## ◼ Air differential pressure transmitter IP65

# PTG

## ◼ Description

The differential pressure transmitter serie PTG 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** | ≤ ±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** | The output signal can be calibrated to zero by pressing the M key. |
| **Supply voltage** | 18…30 V AC / 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 mm² |
| **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. 81x83x41 mm |
| **Weight** | approx. 125 g |
| **Protection class** | IP65 |
| **Working humidity** | 0...95% RH, non-condensing |
| **Working temperature** | 0...+50°C |
| **Storage temperature** | -10...+70°C |
| **Accessories** | Connection set (PVC-hose 2 m Ø 6 with 2 ABS nippels and 4 screws) **included** |
| **Installation** | Screw fastening |
| **Installation position** | any |
| **Standards** | CE-conformity, RoHS |
| **Optional** | UL, conforms to UL Std. 61010-1, conforms to CSA Std. C22.2 No. 61010-1 |

| Models | Measuring range | Max pressure |
|---|---|---|
| PTG1 | -50...0...+50 Pa | 60 kPa |
| PTG2 | 0...100 Pa, 0...250 Pa | 60 kPa |
| PTG3 | 0...500 Pa, 0...1000 Pa | 75 kPa |
| PTG4 | 0...1 kPa, 0...2,5 kPa | 85 kPa |
| PTG5 | 0...5 kPa, 0...10 kPa | 85 kPa |
| PTG6 | 0...25 kPa, 0...50 kPa | 200 kPa |
| PTG9 | -100...0...+100 Pa | 60 kPa |

Suffix A offset autocalibration
Suffix D for models with display
Suffix UL for models UL / CSA approval

## Electrical wirings

3-wire
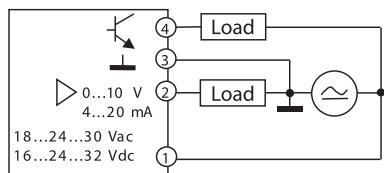


| 4 | S A | Switching output, npn |
|---|-----|------------------------|
| 3 | G O | Ground G N D |
| 2 | Y | Output signal 0 . . . 10V / 4 . . . 20 mA |
| 1 | G | Supply voltage 24 VAC / VDC |

## Settings
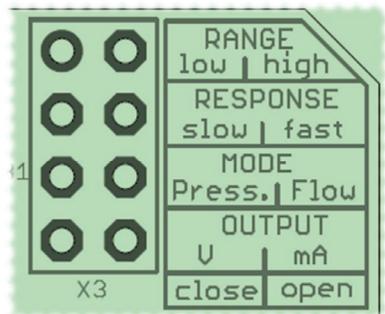


|  | Jumper (switched) | Aperto (open) |
|---|---|---|
| Range pressione (Pressure range) | Bassa (low) | Alta (high) |
| Risposta (Response) | Lenta (slow) | Veloce (fast) |
| Funzionamento (Mode) | Lineare (linear) | Quadratico (square root) |
| Segnale di uscita (Output signal) | 0…10 V | 4…20 mA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

## Dimensions (mm)
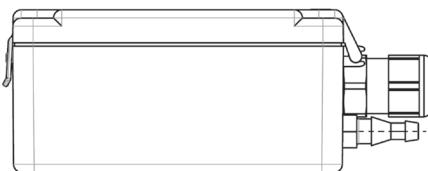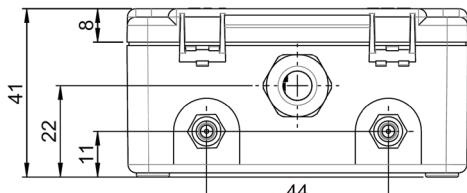


ABS nippel
(part of connection set APA3)
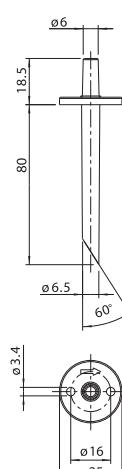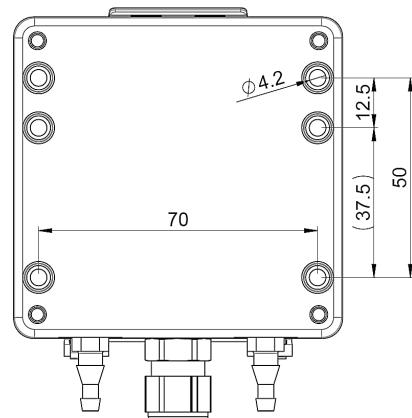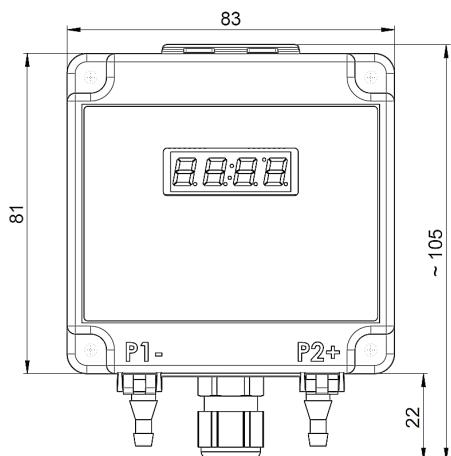
## Programming version without display

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.

For recalibration remove both pressure tube, press the button „MODE/Offset" for 5 seconds and than replase the pressure tube.

## Programming display version

| Display | Description |
|---|---|
| -8.8.4 | ➢ **Pressione rilevata** / *Current measurand* |

*Press MODE/Offset*

| OFFS | ➢ **Calibrazione offset** / *Set zero point* |
|---|---|

*Press MODE/Offset* — *Press SET/Switchp.*

| -8.8.4 | ✓ Offset attuale viene visualizzato / *Current offset value is displayed* |
|---|---|

*Press SET/Switchp. (>5 sec)*

| 8.8.8.0 | ✓ Reset dell'offset a zero / *Reset current offset value* |
|---|---|

*Press MODE/Offset*

| OFFS | ✓ Mem. dell'offset, il display lampeggia / *Safe offset, display is blinking* |
|---|---|

*Press MODE/Offset*

| SP | ➢ **Impostazione del valore di commutazione** / *Set switch point* |
|---|---|

*Press MODE/Offset* — *Press SET/Switchp.*

| 8.8.75 | ✓ Valore di commutazione attuale / *Current switch point is displayed* |
|---|---|

*Press SET/Switchp. (>5 sec)*

| 8.8.50 | ✓ Modifica del valore di commutazione al valore attualmente misurato / *Modify current switch point* |
|---|---|

*Press MODE/Offset*

| SP | ✓ Mem. del valore, il display lampeggia / *Safe switch point, display is blinking* |
|---|---|

*Press MODE/Offset*

| HI | ➢ **Valore di picco max.** / *Max. peak value* |
|---|---|

*Press MODE/Offset* — *Press SET/Switchp.*

| 268 | ✓ Visualizza il valore di picco max. / *Max. peak value is displayed* |
|---|---|

*Press MODE/Offset*

| HI | ✓ Conferma / *Confirmation* |
|---|---|

*Press MODE/Offset*

| LO | ➢ **Valore di picco min.** / *Min. peak value* |
|---|---|

*Press MODE/Offset* — *Press SET/Switchp.*

| -126 | ✓ Visualizza il valore di picco min. / *Min. peak value is displayed* |
|---|---|

*Press MODE/Offset*

| LO | ✓ Conferma / *Confirmation* |
|---|---|

*Press MODE/Offset*

| 8.8.8.0 | ➢ **Pressione differenziale rilevata** / *Current measurand* |
|---|---|

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