

Description and Application

TPE-1474 series low pressure transducers can be used to measure positive, negative, or differential pressure. Four models each offer four 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 jumper-selectable pressure ranges and output signal options for the most flexible applications. They are suited for any application requiring a pressure monitor that provides a reliable, conditioned, and compensated signal output. 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.

The TPE-1474 can be powered from either a 12 to 28 VAC or 16.5 to 35 VDC power source. The TPE-1474 incorporates a high-impact, black ABS plastic, plenum-rated enclosure.

The unit may be mounted in any position 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.) 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



Key Features

- ◆ Three jumper-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
- ◆ Four jumper-selectable pressure ranges (inches water column and pascals)
- ◆ Can be powered by a range of AC or DC voltages
- ◆ Push-button auto-zero

Models

Models are available with the following jumper-selectable pressure ranges:

TPE-1474-21	–1 to +1", 0 to 2" wc
TPE-1474-22	–1.5 to +1.5", –3 to +3", 0 to 3", 0 to 6" wc
TPE-1474-23	–2.5 to +2.5", –5 to +5", 0 to 5", 0 to 10" wc
TPE-1474-24	–250 to +250", –500 to +500", 0 to 500, 0 to 1000 Pa

Accessories

HFO-0015	Low-pressure pick-up tube, 4" long
HFO-0016	Low-pressure pick-up tube, 6" 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

Specifications

Pressure Ranges	(See the Models section on the previous page)
Calibration Accuracy	±1% FSO (Full Scale Output)
Measurement Type	Differential (two port), static, velocity, and total pressures
Response Time	1 ms, maximum
Stability	< ±1% FSO per year
Thermal Effects	< ±3% over compensated range
Compensated Range	50 to 122° F (10 to 50° C)
Over Pressure	20 psi or 2 x range (whichever is greater)
Operating Conditions	32° to 140° F (0° to 60° C), 10 to 90% RH non-condensing
Media Compatibility	Limited only to those that will not attack polyetherimide, silicon, fluorosilicone, silicone, EPDM, and neoprene seals; typically, dry air or inert gas but liquid is allowed
Power Supply (at transmitter)	12 to 28 VAC, 16.5 to 35 VDC (non-isolated half-wave rectified)
Supply Current	< 4 mA
Input Voltage Effect	Negligible over specified operating range
Protection Circuitry	Reverse voltage protected and output limited
Output Signal Options	4–20 mA (2-wire) 0–5 VDC (3-wire) 0–10 VDC (3-wire)
Current Output Drive Capability	400 ohm maximum @ 24 VDC
Voltage Output Drive Capability	2K ohm minimum for 0–5 VDC signal 10K ohm minimum for 0–10 VDC signal
Zero Adjustment	Push-button auto-zero
Wiring Connections	Screw terminal block (14 to 22 AWG)

Pressure Connections

Barbed ports for 0.170" ID flexible tubing

Enclosure

High-impact black ABS plastic, plenum-rated; 2.1 x 4.55 x 3.3 inches (53 x 116 x 84 mm), not including pressure ports

Conduit Connection

Access hole for 1/2" NPT conduit or cable gland

Weight

5.6 oz. (159 grams)

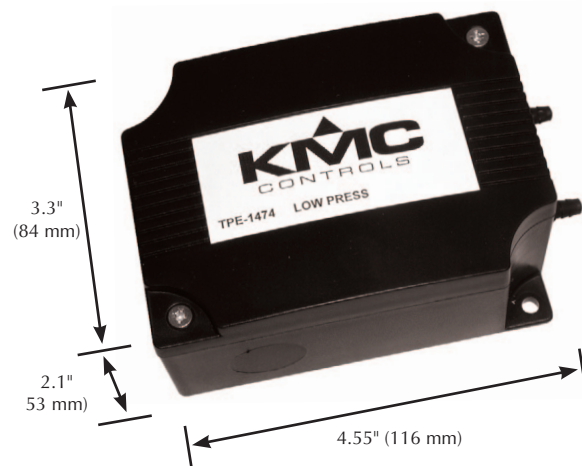
Manufacturing

ISO 9001 registered quality system

Regulatory

CE and RoHS Compliant

Dimensions



Dimensions are in inches (mm)

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