

Differential Pressure Transmitter

Specifications subject to change without notice. | USA 220428 | Page 1 of 2



DESCRIPTION

Compact, temperature-compensated pressure transmitters used for measuring differential pressure, positive pressure and vacuum of non-aggressive gasses in commercial monitoring and control applications including:

- Building automation and air conditioning systems
- Overpressure measurement in clean rooms and laboratories
- Measurement of constant pressure in VAV systems
- Dynamic filter and fan monitoring

FEATURES

- Eight field-selectable pressure ranges
- Field-selectable 0..10 V or 4..20 mA output with screw-terminal connections (3-wire)
- Self-compensating piezoresistive pressure transducer maintains accuracy in any mounting orientation
- Field-selectable normal or fast response time
- 22 to 30 VAC/VDC supply voltage
- In-service auto-zero eliminates scheduled maintenance
- Optional 4-digit LED display
- 1/2" NPT conduit connection
- 1/4" hose connections
- Duct probes and 6' tubing included

984Q



SPECIFICATIONS

| | |
|----------------------------|-----------------------------------------------------------------------|
| Supply Voltage | 22..30 VAC/VDC |
| Output Signal | 0..10 V and 4..20 mA |
| Load (4-20mA output) | 20..500 Ω |
| Max. Current Draw | < 60 mA without display <150 mA with display |
| Pressure Medium | Air and non-aggressive gasses |
| Measurement Method | Piezoresistive pressure transducer |
| Linearity and Hysteresis | $\leq \pm 1\%$ f.s. |
| Temperature: Operating | 32..122°F (0..50°C) |
| Storage | 14..158°F (-10..70°C) |
| Humidity | 0..95% rh, non-condensing |
| Long Term Stability (typ.) | $\leq \pm 0.5\%$ up to $\pm 2.5\%$ f.s./yr; dep. on pressure range |
| Repeatability | $\leq \pm 0.2\%$ f.s. |
| Position Dependency | $\leq \pm 0.02\%$ f.s. |
| Response Time | 1 sec or 100 msec |
| Hose Pressure Connections | 1/4" hose fittings |

| | |
|------------------------|--------------------------------------------|
| Electrical Connections | 16 AWG (1.5 mm ²) max. |
| Mounting | 4 sheet metal screws |
| Case Material | ABS |
| Case Dimensions | Aprox. 3.25" x 2.25" (85 x 58 mm) |
| Weight | Aprox. 0.3 lb. (130g) |
| Protection | NEMA 3 (IP54) |
| Standards | EN 60770, EN 61326, 2002/95/ EWG (RoHS) |

ORDERING INFORMATION

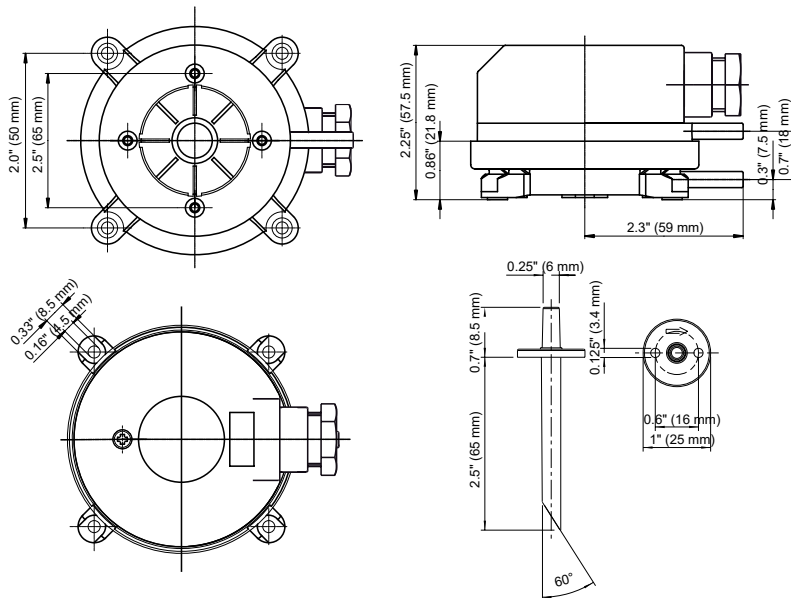
984Q-443704
984Q-443714
984Q-441704
984Q-441714

Differential pressure transmitter,
eight selectable ranges

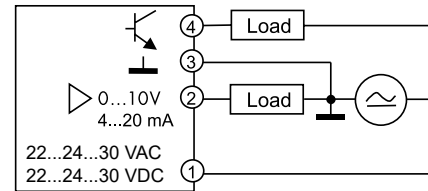
- Pa display scale, w/o LCD
- Pa display scale, with LCD
- mbar display scale, w/o LCD
- mbar display scale, with LCD

| | Selectable Ranges in. WC (Pa) | Overload Capacity | Burst Pressure | Temperature Error |
|----|----------------------------------|----------------------|-------------------|---------------------------|
| 1. | -0.2 to 0.2" (-50 to 50Pa) | 80" (20kPa) | 160" (40kPa) | $\leq \pm 0.002"$ (5Pa) |
| 2. | -0.4 to 0.4" (-100 to 100Pa) | 80" (20kPa) | 160" (40kPa) | $\leq \pm 0.002"$ (5Pa) |
| 3. | -1 to 1" (-250 to 250Pa) | 80" (20kPa) | 160" (40kPa) | $\leq \pm 0.1"$ (25Pa) |
| 4. | -2 to 2" (-500 to 500Pa) | 80" (20kPa) | 160" (40kPa) | $\leq \pm 0.2"$ (50Pa) |
| 5. | 0 to 0.4" (0 to 100Pa) | 80" (20kPa) | 160" (40kPa) | $\leq \pm 0.002"$ (5Pa) |
| 6. | 0 to 1" (0 to 250Pa) | 80" (20kPa) | 160" (40kPa) | $\leq \pm 0.002"$ (5Pa) |
| 7. | 0 to 2" (0 to 500Pa) | 80" (20kPa) | 160" (40kPa) | $\leq \pm 0.07"$ (17.5Pa) |
| 8. | 0 to 4" (0 to 1kPa) | 160" (40kPa) | 280" (70kPa) | $\leq \pm 0.04"$ (10Pa) |

DIMENSIONS

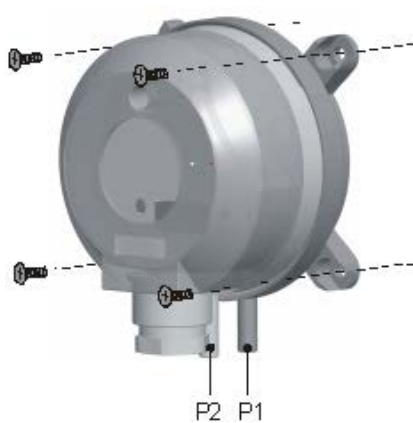


Terminal assignments



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

MOUNTING & INSTALLATIONS



Mounting and hose connection

Important: When connecting and laying the hoses, do not bend or damage them. Hoses and hose connections that are not airtight cause damage to the device or will give wrong measuring results.

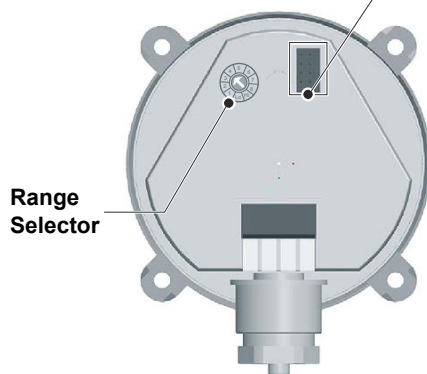
Use 1/4" hose; clamps required above 100" WC (25kPa)

P1 = Positive pressure measurement

P2 = Vacuum measurement

P1 + P2 = Differential pressure measurement

| | Switched (factory setting) | Open |
|---------------|-------------------------------|-----------|
| n/a | n/a | n/a |
| Response | Normal | Fast |
| n/a | n/a | n/a |
| Output signal | 0...10 V | 4...20 mA |



Offset Calibration

The 984Q transmitter automatically and regularly performs self-calibration of the zero point. No manual calibration is required at start-up or during operation. The output signal is briefly held stable during the auto-cal process.



Safety and product liability

The product referred to in these instructions may only be mounted, connected and started up by qualified technicians. The valid safety regulations, intended use and technical data must be observed. In accordance with these regulations, the system voltage must be switched off and secured from being unintentionally switched on again. Damaged products may not be used. The product is not suitable for use in installations under periodic inspection by U.S. FDA. We are not liable for damages that have been caused by improper use.

Pressure Range Selection

Set the rotary selection switch to the desired range (see table on page 1). Position 0 forces the output low (0V/4mA). Position 9 forces the output high (10V/20mA).