Pressalis

Datasheet

Pressure transmitters

PT31

Ceramic transmitter for refrigerant and oil



Ceramic cell rated for R134a and PAG oil up to 135 °C, female 7/16-20 UNF port, 0 to 10 up to 0 to 50 bar.

Range	Accuracy	Output	Media
0 to 10 bar up to 0 to 50 bar	**±1 % of span**	**4 to 20 mA or 0.5 to 4.5 V**	**R134a refrigerant, PAG oil**

Overview

PT31 is a refrigerant pressure transmitter with a ceramic sensing element in a laser-welded 304 stainless steel body. It is rated for HFC-134a (R134a) refrigerant and PAG oil, with medium temperatures from -40 to 135 °C. Zero and span drift are each held to ±0.02 % of span per °C, and long-term stability to ±0.2 % of span per year.

It goes on air conditioning and refrigeration circuits, on air compressors, and on the inspection stations of air conditioning production lines, which places it in HVAC and buildings and on test benches. The female 7/16-20 UNF-2B port with a 16 mm hex is the refrigeration service thread, and the body is 23.4 mm across and 51.5 mm tall with the Packard connector.

Output is 4 to 20 mA two-wire on 9 to 30 V DC, or 0.5 to 4.5 V three-wire on 5 V DC, through a Packard, M12 or Yazaki connector, IP65. Ranges run from 0 to 10 bar up to 0 to 50 bar gauge, at ±1 % of span, with 2 x range overload and 3 x range burst.

Specifications

Measurement

Pressure type	Gauge
Ranges	0 to 10 bar up to 0 to 50 bar
Accuracy	±1 % of span
Long-term stability	±0.2 % 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

Medium and environment

Media	HFC-134a (R134a) refrigerant, PAG oil
Medium temperature	-40 to 135 °C
Compensated temperature	-10 to 70 °C
Storage temperature	-40 to 150 °C
Shock	100 g, 11 ms
Body material	304 stainless steel, laser-welded

Electrical

Output	4 to 20 mA two-wire, or 0.5 to 4.5 V three-wire
Supply	9 to 30 V DC (4 to 20 mA); 5 V DC (0.5 to 4.5 V)
Electrical connection	Packard, M12 4-pin or Yazaki connector
Protection	IP65
Circuit protection	Surge and reverse polarity protection

Mechanical

Process connection	7/16-20 UNF-2B female, 16 mm hex
Sensing element	Ceramic
Dimensions	Ø23.4 mm body, 51.5 mm overall height with Packard connector

Common configurations

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

Range	Output	Electrical connection	Protection	Order code
0 to 10 bar	0.5 to 4.5 V	Packard	IP65	**PT31-010-H-P**
0 to 25 bar	0.5 to 4.5 V	Packard	IP65	**PT31-025-H-P**
0 to 40 bar	0.5 to 4.5 V	Yazaki	IP65	**PT31-040-H-Y**
0 to 16 bar	4 to 20 mA	M12	IP65	**PT31-016-I-M**
0 to 25 bar	4 to 20 mA	Packard	IP65	**PT31-025-I-P**

Ordering code

One code from each group, in this order. Example: **PT31-010-I-P**. Send the code and the quantity to **contact@pressalis.com** for a quote.

PT31	-	010	-	I	-	P
Model		Range		Output		Electrical connection

Range

010	0 to 10 bar
016	0 to 16 bar
025	0 to 25 bar
040	0 to 40 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

Electrical connection

P	Packard connector
M	M12 connector, 4-pin
Y	Yazaki connector