

DESCRIPTION AND APPLICATION

These low pressure transducers can be used to measure positive, negative, or differential pressure. The TPE-1475-xx series models have **both pressure ports on the side**. The TPE-1477-xx series models have an **integrated duct probe and one pressure port on the side**.

The piezoresistive sensor is ideal for monitoring the pressure of air or other clean inert gases. Typical HVAC applications include monitoring of filter differential pressure or duct pressure.

The models feature selectable pressure ranges and output signal options for the most flexible applications. 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 polycarbonate UL94-V0, IP65 (NEMA 4X) enclosure. 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.

NOTE: These specifications are for models that started shipping April 2020. For specifications of earlier models, see Rev. B of this document.



TPE-1477 Series

TPE-1475 Series

FEATURES

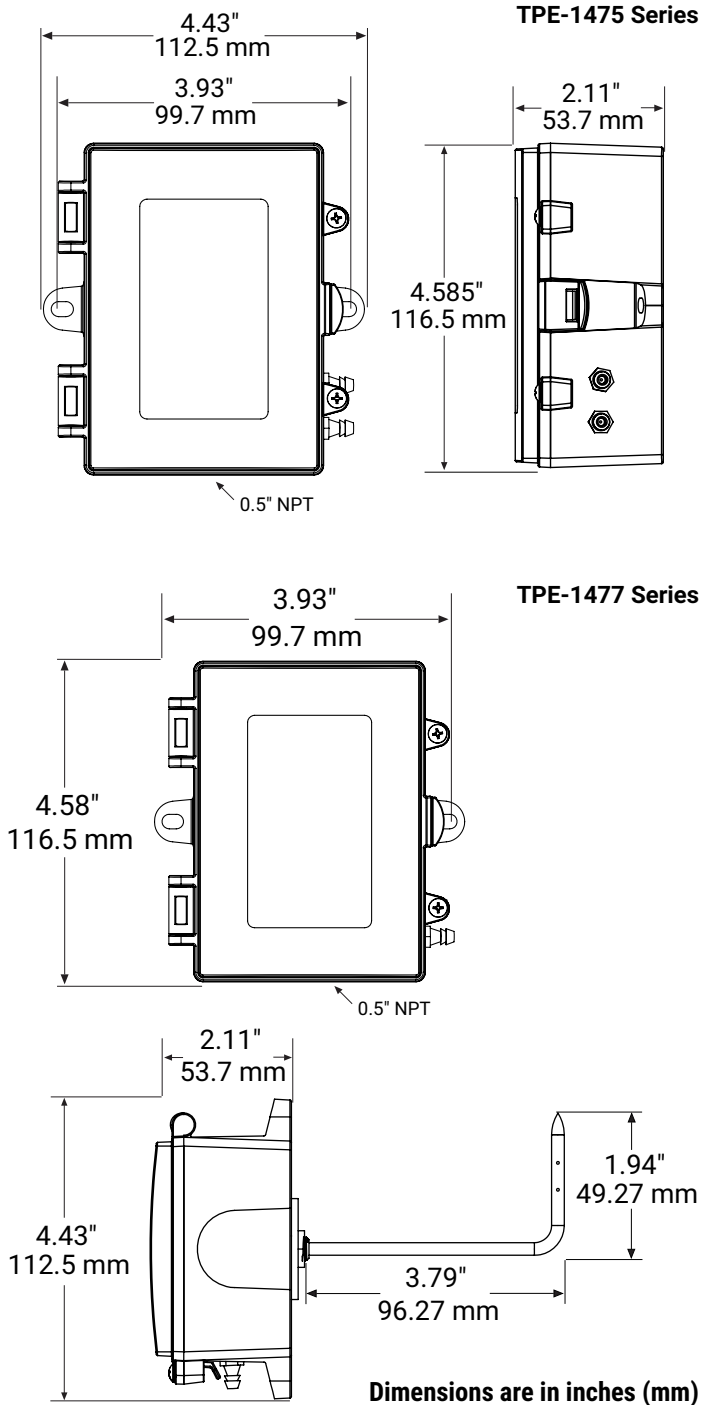
- ◆ Selectable voltage or current outputs of 4–20 mA (2-wire) or 0–10 VDC (3-wire)
- ◆ Measures positive, negative, or differential pressures
- ◆ Selectable pressure ranges
- ◆ Powered by 20 to 28 VAC or VDC
- ◆ Push-button auto-zero



MODELS

MODEL NUMBER	PORTS	INPUT PRESSURE RANGES (SELECTABLE)
TPE-1475-21	Both on the side	-2 to +2" or 0 to 2" wc (-0.5 to +0.5 kPa or 0 to 0.5 kPa)
TPE-1475-22		-10 to +10" or 0 to 10" wc (-2.5 to +2.5 kPa or 0 to 2.5 kPa)
TPE-1477-21	Duct probe and one port on the side	-2 to +2" or 0 to 2" wc (-0.5 to +0.5 kPa or 0 to 0.5 kPa)
TPE-1477-22		-10 to +10" or 0 to 10" wc (-2.5 to +2.5 kPa or 0 to 2.5 kPa)

DIMENSIONS AND MOUNTING



NOTE: Avoid locations with severe vibrations or excessive moisture. Mount the transmitter on a vertical surface using #10 screws (not supplied) through the two integrated mounting holes. The enclosure has an opening for a standard 1/2-inch conduit fitting. Ensure there is enough space around the unit to make the tubing (without kinking) and electrical connections. For added security, two (provided) screws may be installed in the integrated screw tabs of the hinged cover.

SPECIFICATIONS

Pressure Ranges	See Models on page 1
Accuracy	±1% FSO (Full Scale Output)
Measurement Type	Differential (two port) or static
Response Time	250 ms
Stability	< ±1% FSO per year
Thermal Effects	< ±3% over compensated range
Compensated Range	-13 to 185° F (-25 to 85° C)
Proof Pressure	100" wc (25 kPa) for TPE-147x-21 or 200" wc (50 kPa) for TPE-147x-22
Burst Pressure	300" wc (75 kPa)
Operating Conditions	32 to 122° F (0 to 50° C), 10 to 90% RH non-condensing
Media Compatibility	Non-corrosive, non-ionic clean dry air or inert gases
Power Supply (at transmitter)	20 to 28 VAC/VDC (non-isolated half-wave rectified)
Supply Current	< 4 mA in voltage mode or 20 mA max. in current mode
Input Voltage Effect	Negligible over specified operating range
Protection Circuitry	Reverse voltage protected and output limited
Output Signal Options	4-20 mA (2-wire) 0-10 VDC (3-wire)
Output Drive Capability	400 ohm maximum @ 24 VDC for current mode or 10K ohms minimum for voltage mode
Zero Adjustment	Push-button auto-zero
Wiring Connections	Screw terminal block (14 to 22 AWG)
Pressure Connections	Barbed ports for 0.170" (5 mm) ID flexible tubing (two for TPE-1475 or one port and one probe for TPE-1477)
Conduit Connection	Access hole for 1/2" NPT conduit or cable gland
Enclosure Material	Polycarbonate UL94-V0, IP65 (NEMA 4X)
Weight	6 oz. (170 grams)

Manufacturing ISO 9001 registered quality system
Approvals CE and RoHS Compliant

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▲ CAUTION

Ensure that the maximum individual port pressure does not exceed the maximum pressure range of the unit.

Use electrostatic discharge precautions during installation and do not exceed the device ratings.

Do not use in an explosive or hazardous environment, with combustible or flammable gases, as safety or emergency stop devices, or in any other application where failure of the product could result in personal injury.

ACCESSORIES

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

SUPPORT

Additional product and other resources are available on the web at www.kmcccontrols.com.



KMC Controls, Inc.
19476 Industrial Drive
New Paris, IN 46553
574.831.5250
www.kmcccontrols.com
info@kmcccontrols.com