring pin

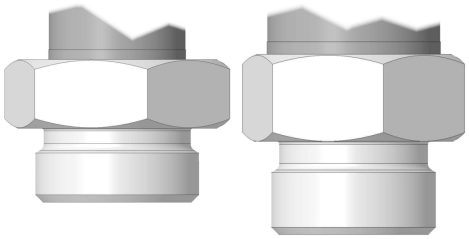
K3



Schrader ®

S1

Near flush-mounted

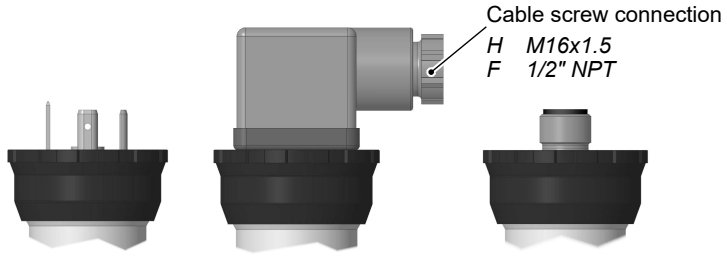


	G 1 B	**G ¾ B**
Code	*A3*	*A8*

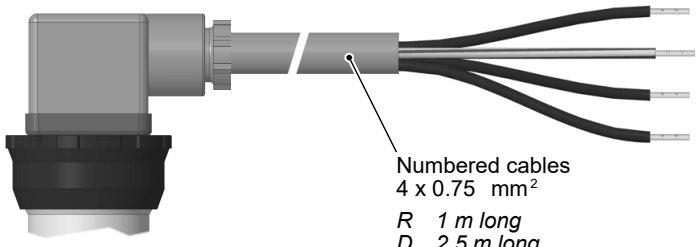
Fig. 2: Options for the process connection

2.3.2 Electrical connection

Plug



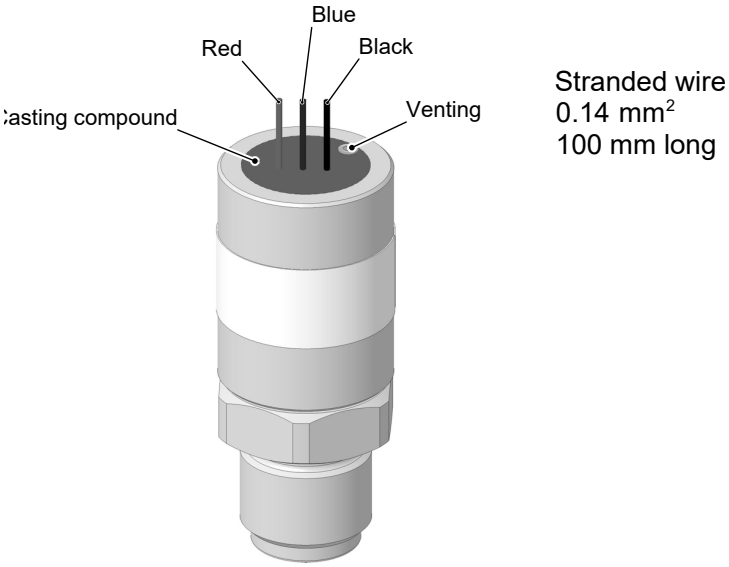
	without standardised plug	**with standardised plug**	**M12 plug**
Code	*A*	*H, F*	*M*



	with cable connection
Code	*R, T*

Free strands

NOTICE! An ATEX model is not possible with this connection variant.



Code *V*

Fig. 3: Electrical connection options

2.4 Type plate

This type plate serves as an example of the information that is stated. For more information, please see the order code at the end of these instructions.

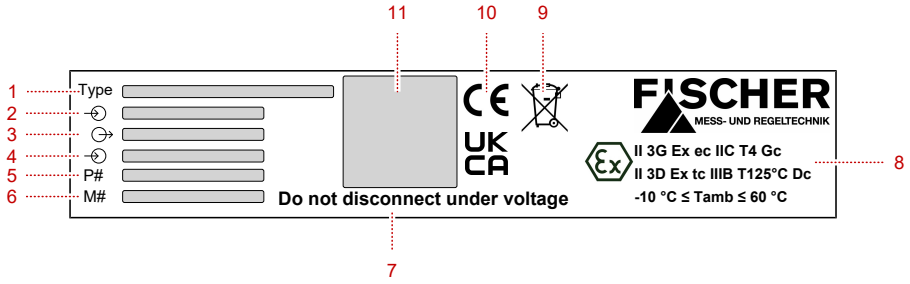


Fig. 4: Type plate

1	Device type (order number)	**2**	Measuring range
3	Output signal	**4**	Auxiliary energy
5	Serial number	**6**	Customer spec. Article number
7	Safety information (ATEX)	**8**	ATEX marking
9	Disposal	**10**	Conformity
11	Circuit diagram		

Key

	Input	*Input*
	Output	*Output*
P#	Production No.	*Production number*

P# **23** 03618.03.123

Production year 2023

2.5 Function diagram

NOTICE! This illustration shows a functional diagram of a 3-wire with standardised plug connection as an example for all models.

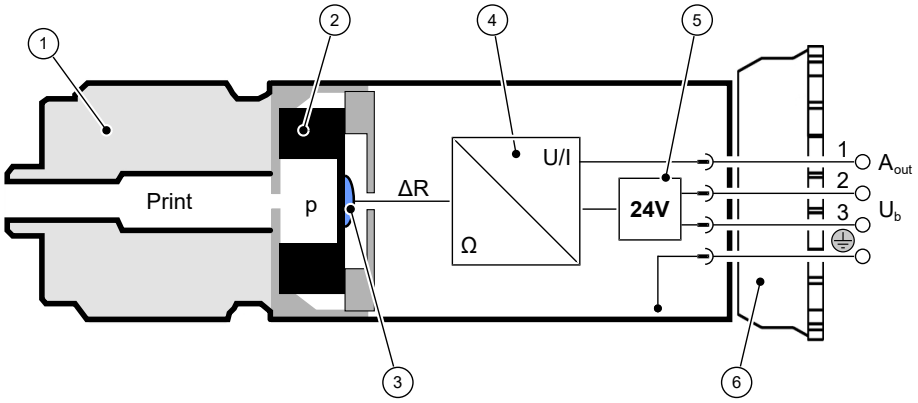


Fig. 5: Functional diagram (3-wire)

1	Process connection	**2**	Sensor element
3	Resistance bridge	**4**	Converter electronics
5	Power supply	**6**	Connection plug

2.6 Design and mode of operation

The standard model with ceramic measuring cell works according to the thick layer technology DMS principle. The measured pressure acts directly onto the membrane, which deforms when under pressure. This changes the resistance of the attached DMS bridge. Electronics integrated into the device convert this bridge signal into an electronic output signal.

3 Installation

3.1 Generalities

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.

⚠ WARNING

Mounting pressure transmitters

During assembly, observe the respective national and international guidelines and safety regulations.

Only mount the unit to systems that are depressurized. Only ever operate the unit within the permitted measuring range or below the maximum overload.

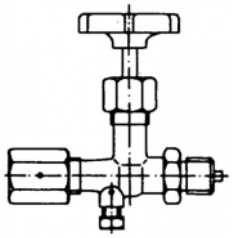


Fig. 6: Shutoff valve.

The device is set ex-works for vertical installation, however any installation position is possible.

To guarantee safe working conditions during installation and maintenance, suitable stop valves must be fitted in the system (see accessories). By means of the manometer shutoff, the unit

- Can be depressurized or taken out of operation.
- Be disconnected from the power supply within the applicable system for repairs or inspections.

3.2 Process connection

- By authorized and qualified specialized personnel only.
- The pipes need to be depressurized when the instrument is being connected.
- Appropriate steps must be taken to protect the device from pressure surges.
- Check that the device is suitable for the medium being measured.
- Maximum pressures must be observed (cf. Tech. data)

Measuring lines that need to be connected

The following points need to be observed when connecting the measuring line:

- To ensure there is no influence on the measured values, significant bends and coils in the wire should be avoided.
- To prevent deposits, there should be a continuous incline or drop of at least 8%.
- When measuring steam pressure, a loop forming a water bag must be provided due to the temperature (see accessories).
- The transmitter must be positioned above the measuring point for gas measurements.
- The transmitter must be positioned below the measuring point for liquid measurements.
- If water is used as a measuring medium, the unit must be protected against frost.

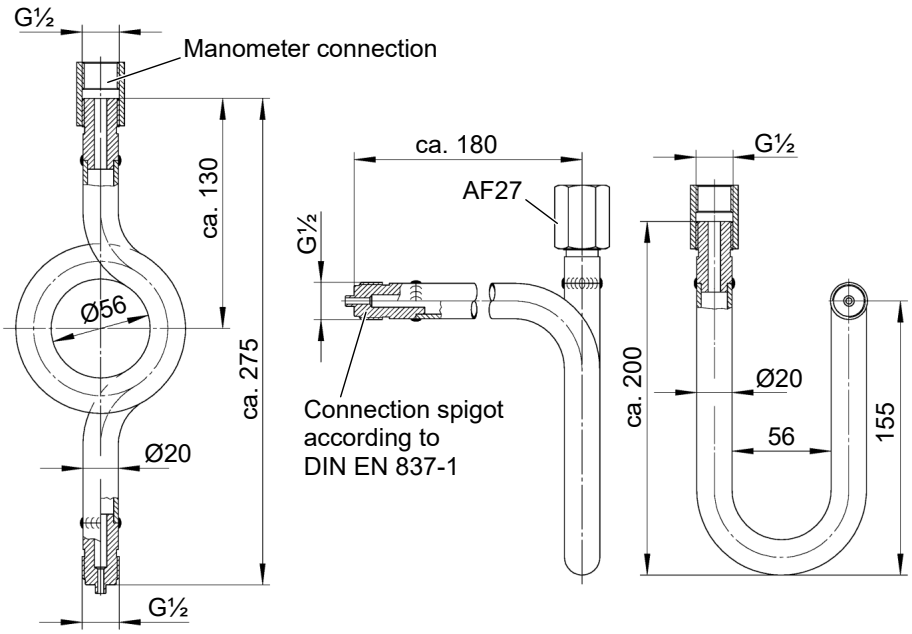


Fig. 7: Siphon MZ1###

Pressure surge absorption

Pulsating pressure on the system side can lead to functional problems in the device. We recommend installing a damping element in the pressure connection lines as a protective measure.

a) Capillary throttle

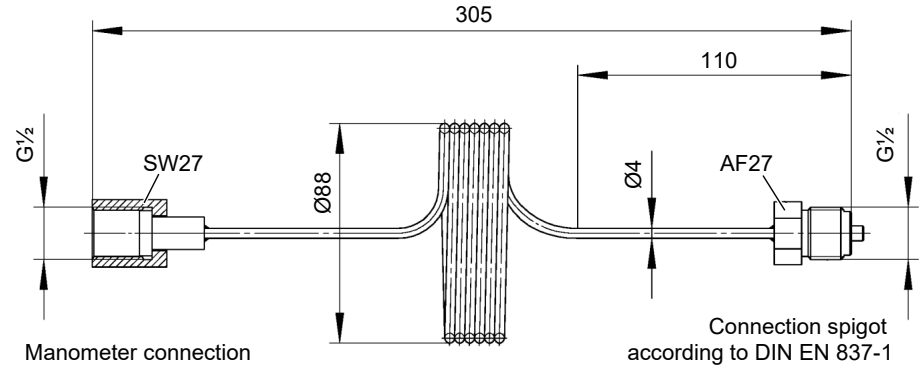


Fig. 8: Capillary throttle MZ400#

b) Adjustable damping throttle

In operating mode, the damping throttle must be set so that the output signal follows the pressure changes with a delay.

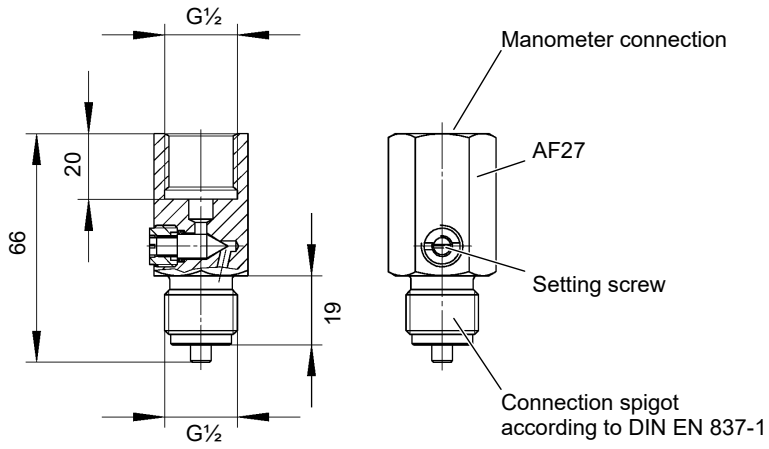


Fig. 9: Damping throttle MZ410#

3.3 Electrical connection

- By authorized and qualified specialized personnel only.
- When connecting the unit, the national and international electro-technical regulations must be observed.
- Disconnect the system from the mains, before electrically connecting the device.
- Install the consumer-adapted fuses.
- Do not connect the connector if strained.

3.3.1 Pin assignment

Standardised plug [DIN EN 175 301-801-A]

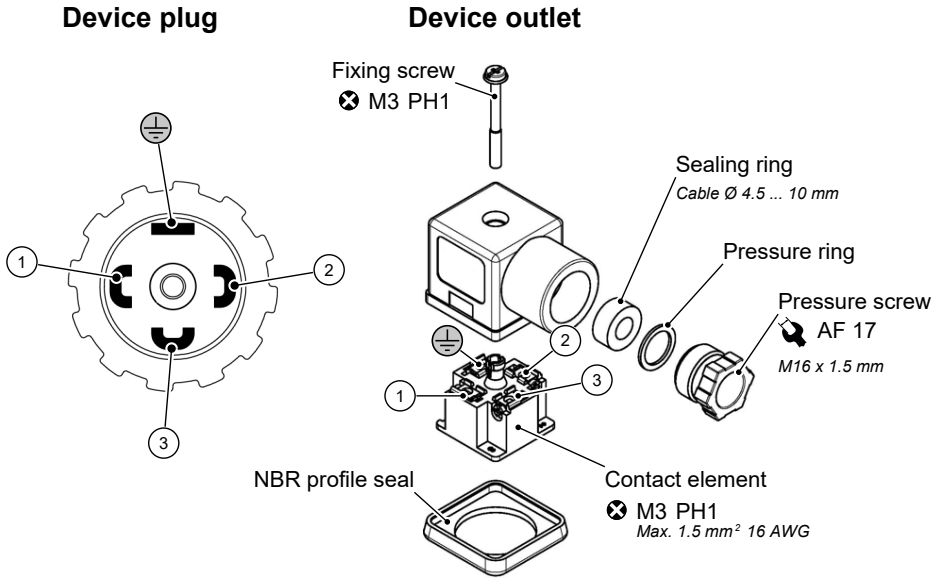
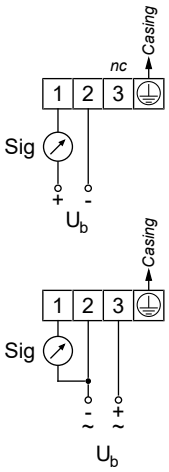


Fig. 10: Standardised plug DIN EN 175 301-803 form A

NOTICE! A number cable is used in models with a connection cable. The pin numbers correspond to the cable numbers.

Standard device



2 wire connection [DC]

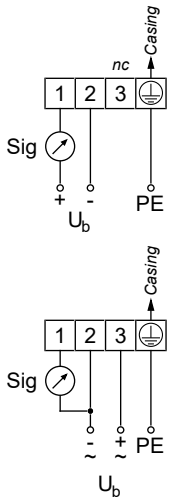
PIN	Signal				Cable connection
1	Supply/output signal		$+U_b$	+Sig	1
2	Supply/output signal		$-U_b$	-Sig	2
3	Not connected				3
⏚	Earthing connection		PE		Green/yellow

3 wire connection [AC/DC]

PIN	Signal				Cable connection
1	Output signal			+Sig	1
2	Supply	~	$-U_b$	-Sig	2
3	Supply	~	$+U_b$		3
⏚	Earthing connection		PE		Green/yellow

NOTICE! For standardised devices, the user is free to decide whether to install the earthing.

ATEX model



2 wire connection [DC]

PIN	Signal			Cable connection
1	Supply/output signal	$+U_b$	+Sig	1
2	Supply/output signal	$-U_b$	-Sig	2
3	Not connected			3
⏚	Earthing connection	PE		Green/yellow

3 wire connection [AC/DC]

PIN	Signal				Cable connection
1	Output signal			+Sig	1
2	Supply	~	$-U_b$	-Sig	2
3	Supply	~	$+U_b$		3
⏚	Earthing connection		PE		Green/yellow

WARNING! For ATEX devices, the earthing must always be installed.

M12 plug [IEC 61076-2-101]

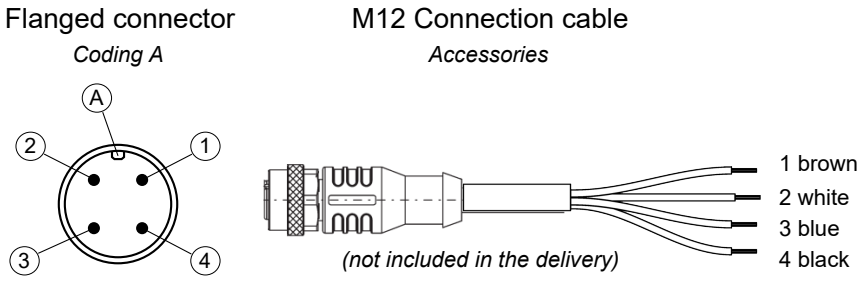
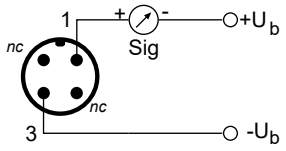
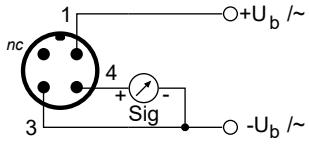


Fig. 11: M12 plug, standard version

Standard version





2 wire connection [DC]

PIN	Signal			Cable colour
1	Supply/output signal	$+U_b$	+Sig	Brown
2	Not connected			White
3	Supply/output signal	$-U_b$	-Sig	Blue
4	Not connected			Black

3 wire connection [AC/DC]

PIN	Signal				
1	Supply	~	$+U_b$		Brown
2	Not connected				White
3	Supply	~	$-U_b$	-Sig	Blue
4	Output signal			+Sig	Black

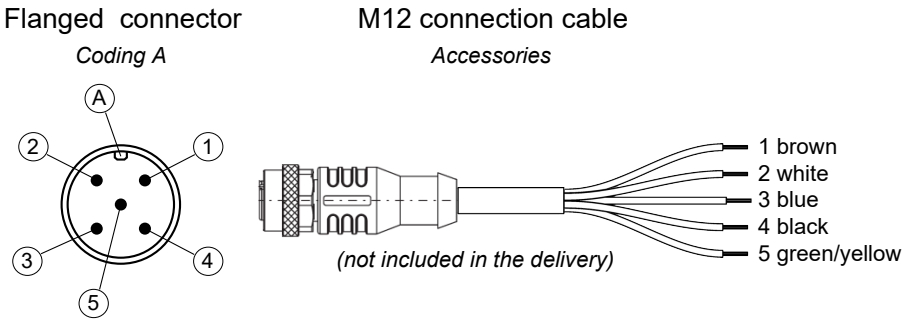
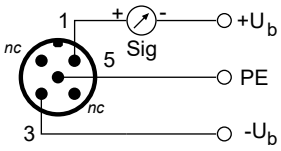


Fig. 12: M12 plug ATEX version

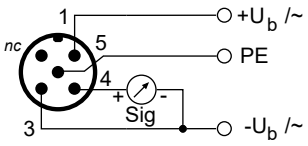
ATEX model

2 wire connection [DC]



PIN	Signal			Cable colour
1	Supply/output signal	$+U_b$	+Sig	Brown
2	Not connected			White
3	Supply/output signal	$-U_b$	-Sig	Blue
4	Not connected			Black
5	Earthing connection	PE		Green/yellow

3 wire connection [AC/DC]



PIN	Signal				
1	Supply	~	$+U_b$		Brown
2	Not connected				White
3	Supply	~	$-U_b$	-Sig	Blue
4	Output signal			+Sig	Black
5	Earthing connection		PE		Green/yellow

Connect with free strands

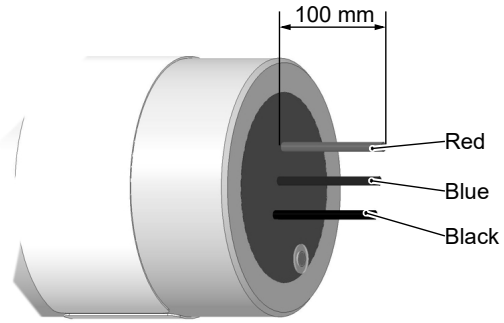
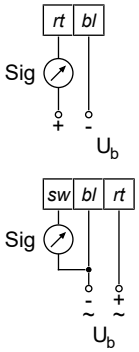


Fig. 13: Electrical connection with free strands

NOTICE! Depending on the model, only the cables necessary for connection may be present.

Standard version



2 wire connection [DC]

Signal			Cable colour
Supply/output signal	$+U_b$	+Sig	Red
Supply/output signal	$-U_b$	-Sig	Blue

3 wire connection [AC/DC]

Signal				Cable colour
Output signal			+Sig	Black
Supply	~	$-U_b$	-Sig	Blue
Supply	~	$+U_b$		Red

ATEX model

An ATEX model is not possible with this connection variant.

3.4 Commissioning

A prerequisite for commissioning is correct installation of all electrical supply lines and the pressure lines. All connections are arranged so that there are no mechanical forces acting on the device.

⚠ CAUTION

Leakage test

The pressurized lines need to be checked for leaks before commissioning.

- If liquid measuring media are used the pressure connection lines must be vented, as liquid columns of different heights in the pipes can cause measuring errors.
- The instrument must be protected against frost if water is used as a medium.
- Appropriate shutoff valves must be provided to ensure safety during installation, maintenance and inspection.

4 Servicing

4.1 Maintenance

The instrument is maintenance-free. We recommend the following regular inspection to guarantee reliable operation and a long service life:

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

The exact test cycles need to be adapted to the operating and environmental conditions. In combination with other devices, the operating instructions for the other devices also need to be observed.

4.2 Transport

The measuring device must be protected against impacts. It should be transported in the original packaging or a suitable transport container.

4.3 Service

All defective or faulty devices should be sent directly to our repair department. Please coordinate all shipments with our sales department.

⚠ WARNING

Process media residues

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

Return the device in the original packaging or a suitable transport container.

4.4 Disposal

WEEE-Reg.-No. DE 31751293

Please help to protect our environment and dispose of the workpieces and packaging materials used in an environmentally friendly manner. Observe the country-specific waste treatment and disposal regulations.

The year of production can be found in the production number (serial number):

P# **23** 03618.03.123

Production year 2023

Further information on disposal can be found on our website [www.fischermesstechnik.de]

5 Technical data

5.1 Generalities

Reference conditions (acc. to IEC 61298-1)		
Temperature	+15 … +25 °C	
Relative humidity	45 … 75%	
Air pressure	86 to 106 kPa	860 to 1060 mbar
Auxiliary energy	24 V DC	
Installation position	User-defined	

General information	
Type designation	ME14
Pressure type	Relative pressure
Measurement principle	SGS
Media	Non-aggressive liquid and gaseous media

5.2 Input variables

Positive measuring ranges [bar]

Measuring range	Pressure safety [bar]		Characteristic curve deviation	
	Overpressure	Bursting pressure	option.	Standard
0 … 250 mbar	1	1.5	-	1.0%
0 … 400 mbar	1	1.5	0.5%	1.0%
0 … 0.6 bar	1.5	2.5	-	1.0%
0 … 1.0 bar	3	5	0.5%	1.0%
0 … 1.6 bar	3	5	0.5%	1.0%
0 … 2.5 bar	7.5	15	0.5%	1.0%
0 … 4 bar	7.5	15	0.5%	1.0%
0 … 6 bar	15	30	0.5%	1.0%
0 … 10 bar	30	60	0.5%	1.0%
0 … 16 bar	30	60	0.5%	1.0%
0 … 25 bar	75	150	-	1.0%
0 … 40 bar	75	150	-	1.0%
0 … 60 bar	150	250	-	1.0%
0 … 100 bar	150	250	0.5%	1.0%

Positive measuring ranges [psi]

Measuring range	Pressure safety [bar]		Characteristic curve deviation	
	Overpressure	Bursting pressure	option.	Standard
0 … 15 psi	3	5	0.5%	1.0%
0 … 30 psi	7.5	15	0.5%	1.0%
0 … 60 psi	7.5	15	0.5%	1.0%
0 … 100 psi	15	30	0.5%	1.0%
0 … 160 psi	30	60	0.5%	1.0%
0 … 250 psi	30	60	0.5%	1.0%
0 … 500 psi	75	150	-	1.0%
0 … 1000 psi	150	250	-	1.0%
0 … 1500 psi	150	250	0.5%	1.0%

Vacuum measuring ranges [bar]

Measuring range	Pressure safety [bar]		Characteristic curve deviation	
	Overpressure	Bursting pressure	option.	Standard
0 … -1 bar	3	5	-	1.0%
-1 … 0 bar	3	5	-	1.0%
-1 … 0.6 bar	3	5	-	1.0%
-1 … 1.0 bar	3	5	-	1.0%
-1 … 1.5 bar	7.5	15	-	1.0%
-1 … 3 bar	7.5	15	-	1.0%
-1 … 5 bar	15	30	-	1.0%
-1 … 9 bar	30	60	-	1.0%
-1 … 15 bar	30	60	-	1.0%
-1 … 24 bar	75	150	-	1.0%

Special measuring ranges

Measuring range	Pressure safety [bar]		Characteristic curve deviation	
	Overpressure	Bursting pressure	option.	Standard
-30 in Hg vac … +15 psi	3	5	-	1.0%
-30 in Hg vac … +100 psi	15	30	-	1.0%

5.3 Output parameters

Voltage output		**3-conductor**
Output range		0 … 10 V DC
Limit		approx. 10.5 V DC
Load impedance	15 V ≤ U_b < 20 V 20 V ≤ U_b ≤ 30 V	≥ 5 kΩ ≥ 2 kΩ

Current output	**2-conductor**	**3-conductor**
Output range	4 … 20 mA	0 to 20 mA 4 to 20 mA
Limit	26 mA	23 mA
Load impedance	(U_b-6V)/0.02A	(U_b-10V)/0.02A + 300Ω

5.4 Measurement accuracy

Non-linearity	Maximum	0.5 % FS
	Typical	0.2 % FS
Hysteresis	Maximum	0.5 % FS
	Typical	0.2 % FS
Characteristic curve deviation [2]	Standard	1.0 %
	Option [1]	0.5 %
Temperature drift	Zero point	0.07 % FS/K
	Measuring range	0.05 % FS/K

[1] only possible for certain measuring ranges
[2] incl. non-linearity and hysteresis

5.5 Auxiliary energy

Voltage output	**3-conductor**
Rated voltage	24 V AC/DC
Permitted op. voltage	15 to 30 V AC/DC
Absorbed power	≤ 1 W (VA)

Current output	**2-conductor**	**3-conductor**
Rated voltage	24 V DC	24 V AC/DC
Permitted op. voltage	6 to 30 V DC	15 to 30 V AC/DC
Absorbed power	≤ 1 W	≤ 1.5 W (VA)

5.6 Application conditions

	Standard	ATEX
Ambient temperature range	-10 °C … +70 °C	-10°C to +60°C
Storage temperature range	-20 °C … +70°C	-20 °C … +70°C
Medium temperature range	-10 °C … +85 °C	-10°C to +60°C
ATEX	EN IEC 60079-0:2018 EN IEC 60079-7 :2015/A1:2018 EN 60079-31:2014	
EMC	EN IEC 61326-1:2021 EN IEC 61326-2-3:2021	
RoHS	EN IEC 63000:2018	
Type of protection	IP 65 as per EN 60529	
Materials of parts in contact with surroundings		
Casing	CrNi Steel 1.4305	
Device plug screw lid	Polypropylene, black	
Device plug	Polyamide, brass, zinc	
Cable socket	Polyamide, polycarbonate, brass, zinc	
Materials of the parts that come into contact with the measuring medium		
Process connection	CrNi Steel 1.4404	
Sensor membrane	Ceramic Al_2O_3	
Seal	FKM	Fluorinated rubber, Viton®
(acc. to model)	CR	Chloroprene rubber, Neoprene®
	EPDM	Ethylene propylene diene rubber
	H-NBR	Hydrogenated acrylonitrile butadiene rubber
	FFPM	Perfluorinated rubber, Kalrez®

5.7 Construction design

5.7.1 Standard version

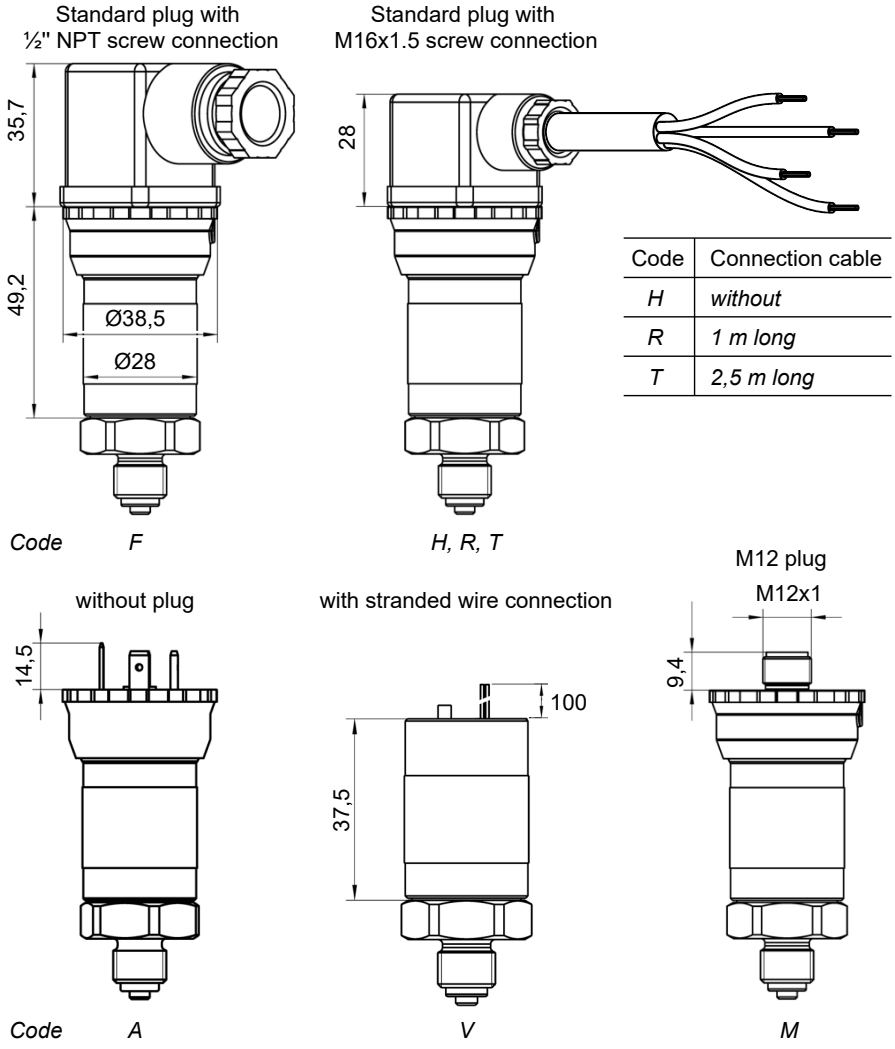


Fig. 14: Dimensional diagram with electrical connection options

5.7.2 Near flush-mounted front sensor

Please note! All electrical connection options (see above) are available.

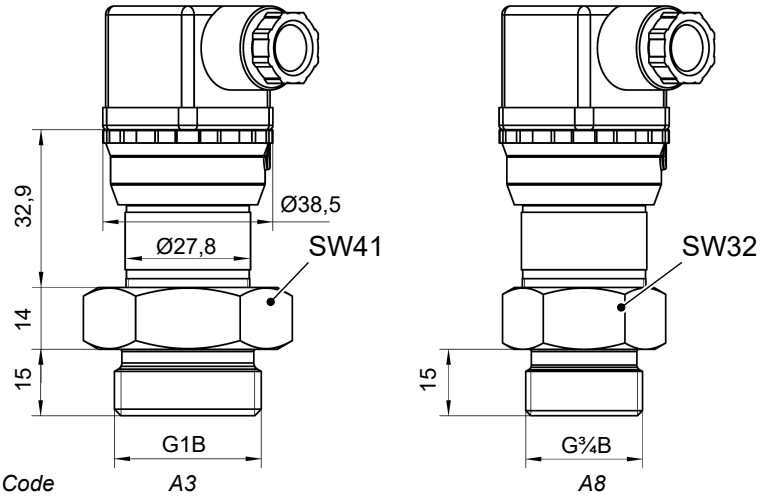


Fig. 15: 'Near flush-mounted front sensor' dimensional drawing

5.7.3 Process connections

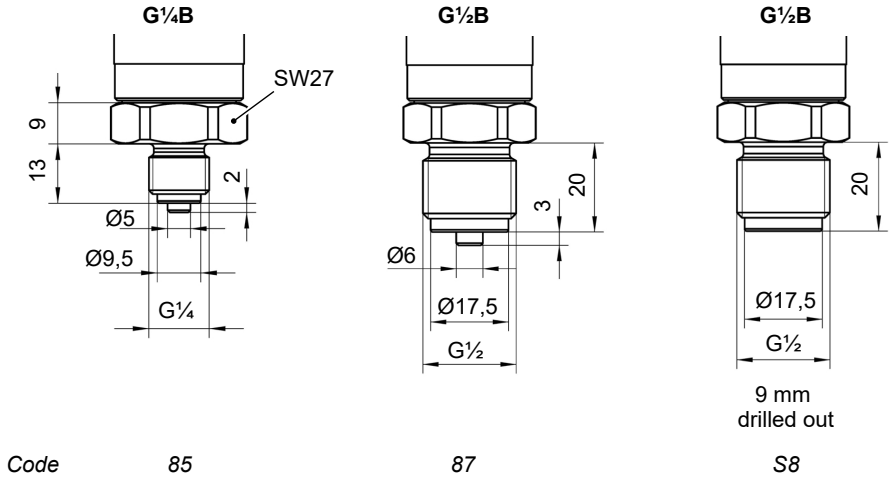


Fig. 16: Process connections with imperial thread

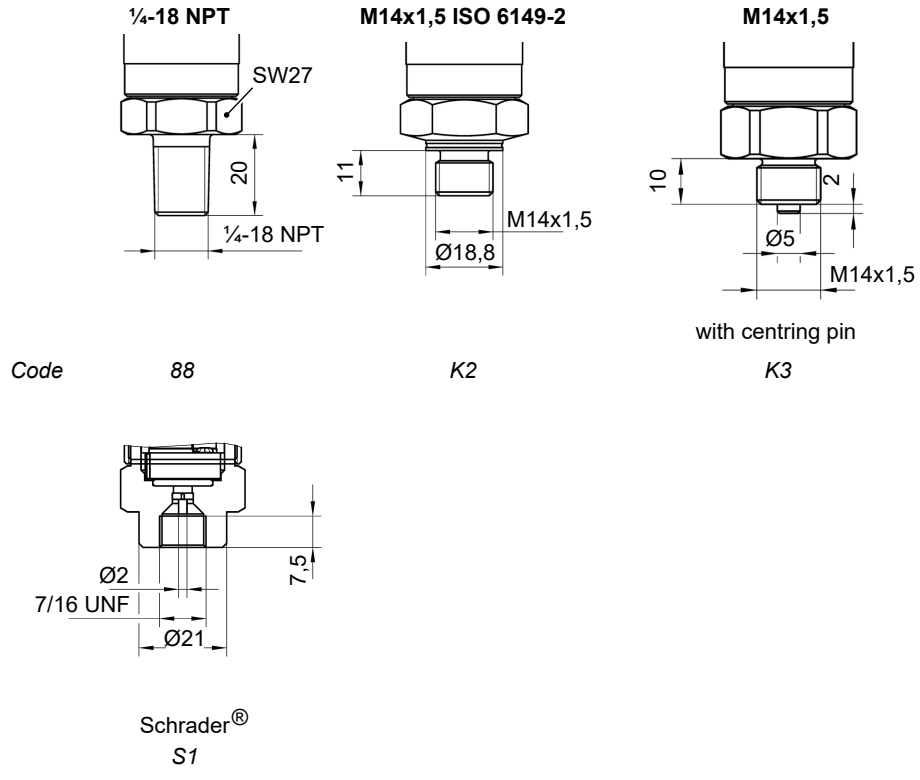
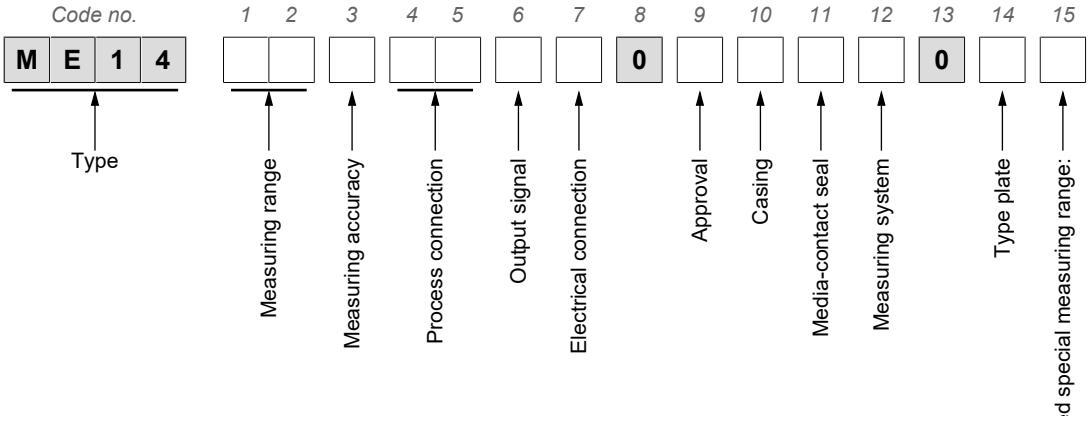


Fig. 17: Process connections with imperial and metric thread

6 Order codes



Measuring range: [mbar]

[1.2]	*(Code no.)*
82	0 … 250 mbar
83	0 … 400 mbar
01	0 … 0.6 bar
02	0 … 1.0 bar
03	0 … 1.6 bar
04	0 … 2.5 bar
05	0 … 4 bar
06	0 … 6 bar
07	0 … 10 bar
08	0 … 16 bar
09	0 … 25 bar
10	0 … 40 bar
11	0 … 60 bar
12	0 … 100 bar
31	−1 … 0 bar
32	−1 … 0.6 bar
27	−1 … 1.0 bar
33	−1 … 1.5 bar
34	−1 … 3 bar
35	−1 … 5 bar
36	−1 … 9 bar
37	−1 … 15 bar
38	−1 … 24 bar
39	0 … −1 bar

Measuring range: [psi]

[1.2]	*(Code no.)*
H4	0 … 15 psi
H5	0 … 30 psi
H6	0 … 60 psi
H7	0 … 100 psi
H9	0 … 160 psi
Q1	0 … 250 psi
P9	0 … 500 psi
P3	0 … 1000 psi
P4	0 … 1500 psi

Measuring range: [special measuring ranges]

[1.2]	*(Code no.)*	
S2	−30 in Hg vac … +15 psi	no front-flush process connection A3, A8 possible
S5	−30 in Hg vac … +100 psi	

Measuring accuracy:

[3]	*(Code no.)*
M	Characteristic curve deviation relative pressure 1.0%
0	Characteristic curve deviation relative pressure 0.5% (special measuring ranges on request)

Process connection:

[4.5]	*(Code no.)*
85	Connecting pin with male thread G ¼ B
87	Connecting pin with male thread G ½ B
88	Connecting pin with male thread ¼ −18 NPT EXT
A3	G 1 B with near flush-mounted front pressure sensor
A8	G ¾ B with near flush-mounted front pressure sensor
S1	Connection for the Schrader® screw connection
S8	Connecting pin with male thread G ½ B interior 9 mm drilled
K1	Connecting pin with male thread G ½ A with taper undercut
K2	Connecting pin with male thread M14 x 1.5 ISO 6149-2
K3	Connecting pin with male thread M14 x 1.5 with centring pin

Output signal:

[6]	*(Code no.)*	Auxiliary energy	Type of connection
A	0 to 20 mA	24 V AC/DC	3-conductor
B	4 … 20 mA	24 V DC	2-conductor
C	0 … 10 V	24 V AC/DC	3-conductor
P	4 … 20 mA	24 V AC/DC	3-conductor

Electrical connection:

[7]	*(Code no.)*
A	4-pin plug connection without device outlet
H	4-pin plug connection with device outlet (M16*1.5)
F	4-pin plug connection with device outlet (½″ NPT)
R	4-pin plug connection with device outlet and 1 m connection cable
D	4-pin plug connection with device outlet and 2.5 m connection cable
V	Connection with free strands (**ATTENTION! ATEX model is not possible**)
M	M12 plug connection, 4-pin (5-pin with ATEX)

Authorisation:

[9]	*(Code no.)*
0	Standard
R	ATEX Zone 2 and Zone 22

Casing design:

[10]	*(Code no.)*	
0	Standard	IP 65
V	Grouted design	IP 65

Media contact seal:

[11]	*(Code no.)*		
V	FKM	Viton® (fluororubber)	Standard
C	CR	Neoprene, chloroprene rubber	
E	EPDM	Ethylene propylene diene rubber	
H	H-NBR	Hydrogenated acrylonitrile butadiene rubber	−25°C … +100°C
K	FFPM	Kalrez® (perfluorinated rubber)	

Measuring system:

[12]	*(Code no.)*
0	Standard
3	System suitable for measuring O_2 (only with VITON® seal)

Type plate:

[14]	*(Code no.)*
0	FISCHER
1	Customer-specific

permanently configured special measuring range:

[15]	*(Code no.)*
0	Without configuration
1	With configuration

6.1 Accessories

Order No.	Designation	No. of pins	Length
06401993	PUR cable with M12-coupling	4-pin	2 m
06401994	PUR cable with M12-coupling	4-pin	5 m
06401563	PUR cable with M12-coupling	4-pin	7 m
06401572	PUR cable with M12-coupling	4-pin	10 m
06401566	PUR cable with M12-coupling	4-pin	15 m

Order No.	Designation	No. of pins	Length
06401995	PUR cable with M12-coupling	5-pin	2 m
06401996	PUR cable with M12-coupling	5-pin	5 m
06401564	PUR cable with M12-coupling	5-pin	7 m
06401573	PUR cable with M12-coupling	5-pin	10 m
06401567	PUR cable with M12-coupling	5-pin	15 m

MZ1###	Siphons
MZ400#	Capillary throttle coil
MZ410#	Settable damping reactor
MZ5###	Manometer shut-off valve acc. to DIN 16270/16271
MZ6###	Manometer shut-off valve acc. to DIN 16272
09002385	Deflagration volume protector

A data sheet is available on our website www.fischermesstechnik.de or on request.

6.2 Information about the document

This document contains all technical data about the device. Great care was taken when compiling the texts and illustrations. nevertheless, errors cannot be ruled out.

Subject to technical amendments.

7 Annex

FISCHER MESS- UND REGELTECHNIK

(Translation) CE

EU Declaration of Conformity

For the product described as follows

Product designation **Pressure transmitter**

Type designation **ME14 ## # ## # # 0 0 # # # # # #**

it is hereby declared that it corresponds with the basic requirements specified in the following designated directives:

2014/30/EU	*EMC Directive*
2011/65/EU	*RoHS Directive*
(EU) 2015/863	*Delegated Directive amending Annex II to Directive 2011/65/EU*

The products were tested in compliance with the following standards.

Electromagnetic compatibility (EMC)

DIN EN IEC 61326-1:2022-11 *EN IEC 61326-1:2021*	*Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirement*
DIN EN IEC 61326-2-3:2022-11 *EN IEC 61326-2-3:2021*	*Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning*

RoHS Directive (RoHS3)

DIN EN IEC 63000:2019-05 *EN IEC 63000:2018*	*Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances*

Also they were subjected to the conformity assessment procedure „**Internal production control**".

Sole responsibility for the issue of this declaration of conformity in relation to fulfilment of the fundamental requirements and the production of the technical documents is with the manufacturer.

Manufacturer

FISCHER Mess- und Regeltechnik GmbH
Bielefelder Str. 37a
32107 Bad Salzuflen, Germany
Tel. +49 (0)5222 974 0

Documentation representative

Torsten Malischewski
General Manager R&D

The devices bear the following marking: CE

ppa. T. M

Bad Salzuflen
14. March 2024

T. Malischewski
General Manager R&D

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Fig. 18: CE_DE_ME14

FISCHER MESS- UND REGELTECHNIK

(Translation) CE

EU Declaration of Conformity

For the product described as follows

Product designation	**Pressure transmitter**
Type designation	**ME14 ## # ## # # 0 R # # # # # #**

it is hereby declared that it corresponds with the basic requirements specified in the following designated directives:

2014/30/EU	*EMC Directive*
2014/34/EU	*ATEX Directive*
2011/65/EU	*RoHS Directive*
(EU) 2015/863	*Delegated Directive amending Annex II to Directive 2011/65/EU*

The products were tested in compliance with the following standards.

Electromagnetic compatibility (EMC)

DIN EN IEC 61326-1:2022-11 *EN IEC 61326-1:2021*	*Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirement*
DIN EN IEC 61326-2-3:2022-11 *EN IEC 61326-2-3:2021*	*Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning*

Explosive atmospheres (ATEX)

DIN EN IEC 60079-0:2019-09 *EN IEC 60079-0:2018* *Correction1* *IEC 60079-0:2017/COR1:2020*	*Explosive atmospheres - Part 0: Equipment - General requirements*
DIN EN IEC 60079-7/A1:2018-07 *EN IEC 60079-7:2015/A1:2018*	*Explosive atmospheres - Part 7: Equipment protection by increased safety "e"*
DIN EN 60079-31:2014-12 *EN 60079-31:2014*	*Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"*

RoHS Directive (RoHS3)

DIN EN IEC 63000:2019-05 *EN IEC 63000:2018*	*Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances*

Also they were subjected to the conformity assessment procedure „**Internal production control**".

Sole responsibility for the issue of this declaration of conformity in relation to fulfilment of the fundamental requirements and the production of the technical documents is with the manufacturer.

Manufacturer	**FISCHER Mess- und Regeltechnik GmbH** Bielefelder Str. 37a 32107 Bad Salzuflen, Germany Tel. +49 (0)5222 974 0
Documentation representative	Torsten Malischewski General Manager R&D
The devices are marked with:	CE Ex II 3G Ex nA IIC T4 Gc **Zone 2** CE Ex II 3D Ex tc IIIB T125°C Dc **Zone 22** -10°C ≤ T_{amb} ≤ 60°C

ppa. T. M

Bad Salzuflen
14. March 2024

T. Malischewski
General Manager R&D

09010873 • CE_EN_ME14_ATEX • Rev. ST4-A • 03/24 1 / 1

Fig. 19: CE_DE_ME14_ATEX

FISCHER MESS- UND REGELTECHNIK

(Translation) UK CA

UKCA Declaration of Conformity

For the product described as follows

is hereby declared to comply with the essential requirements, specified in the following UK regulations:

Product designation **Pressure transmitter**

Type designation **ME14 ## # ## # # 0 0 # # # # # #**

Statutory regulation No.	*Description*
2016 No. 1091	*The Electromagnetic Compatibility Regulations 2016*
2021 No. 422	*The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (Amendment) Regulations 2021*
2022 No. 1647	*The Hazardous Substances and Packaging (Legislative Functions and Amendment) (EU Exit) Regulations 2020*

The products have been tested according to the following standards.

Electromagnetic compatibility (EMC):

BS EN IEC 61326-1:2021-06-07	*Electrical equipment for measurement, control and laboratory use. EMC requirements. General requirements*
BS EN IEC 61326-2-3:2021-06-10	*Electrical equipment for measurement, control and laboratory use. EMC requirements. Particular requirements. Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning*

Restriction of Hazardous Substances (RoHS):

BS EN IEC 63000:2018-12-10	*Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances*

The sole responsibility for drawing up this declaration of conformity in relation to the fulfilment of the essential requirements and the preparation of the technical documentation lies with the manufacturer.

Manufacturer

FISCHER Mess- und Regeltechnik GmbH
Bielefelder Str. 37a
32107 Bad Salzuflen, Germany
Tel. +49 (0)5222 974 0

The devices bear the following marking: UK CA

ppa. T. M

Bad Salzuflen
14. March 2024

T. Malischewski
General Manager R&D

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Fig. 20: UKCA_DE_ME14

FISCHER MESS- UND REGELTECHNIK

(Translation) UK CA

UKCA Declaration of Conformity

For the product described as follows

Product designation **Pressure transmitter**

Type designation **ME14 ## # ## # # 0 R # # # # # #**

is hereby declared to comply with the essential requirements, specified in the following UK regulations:

Statutory regulation No.	*Description*
2016 No. 1107	*The Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016*
2016 No. 1091	*The Electromagnetic Compatibility Regulations 2016*
2021 No. 422	*The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (Amendment) Regulations 2021*
2022 No. 1647	*The Hazardous Substances and Packaging (Legislative Functions and Amendment) (EU Exit) Regulations 2020*

The products have been tested according to the following standards.

Explosive atmospheres (ATEX):

BS EN IEC 60079-0:2018-07-09	*Explosive atmospheres. Equipment. General requirements*
BS EN IEC 60079-7+A1:2015-12-31	*Explosive atmospheres. Equipment protection by increased safety "e"*
BS EN 60079-31:2014-07-31	*Explosive atmospheres. Equipment dust ignition protection by enclosure "t"*

Electromagnetic compatibility (EMC):

BS EN IEC 61326-1:2021-06-07	*Electrical equipment for measurement, control and laboratory use. EMC requirements. General requirements*
BS EN IEC 61326-2-3:2021-06-10	*Electrical equipment for measurement, control and laboratory use. EMC requirements. Particular requirements. Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning*

Restriction of Hazardous Substances (RoHS):

BS EN IEC 63000:2018-12-10	*Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances*

The sole responsibility for drawing up this declaration of conformity in relation to the fulfilment of the essential requirements and the preparation of the technical documentation lies with the manufacturer.

Manufacturer

FISCHER Mess- und Regeltechnik GmbH
Bielefelder Str. 37a
32107 Bad Salzuflen, Germany
Tel. +49 (0)5222 974 0

The devices are marked with:

UK CA Ex II 3G Ex nA IIC T4 Gc **Zone 2**
UK CA Ex II 3D Ex tc IIIB T125°C Dc **Zone 22**
$-10°C \leq T_{amb} \leq 60°C$

Bad Salzuflen
14. March 2024

T. Malischewski
General Manager R&D

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Fig. 21: UKCA_DE_ME14_ATEX

Notes

Notes

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