Pressalis

Datasheet

Pressure transmitters

PT53

Low-power pressure and temperature sensor



Runs on 3 to 5 V DC at 2.5 mA, 0.2 mA standby, with RS485 Modbus RTU or I2C output and ranges to 200 bar.

Supply	Output	Pressure	Temperature
3 to 5 V DC, 2.5 mA maximum	**RS485 Modbus RTU or I2C**	**0 to 40 kPa up to 0 to 200 bar**	**-20 to 85 °C, ±1 % of span**

Overview

PT53 is a pressure and temperature transmitter for sites without mains power. It runs on 3 to 5 V DC and draws 2.5 mA at most, 0.2 mA in standby, which suits loggers and remote units that run from a battery. Pressure and medium temperature come through one process connection and one four-wire cable.

It goes on remote points in water networks and pump stations, and on water, gas or oil lines where only a battery supply is available. That places it in water and pumping first. The 304 stainless steel body is IP65, or IP68 with the sealed cable outlet.

Output is RS485 with Modbus RTU, or I2C. Pressure ranges run from 0 to 40 kPa to 0 to 200 bar, gauge or absolute, at ±0.5 % of span, with 2 x range overload and 3 x range burst. Temperature covers -20 to 85 °C at ±1 % of span. Process threads are G1/4, 1/4 NPT and M20 x 1.5.

Specifications

Pressure measurement

Pressure type	Gauge, absolute
Ranges	0 to 40 kPa up to 0 to 200 bar
Accuracy	±0.5 % of span, at 25 °C reference
Long-term stability	±0.2 % of span per year
Overpressure	2 x range
Burst pressure	3 x range

Temperature measurement

Range	-20 to 85 °C
Accuracy	±1 % of span
Signal	Same digital output as pressure

Medium and environment

Media	Water, gas, oil
Operating temperature	-20 to 85 °C
Compensated temperature	-10 to 70 °C
Body material	304 stainless steel

Electrical

Output	RS485 Modbus RTU, or I2C
Wiring	Four-wire
Supply	3 to 5 V DC
Current consumption	2.5 mA maximum; 0.2 mA maximum in standby
Electrical connection	Cable outlet, sealed cable outlet, M12 4-pin, DIN 43650 form A or form C, or circular connector
Protection	IP65; IP68 with sealed cable outlet

Mechanical

Process connection	G1/4, 1/4 NPT or M20 x 1.5, male
Dimensions	Ø22 mm body, 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	Output	Electrical connection	Protection	Order code
0 to 10 bar	Gauge	G1/4 male	RS485 Modbus RTU	Cable outlet	IP65	**PT53-010-G-B2-M-C**
0 to 16 bar	Gauge	G1/4 male	RS485 Modbus RTU	Sealed cable outlet	IP68	**PT53-016-G-B2-M-CW**
0 to 4 bar	Gauge	1/4 NPT male	I2C	M12	IP65	**PT53-004-G-N2-I2-M**
0 to 25 bar	Gauge	M20 x 1.5 male	RS485 Modbus RTU	DIN 43650 form A	IP65	**PT53-025-G-M20-M-D**
0 to 1 bar	Absolute	G1/4 male	RS485 Modbus RTU	Sealed cable outlet	IP68	**PT53-001-A-B2-M-CW**
0 to 100 bar	Gauge	G1/4 male	RS485 Modbus RTU	M12	IP65	**PT53-100-G-B2-M-M**

Ordering code

One code from each group, in this order. Example: **PT53-K40-G-B2-M-C**. Send the code and the quantity to **contact@pressalis.com** for a quote.

PT53	-	K40	-	G	-	B2	-	M	-	C
Model		Range		Pressure type		Process connection		Output		Electrical connection

Range

K40	0 to 40 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
040	0 to 40 bar
060	0 to 60 bar
100	0 to 100 bar
160	0 to 160 bar
X	Other range, state in the request

Pressure type

G	Gauge
A	Absolute

Process connection

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

Output

M	RS485, Modbus RTU
I2	I2C

Electrical connection

C	Cable outlet
CW	Sealed cable outlet, IP68
M	M12 connector, 4-pin
D	DIN 43650 form A connector
DC	DIN 43650 form C connector
A	Circular connector