

Data sheet

ME11 | Pressure Transmitter

Pressure transmitter with ceramic measuring cell for measuring over-pressure and under-pressure.

Measuring ranges from -1..0 bar to 0..60 bar.

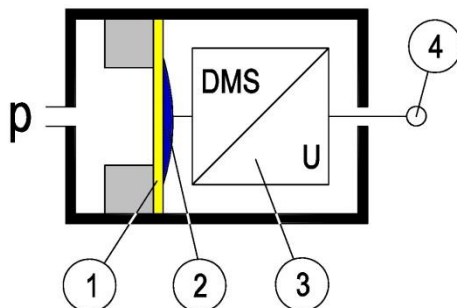
The pressure transmitters of this series are suitable for various measuring tasks in the following areas:

- Procedural engineering
- Process technology
- Environmental technology

Design and mode of operation

The measuring pressure acts on a ceramic membrane that deforms when under pressure. There is a DMS bridge attached to the ceramic membrane. When the ceramic deforms, the output signal of the DMS bridge changes. The electronics integrated into the device convert the bridge signals into electrical unit signals 4...20 mA or 0...10 V DC um.

Functional Schematic

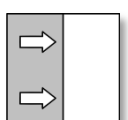
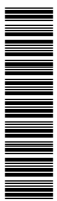


- 1 Ceramic membrane
- 2 DMS bridge
- 3 Transformer electronics
- 4 Analogue output



Important features

- Sturdy device
- high precision
- highly overpressure-proof
- large vibration resistance
- low hysteresis

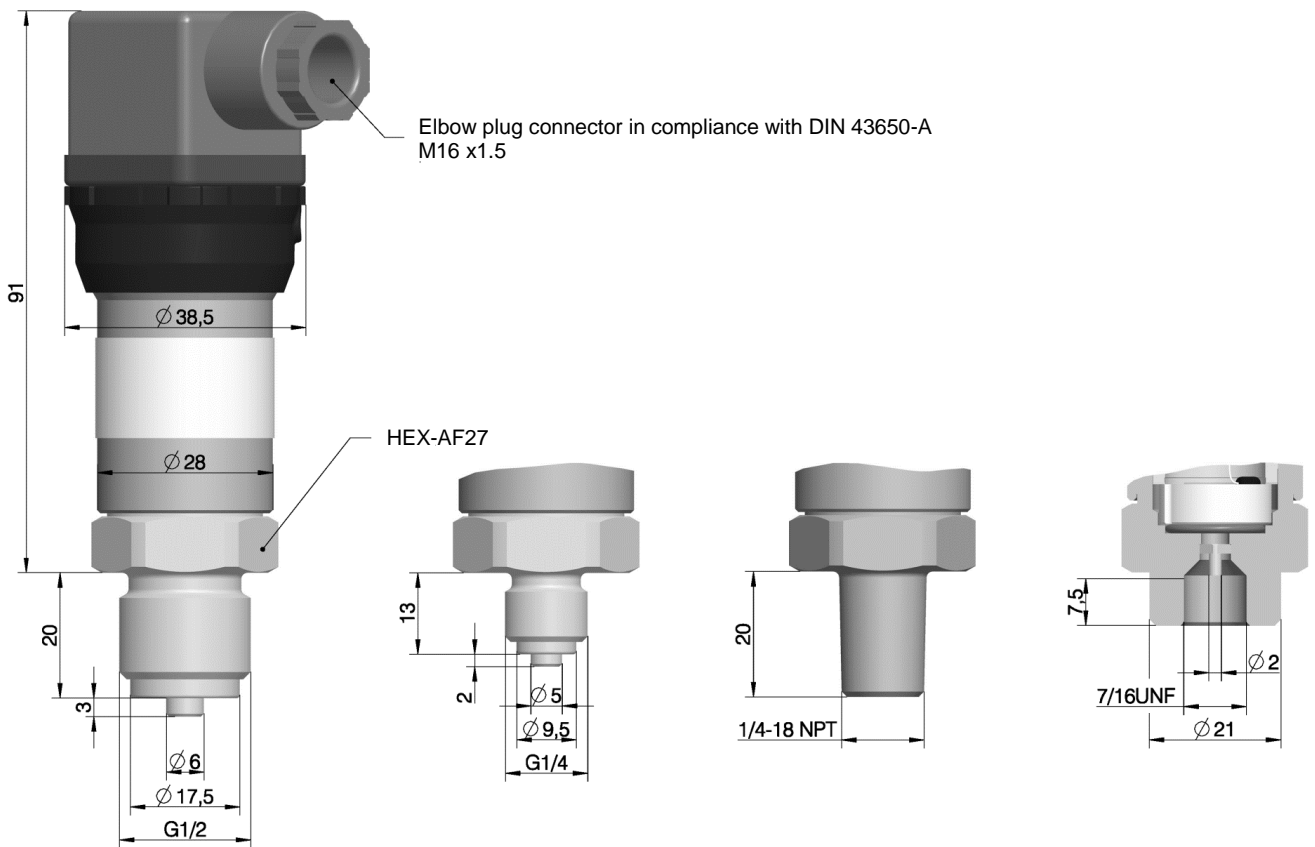


Technical data

Measuring ranges (bar)	-1 - 0	-1 - 0.6	-1 - 1.5	-1 - 3	-1 - 5	-1 - 9	-1 - 15	-1 - 24	0 - 1.6	0 - 2.5	0 - 4	0 - 6	0 - 10	0 - 16	0 - 25	0 - 40	0 - 60
Overpressure-proof	3	5	8	12	20	32	50	80	5	8	12	20	32	50	80	120	200

	General points	
Linearity	< 1 % FS	
Hysteresis	< 0.5 % FS	
Admissible ambient temperature	0 ... 60 °C	
Permissible medium temperature	0 ... 85 °C	
Pressure connection	See order code	
Electrical connection	Standardised plug acc. to DIN EN 175301-803-A M12 plug connection	
Type of protection	IP 65 as per DIN EN 60 529	
Material: parts with contact to the medium	Chrome-Nickel-Steel 1.4305, ceramics: Al ₂ O ₃ , seal: see order code	
Material: casing	Chromium nickel steel 1.4305	
	Electrical data	
Electrical connection type	Two-conductor	Three-conductor
Rated Voltage	24 V DC	24 V AC/DC
Admissible operating voltage U _b	6...30 V DC	15...30 V AC/DC
Output signal	4-20 mA	0-10 V DC
Apparent ohmic resistance	(U _b -6 V) / 0.02 A	≥ 5 kΩ from 15 VDC ≥ 2 kΩ from 20 VDC
Current/voltage limit	ca. 26 mA	approx. 10.5 V DC
Temperature drift, zero-point	0.07 % FS/K	0.07 % FS/K
Temperature drift, measuring range	0.05 % FS/K	0.05 % FS/K

Dimensional drawings (all dimensions in mm unless otherwise specified)



Standardised plug DIN EN 175 301-803-A

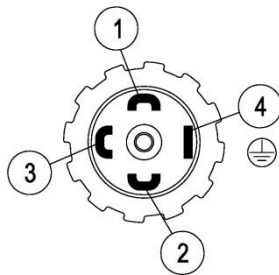


Table 1: 2-conductor connection 4...20 mA

Pin	Signal name		Cable colour
1	Supply/output	+U _b +Sig	red
2	Supply/output	-U _b -Sig	blue
3	n.c.		
4	n.c.		

Table 2: 3-conductor connection 0...10 V

Pin	Signal name		Cable colour
1	Delivery	+Sig	black
2	Supply/output	-U _b -Sig	blue
3	Supply	+U _b	red
4	n.c.		

M12 plug connection

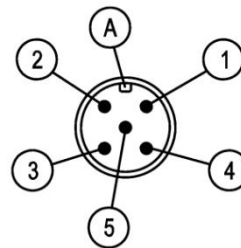


Table 3: 2-conductor connection 4...20 mA

Pin	Signal name		Cable colour
A	Coding		
1	Supply	+U _b +Sig	brown
2	n.c.		
3	Supply/output	-U _b -Sig	blue
4	n.c.		

Table 4: 3-conductor connection 0...10 V

Pin	Signal name		Cable colour
A	Coding		
1	Supply	+U _b	brown
2	n.c.		
3	Supply/output	-U _b -Sig	blue
4	Delivery	+Sig	black

Order Codes

Pressure Transmitter

ME11

		M								0
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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
- 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 ... 60 kPa> F 1
- 0 ... 100 kPa> F 2
- 0 ... 160 kPa> F 3
- 0 ... 250 kPa> F 4
- 0 ... 400 kPa> F 5
- 0 ... 600 kPa> F 6
- 0 ... 1000 kPa> F 7
- 0 ... 1600 kPa> F 8
- 0 ... 2500 kPa> G 1
- 0 ... 4000 kPa> G 2
- 0 ... 6000 kPa> G 3
- 0 ... 30 PSI> H 5
- 0 ... 60 PSI> H 6
- 0 ... 100 PSI> H 7
- 0 ... 160 PSI> H 9
- 0 ... 250 PSI> Q 1
- 0 ... 500 PSI> P 9
- 30 Inch Hg vac ... + 15 PSI> S 2
- 30 Inch Hg vac ... +100 PSI> S 5

Measuring accuracy

Characteristic curve deviation gauge pressure 1.0> M

Pressure connection

- Connection shanks with external thread G ¼ B, 1.4305> 8 5
- Connection shanks with external thread G ½ B, 1.4305> 8 7
- Connection shanks with male thread ¼ -18 NPT EXT, 1.4305> 8 8
- Connection for Schrader® screw connection> S 1

Electrical output signal

- 4 – 20 mA (only 2-conductor)> B
- 0 – 10 V DC (only 3-conductor)> C

Electrical connection

- Plug connection 4-pole, standard plug DIN EN 175 301-803-A> H
- M12 plug connection> C

Operating voltage

- 24 V DC (only 2-conductor)> 9
- 24 V DC (only 3-conductor)> L

Casing

- IP65> 0
- IP 65, encapsulated model> V

Media-Contact Seal

- FKM (standard)> V
- CR (Chloroprene Rubber)> C
- EPDM (Ethylene propylene diene rubber)> E
- H-NBR (Hydrogenated Acrylonitrile Butadiene Rubber)
can be used between -25 °C and +100 °C> H

Measuring System / Design

- Standard> 0
- System for measuring O₂ (only with FKM seal)> 3
- Silicon-free version> A