Pressalis

Datasheet

Pressure transmitters

PT34

Refrigerant pressure sensor with thermistor



Pressure and NTC temperature in one M12 x 1.25 fitting for R410A, R407C and R134a, ratiometric on 5 V DC.

Range	Accuracy	Output	Temperature
1.01 to 10.25 bar absolute	**±2 % of span**	**Ratiometric, 5 V DC supply**	**-30 to 130 °C, 10 kΩ NTC**

Overview

PT34 measures refrigerant pressure and temperature at one point. A pressure cell and a 10 kΩ NTC thermistor share one M12 x 1.25 process connection, sealed by an O-ring, and the thermistor sits in a 5.3 mm tip that extends past the thread. It is rated for R410A, R407C and R134a, and is not for media containing sulfur, water or water vapour.

It is a component for builders of air conditioning units. One part takes the place of a separate pressure sensor and temperature sensor on the refrigerant line, with one fitting and one 4-pin connector carrying supply, pressure signal and thermistor. That places it in HVAC and buildings, at the equipment builder rather than on site.

The pressure signal is ratiometric to the 5 V supply, covering 1.01 to 10.25 bar absolute at ±2 % of span with a 10 ms response. The thermistor reads -30 to 130 °C, within ±1.5 °C from -10 to 80 °C and ±3 °C across the full span. Proof pressure is 20 bar absolute and burst pressure 30 bar absolute.

Specifications

Pressure measurement

Pressure type	Absolute
Range	1.01 to 10.25 bar absolute
Accuracy	±2 % of span
Response time	10 ms
Proof pressure	20 bar absolute
Burst pressure	30 bar absolute

Temperature measurement

Element	NTC thermistor, 10 kΩ nominal
Range	-30 to 130 °C
Accuracy	±1.5 °C from -10 to 80 °C; ±3 °C from -30 to 130 °C
Response time	Under 10 s
Probe tip	Ø5.3 mm, 8.5 mm beyond the thread

Medium and environment

Refrigerants	R410A, R407C, R134a
Not suitable for	Media containing sulfur, water or water vapour
Operating temperature	-30 to 130 °C
Storage temperature	-40 to 140 °C

Electrical

Pressure output	Ratiometric voltage: Vout = (0.082878 x P + 5) x Vcc / 100, P in kPa absolute
Supply	5 V DC ±5 %
Supply current	Under 10 mA
Overvoltage protection	Up to 16 V DC
Electrical connection	4-pin connector: supply, pressure output, NTC, NTC ground

Mechanical

Process connection	M12 x 1.25 male, O-ring seal 9.3 x 2.2 mm
Dimensions	Ø26 mm body, 24 mm hex

Common configurations

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

Range	Refrigerant	Temperature element	Output	Order code
1.01 to 10.25 bar absolute	R410A	10 kΩ NTC	Ratiometric	**PT34-010-R410A**
1.01 to 10.25 bar absolute	R407C	10 kΩ NTC	Ratiometric	**PT34-010-R407C**
1.01 to 10.25 bar absolute	R134a	10 kΩ NTC	Ratiometric	**PT34-010-R134A**
Other range, state in the request	R410A	10 kΩ NTC	Ratiometric	**PT34-X-R410A**

Ordering code

One code from each group, in this order. Example: **PT34-010-R410A**. Send the code and the quantity to **contact@pressalis.com** for a quote.

PT34	-	**010**	-	**R410A**
Model		Range		Refrigerant

Range

010	1.01 to 10.25 bar absolute
X	Other range, state in the request

Refrigerant

R410A	R410A
R407C	R407C
R134A	R134a