

Differential pressure transmitter

Description

The differential pressure transmitters of the PTR series are used to measure differential pressure, overpressure and vacuum. They provide one adjustable pressure range and one output signal.

Monitoring of gaseous, non-aggressive media. Possible usage areas are: Building automation, air conditioning systems and clean room monitoring, valve and flap control, filter, ventilator and blower monitoring, control of air flows.

Technical data

Supply voltage	18 ... 30 V AC/DC (only DC for 2-wire version)
Output signal	0 ... 10 V or 4 ... 20 mA
Load for 4 ... 20mA output	20 ... 500 Ohm
Max. current draw	< 40 mA (<21 mA for 2-wire version)
Pressure medium	Air and non-aggressive gases
Linearity and hysteresis error	$\leq \pm 1\%$ of FS
Working temperature	-40 ... 50°C
Storage temperature	-40 ... 70°C
Typical long-term stability	$\leq \pm 0,5\%$ of $\pm 2,5\%$ of FS/year, depending on pressure range
Repetition accuracy	$\leq \pm 0,2\%$ of FS
Position dependence	$\leq \pm 0,02\%$ of FS/g
Humidity	0 ... 95 % RH, non-condensing
Response time, selectable	0,1 - 1,0s
Process connection	6 mm hose connection
Electrical connection	Spring terminals for wires and leads up to 1,5 mm ²
Mounting	Screw mounting with serrated screws
Housing material	ABS
Housing dimensions	ca. Ø 66 x 28 mm
Weight	50 g
Cable conduit for protection cap	M12x1,5 threaded connection, made of polyamide
Protection class EN 60529	IP54
Conformity	EN 60770, EN 61326, 2011/65/EU (RoHS II)



Model	Range	Overload capacity	Bursting pressure	Temperature error
PTR2..	0... 100 Pa (0... 1,0 mbar)	60 kPa	100 kPa	$\leq \pm 2,5\%$ of full range
PTR3..	0... 250 Pa (0... 2,5 mbar)	60 kPa	100 kPa	$\leq \pm 2,5\%$ of full range
PTR4..	0... 500 Pa (0... 5,0 mbar)	60 kPa	100 kPa	$\leq \pm 2,5\%$ of full range
PTR5..	0... 1000 Pa (0... 10 mbar)	75 kPa	125 kPa	$\leq \pm 1,0\%$ of full range
PTRM..	0... 1,6 kPa (0... 16 mbar)	85 kPa	135 kPa	$\leq \pm 1,0\%$ of full range
PTR6..	0... 2,5 kPa (0... 25 mbar)	85 kPa	135 kPa	$\leq \pm 1,0\%$ of full range
PTR7..	0... 5 kPa (0... 50 mbar)	85 kPa	135 kPa	$\leq \pm 1,0\%$ of full range
PTR8..	0... 10 kPa (0... 100 mbar)	85 kPa	135 kPa	$\leq \pm 1,0\%$ of full range
PTR9..	0... 25 kPa (0... 250 mbar)	135 kPa	275 kPa	$\leq \pm 1,0\%$ of full range
PTRA..	0... 50 kPa (0... 500 mbar)	200 kPa	400 kPa	$\leq \pm 1,0\%$ of full range
PTRB..	0... 100 kPa (0... 1,0 bar)	200 kPa	400 kPa	$\leq \pm 1,0\%$ of full range
PTRF..	0... 250 kPa (0... 2,5 bar)	400 kPa	800 kPa	$\leq \pm 1,0\%$ of full range

Adjustable pressure range: The end of the pressure range can be reduced to 50% of its factory set full scale value simply by the use of a push-button.

Output signal: 0 ... 10 V or 4 ... 20 mA. Other signals on request.

Configurable response time: The response time of the output signal can be configured using a jumper. If the jumper is in place the response time is slow (factory setting), which is useful for suppressing brief pressure peaks. If the application requires a fast response time the jumper must be removed.

Easy offset calibration: The output signal can be calibrated to zero by pressing the push-button (pressure transmitter must be depressurised).

Volume flow measurement (optional): The shape of the output signal can be switched from linear to square root using a jumper in order to measure the volume flow via a differential pressure.

Reset: The transmitter can be reset to its factory setting, just by pressing the push-button for 10sec.

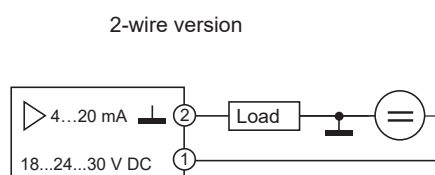
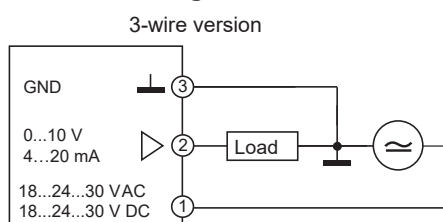
Measuring method: Piezoresistive pressure transducer

Mounting position: Can be mounted in any position. The self-compensating piezoresistive pressure transducer eliminates any possible mounting error.

Order matrix

Configurable pressure ranges	0... 100 Pa	(0... 1,0 mbar)	PTR	2
	0... 250 Pa	(0... 2,5 mbar)		3
	0... 500 Pa	(0... 5,0 mbar)		4
	0... 1000 Pa	(0... 10 mbar)		5
	0... 1,6 kPa	(0... 16 mbar)		M
	0... 2,5 kPa	(0... 25 mbar)		6
	0... 5 kPa	(0... 50 mbar)		7
	0... 10 kPa	(0... 100 mbar)		8
	0... 25 kPa	(0... 250 mbar)		9
	0... 50 kPa	(0... 500 mbar)		A
	0... 100 kPa	(0... 1,0 bar)		B
	0... 250 kPa	(0... 2,5 bar)		F
	Output signal	0...10 V, 3-wire, linear		
4...20 mA, 3-wire, linear				D
0...10 V, 3-wire, square rooted				L
4...20 mA, 3-wire, square rooted				P
4...20 mA, 2-wire, linear				2
4...20 mA, 2-wire, square rooted				U

Electrical wiring



Dimensions (mm)

