

Pressure Sensors Compact

with internal diaphragm
for gauge pressure and absolute pressure

accuracy 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 Compact are top of the range pressure sensors.

Compact, sturdy, accurate and long-term stable, they perform industrial pressure measuring jobs reliable in the fields of production and development and in the laboratory.

The compact design with G ¼ B pressure connection enables space-saving and low-weight installation. The materials and technology used make these pressure sensors insensitive to chemically aggressive media and mechanical load.

Measuring ranges from 250 mbar up to 1000 bar, graded in accordance with EN, offer a wide range of possible applications. The overload limit up to 16 bar is 3.5-fold, between 16 and 600 bar 2-fold and above 600 bar 1.5-fold.

The short response time of the pressure sensors of < 1ms enables peak pressures with frequencies of up to 150 Hz to be measured. DIN plugs or cable outlets are used to pick up the electrical output signals.

The Compact pressure sensors meet the electromagnetic compatibility (EMC) to EN 61326.

Features

- Compact design
- Pressure connection G¼B
- High peak pressure resistance
- High alternating load resistance
- High long-term stability
- Corrosion resistant stainless steel design
- For dynamic and static measurements

Measuring ranges

gauge pressure

negative -1...0 bar to -0.25...0 bar

positive 0...0.25 bar to 0...1000 bar

absolute pressure 0...0.25 bar to 0...16 bar

Applications

Process engineering,
Hydraulics and pneumatics,
Conveyor and lifting systems,
General mechanical engineering,
Development and laboratory applications.

Model: P3249

Technical data

Model	P3249			Options
Pressure type	negative or positive gauge pressure		absolute pressure	negative and positive gauge pressure
Output signal	4...20 mA - 2-wire system 0...5 VDC - 3-wire system 0...10 VDC - 3-wire system			0...20 mA - 3-wire system other signals on request
Accuracy	± 0.5 % of F.S. ¹⁾			
Ranges accord. to EN	0 ... 0.25 bar to 0 ... 16 bar	0 ... 25 bar to 0 ... 1000 bar	0 ... 0.25 bar to 0 ... 16 bar	other measuring ranges on request
Sensor element	piezoresistive	thin film	piezoresistive	
Repeatability	≤ ± 0.05 % of F.S.			
Stability (annual)	≤ ± 0.2 % of F.S. in rated conditions			
Case	stainless steel			
Pressure connection	G ¼ B to DIN 16288			other pressure connections on request
Wetted parts	stainless steel 1.4571 and 1.4542			
Overload limit	≤ 16 bar 3.5-fold; ≤ 600 bar 2-fold; > 600 bar 1.5-fold; vacuum resistant			
Electrical connection	plug according to DIN 43650C with junction box			cable outlet with 1 m cable
Power supply	10...30 VDC (14...30 VDC for output 0...10 V)			
Power consumption	output 4...20 mA: signal current output 0...20 mA: signal current + 4 mA voltage output: 8 mA			
Load	$\leq \frac{UB - 10V}{0.020A}$ for output 4(0)...20 mA > 5 kOhm for output 0...5 V > 10 kOhm for output 0...10 V			
Temp. compens. range	0... 80°C			
Temperature influence	± 0.3 % /10 K, on zero point and measuring range			
Adjustability	on zero point and measuring range ± 10 %			
Response time	≤ 1 ms (within 10 % to 90 % of F.S.)			
Protection type	IP 65 EN 60529 / IEC 529			IP 67 for cable outlet
Emission ²⁾	To EN 61326			
Interference ²⁾	To EN 61326			
Electrical protection types	polarity, overvoltage and short-circuit protection			
Temperature ranges				
– Storage	-40 100 °C			
– Media	-30 100 °C			
– Ambient	-30 85 °C			
Weight	approx. 0.10 kg			

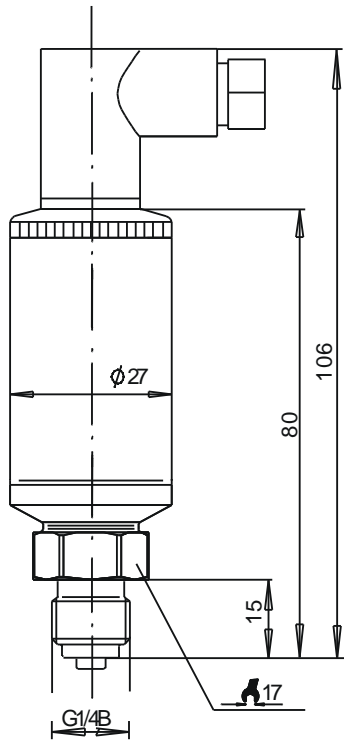
of F.S.= of full scale value

- 1) Terminal point adjustment according to DIN 16 086, incl. linearity and hysteresis
- 2) Declaration of conformity on request

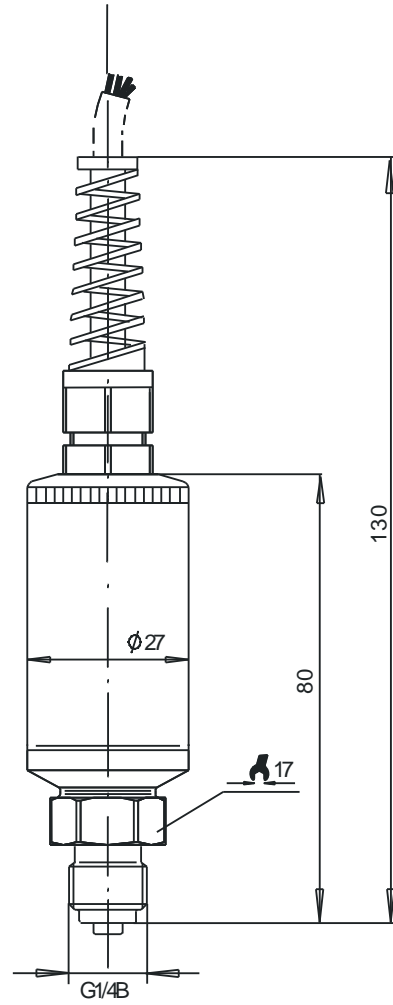
Dimensions (mm)

Case

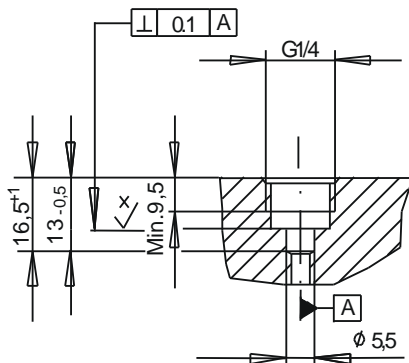
plug according to DIN 43 650C



cable outlet



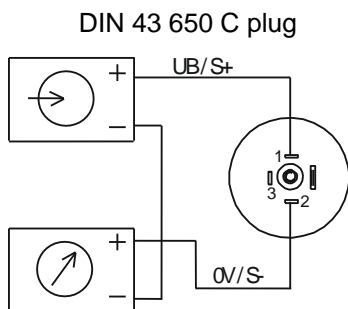
Screw-in aperture according to DIN 16288



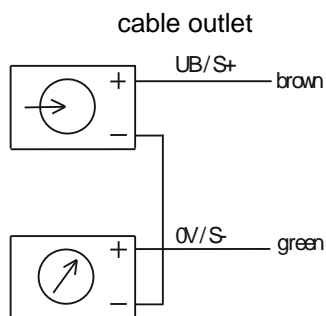
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Electrical connection

Two-wire system

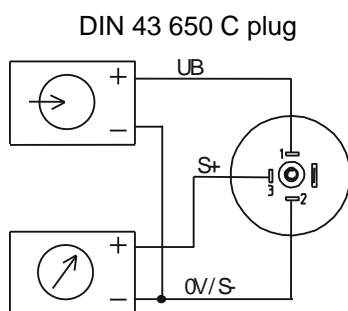


E-005

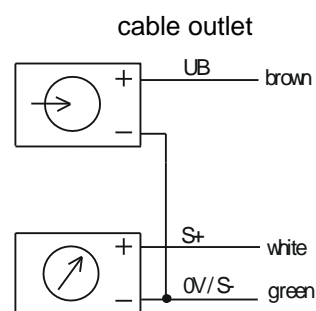


E-016

Three-wire system



E-006



E-018

Connection table for DIN plug or cable outlet

	4...20 mA (2 - wire)		0...10VDC (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. Model
2. Measuring range
3. Output signal
4. Options