Pressalis

Datasheet

Pressure transmitters

PT30

Strain gauge transmitter for refrigeration



Silicon strain gauge, 7/16-20 UNF female port, 0 to 50 kPa up to 0 to 60 bar, current or voltage output.

Range	Accuracy	Output	Process port
0 to 50 kPa up to 0 to 60 bar	**±0.5 % or ±1 % of span**	**4 to 20 mA or 3 voltage outputs**	**7/16-20 UNF female**

Overview

PT30 is a compact pressure transmitter for refrigeration, air conditioning and compressed air. The sensing element is a MEMS silicon strain gauge, glass-fused to the stainless steel body. From 6 bar up, the pressure chamber is machined from one piece of 17-4PH stainless steel, with no weld and no O-ring. Ranges below 6 bar use a 304 or 316 stainless steel body.

It goes on refrigeration and air conditioning circuits, on air compressors, and on the test stations of air conditioning production lines. That covers HVAC and buildings, compressor packages on the machinery side, and test benches. The process port is 7/16-20 UNF female, the thread used on refrigeration service connections.

Output is 4 to 20 mA two-wire, or 0.5 to 4.5 V, 0 to 5 V or 0 to 10 V three-wire, with a Packard, M12, or DIN 43650 form A or form C connector, all IP65. Accuracy is ±0.5 % or ±1 % of span. From 6 bar the transmitter takes 3 x range overload and 5 x range before burst.

Specifications

Measurement

Pressure type	Gauge
Ranges	0 to 50 kPa up to 0 to 60 bar
Accuracy	±0.5 % or ±1 % 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	1.5 x range below 6 bar, 3 x range from 6 bar

Burst pressure	3 x range below 6 bar, 5 x range from 6 bar

Medium and environment

Medium 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 from 6 bar; 304 or 316 stainless steel below 6 bar
Electronics housing	304 stainless steel (ranges from 6 bar)

Electrical

Output	4 to 20 mA two-wire; 0.5 to 4.5 V, 0 to 5 V or 0 to 10 V three-wire
Supply	9 to 30 V DC (4 to 20 mA, 0 to 5 V); 5 V DC (0.5 to 4.5 V); 15 to 30 V DC (0 to 10 V)
Electrical connection	Packard, M12, DIN 43650 form A or DIN 43650 form C connector
Protection	IP65
Circuit protection	Surge and reverse polarity protection

Mechanical

Process connection	7/16-20 UNF female
Sensing element	MEMS silicon strain gauge, glass-fused

Common configurations

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

Range	Output	Electrical connection	Accuracy	Order code
0 to 10 bar	4 to 20 mA	Packard	±0.5 %	**PT30-010-I-P-A05**
0 to 25 bar	0.5 to 4.5 V	Packard	±0.5 %	**PT30-025-H-P-A05**
0 to 40 bar	0.5 to 4.5 V	Packard	±1 %	**PT30-040-H-P-A1**
0 to 16 bar	4 to 20 mA	M12	±0.5 %	**PT30-016-I-M-A05**
0 to 6 bar	0 to 10 V	DIN 43650 form A	±0.5 %	**PT30-006-V10-D-A05**
0 to 60 bar	4 to 20 mA	DIN 43650 form C	±0.5 %	**PT30-060-I-DC-A05**

Ordering code

One code from each group, in this order. Example: **PT30-K50-I-P-A05**. Send the code and the quantity to **contact@pressalis.com** for a quote.

PT30	-	K50	-	I	-	P	-	A05
Model		Range		Output		Electrical connection		Accuracy

Range

K50	0 to 50 kPa
001	0 to 1 bar
002	0 to 2 bar
004	0 to 4 bar
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
X	Other range, state in the request

Output

I	4 to 20 mA, two-wire
H	0.5 to 4.5 V, three-wire
V5	0 to 5 V, three-wire
V10	0 to 10 V, three-wire

Electrical connection

P	Packard connector
M	M12 connector, 4-pin
D	DIN 43650 form A connector
DC	DIN 43650 form C connector

Accuracy

A05	±0.5 % of span
A1	±1 % of span