

ME01 || Digital Pressure Gauge

Application

The ME01 is an electronic manometer with on-site display and signal transmitter for positive and negative pressure measurement of liquid and gaseous media.

This type series' manometers are suitable for various measuring tasks; they apply to measuring ranges of 0..1.6 bar up to 0.. 60 bar.

Operation and Construction

The pressure sensor consists of a ceramic measuring cell. The high durability of the used ceramic materials allows even application with aggressive media. On the diaphragm's side facing away from the medium a wheatstone bridge is attached. During pressurization the diaphragm is strained. The resistance values of the wheatstone bridge change according to the acting pressure. These values are displayed and transmitted as an electrical output signal 0..20 mA (3-wire).



Main Features

- Directly measuring sensor without transfer fluid
- High vibration-resistance
- High accuracy
- High overpressure safety
- Minimum hysteresis

Typical Applications

- Process engineering
- Process technology
- Environmental engineering
- Machine and plant construction



Specifications

Measuring range in bar	0-1.6	0-2.5	0-4	0-6	0-10	0-16	0-25	0-40	0-60
Overpressure safety in bar	3.2	5	8	12	20	32	50	80	120
Measuring range in bar	- 1..0	-1..0.6	-1..1.5	-1..3	-1..5	-1..9	-1..15	0...-1	
Overpressure safety in bar	2	3	3	8	12	20	32	2	

Linearity	< 1% FS
Hysteresis	< 0.5% FS
Perm. ambient temperature	0 .. 60°C
Perm. medium temperature	0 .. 85°C
Protection class	IP 65 acc. to DIN EN 60529

Electrical Data

Nominal power supply	24V DC
Allowable power supply	15...30 V DC
Output signal	0 .. 20 mA
Electrical connection	3-wire
Max. load	450 Ω
Current / voltage limiting	Approx. 26 mA
Temperature drift, zero	0.4 % FS/10 K
Temperature drift, range	0.05 % FS/10 K

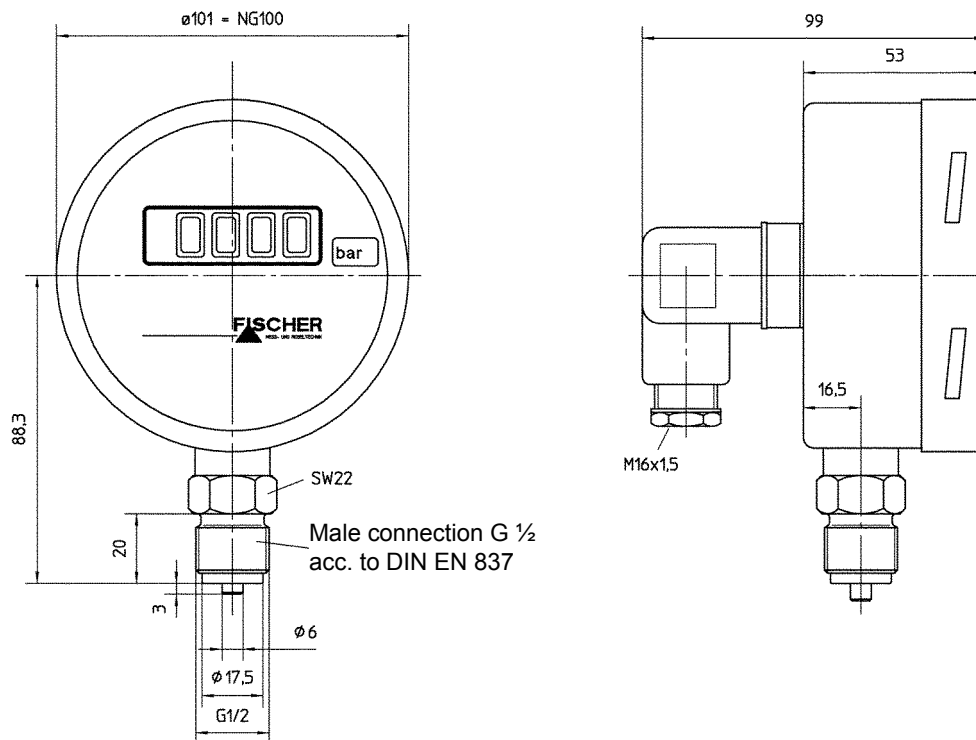
Connections

Electrical connection	Connection plug M16 x 1.5 acc. to DIN EN 175301-803
Pressure connection	Male connection G ½ acc. to DIN EN 837

Materials

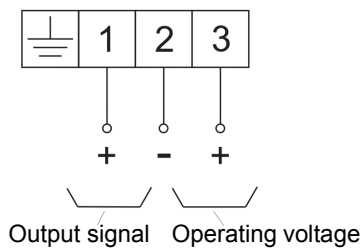
Material, medium contact	AISI 316L (1.4404), gasket: Viton®
Material, body	AISI 304 (1.4305)

Dimensions (all units in mm unless otherwise stated)



Electrical Connection

3-wire



Ordering Code

Digital Pressure Gauge

ME01

			8	7	A	H	L	0	0	0	0
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Measuring Range

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

Accuracy

Linearity error relative pressure 1.0	> M
Linearity error absolute pressure 1.0 (only for ranges ≤16 bar)	> S

Pressure Connection

Male connection G 1/2 B stainless steel	> 8 7
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Electrical Output Signal

0 - 20 mA 3-wire	> A
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Electrical Connection

4-pin connection plug acc. to DIN EN 175 301-803-A	> H
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Power Supply

24 V DC	> L
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