

P7640A,B Differential Pressure Sensors



The P7640A Panel Mount and P7640B Duct Mount Differential Pressure Sensors provide reliable, accurate measurement and control. Proper applications include measurement of extremely low pressure applications such as: building/room pressure, air flow, variable air volume, filter status, and duct pressure. They are ideal for clean rooms, hospitals, fume hoods, and computer rooms.

The P7640 Pressure Sensors are designed with field-selectable 4-20 mA, 0-5 Vdc, or 0-10 Vdc output. The four pressure ranges fall between 0 and 1 inches water column (in. w.c.) or 0-10 in. w.c., depending on the model.

SPECIFICATIONS

Models:

- See Table 1.

Dimensions:

- See Fig. 1.

Fittings:

- Brass barb; 1/8 in. O.D.

Electrical Ratings:

- Supply Voltage: 12-30 Vdc or 24 Vac ($\pm 15\%$) nominal.
- Maximum Supply Current (Vac): 60 mA.
- Maximum Supply Current (Vdc): 25 mA.
- Maximum Output Current: 25 mA.

Operating Environment:

- 32°F to 140°F (0°C to 60°C).
- 0 to 90% RH.
- Dry air or inert gas only.

Zero Adjust:

- Pushbutton auto-zero and digital input on terminal block.

Mode:

- Unidirectional (default) or bidirectional, jumper selectable.

Proof Pressure:

- 3 psid.

Burst Pressure:

- 5 psid.

Accuracy:

- $\pm 1\%$ full scale (combined linearity and hysteresis).

Temperature Effect:

- 1 in. models: 0.05% per °C.
- 10 in. models: 0.01% per °C (relative to 25°C) 0-50°C.

Zero Drift (1 year):

- 1 in. models: 2.0% max.
- 10 in. models: 0.5% max.

Accessories:

- 32003169-001 4 in. Duct Pressure Pick-up Probe.

SPECIFICATION DATA

FEATURES

- Temperature-compensated transmitter with advanced ceramic capacitive sensing element designed for very low pressure differentials provides a stable, reliable, maintenance-free operation.
- Only four models needed to cover all applications. Four additional models offered with LDC option for local monitoring.
- All models output configurable 4-20 mA, 0-5 Vdc, and 0-10 Vdc.
- All models offer uni- or bi-directional output.
- All models offer four configurable pressure ranges, selectable between 0-1 in. w.c. or 0-10 in. w.c. with an easy to set slide switch. No jumpers, no guessing.
- Duct model offers integral duct probe for easy installation with fewer parts.
- All models offer both pushbutton and digital input to zero the output. A microprocessor algorithm prevents accidental zero adjustment during normal operation.

Table 1. P7640 Models.

Model	Mounting	Pressure Ranges (in. w.c.)	Display
P7640A1000	panel	0-0.1, 0-0.25, 0-0.5, 0-1.0	yes
P7640A1018	panel	0-0.1, 0-0.25, 0-0.5, 0-1.0	no
P7640A1026	panel	0-1.0, 0-2.5, 0-5, 0-10	yes
P7640A1034	panel	0-1.0, 0-2.5, 0-5, 0-10	no
P7640B1008	duct	0-0.1, 0-0.25, 0-0.5, 0-1.0	yes
P7640B1016	duct	0-0.1, 0-0.25, 0-0.5, 0-1.0	no
P7640B1024	duct	0-1.0, 0-2.5, 0-5, 0-10	yes
P7640B1032	duct	0-1.0, 0-2.5, 0-5, 0-10	no



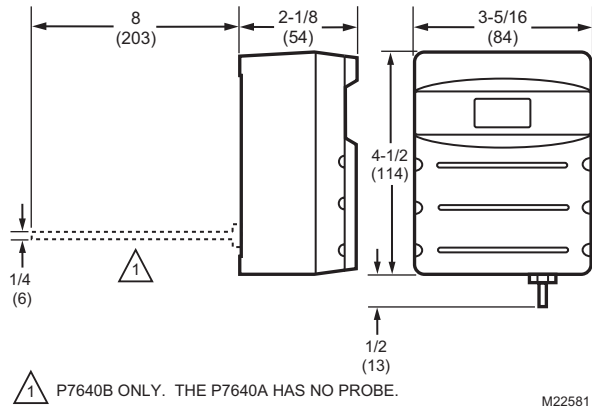


Fig. 1. P7640A,B dimensions in in. (mm).

TYPICAL SPECIFICATION

1. Sensor shall have four switch selectable ranges: 0.1, 0.25, 0.5, 1.0 in. w.c. for 1 in. models, and 1.0, 2.5, 5, 10 in. w.c. for 10 in. models.
2. Sensor shall have provision for zeroing by push-button or digital input.
3. Sensor shall have field selectable outputs of 0-5 Vdc, 0-10 Vdc, and 4-20 mA.
4. Sensor shall have jumper to select unidirectional or bi-directional mode.
5. Sensor shall have brass-barb fittings.
6. Sensor shall operate from 12-30 Vdc or 24 Vac. AC power applies to operation in voltage mode only.
7. Sensor housing dimensions shall be 4-1/2 in. x 4-1/2 in. x 2 in.
8. Sensor shall have LCD display.
9. Sensor accuracy shall be $\pm 1\%$ FS selected range.
10. Sensor overpressure rating shall be 3 PSID proof, and 5 PSID burst.

