Pressalis

Datasheet

Pressure transmitters

PT44

Low-power I2C pressure sensor



Pressure sensor with I2C output for direct connection to a microcontroller, 3 to 5 V DC, 0 to 0.4 bar up to 0 to 70 bar.

Range	Output	Supply	Accuracy
0 to 0.4 bar up to 0 to 70 bar	**I2C digital**	**3 to 5 V DC, 2.7 mA**	**±0.3 % or ±0.5 % of span**

Overview

PT44 is a low-power pressure sensor with an I2C output, for machine builders and integrators who read pressure straight into a microcontroller on their own board. It runs from 3 to 5 V DC, draws 2.7 mA, and returns the reading as a count in which the pressure span maps to 10 to 90 % of full count, 0x0666 to 0x399A.

It suits battery loggers, compact controllers on hydraulic and pneumatic equipment, and in-house telemetry units for water and heating. Ranges run from 0 to 0.4 bar up to 0 to 70 bar, gauge or absolute, with ±0.3 % or ±0.5 % of span accuracy and a 2 kHz frequency response.

The operating range is -40 to 125 °C, wider than the RS485 and voltage-output low-power models, with digital compensation from -10 to 70 °C. Overpressure is 2 x range. The 22 mm stainless steel body takes a cable outlet, a watertight IP68 cable outlet or a DIN 43650 form C connector.

Specifications

Measurement

Pressure type	Gauge, absolute
Ranges	0 to 0.4 bar up to 0 to 70 bar
Accuracy	±0.3 % or ±0.5 % of span
Long-term stability	±0.2 % of span per year
Frequency response	2 kHz
Overpressure	2 x range
Burst pressure	3 x range

Medium and environment

Compensated temperature	-10 to 70 °C
Operating temperature	-40 to 125 °C
Housing and thread	304 stainless steel

Electrical

Output	I2C digital
Output scaling	Full count 0x3FFF; span mapped to 10 to 90 %, 0x0666 to 0x399A
I2C clock	10 to 100 kHz
Supply	3 to 5 V DC
Current consumption	2.7 mA
Electrical connection	Cable outlet, watertight cable outlet, DIN 43650 form C connector
Protection	IP65; IP68 with the watertight cable outlet

Mechanical

Process connection	M20 x 1.5, G1/4, 1/4 NPT; other threads on request
Body	22 mm diameter, 22 mm hex

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	Cable outlet	±0.5 %	**PT44-010-G-B2-C-A05**
0 to 1 bar	Absolute	G1/4 male	Cable outlet	±0.3 %	**PT44-001-A-B2-C-A03**
0 to 16 bar	Gauge	1/4 NPT male	Watertight cable outlet	±0.5 %	**PT44-016-G-N2-CW-A05**
0 to 40 kPa	Gauge	M20 x 1.5 male	DIN 43650 form C	±0.5 %	**PT44-K40-G-M20-DC-A05**
0 to 70 bar	Gauge	G1/4 male	Cable outlet	±0.3 %	**PT44-070-G-B2-C-A03**

Ordering code

One code from each group, in this order. Example: **PT44-K40-G-M20-C-A03**. Send the code and the quantity to **contact@pressalis.com** for a quote.

PT44	-	K40	-	G	-	M20	-	C	-	A03
Model		Range		Pressure type		Process connection		Electrical connection		Accuracy

Range

K40	0 to 40 kPa
001	0 to 1 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
070	0 to 70 bar
X	Other range, state in the request

Pressure type

G	Gauge
A	Absolute

Process connection

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

Electrical connection

C	Cable outlet, IP65
CW	Watertight cable outlet, IP68
DC	DIN 43650 form C connector, IP65

Accuracy

A03	±0.3 % of span
A05	±0.5 % of span