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Vaisala Differential Pressure Transmitter PDT101

Vaisala Differential Pressure Transmitter PDT101 with current output (black) and voltage output (green).

Features

- Easy mounting on wall, DIN rail or panel
- 2 pressure ranges (Pa and in H_2O)
- Accessible zero and span adjustment potentiometers
- ¼" brass tubing connections
- LED status indicator
- Specially designed for critical and regulated environments
- Euro style detachable connector
- NIST traceable (certificate included)

Operating Environment

Vaisala Differential Pressure Transmitter PDT101 is designed especially for demanding life science and high technology cleanroom applications. The PDT101 transmitter is ideal for incorporating into the Vaisala Veriteq Continuous Monitoring System to measure and monitor the critical environmental parameters as required in regulated environments.

Performance

The PDT101 offers high accuracy, sensitivity and stability with accuracy 0.40% of span providing a highly reliable and repeatable measurement. The sensor uses a micro-machined, ultra-thin silicon diaphragm which provides inherent sensor repeatability and stability. The sensor enables precise measurement and control in high performance cleanrooms. The PDT101 transmitter is available with voltage output (3-wire) or current output (2-wire).

Zero and span adjustment screws are available on every PDT101 model. Both adjustments are accessible from the front of the unit.

Applications

The PDT101 is suitable for high performance cleanroom environments in the life science, semiconductor and electronics industries. As part of a continuous monitoring system, it is highly suitable for regulated environments where continuous, documented and redundant data is a requirement to meet FDA regulations. The compact design is well suited for mounting in a cleanroom or in the adjacent corridor with LED indicator lights for quick and easy power status spotcheck.

Technical Data

Performance

Measurement ranges (bidirectional)	±60 Pa ±0.25 in H_2O
Overpressure	
proof pressure	1.0 bar
burst pressure	1.7 bar
static pressure	1.7 bar
Pressure type	differential, gauge, vacuum and compound
Accuracy (terminal point, incl. effect of linearity, hysteresis and repeatability)	0.4 % span
Long-term stability	≤0.5 % span/year
Response time (10 ... 90 %)	250 ms
Warm-up time	15 s
Compensated temperature range	+2 ... +54 °C (+35.6 ... +129.2 °F)
Temperature dependence	±0.54 % / 10 K (reference 20 °C (68 °F))
Mounting position error (zero adjustable)	≤1 %/g (calibration in vertical position is standard)
Adjustments (front accessible)	
zero	±5 % span
span	±3 % span

Operating Environment

Operating temperature	-18 ... +70 °C (-0.4 ... +158 °F)
Storage temperature	-40 ... +82 °C (-40 ... +179.6 °F)
Electromagnetic compatibility (EN 61326-1), basic immunity test requirements	

Note: If used in an electromagnetic field of 3 V/m, with narrow frequency area of 80 - 120 Mhz, it is possible that the current output of PDT101 can deviate max. 0.8% (with accuracy specified 0.4%).

Inputs and Outputs

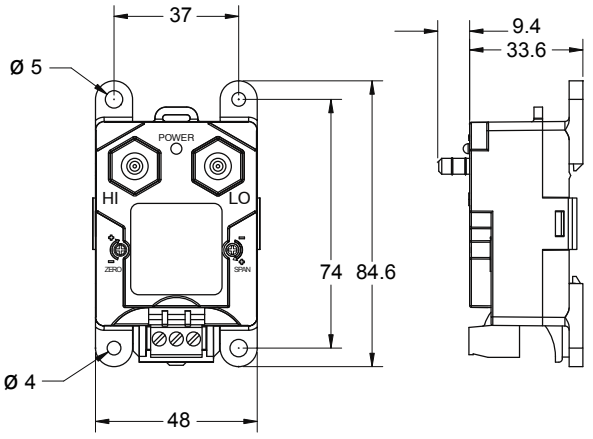
Process connection	1/4" barbed fittings
Output signal	
2-wire	4 ... 20 mA
3-wire	0 ... 5 VDC (user selectable 0 ... 10 VDC)
Operating voltage	
2-wire output 4 ... 20 mA	12 ... 36 VDC
3-wire output 0 ... 5 VDC	11.5 ... 36 VDC
3-wire output 0 ... 10 VDC	14 ... 36 VDC or 24 VAC
Max. loop resistance for 4 ... 20 mA	≤ (Supply voltage - 12V)/0.022 A
Supply current	max. 20 mA for 4 ... 20 mA output signal
Optical process diagnostics	LED visual indicator
Electrical connection	Euro style pluggable terminal block accepts 12...26 AWG wire (0.13 up to 3.31 mm^2)

Mechanics

Medium (measured gas)	clean and dry air, non-conducting and non-corrosive gases
Material	
process connection	brass
sensor element	silicon, aluminium, glass
case	NEMA type 1 fire-retardant ABS 1 (meets UL94-5VA)
Mounting	threaded fastener for wall mounting or DIN rail type EN50022
Housing classification	IP40
Weight	0.07 kg

Dimensions

Dimensions in mm



Order Information for PDT101

PDT101 - XXX

Measurement range: **P** (+/-60 Pa) or **W** (+/-0.25 in H_2O)

Accuracy: **4** (0.4 % span)

Output: **C** (current) or **V** (voltage)

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For more information, visit www.vaisala.com or contact us at sales@vaisala.com

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