

## ME12 || Digital pressure transmitter with remote configuration function

### Application

Pressure transmitter with 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..1bar 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

### Key features

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

### 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.



### 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, which is available as an accessory.



## Technical data

<b>Gauge pressure 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
Overpressure safety [bar]	3	5	8	12	20	32	50	80		2	2	5	8	12	20	32	50	80	120	200
<b>Absolute-pressure range [bar]</b>											0...1	0...1,6	0...2,5	0...4	0...6	0...10	0...16			
Overpressure safety [bar]											2	4	10	10	20	20	40			

**General:**

Linearity	< 1.0 %FS (optional < 0.5 %FS)
Hysteresis	< 0.5 %FS
Per. ambient temperature	-10 °C...+60 °C
Perm. medium temperature	-10 °C...+85 °C
Pressure connection	See Ordering Code
Electrical connection	Connector to DIN EN 175 301-803-A or M12 plug-in connector
Protection class	IP 65 to DIN EN 60 529
Materials with medium contact	Stainless steel 1.4404; ceramic Al <sub>2</sub> O <sub>3</sub> ; for seals see Ordering Code
Material, housing	Stainless steel 1.4305

**Electrical data:**

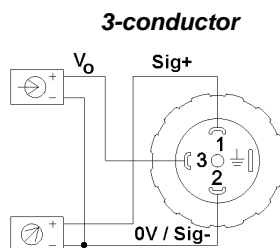
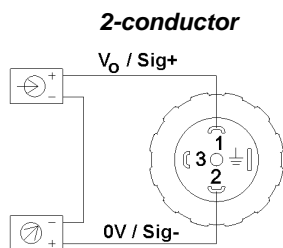
	<b>2-conductor Current output</b>	<b>3-conductor Voltage output</b>	<b>3-conductor Current output</b>
Nominal voltage	24 VDC	24 VAC/DC	24 VAC/DC
Per. supply voltage	6...30 VDC	15...30 VAC/DC	15...30 VAC/DC
Output signal	4...20 mA	0...10 VDC	0...20 mA 4...20 mA
Output signal limit	Approx. 26 mA	Approx. 10.5 VDC	Approx. 23 mA
Load	(V <sub>o</sub> - 6 V) / 0.02 A	≥ 5 kΩ from 15 VDC ≥ 2 kΩ from 20 VDC	[(V <sub>o</sub> - 10V) / 0.02 A + 300 Ω]
Temperature drift, zero point	0.07 %FS/K	0.07 %FS/K	0.07 %FS/K
Temperature drift, measuring range	0.05 %FS/K	0.05 %FS/K	0.05 %FS/K

**Parameterisation:**

Inverted curve	Rising / falling
Damping	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

## Connection diagram

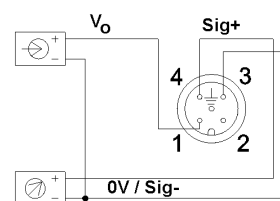
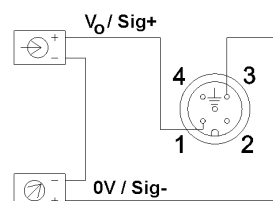
Connector  
DIN EN 175 301-803 A



**Caution:**

Always earth the device!  
Use pressure connection and/or shielding.

5-pole  
Circular connector M12

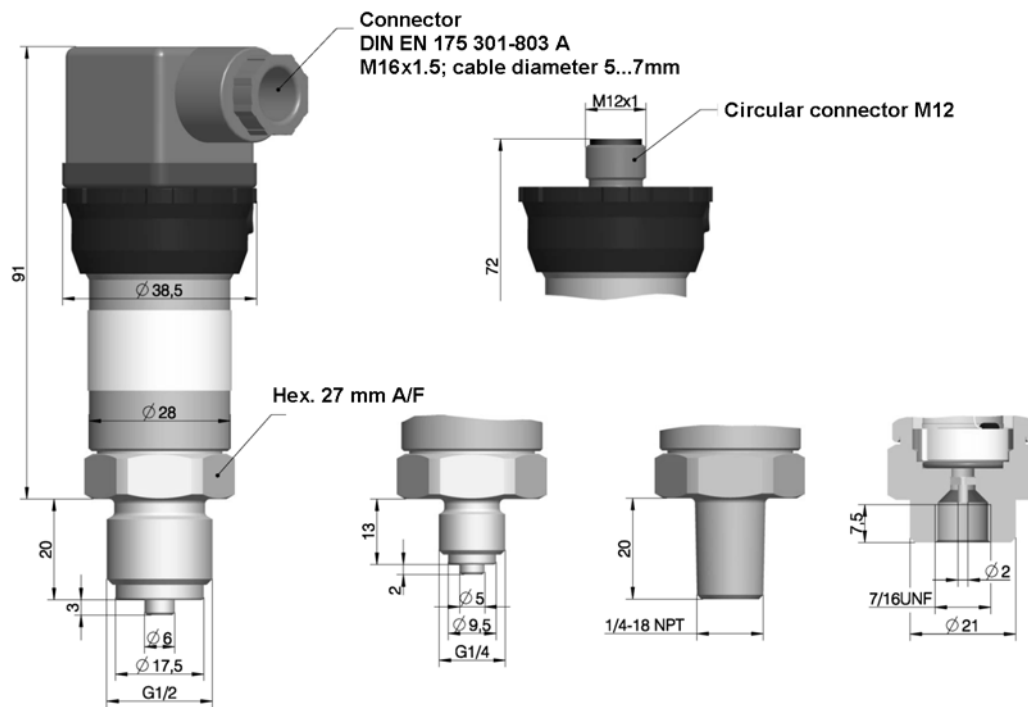


**Legend:**

- Power supply
- Consumer

## Dimension drawings

Possible pressure and electrical connections:



Code

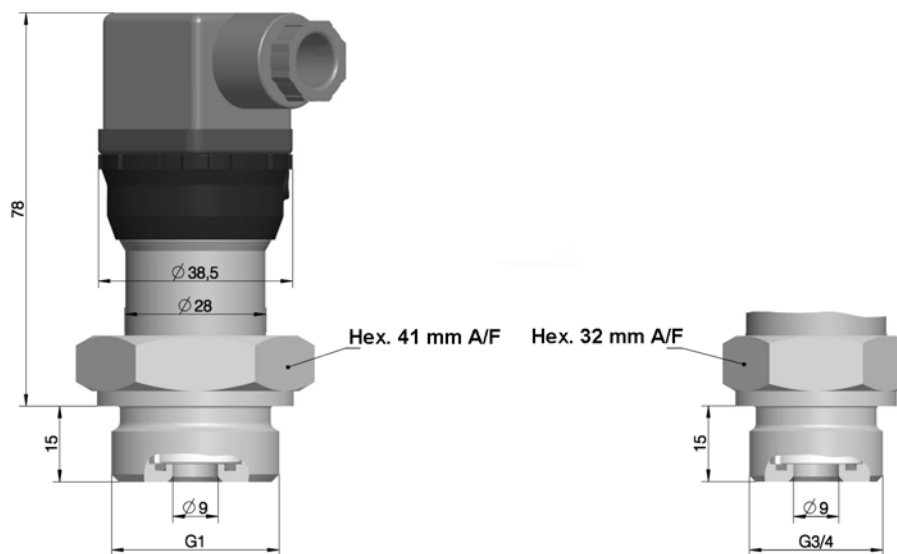
87

85

88

S1

Version with practically front-flush pressure sensor:



Code

A3

A8

## Ordering Code

### Digital pressure transmitter, with remote configuration function ME12



#### Measuring range

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

#### Accuracy

Curve deviation, gauge pressure 1.0%.....>	M	(all measuring ranges)
Curve deviation, gauge pressure 0.5%.....>	O	(all measuring ranges)
Curve deviation, absolute pressure 1.0%.....>	S	(possible for highlighted measuring ranges only)
Curve deviation, absolute pressure 0.5%.....>	T	(possible for highlighted measuring ranges only)

#### Pressure connection

Connection shank G 1/4"B; material: 1.4404.....>	8	5
Connection shank G 1/2"B; material: 1.4404.....>	8	7
Connection shank 1/4-18 NPT EXT; material: 1.4404.....>	8	8
Connection for Schrader® fitting; material: 1.4404.....>	S	1
Connection (practically front-flush) G 1"B; material: 1.4404.....>	A	3
Connection (practically front-flush) G 3/4"B; material: 1.4404.....>	A	8

#### Electrical output signal

0... 20 mA three-conductor.....>	A
4... 20 mA three-conductor.....>	P
0... 10 V three-conductor.....>	C
1... 5 V three-conductor.....>	D
4... 20 mA two-conductor.....>	B

#### Electrical connection

4-pole connector to DIN EN 175 301-803-A.....>	H
5-pole circular connector M12.....>	M

#### Operating voltage

24 VDC (two conductor transmitter only).....>	9
24 VAC/DC (not two-conductor transmitter).....>	L

#### Housing

IP 65 to DIN EN 60 529.....>	0
IP 65 to DIN EN 60 529; encapsulated version.....>	V

#### Seal with medium contact

FPM (fluor rubber, <i>Viton</i> ®).....>	V
CR (chloroprene rubber, <i>Neoprene</i> ®).....>	C
EPDM (ethylene propylene diene monomer).....>	E
H-NBR (hydrogenated nitrile-butadiene rubber) suitable to -25 °C.....>	H
FFKM (perfluoro rubber, <i>Kalrez</i> ®).....>	K

#### Measuring system / version

Standard.....>	0
Suitable for measuring O <sub>2</sub> (with FPM seal only).....>	3
Silicone-free version.....>	A

### Accessories

Order number	Designation	No. of poles	Use	Length
EU13.F200	USB transmitter PC interface incl. PC software		For 2-conductor transmitter	
EU03.F300	USB transmitter PC interface incl. PC software		For 3-conductor transmitter	
06401995	Connection cable with M12 coupling	5-pole	For power supply/signal	2 m
06401996	Connection cable with M12 coupling	5-pole	For power supply/signal	2 m