



Air differential pressure transmitter

Description

The differential pressure transmitter serie PTM is used to measure differential pressure, overpressure and vacuum of gaseous, non-aggressive media. It provides 2 pressure ranges and 2 output signals, which are selectable by jumper.

Possible fields of application are building automation and air conditioning systems, overpressure measurement in clean rooms and laboratories, measurement of constant pressure in VAV applications, dynamic filter and ventilator monitoring.

Technical specifications

Medium	Air, non-combustible and non-aggressive gases
Measurement range	See schedule
Linearity and hysteresis error	$\leq \pm 1\%$ of FS
Repetition accuracy	$\leq \pm 0.2\%$ of FS
Response time	0.1 s or 1 s, selectable by jumper
Position dependence	$\leq \pm 0.02\%$ of FS/g
Long term stability	$< \pm 0.5\%$ final value/year
Offset calibration	The output signal can be calibrated to zero by pressing the M key.
Supply voltage	18...30 V AC / 16...32 V DC
Output signal	3-wire connection, with switching output. The factory setting is 0-10 V DC, but can be changed to 4-20 mA by removing the jumper. 2-wire connection 4-20 mA version is available upon request.
Switching output	npn transistor output for max. 30 V DC/100 mA
Electrical connection	Screw terminal block for wires and strands up to 1,5 mm ²
Display, optional	LED, 4 digits
Housing material	Housing with process connection P2 (-) Base part with process connection P1 (+)
Cable conduit	M16x1,5 connection made of polyamide
Housing dimensions	approx. $\varnothing 85 \times 58$ mm
Weight	approx. 150 g
Protection class	IP54
Working humidity	0...95% RH, non-condensing
Working temperature	0...+50°C
Storage temperature	-40...+70°C
Accessories	Connection set (PVC-hose 2 m $\varnothing 6$ with 2 ABS nippels and 4 screws) included and snap-on plastic brackets optionally
Installation	Screw fastening
Installation position	any
Standards	CE-conformity, RoHS



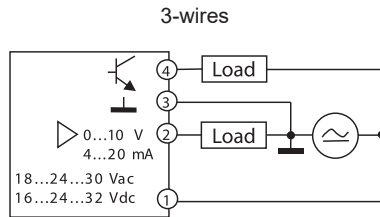
Models	Measuring range	Max pressure
PTM1	-50...0...+50 Pa	20 kPa
PTM2	0...100 Pa, 0...250 Pa	20 kPa
PTM3	0...500 Pa, 0...1000 Pa	20 kPa
PTM4	0...1 kPa, 0...2,5 kPa	40 kPa
PTM5	0...5 kPa, 0...10 kPa	60 kPa
PTM6	0...25 kPa, 0...50 kPa	300 kPa
PTM9	-100...0...+100 Pa	20 kPa

Suffix D for models with display

Models with UL Std. 61010-1 approval and CSA Std. C22.2 No. 61010-1 certification available upon request.

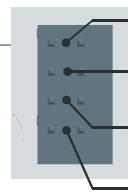
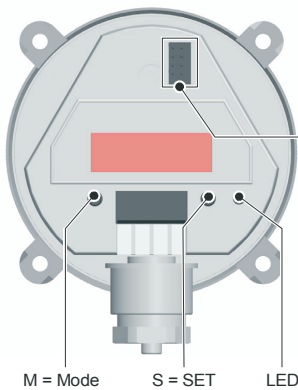


Electrical wirings



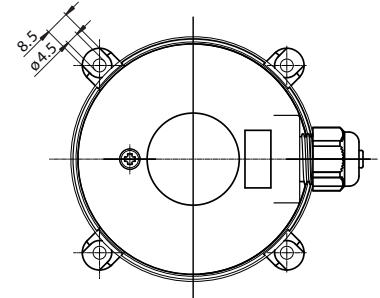
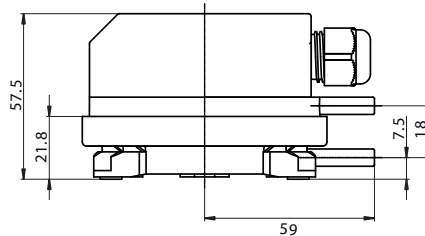
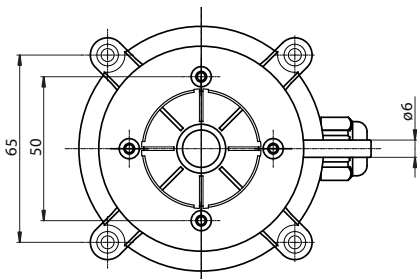
4	SA	Switching output, npn
3	GO	Ground GND
2	Y	Output signal 0...10V / 4...20 mA
1	G	Supply voltage 24 VAC / VDC

Setting

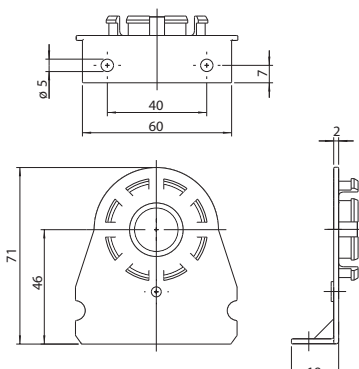


	Jumper (switched)	Aperto (open)
Range pressione (Pressure range)	Bassa (low)	Alta (high)
Risposta (Response)	Lenta (slow)	Veloce (fast)
Funzionamento (Mode)	Lineare (linear)	Quadratico (square root)
Segnale di uscita (Output signal)	0...10 V	4...20 mA

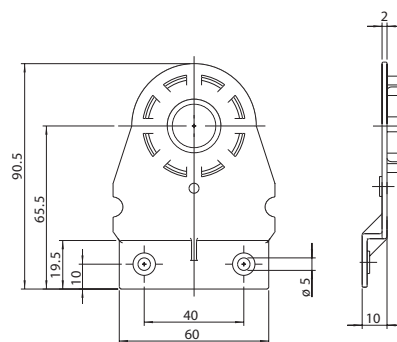
Dimensions (mm)



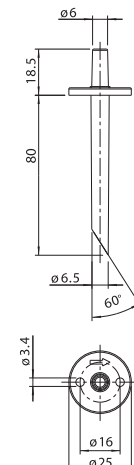
APA1 Snap-on plastic bracket, L-shaped



APA2 Snap-on plastic bracket, S-shaped



ABS nipple (part of connection set APA3)





■ Programming version without display

In the version without display, you can program the switching value by acting in this way:

1 Apply the pressure or differential pressure at which you want the system switches

2 Press the „S“ button for 5 seconds until the LED flashes quickly.

At this point the switching value is saved and the LED will light while reaching the set pressure.

■ Programming display version

Pulsante / switch	Display	Passo / step	Note / Information
	250		Pressione rilevata / current measured value
Press >M<			
	OFFS		Calibrazione offset* / Offset calibration*
Press >M<		Press >S<	Visualizza attuale offset / Show actual offset value
	-3		
		Press >S<(5 sec)	Ritaratura offset / recalibration of offset
	0		
		Press >M<	Memorizzazione offset, il display lampeggia / Store offset, Display blinking for confirmation
	OFFS		
Press >M<			
	SP		Impostazione valore di commutazione / Setting switching level
		Press >S<	Visualizza attuale valore di commutazione / Show actual switching level
	112		
		Press >S<(5 sec)	Modifica valore di commutazione / Modify switching level
	112		
		Press >M<	Memorizzazione valore di commutazione, il display lampeggia / Store switching level, Display blinking for confirmation
	SP		
Press >M<			
	HI		Valore di picco max. / peak value high
		Press >S<	Visualizza il valore di picco max. / show peak value high
	240		
		Press >M<	Ritorno / return
	HI		
Press >M<			
	LO		Valore di picco min. / peak value low
		Press >S<	Visualizza il valore di picco min. / show peak value low
	-50		
		Press >M<	Ritorno / return
	LO		
Press >M<			
	250		Pressione rilevata / current measured value

* Free from pipes or remove the cap from the two nozzles before proceeding with the offset re-calibration.