



Honeywell P7645 Series Dry Pressure Sensors Installation Guide

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Honeywell

P7660/P7645 Series Dry Pressure
Sensors



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INSTALLATION INSTRUCTIONS

WARNING

This product can expose you to chemicals including 1,3 Butadiene, which is known to the State of California to cause cancer and reproductive harm. For more information, go to www.P65Warnings.ca.gov

APPLICATION

The P76660/P7645 Series Dry Differential Pressure Sensors provide reliable, accurate measurement and control. Applications include measurement of extremely low-pressure applications such as building/room pressure, airflow, variable air volume, filter status, and duct pressure. They are ideal for clean rooms, hospitals, fume hoods, and computer rooms.

The P7660 Pressure Sensors have four selectable ranges and 4 output signal configurations. The P7645 offers a single pressure range and a 4-20mA output signal.

Product Application Limitation:

Honeywell products are not designed to be used as the lone device for life or safety applications. Honeywell products are not intended for use in critical applications such as nuclear facilities, human implantable devices, or life support. Honeywell believes a systems approach to safety is necessary for these types of applications. Honeywell is not liable, in whole or in part, for any claims or damages arising from such uses.

IMPORTANT

- Only qualified trade installers should install this product
- This product is not intended for life-safety applications
- Do not install in hazardous or classified locations
- The installer is responsible for all applicable codes
- De-energize power supply prior to installation or service
- Forming a “drip-loop” (allowing the tubing to dip below the level of the sensor hose barbs) is recommended to protect the sensor from damage caused by condensation.



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INSTALLATION

1. Screw mount sensor directly to duct, or in panel using self-tapping screws or attach to a DIN rail (2 possible orientations for DIN mounting, BACK, and LEFT SIDE).
2. Plumb airlines to sensor hose barbs (Accepts 1/8" & 1/4" ID tubing). High (+) and low (-) ports are labeled on

the sensor.

3. Wire sensor for voltage or current output as shown in the wiring diagrams.
4. Recommendation: Apply power to the sensor. With no pressure applied, press the ZERO SET button for 2seconds. For best results, temporarily connect high and low pressure ports together while zeroing.)

LED STATUS/INDICATION

The LED indicator will flash every 5 seconds for normal operation.

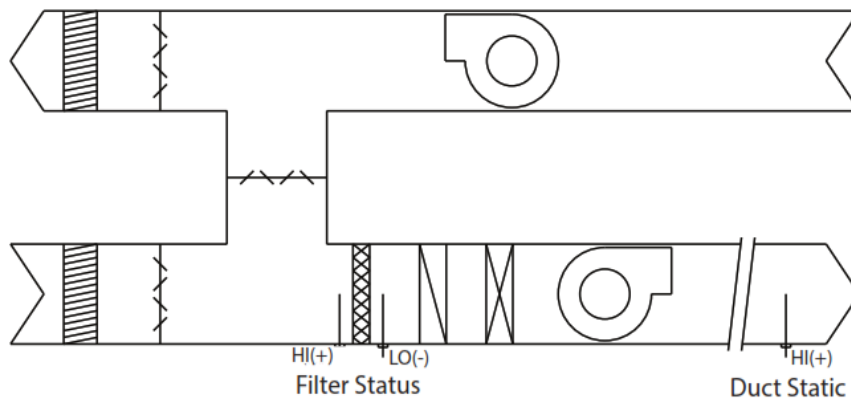
The LED indicator will rapidly flash when the applied pressure is greater than 110% of the selected range.

The LED indicator will rapidly flash momentarily when zeroing process is complete.

TYPICAL APPLICATIONS

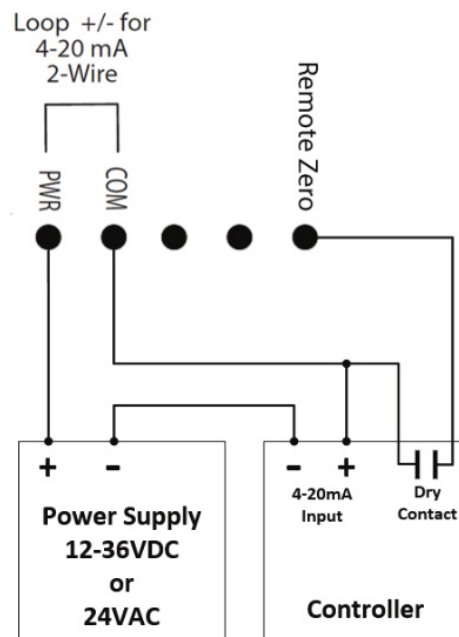
Velocity: Use a Pitot tube and plumb high (+) port to total pressure (Pt) connection and low (-) port to static pressure (Ps) connection to directly read $P_t - P_s = P_v$. Apply correction constant provided by Pitot tube manufacturer.

Duct Static: Install a static pressure pickup tube approximately 2/3 of the way down the discharge air duct and plumb to a high (+) port for positively pressurized ducts.

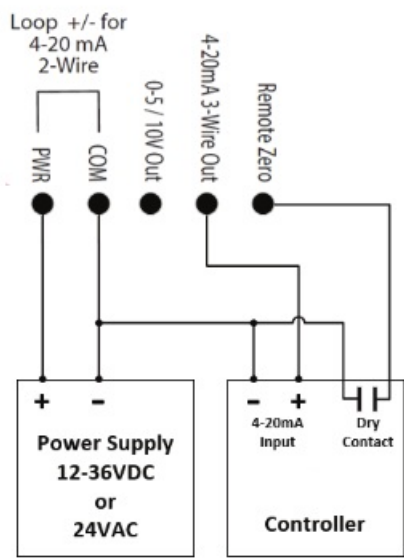


WIRING P7645

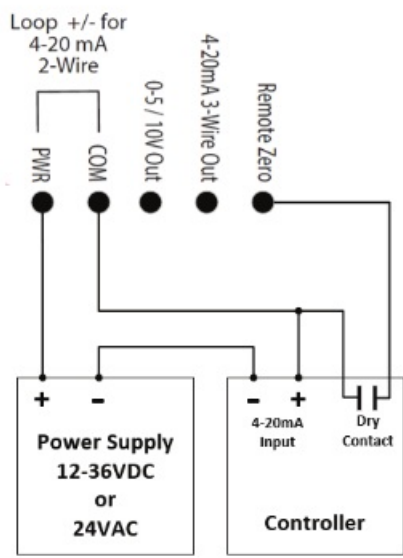
2 – Wire 4 – 20mA



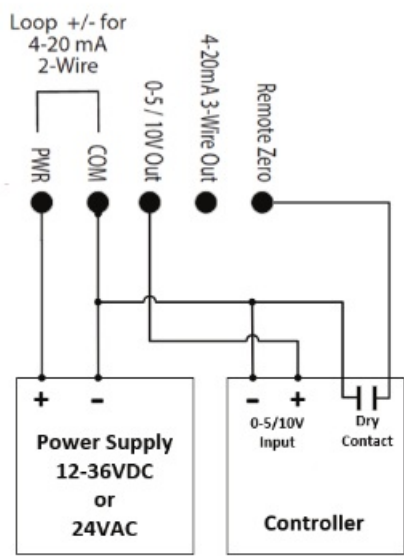
3 – Wire 4 – 20mA



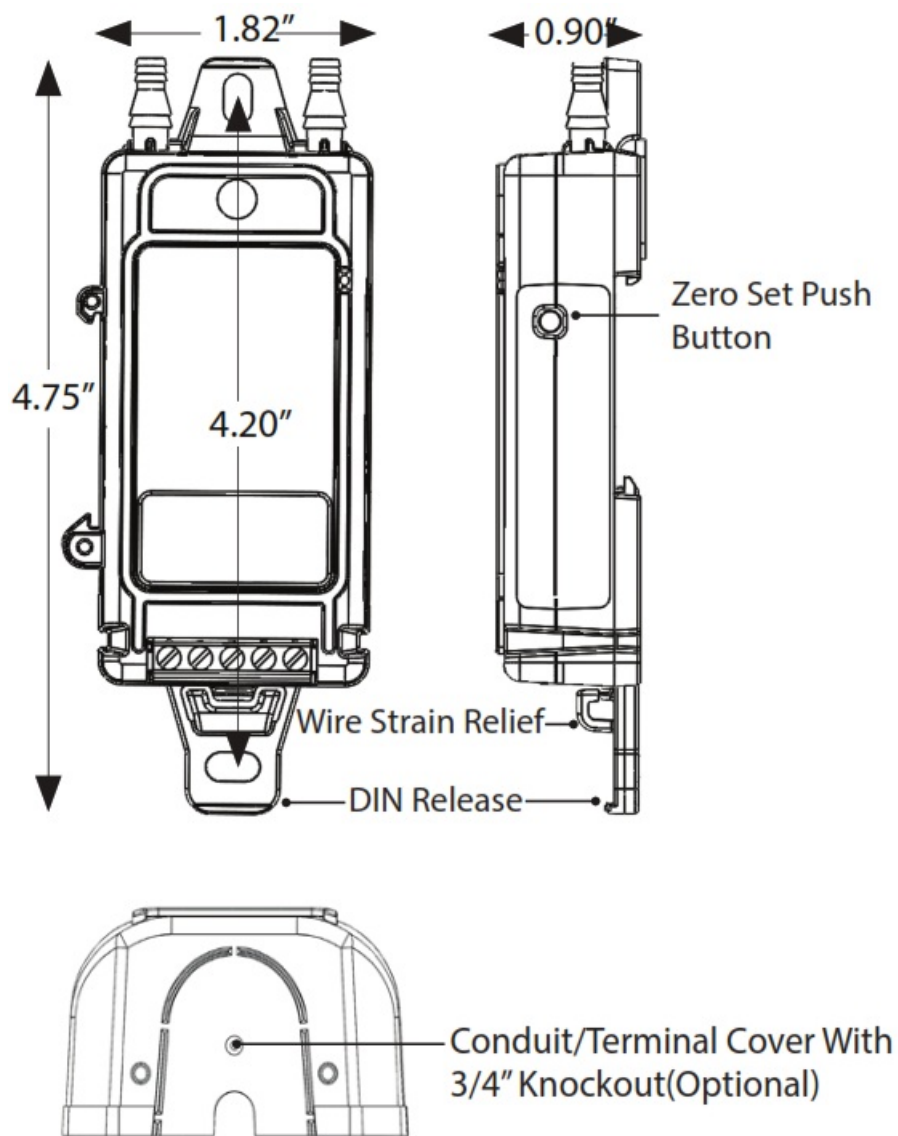
2 – Wire 4 – 20mA



Selectable 0-5V and 0-10V



DIMENSIONS



TROUBLESHOOTING

Table 1.

| Symptom | Solution |
|------------------------|---|
| No output | Check to wire. Ensure power supply meets requirements. |
| Pressure reading error | Verify control panel software is configured for correct output scaling. |
| | Verify switch settings |
| | Verify tubing is not pinched or leaking. |
| | Possible contamination. Ensure the sensor is used only on dry air or nit rogen. |

RECYCLING

The product should not be thrown away in the regular trash. Instead, it should be recycled according to the local municipality.

Table 2. Specification by Product

| Product number | Pressure range | Output | LCD display | Probe |
|----------------|------------------------|--------------|-------------|-------|
| P7645C0010X | 0-0.10 "W.C. | 4-20 mm loop | No | No |
| P7645C0025X | 0-0.25 "W.C. | 4-20 mA Loop | No | No |
| P7645C0100X | 0-1.0 "W.C. | 4-20 mA Loop | No | No |
| P7645C0500X | 0-5.0 "W.C. | 4-20 mA Loop | No | No |
| P7660P0500D | 0.1/0.25/2.5/5.0 "W.C. | Universal | Yes | No |
| P7660P0500X | 0.1/0.25/2.5/5.0 "W.C. | Universal | No | |
| P7660P1000D | 1.0/2.5/5.0/10.0 "W.C. | Universal | Yes | No |
| P7660P1000X | 1.0/2.5/5.0/10.0 "W.C. | Universal | No | No |

Table 2. Specification by Product

| Product number | Pressure range | Output | LCD display | Probe |
|----------------|-------------------------|-----------|-------------|-------|
| P7660D0500D | 0.1/0.25/2.5/5.0 "W.C. | Universal | Yes | Yes |
| P7660D0500X | 0.1/0.25/2.5/ 5.0 "W.C. | Universal | No | Yes |
| P7660D1000D | 1.0/2.5/5.0/10.0 "W.C. | Universal | Yes | Yes |
| P7660D1000X | 1.0/2.5/5.0/10.0 "W.C. | Universal | No | Yes |

SPECIFICATION

Power supply: 12-30 VDC/24 VAC, 30 mA max.

Outputs:

P7660: 3-wire 0-5 V/10 V, 4-20 mA loop-powered, 3-wire 4-20 mA (Selectable)

P7645: 4-20 mA loop powered

Output Scaling:

P7660 Selectable Ranges:

0-5" (0.1/0.25/2.5/5.0 "W.C.)

0-10" (1.0/2.5/5.0/10.0 "W.C.)

P7645 Models: 0-0.1" 0-0.25", 0-1.0", 0-5.0"

Operating Temperature:

Operating Range: -4°F to 185°F (-20°C to 85°C)

Compensated Range: 32°F to 122°F (0°C to 50°F)

Media Compatibility: Dry, oil-free air. Nitrogen.

Sensor Type:

Precision calibrated: MEMS silicone piezoresistive

Accuracy:

Combined linearity and hysteresis: +/- 1.0% of selected range

BFSL: +/- 0.25% BFSL

Auto-zero input: Push-button and contact closure input

Enclosure:

Material: ABS

Dimensions: 4.75”h x 1.82”w x 0.90”d

Optional Probe: P7600PROBE

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Documents / Resources

| | |
|---|---|
|  | <p>Honeywell P7645 Series Dry Pressure Sensors [pdf] Installation Guide P7660, P7645, Series Dry Pressure Sensors</p> |
|---|---|

References

-  P65Warnings.ca.gov