

Pressure Monitor v2 PM276

Description

The PM276 provides a retransmit output and an alarm contact for applications requiring electronic pressure monitoring. The heart of the PM276 is a piezoresistive silicon pressure transducer, providing high accuracy, long life and total adjust-ability. The PM276 contains a stable bridge supply, pre-amplifier, scaling amplifier and a comparator circuit driving a high power relay. The trip point and switching hysteresis are adjustable from the front of the module. A 2mm test socket is used for trip adjustment within a 0-5V trip set range calibrated to correspond to the input pressure range. Trip status is indicated by a red L.E.D. on the front. High or low setting is selectable internally by coding plugs. Optional features include vacuum and absolute inputs with a wide choice of retransmit analogue output signals. Power supply can be 12 or 24Vdc or low level (non isolated) AC voltage.



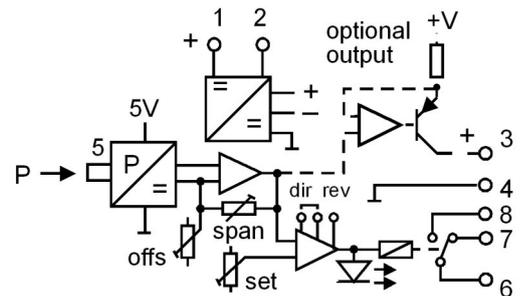
Trip set example

Input range: 0 - 10kPa.
 Trip set range: 0 - 5Vdc (test socket to terminal 2).
 Required trip point: 2kPa.
 Set trip to: $\frac{5}{10} \times 2 = 1V$

General Specifications

Size: 23.5W x 71.5H x 109D (mm).
 Mounting: Clip for 35mm DIN-Rail.
 Housing material: ABS.
 Termination: Top mounted screw terminals.
 Pneumatic connection: Barbed nozzle for 3.5 - 4mm I.D. tube. Optional quick connector "one touch" for 3.2mm O.D. Tube (as shown).
 Weight: 100 kg.
 Protection class: IP40 (IP65 Enclosure opt.)
 Input pressure ranges: 1kPa up to 200kPa. (0.15 PSI up to 30 PSI).
 Medium compatibility: Air, low pressure steam, gasoline and oil vapours, ethylene glycol.
 Over pressure (max): 5 x range (2 x range/200kPa).
 Accuracy: (> 5kPa) <1% of range.
 Linearity: <0.5% of range.
 Pressure hysteresis: 0.05% of range.
 Temperature drift: 0.02% per °C.
 Relay contact: Change-over.
 8A/250Vac resistive.
 3.5A/250Vac inductive.
 Switching hysteresis (DB): 0.5 - 5%.
 Power supply swing: -20...+30%.
 Electromagnetic compatibility: Complies with AS/NZS 4251.1 (EN 50081.1)

Block Diagram



For input / output combinations refer to TYPE NO. DESIGNATION overleaf.

TYPE NO. DESIGNATION

Power Supply:

- | | |
|--------------------------|------------------------------------|
| 1 = 12Vdc (30mA - 50mA). | # 3 = 12Vac (non isol). |
| 2 = 24Vdc (50mA - 70mA). | # 4 = 24Vac (non isol). |
| | *) 9 = Other <48V dc/ac (Specify). |

Input:

- | | |
|--------------------|---|
| 4 = 1 to 10kPa | Specify required calibration within the input range selected. |
| 7 = 10 to 100kPa. | |
| 8 = 100 to 200kPa. | |

*) Retransmit Output: (for ≥ 5 kPa)

- (For 24Vdc supply only - 12Vdc models have reduced output drive).
- | | |
|---------------------------------|-----------------------------------|
| 0 = None. | 5 = 0 - 10V (500k Ω min). |
| 1 = 0 - 1mA (10k Ω max). | 6 = 1 - 5V (100k Ω min). |
| 2 = 0 - 5mA (2k Ω max). | 7 = 4 - 20mA (500 Ω max). |
| 3 = 0 - 1V (100k Ω min). | 8 = 10 - 50mA (200 Ω max). |
| 4 = 0 - 5V (100k Ω min). | *) 9 = Other (Specify). |

Options:

- | |
|--|
| 0 = None. |
| 3 = Open collector transistor output. |
| *) 4 = (0 - 100kPa) Vacuum. |
| *) 5 = (0 - 120kPa) Vacuum (Barometric). |
| *) 9 = Other (Specify). |

Nozzle Type:

- | |
|---|
| 1 = Barbed fitting for 3.5 - 4mm ID soft tube. |
| *) 2 = Quick-Connect 3.2mm (1/8") OD tube (recommended tube SMC TE 1800 BG) |
| *) 6 = Quick-Connect 6mm OD tube |

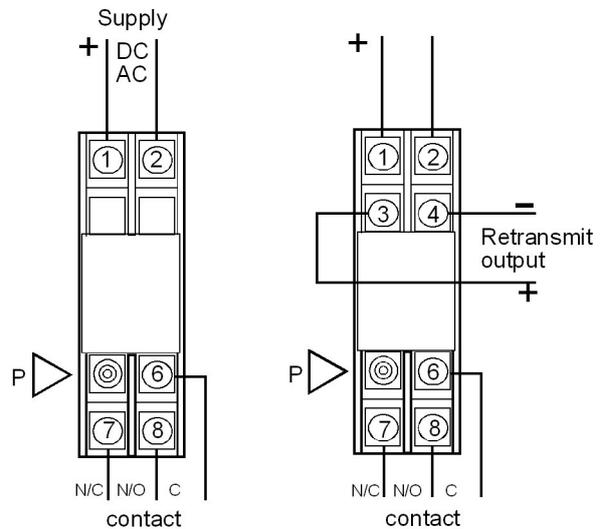
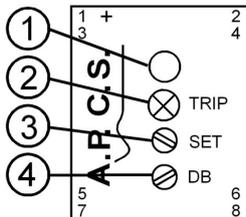
= Not Suitable For Units With Retransmit Output.

*) = Price Extra.

Connection Diagram

Front Control Explanation

- 1) Test socket. Reference to terminal 2 for trip adjustment.
- 2) Status indicator. ON = relay energised.
- 3) Trip set adjustment (15 turns).
- 4) Dead band (Hysteresis) adjustment (15 turns).



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