Pressalis

Datasheet

Pressure transmitters

PT10

Millivolt pressure sensor, glass-fused cell



Unamplified 10 to 15 mV/V output from a one-piece 17-4PH cell, 6 to 600 bar, for your own amplifier.

Range	Accuracy	Output	Overpressure
0 to 6 up to 0 to 600 bar	**±0.3 % or ±0.5 % of span**	**10 to 15 mV/V, four-wire**	**3 x range, burst 5 x range**

Overview

PT10 is a bare pressure sensor with no amplifier inside. MEMS silicon strain gauges are glass-fused onto a 17-4PH stainless steel cell, and the bridge gives 10 to 15 mV/V on four wires from a 3 to 10 V DC excitation, 5 V DC recommended. Ranges run from 0 to 6 bar up to 0 to 600 bar, gauge or sealed gauge, at ±0.3 % or ±0.5 % of span.

It is meant for machine builders and test bench designers who already have a strain gauge amplifier, a bridge input card or their own conditioning board, and want the sensing element without a second set of electronics. Hydraulic test stands, presses, injection moulding machines and pump test rigs are the usual points.

The pressure chamber is machined from one piece of 17-4PH with no weld and no O-ring in contact with the medium. Overpressure is 3 x range and burst pressure 5 x range, with ±0.1 % of span per year stability. Process connection is M20 x 1.5, G1/4 or 1/4 NPT. Electrical connection is a cable outlet, an M12 connector or a circular connector, all IP65.

Specifications

Measurement

Pressure type	Gauge, sealed gauge
Ranges	0 to 6 bar up to 0 to 600 bar
Accuracy	±0.3 % or ±0.5 % of span
Long-term stability	±0.1 % of span per year
Overpressure	3 x range
Burst pressure	5 x range
Zero temperature drift	±0.02 % of span per °C
Span temperature drift	±0.02 % of span per °C

Compensated temperature	-20 to 70 °C

Medium and environment

Operating temperature	-40 to 85 °C
Storage temperature	-40 to 125 °C
Shock	100 g (11 ms)
Wetted parts	17-4PH stainless steel
Housing	304 stainless steel

Electrical

Output	10 to 15 mV/V, unamplified bridge
Wiring	Four-wire
Excitation	3 to 10 V DC, 5 V DC recommended
Electrical connection	Cable outlet, M12 connector or circular connector
Protection	IP65

Mechanical

Process connection	M20 x 1.5, G1/4, 1/4 NPT
Construction	One-piece 17-4PH pressure chamber, glass-fused sensing element, no weld, no O-ring

Common configurations

Any combination from the ordering code can be quoted. Other ranges and connections on request.

Range	Pressure type	Process connection	Electrical connection	Accuracy	Order code
0 to 10 bar	Gauge	G1/4 male	M12	±0.5 %	**PT10-010-G-B2-M-A05**
0 to 25 bar	Gauge	G1/4 male	Cable outlet	±0.3 %	**PT10-025-G-B2-C-A03**
0 to 100 bar	Sealed gauge	M20 x 1.5 male	M12	±0.3 %	**PT10-100-S-M20-M-A03**
0 to 250 bar	Sealed gauge	G1/4 male	Circular connector	±0.5 %	**PT10-250-S-B2-A-A05**
0 to 400 bar	Sealed gauge	1/4 NPT male	Cable outlet	±0.3 %	**PT10-400-S-N2-C-A03**
0 to 600 bar	Sealed gauge	M20 x 1.5 male	M12	±0.5 %	**PT10-600-S-M20-M-A05**

Ordering code

One code from each group, in this order. Example: **PT10-006-G-M20-C-A03**. Send the code and the quantity to **contact@pressalis.com** for a quote.

PT10	-	006	-	G	-	M20	-	C	-	A03
Model		Range		Pressure type		Process connection		Electrical connection		Accuracy

Range

006	0 to 6 bar
010	0 to 10 bar
016	0 to 16 bar
025	0 to 25 bar
040	0 to 40 bar
060	0 to 60 bar
100	0 to 100 bar
160	0 to 160 bar
250	0 to 250 bar
400	0 to 400 bar
600	0 to 600 bar
X	Other range, state in the request

Pressure type

G	Gauge
S	Sealed gauge

Process connection

M20	M20 x 1.5 male
B2	G1/4 male
N2	1/4 NPT male

Electrical connection

C	Cable outlet
M	M12 connector, four-pin
A	Circular connector

Accuracy

A03	±0.3 % of span
A05	±0.5 % of span