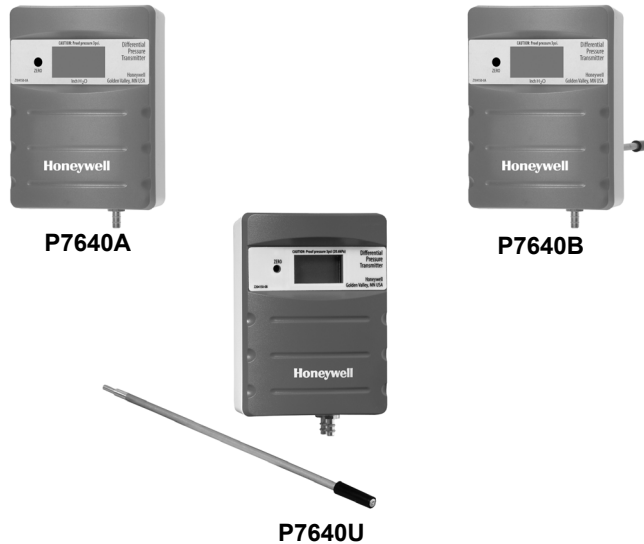


# P7640A,B,U

## DIFFERENTIAL PRESSURE SENSORS

### SPECIFICATION DATA



### GENERAL

The P7640A Panel Mount, P7640B Duct Mount, and P7640U Universal 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.

### FEATURES

- Temperature-compensated transmitter with advanced ceramic capacitive sensing element designed for very low pressure differentials provides a stable, reliable, maintenance-free operation.
- The P7640 Pressure Sensors are designed with field-selectable 4-20 mA, 0-5 Vdc, or 0-10 Vdc output.
- All models offer jumper selectable inches w.c. or pascal scale.
- All models offer uni- or bi-directional output.
- All models offer jumper selectable fast or standard response time.
- The P7640A,B offer four configurable pressure ranges, selectable between 0-1" w.c./0-250 Pa or 0-10" w.c./0-2500 Pa with an easy to set rotary switch. No jumpers, no guessing.
- The P7640U offers configurable pressure ranges between 0-10 in. w.c./0-2500 Pa with an easy to set rotary switch.
- Duct model comes with factory installed duct probe. The Universal model comes with attachable duct probe and can be used in either panel or duct mounting application.
- All models offer both pushbutton and digital input to zero the output. A microprocessor algorithm prevents accidental zero adjustment during normal operation.

### SPECIFICATIONS

#### Models:

Refer to Table 1.

#### Dimensions:

Refer to Fig. 1.

#### Fittings:

Brass barb; 0.24 in. (6.1 mm) 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° to 140° F (0° 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:**

+/- 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:**

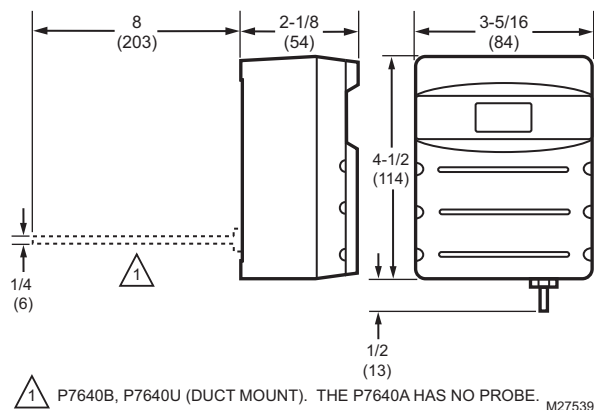
32003169-001 4 in. Duct Pressure Pick-up Probe.

**IMPORTANT:**

*The selectable pascal scale and selectable response time features do not apply to models with date code prior to 0816.*

**Table 1. P7640 Models.**

| Model      | Mounting  | Pressure Ranges<br>(in. w.c.)            | Pressure Ranges<br>(pascal)                     | Display |
|------------|-----------|------------------------------------------|-------------------------------------------------|---------|
| P7640A1000 | panel     | 0-.1, 0-.25, 0-.5, 0-1                   | 0-25, 0-50, 0-100, 0-250                        | yes     |
| P7640A1018 | panel     | 0-.1, 0-.25, 0-.5, 0-1                   | 0-25, 0-50, 0-100, 0-250                        | no      |
| P7640A1026 | panel     | 0-1, 0-2.5, 0-5, 0-10                    | 0-250, 0-500, 0-1000, 0-2500                    | yes     |
| P7640A1034 | panel     | 0-1, 0-2.5, 0-5, 0-10                    | 0-250, 0-500, 0-1000, 0-2500                    | no      |
| P7640B1008 | duct      | 0-.1, 0-.25, 0-.5, 0-1                   | 0-25, 0-50, 0-100, 0-250                        | yes     |
| P7640B1016 | duct      | 0-.1, 0-.25, 0-.5, 0-1                   | 0-25, 0-50, 0-100, 0-250                        | no      |
| P7640B1024 | duct      | 0-1, 0-2.5, 0-5, 0-10                    | 0-250, 0-500, 0-1000, 0-2500                    | yes     |
| P7640B1032 | duct      | 0-1, 0-2.5, 0-5, 0-10                    | 0-250, 0-500, 0-1000, 0-2500                    | no      |
| P7640U1040 | Universal | 0-.1, 0-.25, 0-.5, 0-1, 0-2.5, 0-5, 0-10 | 0-25, 0-50, 0-100, 0-250, 0-500, 0-1000, 0-2500 | no      |
| P7640U1052 | Universal | 0-.1, 0-.25, 0-.5, 0-1, 0-2.5, 0-5, 0-10 | 0-25, 0-50, 0-100, 0-250, 0-500, 0-1000, 0-2500 | yes     |

**Fig. 1. P7640A,B,U 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 pushbutton 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 I-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 ±1% FS selected range.
10. Sensor overpressure rating shall be 3 PSID proof, and 5 PSID burst.

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