**HEAVY DUTY INDUSTRIAL PRESSURE TRANSMITTERS**

**GAGE AND DIFFERENTIAL PRESSURE MODELS**

**PX750 Series**

5 Models:
- Gage Pressure
- Differential Pressure
- High Differential Pressure
- Draft-Range Differential
- Square-Root Output

Shown smaller than actual size.

**SPECIFICATIONS**

(For All Models)

- **Service:** Liquid, Gas, Vapor
- **Output:** 4-20 mA dc 2-wire
- **Excitation:** 12 to 45 Vdc with no load.  See chart for loop resistance (Figure 1).
- **Indication:** Optional meter with 1¾", 0-100% scale; accuracy is 2% of span
- **Hazardous Locations:** Factory Mutual (FM) approvals: Class 1 Division 1 and 2, Groups B, C, and D. Dust-ignition proof: Class 2, Divisions 1 and 2, Groups E, F, & G. Suitable for use in: Class 3, Divisions 1 and 2. Indoor and outdoor use. NEMA 4X.
- **Zero and Span:** Continuously adjustable externally Zero Elevation and Suppression: Regardless of output specified, zero elevation and suppression must be such that neither the span nor the upper or lower range value. exceed 100% of the upper range limit. Maximum zero elevation: 600% of calibrated span. Maximum zero suppression: 500% of calibrated span.
- **Temperature Limits:** Amplifier: -20 to +200°F (-29 to -93°C)
  - Square Root Amplifier: -20 to 150°F (-29 to 66°C)
  - Element: -40 to 220°F (-40 to 104°C)
- **Humidity Limits:** 0 to 100% RH
- **Volumetric Displacement:** Less than 0.01 cubic inches (16cm³)
- **Turn On Time:** 2 seconds — no warm up required

**PHYSICAL SPECIFICATIONS**

- **Isolating Diaphragm:** 316 Stainless Steel
- **Drain/Vent Valves:** 316 Stainless Steel
- **Process Flange and Adapter:** Cadmium plated carbon steel standard (316 Stainless Steel Optional)
- **Wetted O-Rings:** Viton® A (Flouro-Polymer)
- **Fill Fluid:** Silicon Oil
- **Bolts:** Cadmium Plated Carbon Steel
- **Electronic Housing:** Low Copper Aluminum
- **Paint:** Epoxy-Polyester
- **Electrical Connections:** ¼" conduit with screw terminals and integral test jacks compatible with miniature banana plugs
- **Weight:** 12 pounds (5.44 kg) excluding options
- **Vibration Effect:** 0.05% of upper range limit per G to 200 Hz in any axis
- **Power Supply Effect:** < 0.005% of shift up to 1 inHg which can be calibrated out

<table>
<thead>
<tr>
<th>LOAD LIMITATIONS</th>
<th>POWER SUPPLY (VDC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOAD (OHMS)</td>
<td>OPERATING REGION</td>
</tr>
<tr>
<td>0</td>
<td>12 20 30 40 45 55</td>
</tr>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>250</td>
<td></td>
</tr>
<tr>
<td>500</td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>1500</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>2500</td>
<td></td>
</tr>
<tr>
<td>3000</td>
<td></td>
</tr>
<tr>
<td>3500</td>
<td></td>
</tr>
<tr>
<td>4000</td>
<td></td>
</tr>
<tr>
<td>4500</td>
<td></td>
</tr>
<tr>
<td>5000</td>
<td></td>
</tr>
</tbody>
</table>

**ACCESSORIES**

- **PX750-M1**, linear meter kit, 0 to 100% scale, $250
- **PX750-B3**, mounting bracket kit for flush panel mounting or 2" pipe, $60

**Smart Retrofit Kit Now Available!** See Page B-234
HEAVY DUTY GAGE PRESSURE TRANSMITTER
RUGGED NEMA 4X ENCLOSURE

PX750-GI Series
0-5 inH₂O to 6000 psig

Starts at
$1565

�� Stainless Steel Diaphragm
篷 High Accuracy:
篷 0.25% of Span
篷 FM Explosion-Proof
篷 Rating; NEMA 4X
篷 Enclosure
篷 4 to 20 mA Current
篷 Output
篷 External Zero and
篷 Span Adjustments
篷 Compatible with
篷 Any 2-Wire System

The OMEGA PX750 Gage Pressure
Transmitter brings true precision
and reliability to industrial pressure
monitoring applications. Process
pressure is transmitted through an
isolating diaphragm and an oil fill
fluid to a central sensing diaphragm.
The atmospheric reference pressure
is transmitted similarly to the other
side of the sensing diaphragm. The
displacement of the sensing
diaphragm is proportional to the
pressure differential across it. In
addition to gage pressure, the
PX750 can measure vacuums by
simply reversing the process
collection to the sensing element.

SPECIFICATIONS

Accuracy: ±0.25% of calibrated span
includes linearity, hysteresis and
repeatability
Stability: ±0.25% URL for 6-months

Temperature Effect at Maximum
Span (e.g. 0 to 17 psig for 0 to 17/100 psig
Range): Zero error = ±3.0% of span per
55°C (100°F); total effect including span
and zero errors = ±3.5% of span per
55°C (100°F) (double the specified
effects for 30 inH₂O range)

Mounting: ½ NPT on adaptor, ¼ NPT
with adaptor removed
Damping: Time constant continuously
adjustable between 0.2 (0.4 for 30 inH₂O
range) to 1.67 seconds for silicone fill

MOST POPULAR MODELS HIGHLIGHTED

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PX750-30GI</td>
<td>$1695</td>
<td>0 to 5 inH₂O</td>
<td>0 to 30 inH₂O</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
<tr>
<td>PX750-150GI</td>
<td>1565</td>
<td>0 to 25 inH₂O</td>
<td>0 to 150 inH₂O</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
<tr>
<td>PX750-750GI</td>
<td>1565</td>
<td>0 to 125 inH₂O</td>
<td>0 to 750 inH₂O</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
<tr>
<td>PX750-100GI</td>
<td>1565</td>
<td>0 to 17 psi</td>
<td>0 to 100 psi</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
<tr>
<td>PX750-300GI</td>
<td>1565</td>
<td>0 to 50 psi</td>
<td>0 to 300 psi</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
<tr>
<td>PX750-1KGI</td>
<td>1565</td>
<td>0 to 170 psi</td>
<td>0 to 1000 psi</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
<tr>
<td>PX750-3KGI</td>
<td>1699</td>
<td>0 to 500 psi</td>
<td>0 to 3000 psi</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
<tr>
<td>PX750-6KGI</td>
<td>1699</td>
<td>0 to 1000 psi</td>
<td>0 to 6000 psi</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
</tbody>
</table>
HEAVY DUTY DIFFERENTIAL PRESSURE TRANSMITTER

PX750-DI/HDI Series
0-5 inH₂O to 0-170 psid

Starts at $1545

High Accuracy:
- 0.2% of Span

“Smart” Option

External Zero and Span Adjustments Up to 600% Elevation or 500% Suppression

Stainless Steel Diaphragm

NEMA 4X Enclosure

FM Explosion-Proof Rating

The PX750 Industrial Transmitter is designed for accurate measurement of differential pressure in higher dp applications such as level measurements on towers and pressure drop across compressors or filters. Full overpressure protection to 2000 psi permits confident application in high pressure systems. Installation is simplified by a compact flexible design, 2-wire compatibility, external span and zero adjustments all packaged in an FM approved, weather-tight NEMA 4 enclosure.

A new “Smart” option now makes the PX750 compatible with new installations and makes it possible to upgrade existing installations.

SPECIFICATIONS

Accuracy: ±0.2% of calibrated span. Includes combined effects of hysteresis, linearity and repeatability

Linearity: ±0.1% of calibrated span

Hysteresis: ±0.05% of calibrated span

Dead Band: None

Stability: ±0.2% of upper range limit for 6 months

Temperature Effect at Maximum Span
0 to 150 inH₂O: Zero error ±3% of span per 55°C (100°F); total error ± 3.5% of span per 55°C (100°F) (includes zero and span errors)

Note: Double the specified effects for the 0 to 30 inH₂O range.

Static Pressure and Overpressure Limits: 0 psia to 2000 psig on either or both sides without damage to the transmitter. Operates within specifications for static pressure from 0.5 psi absolute to 2000 psig; 10,000 psi proof pressure on flanges

High Differential Ranges:
Zero effect: ±0.5% of upper range limit for 2000 psi; span error: -1 ±0.25% of reading for 1000 psi; this is a systematic error which can be calibrated out prior to installation

Damping: Time constant continuously adjustable between 0.2 and 1.67 s

Process Connections: Reversible for either ½ FNPT on 2½” centers or ½ FNPT on 2, 2½ or 2¾” centers with adaptors provided

Available for Fast Delivery!

<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th>LOWER RANGE DIFFERENTIAL PRESSURE RANGES</th>
<th>UPPER RANGE DIFFERENTIAL PRESSURE RANGES</th>
<th>COMPATIBLE METERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PX750-30DI</td>
<td>0 to 5 inH₂O</td>
<td>0 to 30 inH₂O</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
<tr>
<td>PX750-150DI</td>
<td>0 to 25 inH₂O</td>
<td>0 to 150 inH₂O</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
<tr>
<td>PX750-750DI</td>
<td>0 to 125 inH₂O</td>
<td>0 to 750 inH₂O</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
<tr>
<td>PX750-100HDI</td>
<td>0 to 100 psi</td>
<td>0 to 100 psi</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
<tr>
<td>PX750-300HDI</td>
<td>0 to 50 psi</td>
<td>0 to 300 psi</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
<tr>
<td>PX750-1KHDI</td>
<td>0 to 170 psi</td>
<td>0 to 1000 psi</td>
<td>DP41-E, DP25B-E, DP3002-E</td>
</tr>
</tbody>
</table>
SQUARE ROOT OUTPUT TRANSMITTER FOR FLOW MEASUREMENT

PX750-SQDI Series
5 to 750 inH₂O

Starts at $1675

- Output Linear with Flow
- High Accuracy: 0.25%
- Adjustable Damping
- Linear Zero Functions for High Stability
- Rugged NEMA 4X Industrial Enclosure

For the measurement of flow, the PX750 transmitter combines the square root extraction function within the differential pressure transmitter to provide a 4 to 20 mA signal directly proportional to flow. It is compatible with all OMEGA® 4 to 20 mA readout devices. The PX750 flow transmitter has an operable range from 20 to 100% of flow rate. No additional power supplies, wiring or additional “block boxes” are required for use with this instrument. A stable zero flow signal is achieved by electronically switching from a square root to a linear function at 20% of flow.

SPECIFICATIONS
Accuracy: ±0.25% of calibrated span for a range of 20% to 100% of flow (4% to 100% of input pressure). Includes combined effects of hysteresis, repeatability, and conformity of the square root function. Output linear with input pressure for the range of 0 to 20% of flow (0 to 4% of input pressure).
Deadband: None
Stability: ±0.25% of upper range limit for six months
Temperature Effect: The total output effect, whether at zero or full scale, including zero and span errors: ±1.5% of upper range limit per 100°F (55°C) (±0.25% for PX750-30 model)

Static Pressure Effect:
Zero Error: ±0.25% of differential pressure upper range limit for 2000 psi (13.79 MPa), ±0.5% for PX750-30
Span Error: Correctable to ±0.125% of reading per 1000 psi (6.89 MPa), ±0.25% for PX750-30 model; this is a systematic error which can be calibrated out for a particular pressure before installation.
Damping: Time constant continuously adjustable between 0.2 and 1.0 s

Static Pressure and Overpressure Limits: 0 psia to 2000 psig (to 13.79 MPa) on either side without damage to the transmitter; operates within specifications between static line pressure of ½ psia and 2000 psig (3.44 kPa to 13.79 MPa) for silicone oil transmitters, and 10,000 psig (68.95 MPa) proof pressure on the flanges

To Order (Specify Model Number)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>price</th>
<th>Lower Range Differerential</th>
<th>Upper Range Differential</th>
<th>Compatible Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>PX750-30SQDI</td>
<td>$1785</td>
<td>0 to 5 inH₂O</td>
<td>0 to 30 inH₂O</td>
<td>DP41-E, DP25B-E, DP3000-E</td>
</tr>
<tr>
<td>PX750-150SQDI</td>
<td>1675</td>
<td>0 to 25 inH₂O</td>
<td>0 to 150 inH₂O</td>
<td>DP41-E, DP25B-E, DP3000-E</td>
</tr>
<tr>
<td>PX750-750SQDI</td>
<td>1675</td>
<td>0 to 125 inH₂O</td>
<td>0 to 750 inH₂O</td>
<td>DP41-E, DP25B-E, DP3000-E</td>
</tr>
</tbody>
</table>

MOST POPULAR MODELS HIGHLIGHTED
More than 100,000 Products Available!

- **Temperature**

- **Flow and Level**
  Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

- **pH and Conductivity**
  Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

- **Data Acquisition**

- **Pressure, Strain and Force**
  Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

- **Heaters**

- **click here to go to the omega.com home page**