Valid late 2004 into 2008—see Rev. E of this data sheet for information on the new case and board.

TPE–1464 Series
Pressure Transducer

Description

The KMC TPE–1464 series of pressure transducers incorporate a gauge pressure transmitter featuring low hysteresis, excellent repeatability, and long-term stability.

Up to four field-selectable input ranges are available in most models. The field selectable feature provides a single model that can be configured to cover all the input pressure ranges for any given application.

Three output ranges are field selectable, 4 to 20mA, 0 to 5 VDC, and 0 to 10 VDC. The output signal is factory calibrated and temperature compensated for the highest start-up accuracy.

The TPE–1464 can be powered from either a 24 VAC nominal, or 12 to 30 VDC power source. TPE–1464 incorporates a rugged NEMA 4 enclosure.

Features

- Push-button and remote zeroing terminal
- Normal or slow surge damping switch to prevent false alarms and reduce noise
- Output polarity reverse switch

Models

The following models are available

TPE–1464–1	0 to 10/20/50/100 psig/d
TPE–1464–2	0 to 20/40/100/200 psig/d
TPE–1464–3	0 to 50/100/250/500 psig/d

Application

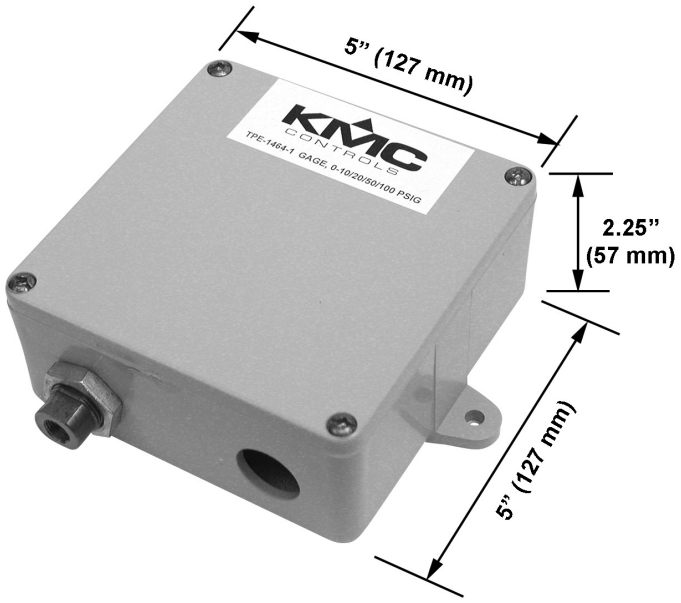
KMC TPE–1464 Pressure Transducers are suited for any application requiring a reliable pressure monitor providing a dependable conditioned and compensated signal output.

The TPE–1464 may be used with any liquid or gas that is compatible with 17–4 PH stainless steel.

DO NOT USE for these applications:

- Oxygen service
- Explosive/hazardous environments
- Flammable or combustible materials

Enclosure



Specifications

Media compatibility
17-4 PH stainless steel

Supply Voltage 24 VAC or 15 to 30 VDC

Supply Current 35 mA, maximum @ 24VDC

Output Signal 4 to 20mA, 0 to 5 or 0 to 10 VDC, field selectable

Pressure Ranges Field selectable:

TPE-1464-1	0 to 10/20/50/100 psig/d
TPE-1464-2	0 to 20/40/100/200 psig/d
TPE-1464-3	0 to 50/100/250/500 psig/d

Proof Pressure Max. 2X F.S. range

Burst Pressure Max. 5X F.S. range

Accuracy ±1% F.S. combined linearity, hysteresis, and repeatability. Range 4 accuracy ±2% F.S.

Pressure cycles > 100 million

Surge Damping normal 4-second averaging, slow 8-second averaging, switch selectable

Sensor Operating Range -40° to 220°F (-40° to 105°C)

Temperature Compensation Error
32° to 130°F (0° to 55°C)

Long term stability ±0.25% typical (1 year)

Zero Adjust push-button auto-zero and digital input

Operating Environment
32° to 122°F (0° to 50°C), 10 to 90% RH, non-condensing

Fittings 1/8" NPT female

Enclosure 5" x 5" x 2.25" (127mm x 127mm x 57mm); IP 54 (NEMA 4)

Weight 1.33 lbs. (.60 kg)

Shock 100G, 11 mSec, 1/2 sine

Vibration 20G peak 20 to 2400 Hz

KMC Controls, Inc.
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574.831.5250
www.kmccontrols.com

Valid late 2004 into 2008—see Rev. A of this installation guide for information on the new case and board.

Gage Pressure Transducer

TPE-1464 Series

Installation Guide

Mounting

Avoid locations with severe vibrations or excessive moisture. The enclosure has a standard ½" conduit opening and may be installed with either a conduit coupler or a cable gland type fitting.

1. Mount on a vertical surface with the pressure port and cable entrance on the bottom.
2. Use screws in the tab holes to fasten the assembly to the mounting surface.
3. Ensure there is enough space around the unit to make the pressure and electrical connections.

WARNING:

Do not use in explosive or hazardous environments, with combustible or flammable gasses, as a safety or emergency stop device, or in any other application where failure of the product could result in personal injury.

!CAUTION:

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

Plumbing

1. Use an appropriately rated pressure tubing for connections.
2. Arrange the tubing to minimize stress on the connections.
3. Do not allow debris to fall into the pressure ports, contamination can damage the sensor.

Wiring

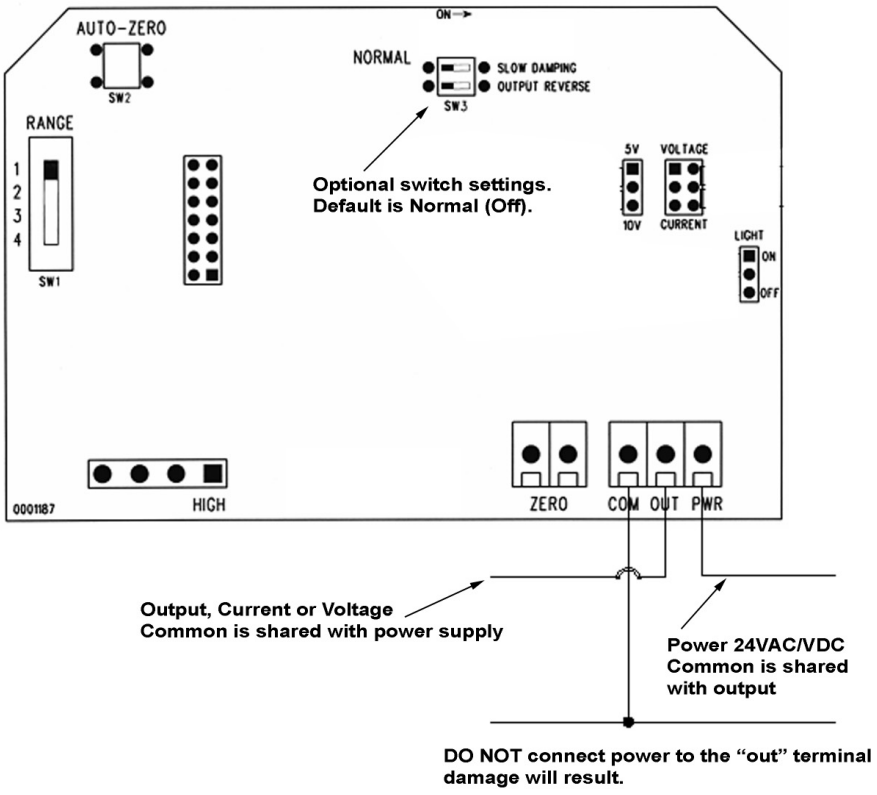
Use 22 AWG shielded wiring for all connections. Do not locate device wires in the same conduit as wiring supplying inductive loads.

1. Connect the positive DC voltage or the hot side of the AC voltage to the terminal marked **PWR.**
2. Connect the power supply common to the terminal marked **COM.** The device is reverse voltage protected and will not operate if connected backwards.

The analog output signal is available on the **OUT** terminal. This signal is jumper selectable for either voltage or 4 to 20 mA output. In voltage mode, either 0 to 5 or 0 to 10 VDC can also be selected.

The remote zero feature may be used by wiring a dry-contact (relay only) digital output to the **ZERO** terminals. Do not apply voltage to the **ZERO** terminals.

This is an active device, turn off the input dip switches at the KMD and BACnet controllers.



Set-Up

CONFIGURATION

Push-on jumpers and switches are used to select the output signal type, the input pressure range, and several features. The device is factory configured to operate in the 4 to 20 mA output mode but can be changed to voltage mode by moving the two jumpers from the positions marked '**Current**' to the positions marked '**Voltage**'.

NOTE: Output jumpers can only be changed while the power is removed.

CAUTION: Always note the current jumper position before moving them to the new position. If the jumpers are rotated 90 degrees and installed incorrectly the product will not work and damage may occur.

Set-Up Continued

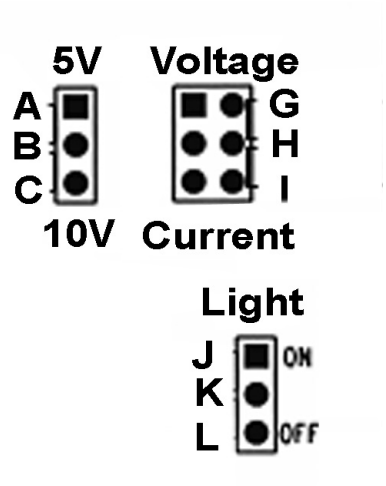
JUMPER SETTINGS

Refer to the detailed drawing for pin location, the letter designations do not appear on the actual board.

- ♦ 0 to 5 VDC signal Connect A to B
- ♦ 0 1 to 10 VDC signal Connect B to C

- ♦ Voltage signal Connect G to H
- ♦ Current Signal Connect H to I

- ♦ For Backlight Connect J to K
- ♦ No Backlight Connect K to L



RANGE

The input pressure range is set by moving the 4-position slide switch marked RANGE. Range and Options switches can be changed while the unit is operating.

	PRESSURE RANGE			
MODEL	1	2	3	4
1464-1	100 PSI	50 PSI	20 PSI	10 PSI
1464-2	200 PSI	100 PSI	40 PSI	20 PSI
1464-3	500 PSI	250 PSI	100 PSI	50 PSI

SLOW DAMPING

The switch provides an 8-second averaging for surge dampening (normally it is 4-seconds).

OUTPUT REVERSE

Reverses the output signal polarity. In reverse mode the analog output is maximum when the gage pressure is zero and decreases as pressure increases.

OPERATION

The port is used to measure a positive pressure for normal operation such as 0 to 100 PSI

0 PSI = 4 mA 100 PSI = 20 mA.

CALIBRATION

This feature is enabled only when the detected pressure on the port is less than 5% of the full range to protect the unit from accidental zeroing. Span calibration should not be performed in the field unless a high quality calibrator is available.

1. Open the port to the ambient pressure or equalized at 0 pressure:
2. Press and hold the auto-zero button or provide contact closure on the **ZERO** terminals for at least 3 seconds.
3. Release the button or terminals and the device will calculate and store the new zero point.

Maintenance

No routine maintenance is required. Each component is designed for dependable, long term reliability and performance. Careful installation will also ensure long term reliability and performance.

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