Pressalis

Datasheet

Differential pressure transmitters

PDT21

Bidirectional micro differential transmitter



Wall box for room and duct pressure from ±0.5 to ±10 kPa, analog output with optional RS485 and LCD.

Range	Accuracy	Output	Resolution
±0.5 kPa up to ±10 kPa	**±1 % of span**	**4 to 20 mA, 0 to 10 V, RS485**	**0.1 Pa below 1 kPa**

Overview

PDT21 is a micro differential pressure transmitter in a 100 x 70 x 47.5 mm wall box. It reads both sides of zero, from -0.5 to 0.5 kPa up to -10 to 10 kPa, so a room that swings between positive and negative stays on scale. Resolution is 0.1 Pa on ranges below 1 kPa and 1 Pa above, and response time is 0.5 s or less.

It is an HVAC and buildings instrument: room to corridor and indoor to outdoor differential, supply and extract duct pressure, and the pressurisation of lift lobbies and stairwells. The medium is dry air or gas. Two hose barbs, marked plus and minus, sit 16 mm apart on the bottom face next to the cable gland.

Output is 4 to 20 mA on two wires, or 4 to 20 mA, 0 to 5 V or 0 to 10 V on three. The four-wire version adds RS485 alongside the analog signal, for a building management bus. The front carries an LCD with three keys, or stays blind where nobody reads it on site. Supply is 12 to 30 V DC and accuracy is ±1 % of span.

Specifications

Measurement

Pressure type	Differential, both directions
Ranges	-0.5 to 0.5 kPa up to -10 to 10 kPa
Accuracy	±1 % of span
Resolution	0.1 Pa on ranges below 1 kPa, 1 Pa from 1 kPa
Response time	0.5 s or less

Medium and environment

Medium	Dry air and gases
Operating temperature	-20 to 70 °C

Electrical

Output, two-wire	4 to 20 mA
Output, three-wire	4 to 20 mA, 0 to 5 V or 0 to 10 V
Output, four-wire	RS485 plus 4 to 20 mA, 0 to 5 V or 0 to 10 V
Supply	12 to 30 V DC
Electrical connection	Cable gland to internal screw terminals

Display and switching

Display	LCD with three keys, or blind cover

Mechanical

Pressure ports	Two hose barbs, marked + and –, 16 mm apart
Housing	100 x 70 x 47.5 mm wall box with two mounting lugs

Common configurations

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

Range	Analog output	RS485	Display	Order code
-0.5 to 0.5 kPa	4 to 20 mA, two-wire	No	LCD	**PDT21-P500-I-N-D**
-0.5 to 0.5 kPa	0 to 10 V	No	LCD	**PDT21-P500-V10-N-D**
-10 to 10 kPa	4 to 20 mA	Yes	LCD	**PDT21-K10-I-RS-D**
-10 to 10 kPa	0 to 5 V	No	Blind	**PDT21-K10-V5-N-B**
-10 to 10 kPa	4 to 20 mA, two-wire	No	Blind	**PDT21-K10-I-N-B**

Ordering code

One code from each group, in this order. Example: **PDT21-P500-I-N-D**. Send the code and the quantity to **contact@pressalis.com** for a quote.

PDT21	-	P500	-	I	-	N	-	D
Model		Range		Analog output		RS485 output		Display

Range

P500	-0.5 to 0.5 kPa
K10	-10 to 10 kPa
X	Other range, state in the request

Analog output

I	4 to 20 mA
V5	0 to 5 V
V10	0 to 10 V

RS485 output

N	None
RS	RS485, four-wire version

Display

D	LCD with three keys
B	Blind cover, no display