

Pressure sensor for general application

With front flush diaphragm
for gauge pressure and absolute pressure

Accuracy 0,25% and 0,5 %

Standard output: 4...20 mA; 2-wire system
or 0...5 VDC; 3-wire system
or 0...10 VDC; 3-wire system



Description

Pressure sensors for general application are top of the range "pressure transducers".

Their accuracy, reliability, resistance to corrosion and mechanical load rating make them suitable for all pressure measuring tasks – in production, development or in the laboratory.

The front flush pressure diaphragm avoids zones, in which medium could crystallize or residues could form, thus ensuring trouble-free pressure measurement and hygienic cleaning of the pressure sensors.

The measuring ranges, graded in accordance with EN, range from 0.1 bar to 600 bar. The case and wetted parts comprise stainless steel and are thus resistant to chemically aggressive media. With the aid of an integrated cooling element, the sensors can be supplied with medium temperatures up to 150°C.

For more difficult measuring tasks (e.g. hydrostatic column), two potentiometers enable the zero point and measuring range to be set.

The pressure sensors for general application meet the electronic magnetic compatibility (EMC) requirements to EN 61326.

Features

- For pasty or crystallizing media
- Finely graded selection of nominal pressure ranges according to EN
- Corrosion resistant stainless steel design
- High overload protection
- High resistant to shock and vibration
- For dynamic or static measurements
- Good repeatability
- Integrated cooling element for medium temperatures up to 150°C

Ranges

Negative	-1...0 bar	to	-0,1...0 bar
Positive	0...0,1 bar	to	0...600 bar
Absolute pressure	0...0.25 bar	to	0... 16 bar

Applications

Process engineering,
Plant and apparatus design,
Development and laboratory applications

Technical details

Type	3380	3385	Options
Pressure type	negative or positive gauge pressure		negative and positive gauge pressure
Output signal	4...20 mA 2 wire system	0...5 VDC; 0...10 VDC 3 wire system	0...20 mA - 3 wire system; special signals on request
Accuracy % of F.S. 1)	0,5		Class 0,25; 0,35
Ranges acc. to EN	0...0.1 bar to 0 ... 600 bar		
Sensor element	thin film		
Repeatability	≤ ± 0,05 % of F.S.		
Stability (annual)	≤ ± 0,2 % of F.S. in rated conditions		
Case	stainless steel 1.4301		
Pressure connection	G ½ B		G ¼ B; G 1 B
Wetted parts	stainless steel		
Overload limit	≤ 16 bar 3,5-fold; ≤ 600 bar 2-fold; vacuum resistant		
Electrical connection	plug to DIN 43 650 with junction box round connector M12x1, 4-pin		cable outlet with 12 m cable
Power supply	10...30 VDC (14...30 VDC for output 0...10 V)		
Power consumption	output 4...20 mA: signal voltage output 0...20 mA: signal voltage + 4 mA voltage output: 8 mA		
Load	$\leq \frac{UB - 10V}{0,020A}$ for output 0(4)...20 mA $> 5 \text{ kOhm}$ for output 0...5 V $> 10 \text{ kOhm}$ for output 0...10 V		
Temp. compens. range	0.... 80°C		
Temperature influence			
– zero point	≤ ± 0,2 % /10 K 3)		
– measuring range	≤ ± 0,2 % /10 K		
Adjustability	zero point and measuring range up to ± 10 %		
Response time	≤1 ms (within 10 % to 90 % of F.S.)		
Protection type	IP 65 acc. to EN 60529/IEC S29 IP 67 acc. to M12x1 plug		IP 67 for cable outlet
Emission 4)	acc. to EN 61326		
Interference 4)	acc. to EN 61326		
Electrical protection types	polarity, overload, and short-circuit-protection		
Temperatures ranges			
– storage	-40..... 100 °C		medium temperature -40 ... 125 °C
– medium	-30..... 100 °C		
– ambient	-20..... 80 °C		integrated cooling element for temperatures up to 150°C
Weight	approx. 0,2 kg		

of F.S. = of full scale value

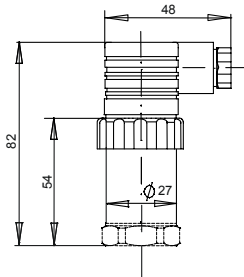
- 1) Terminal point adjustment according to DIN 16 086, incl. linearity and hysteresis
- 2) 0.25% accuracy only for ranges ≥ 0.25 bar
- 3) ≤ ± 0.4 % /10 K for ranges 0...0.1 and 0...0.16 bar
- 4) Declaration of conformity on request

Dimensions (mm)

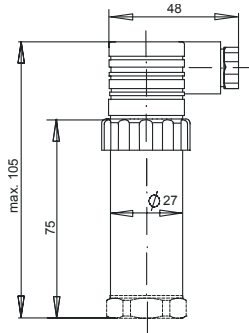
Case

plug according to DIN 43 650

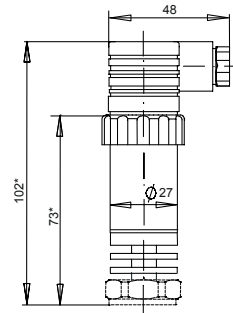
accuracy 0.5%



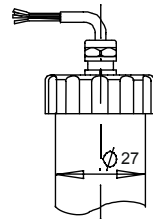
accuracy 0.25%



with integrated cooling element



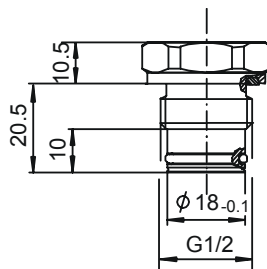
cable outlet



* for long version + 22 mm

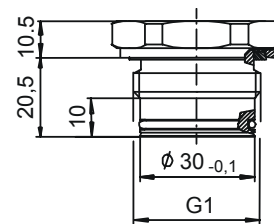
Pressure connections

G 1/2 B



A-004

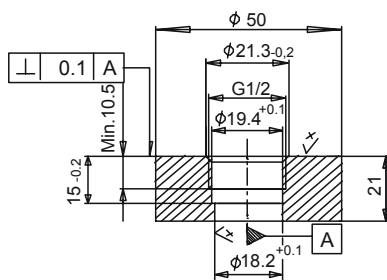
G 1 B



A-005

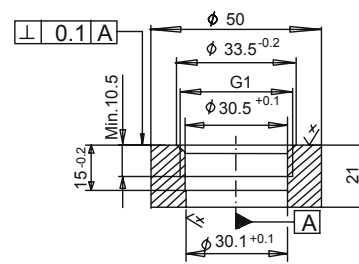
Weld-on socket or screw-in aperture

G 1/2



S-003

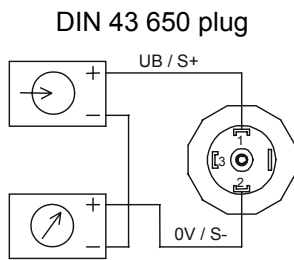
G 1



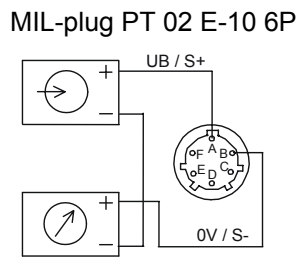
S-004

Electrical connection

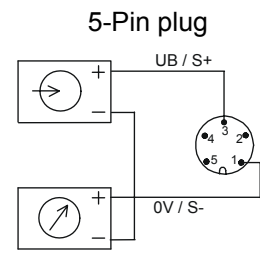
2-wire system



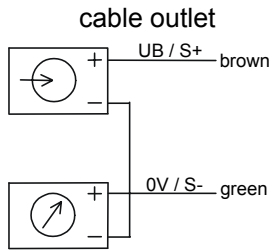
E-001



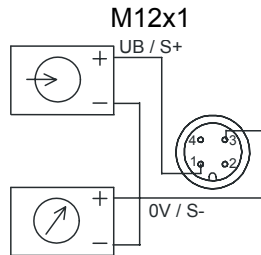
E-011



E-035

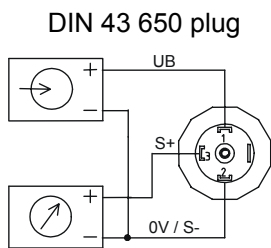


E-015

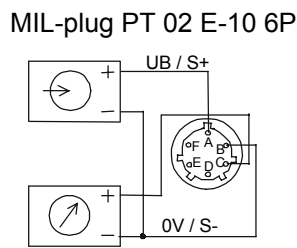


E-033

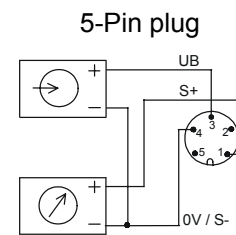
3-wire-system



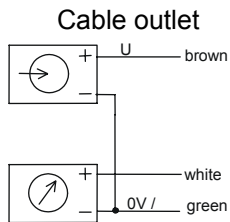
E-002



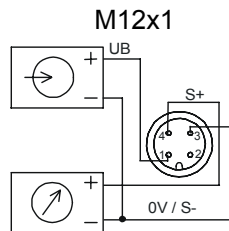
E-012



E-036



E-017



E-034

Connection table for DIN plug or cable outlet

	4...20 mA (2 - wire)		0...10 VDC (3 - wire)	
Supply: UB	1	Brown	1	Brown
Supply: 0V	2	Green	2	Green
Signal: S+	-	-	3	White
Signal: S-	-	-	2	Green

Order details

1. Type
2. Measuring range
3. Output signal
4. Options