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

Smart Retrofit Kit Now Available!
See Page B-234

Starts at $1565

Shown smaller than actual size.

Field-selectable ¼" or ½" FNPT Ports. Adaptor included.

SPECIFICATIONS

(For All Models)

Service: Liquid, Gas, Vapor

Output: 4-20 mAdc 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 ($16cm^3$)

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: ½" 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 inH_20 which can be calibrated out

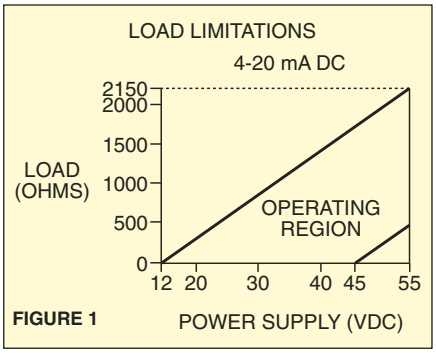


FIGURE 1

ACCESSORIES

PX750-M1, linear meter kit, 0 to 100% scale, **$250**

PX750-B3, mounting bracket kit for flush panel mounting or 2" pipe, **$60**

HEAVY DUTY GAGE PRESSURE TRANSMITTER
RUGGED NEMA 4X ENCLOSURE

PX750-GI Series
0-5 inH_2O to 6000 psig

Starts at
$1565

PX750-30Gi, $1695, shown smaller than actual size..

- Stainless Steel Diaphragm
- High Accuracy: 0.25% of Span
- FM Explosion-Proof Rating; NEMA 4X Enclosure
- 4 to 20 mA Current Output
- External Zero and Span Adjustments
- Compatible with 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 connection 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 100 psig for 0 to 17/100 psig Range): Zero error = ±0.5% of span per 55°C (100°F); total effect including span and zero errors = ±1.0% of span per 55°C (100°F)

Temperature Effect at Minimum 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 inH_2O range)

Mounting: ½ NPT on adaptor, ¼ NPT with adaptor removed

Damping: Time constant continuously adjustable between 0.2 (0.4 for 30 inH_2O range) to 1.67 seconds for silicone fill

MOST POPULAR MODELS HIGHLIGHTED

To Order *(Specify Model Number)*

Model No.	Price	Lower Range Gage Pres.	Upper Range Gage Pres.	Compatible Meters
PX750-30GI	$1695	0 to 5 inH_2O	0 to 30 inH_2O	DP41-E, DP25B-E, DP3002-E
PX750-150GI	1565	0 to 25 inH_2O	0 to 150 inH_2O	DP41-E, DP25B-E, DP3002-E
PX750-750GI	1565	0 to 125 inH_2O	0 to 750 inH_2O	DP41-E, DP25B-E, DP3002-E
PX750-100GI	1565	0 to 17 psi	0 to 100 psi	DP41-E, DP25B-E, DP3002-E
PX750-300GI	1565	0 to 50 psi	0 to 300 psi	DP41-E, DP25B-E, DP3002-E
PX750-1KGI	1565	0 to 170 psi	0 to 1000 psi	DP41-E, DP25B-E, DP3002-E
PX750-3KGI	1699	0 to 500 psi	0 to 3000 psi	DP41-E, DP25B-E, DP3002-E
PX750-6KGI	1699	0 to 1000 psi	0 to 6000 psi	DP41-E, DP25B-E, DP3002-E

HEAVY DUTY DIFFERENTIAL PRESSURE TRANSMITTER

PX750-DI/HDI Series
0-5 inH_2O to 0-170 psid

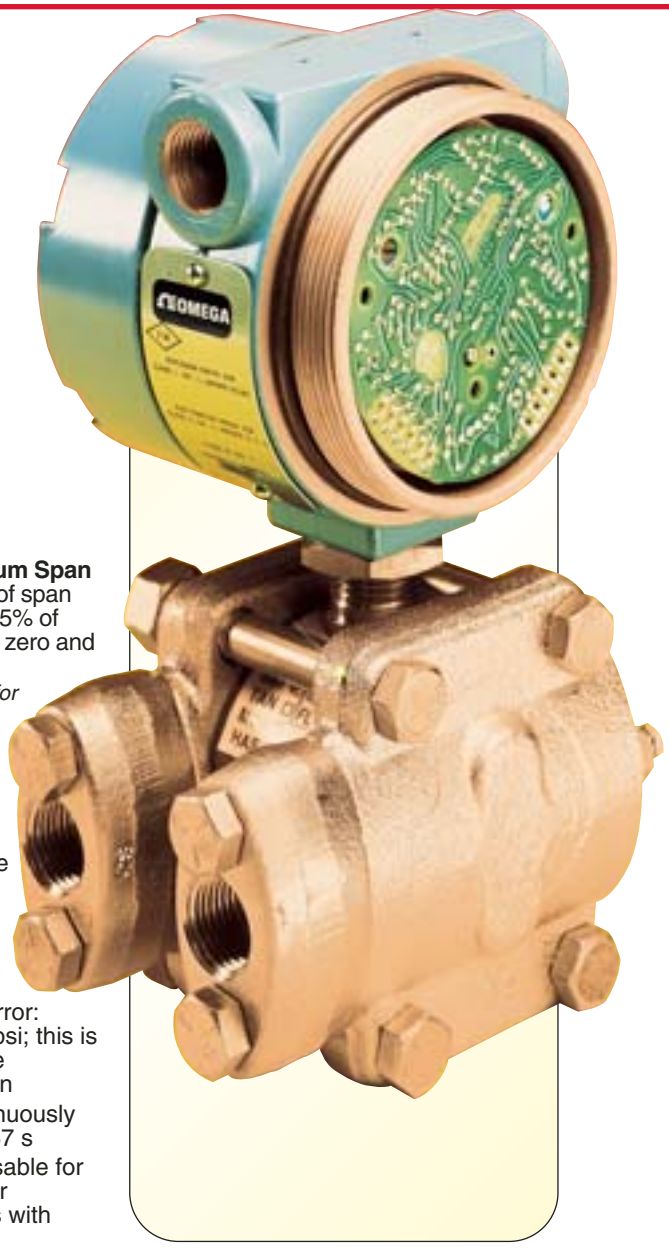
Starts at
$1545

- 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 accross 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.

PX750-30DI, $1805, showns smaller than actual size.



Temperature Effect at Maximum Span 0 to 150 inH_2O: 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 inH_2O 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: Reversable for either ¼ FNPT on 2⅛" centers or ½ FNPT on 2, 2⅛ or 2¼" centers with adaptors provided

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

AVAILABLE FOR FAST DELIVERY!

To Order *(Specify Model Number)*

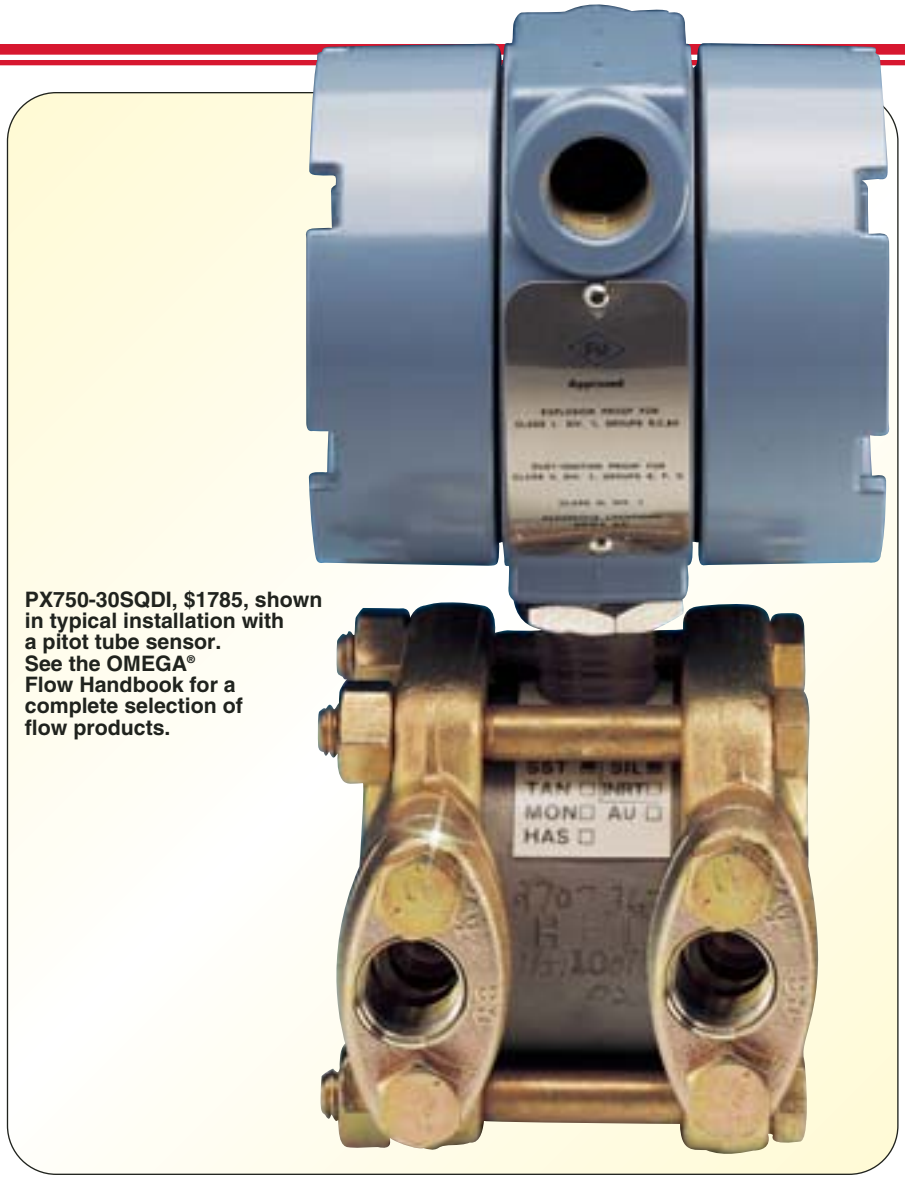
MODEL NO.	PRICE	LOWER RANGE DIFFERENTIAL	UPPER RANGE DIFFERENTIAL	COMPATIBLE METERS
inH_2O DIFFERENTIAL PRESSURE RANGES				
PX750-30DI	**$1805**	0 to 5 inH_2O	0 to 30 inH_2O	DP41-E, DP25B-E, DP3002-E
PX750-150DI	**1545**	0 to 25 inH_2O	0 to 150 inH_2O	DP41-E, DP25B-E, DP3002-E
PX750-750DI	**1665**	0 to 125 inH_2O	0 to 750 inH_2O	DP41-E, DP25B-E, DP3002-E
HIGH DIFFERENTIAL PRESSURE RANGES				
PX750-100HDI	**$1665**	0 to 17 psi	0 to 100 psi	DP41-E, DP25B-E, DP3002-E
PX750-300HDI	**1665**	0 to 50 psi	0 to 300 psi	DP41-E, DP25B-E, DP3002-E
PX750-1KHDI	**1665**	0 to 170 psi	0 to 1000 psi	DP41-E, DP25B-E, DP3002-E

SQUARE ROOT OUTPUT TRANSMITTER FOR FLOW MEASUREMENT

PX750-SQDI Series
5 to 750 inH_2O

Starts at
$1675

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



PX750-30SQDI, $1785, shown in typical installation with a pitot tube sensor. See the OMEGA® Flow Handbook for a complete selection of flow products.

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

MOST POPULAR MODELS HIGHLIGHTED

To Order *(Specify Model Number)*

Model No.	price	Lower Range Differerential	Upper Range Differential	Compatible Meters
PX750-30SQDI	**$1785**	0 to 5 inH_2O	0 to 30 inH_2O	DP41-E, DP25B-E, DP3000-E
PX750-150SQDI	**1675**	0 to 25 inH_2O	0 to 150 inH_2O	DP41-E, DP25B-E, DP3000-E
PX750-750SQDI	**1675**	0 to 125 inH_2O	0 to 750 inH_2O	DP41-E, DP25B-E, DP3000-E

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