Pressalis

Datasheet

Pressure transmitters

PT50

Analog pressure and temperature transmitter



Pressure up to 600 bar and -30 to 125 °C through one port, as 4 to 20 mA plus Pt100 or two 4 to 20 mA loops.

Pressure	Temperature	Output	Accuracy
0 to 10 kPa up to 0 to 600 bar	**-30 to 125 °C, Pt100**	**Analog: 2 x 4 to 20 mA or Pt100**	**±0.3 % or ±0.5 % of span**

Overview

PT50 measures pressure and medium temperature through one process connection, so a single tapping gives both readings. Pressure is sensed by a silicon strain gauge glass-fused to a 17-4PH stainless steel element, in a 304 stainless steel housing. Temperature is sensed by a Pt100 element. Both signals are analog, on a four-wire connection with a 9 to 30 V DC supply.

It goes on pump stations and water treatment plant, hydraulic and pneumatic control systems, and automated test and inspection rigs. That covers water and pumping, hydraulics and machinery, and test benches, wherever one fitting is easier to place than two and the controller takes analog inputs.

Output is 4 to 20 mA for pressure with either the Pt100 wired out directly or a second 4 to 20 mA loop for temperature. Pressure ranges run from 0 to 10 kPa to 0 to 600 bar, gauge or absolute, at ±0.3 % or ±0.5 % of span; temperature reads -30 to 125 °C at ±0.5 % of span. G, NPT, R and metric male threads are offered, IP65.

Specifications

Pressure measurement

Pressure type	Gauge, absolute
Ranges	0 to 10 kPa up to 0 to 600 bar
Accuracy	±0.3 % or ±0.5 % of span
Long-term stability	±0.1 % of span per year
Zero temperature drift	±0.02 % of span per °C
Span temperature drift	±0.02 % of span per °C
Overpressure	2 x range

Burst pressure	3 x range

Temperature measurement

Element	Pt100
Range	-30 to 125 °C
Accuracy	±0.5 % of span
Signal	Pt100 wired out, or 4 to 20 mA

Medium and environment

Operating temperature	-40 to 85 °C
Compensated temperature	-20 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	4 to 20 mA pressure and Pt100 temperature, or 4 to 20 mA pressure and 4 to 20 mA temperature
Wiring	Four-wire
Supply	9 to 30 V DC
Electrical connection	Cable outlet, M12 4-pin, DIN 43650 form A or form C, circular or Deutsch DT04-4P connector
Protection	IP65

Mechanical

Process connection	G1/8, G1/4, G3/8, G1/2, 1/8 NPT, 1/4 NPT, 1/2 NPT, R1/4, R1/2, M12 x 1.5, M18 x 1.5, M20 x 1.5, male
Sensing element	Silicon strain gauge, glass-fused to 17-4PH stainless steel
Dimensions	Ø22 mm body, 22 mm hex, 69 mm from thread end to cable gland

Common configurations

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

Range	Pressure type	Process connection	Signals	Electrical connection	Accuracy	Order code
0 to 10 bar	Gauge	G1/4 male	4 to 20 mA and Pt100	Cable outlet	±0.5 %	**PT50-010-G-B2-IP-C-A05**
0 to 16 bar	Gauge	G1/2 male	2 x 4 to 20 mA	M12	±0.3 %	**PT50-016-G-B4-II-M-A03**
0 to 25 bar	Gauge	1/4 NPT male	2 x 4 to 20 mA	DIN 43650 form A	±0.5 %	**PT50-025-G-N2-II-D-A05**
0 to 100 bar	Gauge	M20 x 1.5 male	4 to 20 mA and Pt100	M12	±0.5 %	**PT50-100-G-M20-IP-M-A05**
0 to 250 bar	Gauge	G1/4 male	2 x 4 to 20 mA	Deutsch DT04-4P	±0.3 %	**PT50-250-G-B2-II-T4-A03**
0 to 1 bar	Absolute	G1/4 male	2 x 4 to 20 mA	Cable outlet	±0.5 %	**PT50-001-A-B2-II-C-A05**

Ordering code

One code from each group, in this order. Example: **PT50-K10-G-B1-IP-C-A03**. Send the code and the quantity to **contact@pressalis.com** for a quote.

PT50	-	K10	-	G	-	B1	-	IP	-	C	-	A03
Model		Range		Pressure type		Process connection		Output		Electrical connection		Accuracy

Range

K10	0 to 10 kPa
K50	0 to 50 kPa
001	0 to 1 bar
004	0 to 4 bar
010	0 to 10 bar
016	0 to 16 bar
025	0 to 25 bar
060	0 to 60 bar
100	0 to 100 bar
250	0 to 250 bar
600	0 to 600 bar
X	Other range, state in the request

Pressure type

G	Gauge
A	Absolute

Process connection

B1	G1/8 male
B2	G1/4 male
B3	G3/8 male
B4	G1/2 male
N1	1/8 NPT male
N2	1/4 NPT male
N4	1/2 NPT male
R2	R1/4 male
R4	R1/2 male
M12	M12 x 1.5 male
M18	M18 x 1.5 male
M20	M20 x 1.5 male

Output

IP	4 to 20 mA pressure and Pt100 temperature
II	4 to 20 mA pressure and 4 to 20 mA temperature

Electrical connection

C	Cable outlet
M	M12 connector, 4-pin
D	DIN 43650 form A connector
DC	DIN 43650 form C connector
A	Circular connector
T4	Deutsch DT04-4P connector

Accuracy

A03	±0.3 % of span
A05	±0.5 % of span