

# Differential Pressure Transmitter

984M

## 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

- Dual, 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
- 24 VAC/VDC supply voltage
- Push-button zero calibration
- Optional 4-digit LED display
- 1/2" NPT conduit connection
- 1/4" hose connections
- Duct probes and 6' tubing included



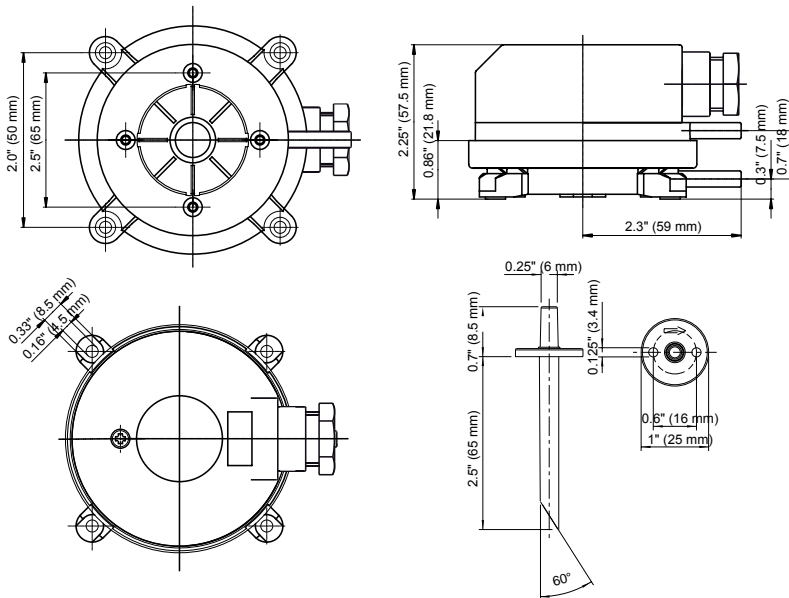
## SPECIFICATIONS

Supply Voltage	18..30 VAC / 16..32 VDC	Repeatability	≤ ± 0.2% f.s.
Output Signal	0..10 V and 4..20 mA	Position Dependency	≤ ± 0.02% f.s.
Load (4-20mA output)	20..500 Ω	Response Time	1 sec or 100 msec
Max. Current Draw	< 65 mA without display <150 mA with display	Hose Pressure Connections	1/4" hose fittings
Pressure Medium	Air and non-aggressive gasses	Electrical Connections	16 AWG (1.5 mm <sup>2</sup> ) max.
Measurement Method	Piezoresistive pressure transducer	Mounting	4 sheet metal screws
Linearity and Hysteresis	≤ ± 1% f.s.	Case Material	ABS
Temperature: Operating	32..122°F (0..50°C)	Case Dimensions	Aprox. 3.25" x 2.25" (85 x 58 mm)
Storage	14..158°F (-10..70°C)	Weight	Aprox. 0.3 lb. (130g)
Humidity	0..95% rh, non-condensing	Protection	NEMA 3 (IP 54)
Long Term Stability (typ.)	≤ ±0.5% up to ± 2.5% f.s./yr; dep. on pressure range	Standards	EN 60770, EN 61326, 2002/95/ EWG (RoHS)

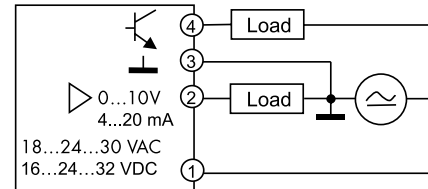
Range 1 in. WC (Pa)	Range 2 in. WC (Pa)	Overload Capacity	Burst Pressure	Temperature Error (range 1)	Part Number*
-0.2 to 0.2" (-50 to 50Pa)	n/a	80" (20kPa)	160" (40kPa)	≤ ±0.002" (5Pa)	984M-4X3704
-0.4 to 0.4" (-100 to 100Pa)	n/a	80" (20kPa)	160" (40kPa)	≤ ±0.002" (5Pa)	984M-4W3704
0 to 0.4" (0 to 100Pa)	0 to 1" (0 to 250Pa)	80" (20kPa)	160" (40kPa)	≤ ±0.002" (5Pa)	984M-423704
0 to 1" (0 to 250Pa)	0 to 2" (0 to 500Pa)	80" (20kPa)	160" (40kPa)	≤ ±0.002" (5Pa)	984M-433704
0 to 2" (0 to 500Pa)	0 to 4" (0 to 1000Pa)	80" (20kPa)	160" (40kPa)	≤ ±0.07" (17.5Pa)	984M-443704
0 to 4" (0 to 1kPa)	0 to 10" (0 to 2.5kPa)	160" (40kPa)	280" (70kPa)	≤ ±0.04" (10Pa)	984M-453704
0 to 20" (0 to 5kPa)	0 to 40" (0 to 10kPa)	240" (60kPa)	480" (120kPa)	≤ ±0.002" (50Pa)	984M-473704

\* To include display option, replace "0" with "1" in part number; example 984M-423714.

**DIMENSIONS**

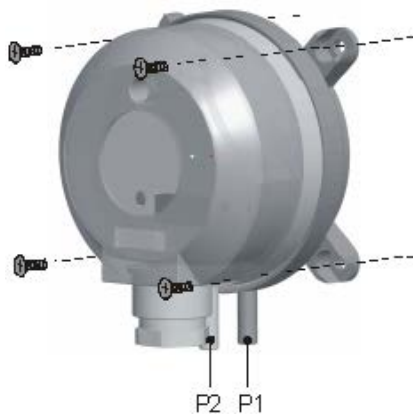


**Terminal assignments**



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.

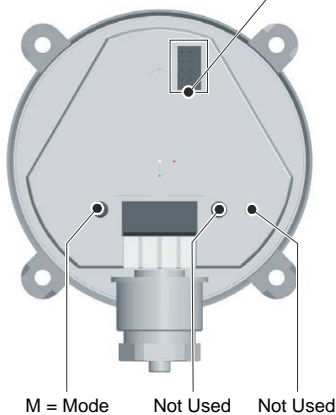
Use 1/4" hose; clamps required above 100" WC (25kPa)

P1 = Positive pressure measurement

P2 = Vacuum measurement

P1 + P2 = Differential pressure measurement

	Switched (factory setting)	Open
Pressure range	Low	High
Response	Normal	Fast
n/a	n/a	n/a
Output signal	0...10 V	4...20 mA



**Offset Calibration**

This function is used to correct the zero-point deviation (offset) of the output signal in depressurised state (example: to 0 V/4mA at zero Pa).

Disconnect the unit from the pressure by opening both hose nozzles or removing the hoses. Then press the "M" button for 5 sec.

**! 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.