

### Description and Application

These low pressure transducers can be used to measure positive, negative, or differential pressure. Each model offers six easily selectable pressure ranges and three selectable outputs.

The piezoresistive sensor is ideal for monitoring the pressure of air or other clean inert gases and is limited only to those media that will not attack polyetherimide, silicon, fluorosilicone, silicone, EPDM, and neoprene seals.

The units feature switch-selectable pressure ranges and output signal options for the most flexible applications. Typical HVAC applications include monitoring of filter differential pressure or duct pressure. The output signal is factory-calibrated and temperature-compensated for highest start-up accuracy and trouble-free operation.

They can be powered from a 20 to 28 volt AC or DC power source. They incorporate a high-impact, black ABS plastic enclosure.

The unit may be mounted in any position (using the two holes provided on the base of the unit) but typically is installed on a vertical surface with the pressure ports on the right and the cable entrance on the left. (Avoid locations where severe vibrations or excessive moisture are present, and ensure enough space around the unit exists to connect the pressure tubing without kinking.)

The enclosure has a standard 1/2-inch conduit opening and may be installed with either conduit and a conduit coupler or a cable-gland-type fitting.

**DO NOT USE** for these applications:

- ◆ Oxygen service
- ◆ Explosive/hazardous environments
- ◆ Flammable or combustible materials
- ◆ Emergency stop devices or in any other application where failure of the product could result in personal injury



TPE-1475 Series



TPE-1477 Series



### Key Features

- ◆ Three switch-selectable voltage/current outputs of 4–20 mA (2-wire), 0–5 VDC (3-wire), or 0–10 VDC (3-wire)
- ◆ Can measure positive, negative, or differential pressures
- ◆ Six switch-selectable pressure ranges (inches water column or pascals)
- ◆ Can be powered by 20 to 28 VAC or VDC
- ◆ Push-button auto-zero

### Models

The TPE-1475-xx series have both pressure ports on the side. The TPE-1477-xx series have an integrated duct probe and one pressure port on the side. Models are available with the following switch-selectable pressure ranges:

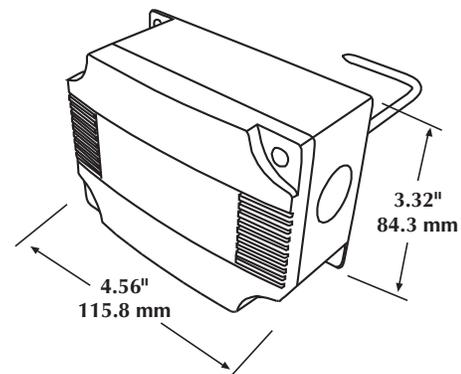
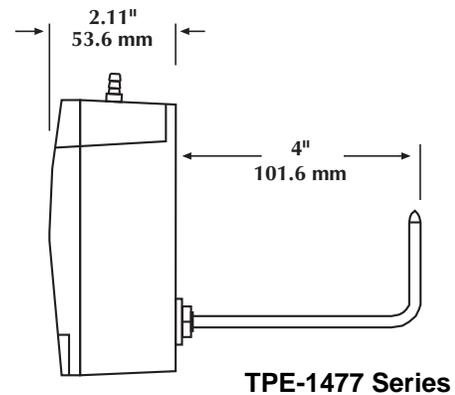
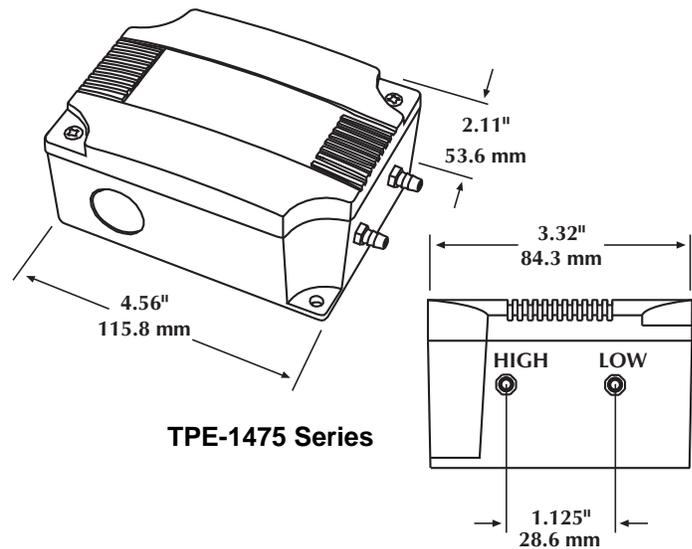
TPE-147x-21	-1 to +1", -2 to +2", -4 to +4", 0 to 1", 0 to 2", 0 to 4" wc
TPE-147x-22	-3 to +3", -5 to +5", -8 to +8", 0 to 3", 0 to 5", 0 to 8" wc
TPE-147x-24	-250 to +250", -500 to +500", -1000 to +1000", 0 to 250, 0 to 500, 0 to 1000 Pa

## Specifications

<b>Pressure Ranges</b>	(See the Models section on the previous page)
<b>Accuracy</b>	±1% FSO (Full Scale Output)
<b>Measurement Type</b>	Differential (two port), static, velocity, and total pressures
<b>Response Time</b>	250 ms
<b>Stability</b>	< ±1% FSO per year
<b>Thermal Effects</b>	< ±3% over compensated range
<b>Compensated Range</b>	32 to 122° F (0 to 50° C)
<b>Proof Pressure</b>	40" wc
<b>Burst Pressure</b>	60" wc
<b>Operating Conditions</b>	32 to 158° F (0 to 70° C), 10 to 90% RH non-condensing
<b>Media Compatibility</b>	Non-corrosive, non-ionic fluids such as clean dry air or inert gases
<b>Power Supply (at transmitter)</b>	20 to 28 VAC/VDC (non-isolated half-wave rectified)
<b>Supply Current</b>	< 4 mA
<b>Input Voltage Effect</b>	Negligible over specified operating range
<b>Protection Circuitry</b>	Reverse voltage protected and output limited
<b>Output Signal Options (Switch Selectable)</b>	4–20 mA (2-wire) 0–5 VDC (3-wire) 0–10 VDC (3-wire)
<b>Current Output Drive Capability</b>	400 ohm maximum @ 24 VDC
<b>Voltage Output Drive Capability</b>	10K ohm minimum
<b>Zero Adjustment</b>	Push-button auto-zero
<b>Wiring Connections</b>	Screw terminal block (14 to 22 AWG)
<b>Pressure Connections</b>	Barbed ports for 0.170" ID flexible tubing (two for TPE-1475 or one port and one probe for TPE-1477)
<b>Conduit Connection</b>	Access hole for 1/2" NPT conduit or cable gland

<b>Enclosure</b>	High-impact black ABS plastic, 4.56" W x 3.32" H x 2.11" D (115.8 mm x 84.3 mm x 53.6 mm), not including probe or ports
<b>Weight</b>	5.6 oz. (159 grams)
<b>Manufacturing</b>	ISO 9001 registered quality system
<b>Regulatory</b>	CE and RoHS Compliant

## Dimensions



## Accessories

- HFO-0015 Low-pressure pick-up tube, 4"  
(101 mm) long
- HFO-0016 Low-pressure pick-up tube, 6"  
(152 mm) long
- SSS-1002 Differential pressure flow sensor,  
one sensing point, 3-5/32" (80  
mm) length
- SSS-1003 Differential pressure flow sensor,  
two sensing points, 5-13/32" (137  
mm) length
- SSS-1004 Differential pressure flow sensor,  
three sensing points, 7-21/32"  
(195 mm) length
- SSS-1005 Differential pressure flow sensor,  
four sensing points, 9-29/32" (252  
mm) length
- XEE-6111-040 Transformer, 120-to-24 VAC, 40  
VA, **single**-hub
- XEE-6112-040 Transformer, 120-to-24 VAC, 40  
VA, **dual**-hub



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