Pressalis

Datasheet

Pressure transmitters

PT52

Digital pressure and temperature transmitter



Pressure and temperature over Modbus RTU on RS485 or RS232, 0 to 10 kPa up to 0 to 600 bar, 9 to 30 V DC.

Pressure	Temperature	Output	Accuracy
0 to 10 kPa up to 0 to 600 bar	**-30 to 125 °C, ±1 % of span**	**RS485 or RS232 Modbus RTU**	**±0.3 % or ±0.5 % of span**

Overview

PT52 is the digital pressure and temperature transmitter in the range. One four-wire connection carries supply and both readings, pressure and medium temperature, over Modbus RTU on RS485, or on RS232 for a point-to-point link. There is no analog scaling to set in the controller, and both readings share one cable and one process tapping.

It goes on pump stations and water treatment works, hydraulic and pneumatic units, and automated test stations, where readings go straight into a PLC or SCADA system over a serial link. That covers water and pumping, hydraulics and machinery, and test benches.

Pressure ranges run from 0 to 10 kPa to 0 to 600 bar, gauge or absolute, at ±0.3 % or ±0.5 % of span, with 2 x range overload. Temperature covers -30 to 125 °C at ±1 % of span. The 17-4PH stainless steel sensing element sits in a 304 stainless steel housing, IP65, with cable outlet, M12, DIN 43650, circular or Deutsch DT04-4P connection.

Specifications

Pressure measurement

Pressure type	Gauge, absolute
Ranges	0 to 10 kPa up to 0 to 600 bar
Accuracy	±0.3 % or ±0.5 % 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	2 x range

Burst pressure	3 x range

Temperature measurement

Range	-30 to 125 °C
Accuracy	±1 % of span
Signal	Modbus RTU, with the pressure reading

Medium and environment

Operating 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
Housing	304 stainless steel

Electrical

Output	RS485 or RS232, Modbus RTU
Wiring	Four-wire
Supply	9 to 30 V DC
Electrical connection	Cable outlet, M12 4-pin, DIN 43650 form A or form C, circular or Deutsch DT04-4P connector
Protection	IP65

Mechanical

Process connection	G1/8, G1/4, G3/8, G1/2, 1/8 NPT, 1/4 NPT, 1/2 NPT, R1/4, R1/2, M12 x 1.5, M18 x 1.5, M20 x 1.5, male
Dimensions	Ø22 mm body, 22 mm hex, 69 mm from thread end to cable gland

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	Accuracy	Order code
0 to 10 bar	Gauge	G1/4 male	RS485 Modbus RTU	M12	±0.5 %	**PT52-010-G-B2-M-M-A05**
0 to 16 bar	Gauge	G1/2 male	RS485 Modbus RTU	Cable outlet	±0.3 %	**PT52-016-G-B4-M-C-A03**
0 to 25 bar	Gauge	1/4 NPT male	RS485 Modbus RTU	DIN 43650 form A	±0.5 %	**PT52-025-G-N2-M-D-A05**
0 to 100 bar	Gauge	M20 x 1.5 male	RS485 Modbus RTU	M12	±0.3 %	**PT52-100-G-M20-M-M-A03**
0 to 250 bar	Gauge	G1/4 male	RS485 Modbus RTU	Deutsch DT04-4P	±0.5 %	**PT52-250-G-B2-M-T4-A05**
0 to 1 bar	Absolute	G1/4 male	RS232 Modbus RTU	Cable outlet	±0.5 %	**PT52-001-A-B2-M2-C-A05**

Ordering code

One code from each group, in this order. Example: **PT52-K10-G-B1-M-C-A03**. Send the code and the quantity to **contact@pressalis.com** for a quote.

PT52	-	K10	-	G	-	B1	-	M	-	C	-	A03
Model		Range		Pressure type		Process connection		Output		Electrical connection		Accuracy

Range

K10	0 to 10 kPa
K50	0 to 50 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
060	0 to 60 bar
100	0 to 100 bar
250	0 to 250 bar
600	0 to 600 bar
X	Other range, state in the request

Pressure type

G	Gauge
A	Absolute

Process connection

B1	G1/8 male
B2	G1/4 male
B3	G3/8 male
B4	G1/2 male
N1	1/8 NPT male
N2	1/4 NPT male
N4	1/2 NPT male
R2	R1/4 male
R4	R1/2 male
M12	M12 x 1.5 male
M18	M18 x 1.5 male
M20	M20 x 1.5 male

Output

M	RS485, Modbus RTU
M2	RS232, Modbus RTU

Electrical connection

C	Cable outlet
M	M12 connector, 4-pin
D	DIN 43650 form A connector
DC	DIN 43650 form C connector
A	Circular connector
T4	Deutsch DT04-4P connector

Accuracy

A03	±0.3 % of span
A05	±0.5 % of span