



Description

The differential pressure transmitters serie PTQ is used to measure differential pressure, overpressure and vacuum of gaseous, non-aggressive media. It provides 8 pressure ranges and 2 output signals, which are easily selectable by jumper or rotary selector switch. 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

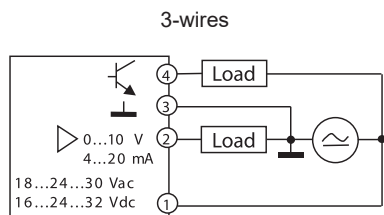
| | |
|---------------------------------------|---|
| Medium | Air, non-combustible and non-aggressive gases |
| Measurement range | -50...0...+50 Pa, -100...0...+100 Pa, -250...0...+250 Pa, -500...0...500 Pa, 0...100 Pa, 0...250 Pa, 0...500 Pa, 0...1000 Pa |
| Linearity and hysteresis error | ≤ ±1% of FS |
| Repetition accuracy | ≤ ±0.2 % of FS |
| Response time | 0.1 s or 1 s, selectable by jumper |
| Position dependence | ≤ ±0,02% of FS/g |
| Long term stability | < ±0,5% final value/year |
| Offset calibration | It performs an automated zero offset compensation. No re-calibration needed. |
| Max pressure | 20 kPa |
| 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. |
| 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 | Housing with process connection P2 (-) Base part with process connection P1 (+) |
| Cable conduit | M16x1,5 connection made of polyamide |
| Dimensions | approx. Ø 85 x 58 mm |
| Weight | approx. 150 g |
| Protection type | 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 Ø 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 | Version |
|---------------------|--|--------------|
| PTQ1 | -50...0...+50 Pa, -100...0...+100 Pa, -250...0...+250 Pa, -500...0...500 Pa, 0...100 Pa, 0...250 Pa, 0...500 Pa, 0...1000 Pa | |
| PTQ1D | -50...0...+50 Pa, -100...0...+100 Pa, -250...0...+250 Pa, -500...0...500 Pa, 0...100 Pa, 0...250 Pa, 0...500 Pa, 0...1000 Pa | with display |
| Accessories: | APA1 Snap-on plastic bracket, L-shaped APA2 Snap-on plastic bracket, S-shaped | |

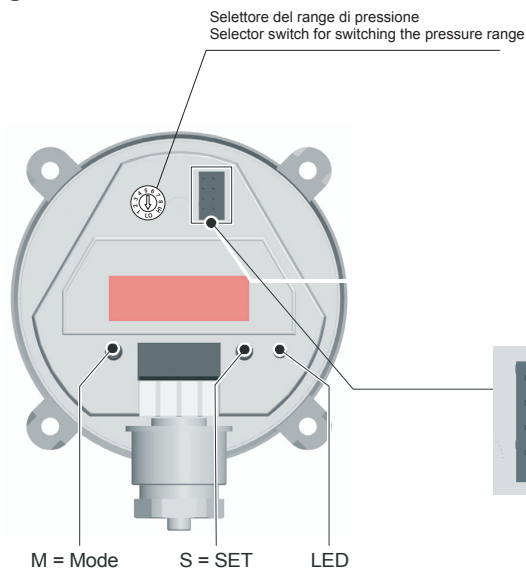


Electrical wirings



| | | |
|---|-----|-------------------------------------|
| 4 | SA | Switching output, npn |
| 3 | G O | Ground G N D |
| 2 | Y | Output signal 0... 10V / 4... 20 mA |
| 1 | G | Supply voltage 24 VAC / VDC |

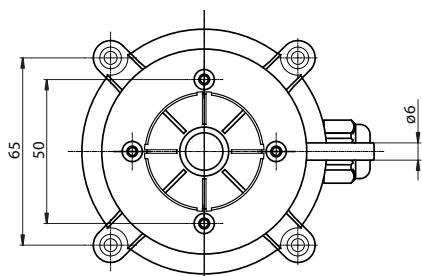
Setting



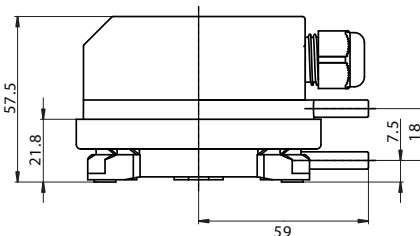
| Selettore Selector | Scala Range |
|-----------------------|----------------------------|
| 1 | 0...100 Pa |
| 2 | 0...250 Pa |
| 3 | 0...500 Pa |
| 4 | 0...1000 Pa |
| 5 | -50...0...+50 Pa |
| 6 | -100...0...+100 Pa |
| 7 | -250...0...+250 Pa |
| 8 | -500...0...+500 Pa |
| 0 | Test output (0 V / 4 mA) |
| 9 | Test output (10 V / 20 mA) |

| | 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 |

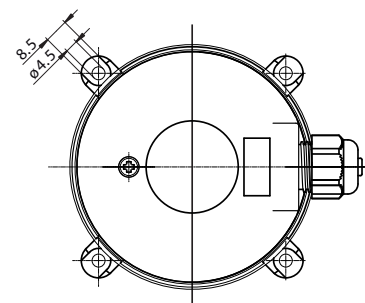
Dimensions (mm)



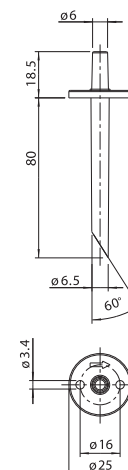
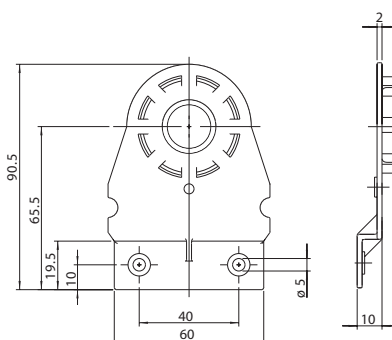
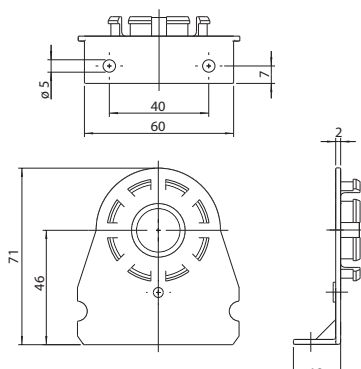
APA1 Snap-on plastic bracket, L-shaped



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< | | | |
| | OFF5 | | 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 |
| | OFF5 | | |
| | | | |
| | SP | | Impostazione valore di commutazione / Setting switching level |
| Press >M< | | 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 | | |
| | | | |
| | HI | | Valore di picco max. / peak value high |
| Press >M< | | Press >S< | Visualizza il valore di picco max. / show peak value high |
| | 240 | | |
| | | Press >M< | Ritorno / return |
| | HI | | |
| | | | |
| | LO | | Valore di picco min. / peak value low |
| Press >M< | | 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.