

## Datasheet

**ME12****Remotely Configurable Digital Pressure Transmitter**

### Application

Pressure transmitter with a ceramic measuring cell for measuring positive and negative pressures.

- Gauge pressure range from -1 ... 0 bar to 0 ... 60 bar.
- Absolute pressure range from 0 ... 1 bar to 0 ... 16 bar

Pressure transmitters from this series are suitable for a wide variety of measuring tasks in the fields of:

- Process engineering
- Process technology
- Environmental engineering

### Construction and mode of operation

The pressure being measured acts directly on the ceramic diaphragm, causing it to distort. That in turn alters the resistance of the strain gauge on the rear of the diaphragm in proportion to the level of distortion.

Electronics in the pressure transmitter housing convert the change in resistance into standard electrical signals.



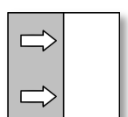
### Key features

- Configurable
- Robust housing design
- High accuracy
- Low hysteresis

### Parameterisation

The device is supplied as defined in the ordering code.

Nevertheless, to optimise performance in line with prevailing process conditions it is also possible to configure the pressure transmitter on-site via the connection cables. To do so you will require a PC as well as the programming adapter EU13, available as an accessory.



## Technical data

<b>Relative pressure measuring range [bar]</b>	-1...0	-1...+0.6	-1...+1.5	-1...+3	-1...+5	-1...+9	-1...+15	-1...+24		0...0.6	0...1	0...1.6	0...2.5	0...4	0...6	0...10	0...16	0...25	0...40	0...60
Overload pressure safety [bar]	4	4	4	10	20	40	40	100		4	4	4	10	12	20	40	40	100	100	200

<b>Absolute pressure measuring range [bar]</b>											0...1	0...1.6	0...2.5	0...4	0...6	0...10	0...16			
Overload pressure safety [bar]											2	2	5	5	10	20	20			

### General:

Linearity	< 1.0 % FS (optionally < 0.5 %FS)
Hysteresis	< 0.5 % FS
Permissible ambient temperature	-10 °C...+70 °C
Permissible continuous media temperature	-10 °C...+85 °C
Pressure connection	See order code
Electrical connection	Line socket DIN EN 175 301-803-A or M12 plug connector DIN EN 61076-2-101
Protection class	IP 65 according to DIN EN 60 529
Materials in contact with media	Chromium nickel steel 1.4404, ceramic Al <sub>2</sub> O <sub>3</sub> , see order code for seal
Casing materials	Chromium nickel steel 1.4305

### Electrical Data:

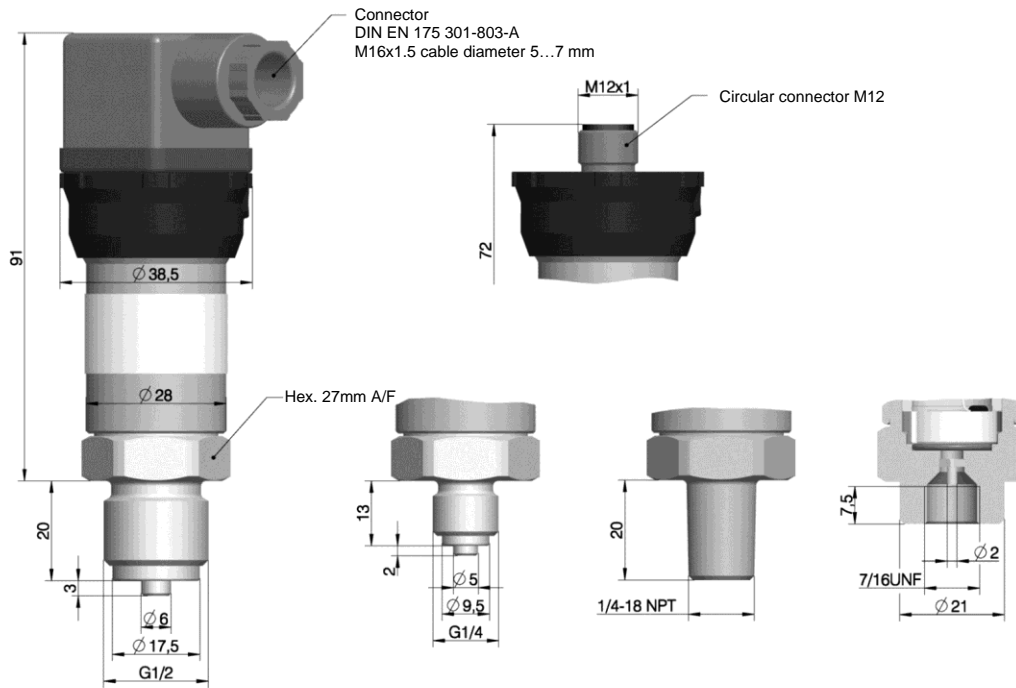
	<b>2-wire current output</b>	<b>3-wire voltage output</b>	<b>3-wire current output</b>
Rated voltage	24 VDC	24 VAC/DC	24 VAC/DC
Permissible supply voltage U <sub>b</sub>	6...30 VDC	15...30 VAC/DC	15...30 VAC/DC
Output signal	4...20 mA	0...10 VDC	0...20 mA 4...20 mA
Limit of the output signal	ca. 26 mA	ca. 10.5 VDC	ca. 23 mA
Apparent ohmic resistance	(U <sub>b</sub> - 6V) / 0.02A	≥ 5 kΩ ab 15 VDC ≥ 2 kΩ ab 20 VDC	[(U <sub>b</sub> - 10V) / 0.02A] + 300 Ω
Zero-point temperature drift	0.07 % FS/K	0.07 % FS/K	0.07 % FS/K
Measuring range temperature drift	0.05 % FS/K	0.05 % FS/K	0.05 % FS/K

### Configuration:

Characteristic curve inversion	Increasing / decreasing
Attenuation	0...200 s
Adjustable signal limits	Upper current limit 3.5...22.5 mA Lower current limit 3.5...22.5 mA Error signal 3.5...22.5 mA
Offset correction	+/-25 %FS
Span correction	+/-25 %FS

## Dimensioned drawings

Possible pressure and electrical connections:



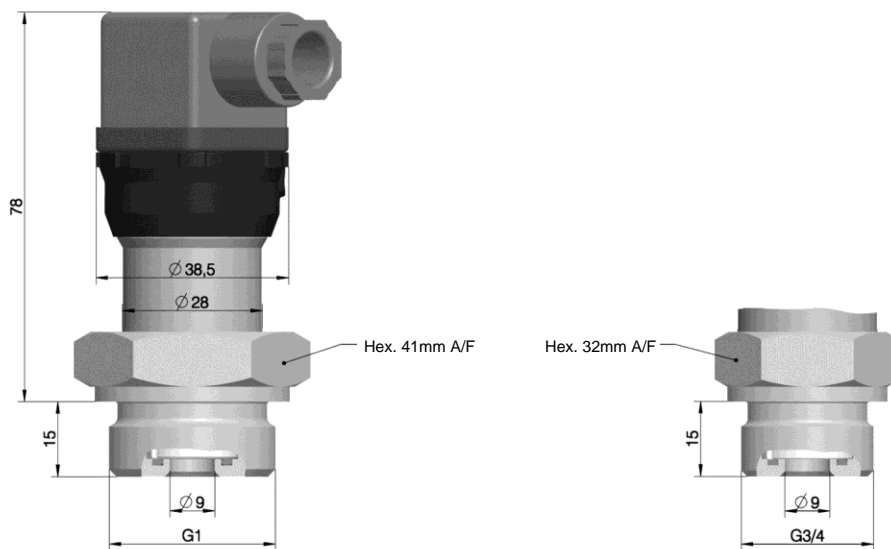
Code **87**

**85**

**88**

**S1**

Model with near flush-mounted front sensor:



Code **A3**

**A8**

**Order codes**

**Remotely Configurable Digital Pressure Transmitter**

**ME12**

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**Measuring Ranges**

0 ... 0.6 bar.....>	0	1
0 ... 1 bar.....>	0	2
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
0 ... 16 bar.....>	0	8
0 ... 25 bar.....>	0	9
0 ... 40 bar.....>	1	0
0 ... 60 bar.....>	1	1
-1 ... 0 bar.....>	3	1
-1 ... 0.6 bar.....>	3	2
-1 ... 1.5 bar.....>	3	3
-1 ... 3 bar.....>	3	4
-1 ... 5 bar.....>	3	5
-1 ... 9 bar.....>	3	6
-1 ... 15 bar.....>	3	7
-1 ... 24 bar.....>	3	8
0 ... -1 bar.....>	3	9

**Measuring Accuracy**

Characteristic curve deviation relative pressure 1.0%.....>	M
Characteristic curve deviation relative pressure 0.5%.....>	O
Characteristic curve deviation absolute pressure 1.0%.....>	S
Characteristic curve deviation absolute pressure 0.5%.....>	T

For the green measuring range only

**Pressure Connection**

Connection shanks G ¼ B; material 1.4404.....>	8	5
Connection shanks G ½ B; material 1.4404.....>	8	7
Connection shanks with external thread ¼ -18 NPT EXT, 1.4404.....>	8	8
Connection for Schrader® fitting, 1.4404.....>	S	1
G 1 B with near flush-mounted front pressure sensor, 1.4404.....>	A	3
G ¾ B with near flush-mounted front pressure sensor, 1.4404.....>	A	8

**Electrical Output Signal**

0 ... 20 mA Three-wire.....>	A
4 ... 20 mA Three-wire.....>	P
0 ... 10 V Three-wire.....>	C
1 ... 5 V Three-wire.....>	D
4 ... 20 mA Two-wire.....>	B

**Electrical Connection**

4-pole Line socket DIN EN 175 301-803-A.....>	H
4-pole circular plug connector M12 DIN EN 61076-2-101.....>	M

**Operating Voltage**

24 VDC (with two-wire only).....>	9
24 VAC/VDC (with three-wire only).....>	L

**Casing**

IP65 as per DIN EN 60 529.....>	0
IP65 as per DIN EN 60 529; encapsulated model.....>	V

**Media-Contact Seal**

FKM (Fluororubber, Viton®).....>	V
CR (Chloroprene rubber, Neoprene®).....>	C
EPDM (Ethylene propylene diene rubber).....>	E
H-NBR (Hydrogenated nitrile rubber), deployable to -25°C.....>	H
FFPM (Perfluororubber, Kalrez®).....>	K

**Measuring System / Type**

Standard.....>	0
Suitable for O <sub>2</sub> measurement (FKM seal only).....>	3
Silicone-free model.....>	A

**Accessories**

Order Code	Description	No. of Poles	Application	Length
EU13.F200	USB transmitter PC interface incl. PC software		for 2-wire transmitter	
EU03.F300	USB transmitter PC interface incl. PC software		for 3-wire transmitter	
06401993	Connection cable with M12 connector	4-pole	for supply / signal	2 m
06401994	Connection cable with M12 connector	4-pole	for supply / signal	5 m