OMEGA’s PX2088 Series smart pressure transmitters maintain a specification conformance of at least 3%. The reliable performance of these rugged transmitters, when coupled with the broad selection of options, makes these transducers an exceptional value for tough process applications. The PX2088S is designed to operate safely in the event of damage or failure to the sensor diaphragm. The electronics compartment is isolated from the process by 2 seals. A third seal isolates the field terminals and conduit entries. This design ensures against housing pressurization and process contamination.

The electronics incorporates an ASIC module that accepts the digital signal from the sensor, along with the correction coefficients, then corrects and linearizes the signal. This is then converted to an analog signal for retransmission. The output section also handles the HART® communications.

Recommended Reference Book: Handbook of Water and Wastewater Treatment Technologies, ES-2207, $99. See Section Y For Additional Books

To Order (Specify Model Number)

<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th>PRICE</th>
<th>MIN SPAN</th>
<th>MAX SPAN</th>
<th>COMPATIBLE METERS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>PX2088S-30GI</td>
<td>$1165</td>
<td>0 to 1.5 psi</td>
<td>0 to 30 psi</td>
<td>DP41-E, DP25-B-E, DP24-E</td>
</tr>
<tr>
<td>PX2088S-150GI</td>
<td>$1165</td>
<td>0 to 7.5</td>
<td>0 to 150</td>
<td>DP41-E, DP25-B-E, DP24-E</td>
</tr>
<tr>
<td>PX2088S-600GI</td>
<td>$1165</td>
<td>0 to 30</td>
<td>0 to 600</td>
<td>DP41-E, DP25-B-E, DP24-E</td>
</tr>
<tr>
<td>PX2088S-4KGI</td>
<td>$1165</td>
<td>0 to 200</td>
<td>0 to 4000</td>
<td>DP41-E, DP25-B-E, DP24-E</td>
</tr>
</tbody>
</table>

Comes with complete operator’s manual.

* See section D for compatible meters.
See specifications for fitting material and fill fluid options.
See page B-240b for HART® protocol programming module for smart transducers.

To order absolute pressure ranges, change the “G” in the model number to an “A”, and add $205 to price. To order LCD meter scaled 0 to 100%, add suffix “-M5”, and add $450 to price.

Ordering Example: PX2088S-150AI, smart transducer, 150 psi absolute pressure range, with 4 to 20 mA output, $1165 + 205 = $1370.
SMART FUNCTIONALITY

The PX2088S smart transducer HART® protocol allows easy access to configuration, test, and setup capabilities. The PX2088S can be configured using a HART® communicator or another HART®-based communications device. Configuration consists of two steps. First, the transmitter operational parameters are set including:

- Zero and span
- Damping
- Engineering units.

Second, data can be entered into the transmitter to allow identification and physical description of the transmitter. These data include:

- Tag: 8 alphanumeric
- Descriptor: 16 characters
- Message: 32 characters
- Date
- Integral meter installation
- Remote seal information

In addition to the configurable parameters, the PX2088 software contains information that is not user-changeable. Non-configurable information includes:

- Transmitter type
- Sensor limits
- Minimum span

- Fill fluid
- Isolator material
- Module serial number
- Transmitter software revision level

SPECIFICATIONS

Excitation: 10.5 to 36 Vdc unregulated, reverse polarity protected

Supply Effect: <0.01% span/V

Zero Elevation and Suppression: Zero can be suppressed between atmosphere (or 0 psia for absolute ranges) and the upper range limit (URL), provided the span is ≥ the minimum span and the URL does not exceed the unit’s URL. No vacuum calibrations are allowed on the gage pressure models.

Overpressure Limits:
- 8 and 30 psi Ranges: 120 psi
- >30 psi Ranges: 2x URL

Process Temperature Limits:
- Silicon Fill: -40 to 121°C (-40 to 250°F)
- Inert Fill: -30 to 121°C (-20 to 250°F)

Ambient Temperature Limits:
- Standard: -40 to 85°C (-40 to 185°F)
- LCD Meter: -20 to 80°C (-4 to 175°F)

Volumetric Displacement: <0.00042 cm³

Accuracy: Includes linearity, hysteresis and repeatability

Smart: ±0.20% of calibrated span

Analog: ±0.25% of calibrated span

Ambient Temperature Effect:

Smart: ±(0.003% URL + 0.003% span)/°F

Analog (Ranges >8 psi): -40 to 0°F ±(0.007% URL + 0.008% span)/°F; -0 to 140°F ±(0.005% URL + 0.005% span)/°F; 140 to 185°F ±(0.007% URL + 0.008% span)/°F

Stability:

Smart: ±0.10% URL for 12 months

Analog: ±0.25% URL for 12 months

Vibration: ≤±1% URL 4 mm pk/pk 5 to 15 Hz and constant acceleration of 2 g (15 to 150 Hz) and 1 g (150 to 2000 Hz)

Process Connection: ½ to 14 FNPT

Wetted Parts: 316 SS (Hastelloy® optional)

Electronic Housing: Sealed to NEMA 4X (IP66), low-copper aluminum with polyurethane paint; cover O-ring is Buna-N

Electrical Connections: ½ to 14 NPT conduit

Fill Fluid: Silicone oil, standard; inert oil, optional

Weight:

Smart: 1.11 kg (2.44 lb)

Analog: 0.86 kg (1.9 lb)

Fitting Material/Fill Options: (add suffix)

SS/Silicone Oil: Standard

SS/Inert Oil*: “-2B” add $90

Hastelloy/Silicon Oil: “-33” add $250
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 Sheddng Flowmeters

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

- **Data Acquisition**
  Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485, Ethernet and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

- **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, Pressure Transmitters, Strain Gauges, Torque Transducers, Valves

- **Heaters**