

# SUBMERSIBLE PRESSURE TRANSDUCERS

## FOR LEVEL, DEPTH OR GROUND WATER MEASUREMENTS

**Gage, Sealed Gage or Absolute Pressure**  
**mV/V, 0 to 5 Vdc, 0 to 10 Vdc, or 4 to 20 mA Outputs**  
**0-10 inH<sub>2</sub>O to 0-1000 psi**

### **PX709GW Series Level/Submersible**



- ✓ Precision Micromachined Silicon Sensor
- ✓ 5-Point NIST Traceable Calibration
- ✓ Lightning/Surge Protection Available on Amplified Models
- ✓ 316L SS Case and Diaphragm
- ✓ Fused Polyurethane Cable
- ✓ Premium Temperature Performance
- ✓ Broad Compensated Temperature Range
- ✓ 0.20% Standard Accuracy or Optional 0.08% High Accuracy Models for Precise Depth Measurement
- ✓ Available in Gage Pressure: Vented to Atmosphere Through the Cable; Sealed Gage: Not Vented to Atmosphere; or Absolute Pressure: Vacuum Reference
- ✓ Reverse Polarity Protected
- ✓ Protective Nose Cone and Desiccant Available
- ✓ Standard or Custom Cable Lengths

The PX709GW Series submersible depth transducers are designed to make precision level or depth measurements in fresh water or liquids compatible with 316 SS reliably for years in harsh industrial environments. The PX709GW



**Economical Price  
High Performance**

PX709GW available with optional lightning protection shown smaller than actual size.

Nose cone included.

series has the proven Omega micromachined silicon technology as its core sensor. The Piezoresistive technology uses precision solid state strain gages molecularly embedded into a highly stable silicon wafer. The silicon is mounted in a sealed chamber and protected from the environmental fluids by a pressure sensitive stainless steel diaphragm. A very small volume of silicone oil transfers the pressure from the diaphragm to the silicon sensor. The cable is molded onto the case using a unique high pressure, high temperature system to assure the best possible quality seal for long life and durability. This technology produces a very rugged, high stability sensor with exceptional accuracy, minimal thermal effects and long term reliability.

#### **Applications**

- Level Monitoring and Control
- Depth Measurement
- Surface Water Monitoring
- Tank Level
- Well Water Depth
- Waste Water Applications
- Dewatering Installations
- Construction Bypass

# SUBMERSIBLE PRESSURE TRANSDUCERS FOR LEVEL, DEPTH OR GROUND MEASUREMENTS

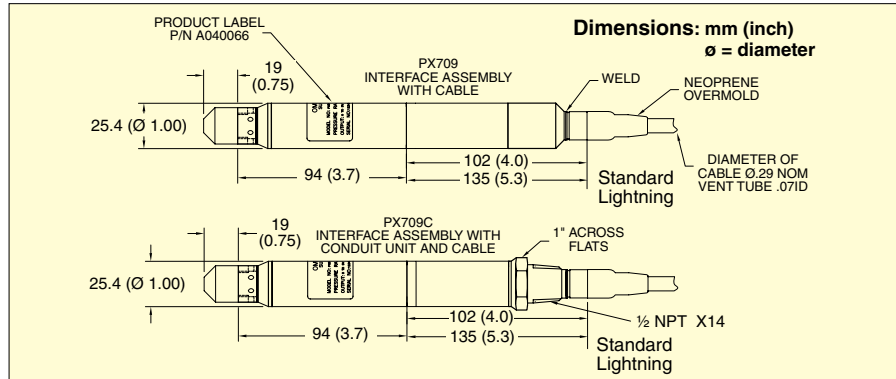
## PX709GW Connections

	mV/V	VOLTAGE	CURRENT
Red	(+) V in	(+) V in	(+) Supply
Black	(-) V in	(-) Common	(-) Supply
Green	(-) Signal	no connection or Common*	Shunt (option)
White	(+) Signal	(+) Signal	Shunt (option)

\* If 4-wire voltage output is chosen, see application note in manual.



Shown monitoring river level for flood warning.



## COMMON SPECIFICATIONS

**Approvals:** RoHS compliant

**Accuracy (Combined Linearity, Hysteresis and Repeatability):**

Standard  $\pm 0.20\%$  BSL or high accuracy, option "HH",  $\pm 0.08\%$  BSL

**Setting Accuracy Zero:**  $\pm 0.5\%$  full scale typical,  $\pm 1.0\%$  full scale maximum ( $\pm 1.0\%$  full scale typical,  $\pm 2.0\%$  full scale maximum for ranges  $\leq 2.5$  psi)

**Setting Accuracy Span:**  $\pm 0.5\%$  full scale typical,  $\pm 1.0\%$  FS maximum ( $\pm 1.0\%$  full scale typical,  $\pm 2.0\%$  full scale maximum for ranges  $\leq 2.5$  psi) calibrated in vertical direction with fitting down

**Minimum Resistance Between Transducer Body and Any Wire:**  $100M \Omega @ 50$  Vdc (before surge protection)

**Pressure Cycles:** 1 million minimum  
**Long Term Stability (1 year.):**  $\pm 0.1\%$  full scale typical

**Operating Temperature:**  $-18$  to  $79^\circ\text{C}$  ( $0$  to  $175^\circ\text{F}$ ) with no solid freeze

**Compensated Temperature:**  $-1$  to  $88^\circ\text{C}$  ( $30$  to  $190^\circ\text{F}$ )

**Thermal Effects (Over Compensated Range):**

**Zero Balance:**

Ranges  $>5$  psi:  $\pm 0.3\%$  span

Ranges  $\leq 5$  psi:  $\pm 0.5\%$  span

**Span Setting:**

Ranges  $>5$  psi:  $\pm 0.3\%$  span

Ranges  $\leq 5$  psi:  $\pm 0.5\%$  span

**Bandwidth:** DC to 1 kHz typical

**Response Time:** 500 usec, 0 to 90% step change

**CE Compliant:** Meets EN 61326-1: 2006 for industrial locations (certified with 91 m (300'))

**Lightning Protection Option**

(if included): Integral lightning surge protection to IEC-61000-4-5 (Level 4)

**Shock:** 50 g, 11 ms, half-sine horizontal and vertical axis

**Vibration:**  $\pm 20$  g

**Overpressure**

**Gage and Sealed Gage:**

**10 inH<sub>2</sub>O:** 10 times span

**1 psi:** 6 times span

**2.5 to 1000 psi:** 4 times span

**Absolute:**

**5 psia:** 6 times span; ranges

**>5 psia:** 4 times span

**Containment Pressure**

**Gage Pressure**

**10 inH<sub>2</sub>O to 5 psi:** to 1000 psi

**15 to 1000 psi:** to 3000 psi

**Absolute Pressure:**

**5 to 1000 psi:** to 6000 psia

**Wetted Parts:** 316L stainless steel

**Body Material:** 316L stainless steel

**Pressure Connection:** 9/16-18 UNF female

**Transducer Weight:** 285 g (10 oz) typical depending upon configuration

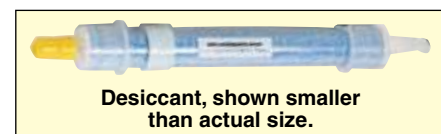
**Cable Construction:** Polyurethane jacket with double Kevlar® reinforcing stringers, fused to case, with large vent tube

**Cable Pull Strength:** 109 kg (240 lb)

**Cable Conductors:** Four 24 AWG (19/36 stranded tinned copper) with ETFE insulation. Meets MIL-W-22759/16 & SAE AS22759/16

**Cable Sealing:** Fused to case via molded Neoprene boot rated to 610 m (2000') depth

**Standard Cable Lengths (ft):** 10, 15, 20, 25, 30, 40, 50, 60, 65, 74, 100, 150, 200, 300, for other lengths contact factory for lead times (see page 6)



Desiccant, shown smaller than actual size.

# SUBMERSIBLE PRESSURE TRANSDUCERS

## PX709GW SERIES WITH 100 mV OUTPUT

Submersible Level Transducer

### To Order

10 mV/V OUTPUT, 0.2% ACCURACY<sup>1</sup> WITH 3 m (10') CABLE [Maximum recommended cable length\*\* on mV models 7.8 m (25')]  
GAGE PRESSURE RANGES (INTERMEDIATE RANGES AVAILABLE, CONSULT PRESSURE ENGINEERING)

RANGE PSIG	EQUIVALENT DEPTH ftH <sub>2</sub> O	EQUIVALENT DEPTH mH <sub>2</sub> O	STD CABLE LENGTH	STANDARD PART NUMBER <sup>2</sup> STANDARD 0.20% ACCURACY	HIGH ACCURACY MODELS 0.08% ACCURACY
0 to 0.36	10.00 inH <sub>2</sub> O	250 mmH <sub>2</sub> O	3 m (10')	PX709GW-10WGV- <sup>[**]</sup>	PX709GW-10WGV-HH- <sup>[**]</sup>
0 to 1	27.68 inH <sub>2</sub> O	670 mmH <sub>2</sub> O	3 m (10')	PX709GW-001GV- <sup>[**]</sup>	PX709GW-001GV-HH- <sup>[**]</sup>
0 to 2.5	69.24 inH <sub>2</sub> O	1757 mmH <sub>2</sub> O	3 m (10')	PX709GW-2.5GV- <sup>[**]</sup>	PX709GW-2.5GV-HH- <sup>[**]</sup>
0 to 5	11.5	3.51	3 m (10')	PX709GW-005GV- <sup>[**]</sup>	PX709GW-005GV-HH- <sup>[**]</sup>
0 to 10	23.1	7.04	3 m (10')	PX709GW-010GV- <sup>[**]</sup>	PX709GW-010GV-HH- <sup>[**]</sup>
0 to 15	34.6	10.5	3 m (10')	PX709GW-015GV- <sup>[**]</sup>	PX709GW-015GV-HH- <sup>[**]</sup>
0 to 30	69.2	21.1	3 m (10')	PX709GW-030GV- <sup>[**]</sup>	PX709GW-030GV-HH- <sup>[**]</sup>
0 to 50	115	35.1	3 m (10')	PX709GW-050GV- <sup>[**]</sup>	PX709GW-050GV-HH- <sup>[**]</sup>
0 to 100	231	70.4	3 m (10')	PX709GW-100GV- <sup>[**]</sup>	PX709GW-100GV-HH- <sup>[**]</sup>
0 to 150	346	105	3 m (10')	PX709GW-150GV- <sup>[**]</sup>	PX709GW-150GV-HH- <sup>[**]</sup>
0 to 250	577	176	3 m (10')	PX709GW-250GV- <sup>[**]</sup>	PX709GW-250GV-HH- <sup>[**]</sup>
0 to 500	1153	351	3 m (10')	PX709GW-500GV- <sup>[**]</sup>	PX709GW-500GV-HH- <sup>[**]</sup>
0 to 750	1730	527	3 m (10')	PX709GW-750GV- <sup>[**]</sup>	PX709GW-750GV-HH- <sup>[**]</sup>
0 to 1000	2307	703	3 m (10')	PX709GW-1.0KGV- <sup>[**]</sup>	PX709GW-1.0KGV-HH- <sup>[**]</sup>
<b>SEALED GAGE PRESSURE RANGES (PSISG)</b>					
0 to 100	231	70.4	3 m (10')	PX709GW-100SGV- <sup>[**]</sup>	PX709GW-100SGV-HH- <sup>[**]</sup>
0 to 150	346	105	3 m (10')	PX709GW-150SGV- <sup>[**]</sup>	PX709GW-150SGV-HH- <sup>[**]</sup>
0 to 250	577	176	3 m (10')	PX709GW-250SGV- <sup>[**]</sup>	PX709GW-250SGV-HH- <sup>[**]</sup>
0 to 500	1153	351	3 m (10')	PX709GW-500SGV- <sup>[**]</sup>	PX709GW-500SGV-HH- <sup>[**]</sup>
0 to 750	1730	527	3 m (10')	PX709GW-750SGV- <sup>[**]</sup>	PX709GW-750SGV-HH- <sup>[**]</sup>
0 to 1000	2307	703	3 m (10')	PX709GW-1.0KSGV- <sup>[**]</sup>	PX709GW-1.0KSGV-HH- <sup>[**]</sup>
<b>ABSOLUTE PRESSURE RANGES (PSIA)</b>					
0 to 5	11.5	3.51	3 m (10')	PX709GW-005AV- <sup>[**]</sup>	PX709GW-005AV-HH- <sup>[**]</sup>
0 to 10	23.1	7.04	3 m (10')	PX709GW-010AV- <sup>[**]</sup>	PX709GW-010AV-HH- <sup>[**]</sup>
0 to 15	34.6	10.5	3 m (10')	PX709GW-015AV- <sup>[**]</sup>	PX709GW-015AV-HH- <sup>[**]</sup>
0 to 30	69.2	21.1	3 m (10')	PX709GW-030AV- <sup>[**]</sup>	PX709GW-030AV-HH- <sup>[**]</sup>
0 to 50	115	35.1	3 m (10')	PX709GW-050AV- <sup>[**]</sup>	PX709GW-050AV-HH- <sup>[**]</sup>
0 to 100	231	70.4	3 m (10')	PX709GW-100AV- <sup>[**]</sup>	PX709GW-100AV-HH- <sup>[**]</sup>
0 to 150	346	105	3 m (10')	PX709GW-150AV- <sup>[**]</sup>	PX709GW-150AV-HH- <sup>[**]</sup>
0 to 250	577	176	3 m (10')	PX709GW-250AV- <sup>[**]</sup>	PX709GW-250AV-HH- <sup>[**]</sup>
0 to 500	1153	351	3 m (10')	PX709GW-500AV- <sup>[**]</sup>	PX709GW-500AV-HH- <sup>[**]</sup>
0 to 750	1730	527	3 m (10')	PX709GW-750AV- <sup>[**]</sup>	PX709GW-750AV-HH- <sup>[**]</sup>
0 to 1000	2307	703	3 m (10')	PX709GW-1.0KAV- <sup>[**]</sup>	PX709GW-1.0KAV-HH- <sup>[**]</sup>

### mV/V OUTPUT SPECIFICATIONS

**Output:** 100 mV @ 10 Vdc (Ratiometric 5 to 10 Vdc)

**\*\*Cable Length:** For lengths over 7.6 (25') output signal is attenuated ½% per 30.5 m (100') nominal

**Supply Voltage:** 5 to 10 Vdc (ratiometric)

**Current Draw:** 5 mA @ 10 Vdc

**Input Impedance:** 1000 to 5000 Ω

**Output Impedance:** 5000 Ω ± 10% Typical

See Common Specifications for other parameters

Comes complete with 5-point NIST traceable calibration certificate.

[\*\*] To order with additional cable length, specify total length in feet, **PX709GW-001GV-25FT**, additional cost for length over 10 feet.

Consult sales for stock cable length to assure fast delivery.

1.) To order with optional high accuracy for extra cost, insert code “-HH” for 0.08% accuracy after the V, **PX709GW-100GV-HH-<sup>[\*\*]</sup>**.

2.) To order with ½ NPT conduit fitting specify Model **PX709C** for additional cost, **PX709CGW-010GV**.

3.) Lightning protection is available on amplified voltage and mA output models for additional costs.

**Ordering Examples:** **PX709GW-001GV**, 1 psi gage submersible transducer with 10 mV/V output, 3 m (10') of cable and standard 0.2% accuracy.

**PX709GW-005AV-HH-25FT**, 5 psi absolute pressure submersible transducer with 10 mV/V output, 7.6 m (25') of cable and high 0.08% accuracy.

**PX709CGW-2.5GV-20FT**, 2.5 psi gage submersible transducer with 10 mV/V output, a ½ NPT conduit fitting, 6.1 m (20') of cable.

### OPTIONS FOR SUBMERSIBLE TRANSDUCERS

<b>PX709-BOX1</b>	Terminal enclosure without surge protection - for use with all models
<b>PX709-BOX2</b>	Terminal enclosure with surge protection - for use with 4 to 20 mA without Shunt Cal (one surge protection module)
<b>PX709-BOX3</b>	Terminal enclosure with surge protection - for use with voltage output sensors and 4 to 20 mA with Shunt Cal option (two surge protection modules)
<b>A019385</b>	Replacement desiccant to keep moisture out of vent tube

# SUBMERSIBLE PRESSURE TRANSDUCERS

## PX709GW SERIES WITH 0 TO 5 Vdc OR 0 TO 10 Vdc OUTPUT

### Submersible Level Transducer

#### To Order

5 Vdc OUTPUT, 0.2% ACCURACY<sup>1</sup> WITH 3 m (10') CABLE [Maximum cable length 91 m (300')]

GAGE PRESSURE RANGES (INTERMEDIATE RANGES AVAILABLE, CONSULT PRESSURE ENGINEERING)

RANGE PSIG	EQUIVALENT DEPTH ftH <sub>2</sub> O	EQUIVALENT DEPTH mH <sub>2</sub> O	STD CABLE LENGTH	STANDARD PART NUMBER <sup>2</sup> STANDARD 0.20% ACCURACY	LIGHTNING <sup>3</sup> PROTECTED MODELS STANDARD 0.20% ACCURACY
0 to 0.36	10.00 inH <sub>2</sub> O	250 mmH <sub>2</sub> O	3 m (10')	PX709GW-10WG5V- <sup>[**]</sup>	PX709LGW-10WG5V- <sup>[**]</sup>
0 to 1	27.68 inH <sub>2</sub> O	670 mmH <sub>2</sub> O	3 m (10')	PX709GW-001G5V- <sup>[**]</sup>	PX709LGW-001G5V- <sup>[**]</sup>
0 to 2.5	69.24 inH <sub>2</sub> O	1757 mmH <sub>2</sub> O	3 m (10')	PX709GW-2.5G5V- <sup>[**]</sup>	PX709LGW-2.5G5V- <sup>[**]</sup>
0 to 5	11.5	3.51	3 m (10')	PX709GW-005G5V- <sup>[**]</sup>	PX709LGW-005G5V- <sup>[**]</sup>
0 to 10	23.1	7.04	3 m (10')	PX709GW-010G5V- <sup>[**]</sup>	PX709LGW-010G5V- <sup>[**]</sup>
0 to 15	34.6	10.5	3 m (10')	PX709GW-015G5V- <sup>[**]</sup>	PX709LGW-015G5V- <sup>[**]</sup>
0 to 30	69.2	21.1	3 m (10')	PX709GW-030G5V- <sup>[**]</sup>	PX709LGW-030G5V- <sup>[**]</sup>
0 to 50	115	35.1	3 m (10')	PX709GW-050G5V- <sup>[**]</sup>	PX709LGW-050G5V- <sup>[**]</sup>
0 to 100	231	70.4	3 m (10')	PX709GW-100G5V- <sup>[**]</sup>	PX709LGW-100G5V- <sup>[**]</sup>
0 to 150	346	105	3 m (10')	PX709GW-150G5V- <sup>[**]</sup>	PX709LGW-150G5V- <sup>[**]</sup>
0 to 250	577	176	3 m (10')	PX709GW-250G5V- <sup>[**]</sup>	PX709LGW-250G5V- <sup>[**]</sup>
0 to 500	1153	351	3 m (10')	PX709GW-500G5V- <sup>[**]</sup>	PX709LGW-500G5V- <sup>[**]</sup>
0 to 750	1730	527	3 m (10')	PX709GW-750G5V- <sup>[**]</sup>	PX709LGW-750G5V- <sup>[**]</sup>
0 to 1000	2307	703	3 m (10')	PX709GW-1.0KG5V- <sup>[**]</sup>	PX709LGW-1.0KG5V- <sup>[**]</sup>
<b>SEALED GAGE PRESSURE (PSIG)</b>					
0 to 100	231	70.4	3 m (10')	PX709GW-100SG5V- <sup>[**]</sup>	PX709LGW-100SG5V- <sup>[**]</sup>
0 to 150	346	105	3 m (10')	PX709GW-150SG5V- <sup>[**]</sup>	PX709LGW-150SG5V- <sup>[**]</sup>
0 to 250	577	176	3 m (10')	PX709GW-250SG5V- <sup>[**]</sup>	PX709LGW-250SG5V- <sup>[**]</sup>
0 to 500	1153	351	3 m (10')	PX709GW-500SG5V- <sup>[**]</sup>	PX709LGW-500SG5V- <sup>[**]</sup>
0 to 750	1730	527	3 m (10')	PX709GW-750SG5V- <sup>[**]</sup>	PX709LGW-750SG5V- <sup>[**]</sup>
0 to 1000	2307	703	3 m (10')	PX709GW-1.0KSG5V- <sup>[**]</sup>	PX709LGW-1.0KSG5V- <sup>[**]</sup>
<b>ABSOLUTE PRESSURE (PSIA)</b>					
0 to 5	11.5	3.51	3 m (10')	PX709GW-005A5V- <sup>[**]</sup>	PX709LGW-005A5V- <sup>[**]</sup>
0 to 10	23.1	7.04	3 m (10')	PX709GW-010A5V- <sup>[**]</sup>	PX709LGW-010A5V- <sup>[**]</sup>
0 to 15	34.6	10.5	3 m (10')	PX709GW-015A5V- <sup>[**]</sup>	PX709LGW-015A5V- <sup>[**]</sup>
0 to 30	69.2	21.1	3 m (10')	PX709GW-030A5V- <sup>[**]</sup>	PX709LGW-030A5V- <sup>[**]</sup>
0 to 50	115	35.1	3 m (10')	PX709GW-050A5V- <sup>[**]</sup>	PX709LGW-050A5V- <sup>[**]</sup>
0 to 100	231	70.4	3 m (10')	PX709GW-100A5V- <sup>[**]</sup>	PX709LGW-100A5V- <sup>[**]</sup>
0 to 150	346	105	3 m (10')	PX709GW-150A5V- <sup>[**]</sup>	PX709LGW-150A5V- <sup>[**]</sup>
0 to 250	577	176	3 m (10')	PX709GW-250A5V- <sup>[**]</sup>	PX709LGW-250A5V- <sup>[**]</sup>
0 to 500	1153	351	3 m (10')	PX709GW-500A5V- <sup>[**]</sup>	PX709LGW-500A5V- <sup>[**]</sup>
0 to 750	1730	527	3 m (10')	PX709GW-750A5V- <sup>[**]</sup>	PX709LGW-750A5V- <sup>[**]</sup>
0 to 1000	2307	703	3 m (10')	PX709GW-1.0KA5V- <sup>[**]</sup>	PX709LGW-1.0KA5V- <sup>[**]</sup>

#### 5V and 10V OUTPUT SPECIFICATIONS

**Output:** 0 to 5 Vdc or 0 to 10 Vdc (3 or 4 wire user selectable) see application note/manual

**Supply Voltage:** 5V output: 10 to 30 Vdc @ 10 mA, 10V output: 15 to 30 Vdc @ 10 mA

**Lightning Protection:** See application note/manual

See Common Specifications for other parameters

Comes complete with 5-point NIST traceable calibration certificate.

[\*\*] To order with additional cable length, specify total length in feet, **PX709GW-001G5V-25FT**, additional cost for length over 10 feet.

Consult sales for stock cable length to assure fast delivery.

1.) To order with optional high accuracy for extra cost, insert code “-HH” after 5V for 0.08% accuracy, **PX709-150G5V-HH-<sup>[\*\*]</sup>**.

2.) To order with ½ NPT conduit fitting for extra cost, specify Model **PX709C**, for additional cost **PX709CGW-010G5V**.

3.) To order with optional Lightning/Surge protection for extra cost, specify model **PX709LGW**, **PX709LGW-001G5V**.

4.) To order with optional Lightning/Surge protection and conduit fitting for extra cost, specify model **PX709CLGW**, **PX709CLGW-001G5V**.

**Ordering Examples:** **PX709GW-001G5V**, 1 psi gage submersible transducer with 0 to 5 Vdc output, 3 m (10') of cable and standard 0.2% accuracy. **PX709LGW-005A5V-HH-25FT**, 5 psi absolute pressure, lightning protected submersible transducer with 0 to 5 Vdc output, 7.6 m (25') of cable and high 0.08% accuracy.

**PX709CGW-2.5G10V-20FT**, 2.5 psi gage submersible transducer with 0 to 10 Vdc output, a ½ NPT conduit fitting and 6.1 m (20') of cable.

#### OPTIONS FOR SUBMERSIBLE TRANSDUCERS

<b>PX709-BOX1</b>	Terminal enclosure without surge protection - for use with all models
<b>PX709-BOX2</b>	Terminal enclosure with surge protection - for use with 4 to 20 mA without Shunt Cal (one surge protection module)
<b>PX709-BOX3</b>	Terminal enclosure with surge protection - for use with voltage output sensors and 4 to 20 mA with Shunt Cal option (two surge protection modules)
<b>A019385</b>	Replacement desiccant to keep moisture out of vent tube

# SUBMERSIBLE PRESSURE TRANSMITTER

## PX709GW SERIES WITH 4 TO 20 mA OUTPUT

Submersible Level Transducer

### To Order

4 to 20 OUTPUT, 0.2% ACCURACY<sup>1</sup> WITH 3 m (10') CABLE [Maximum cable length 91 m (300')]

GAGE PRESSURE RANGES (INTERMEDIATE RANGES AVAILABLE, CONSULT PRESSURE ENGINEERING)

RANGE PSIG	EQUIVALENT DEPTH ftH <sub>2</sub> O	EQUIVALENT DEPTH mH <sub>2</sub> O	STD CABLE LENGTH	STANDARD PART NUMBER <sup>2</sup> STANDARD 0.20% ACCURACY	LIGHTNING <sup>3</sup> PROTECTED MODELS STANDARD 0.20% ACCURACY
0 to 0.36	10.00 inH <sub>2</sub> O	250 mmH <sub>2</sub> O	3 m (10')	PX709GW-10WGI- <b>[**]</b>	PX709LGW-10WGI- <b>[**]</b>
0 to 1	27.68 inH <sub>2</sub> O	670 mmH <sub>2</sub> O	3 m (10')	PX709GW-001GI- <b>[**]</b>	PX709LGW-001GI- <b>[**]</b>
0 to 2.5	69.24 inH <sub>2</sub> O	1757 mmH <sub>2</sub> O	3 m (10')	PX709GW-2.5GI- <b>[**]</b>	PX709LGW-2.5GI- <b>[**]</b>
0 to 5	11.5	3.51	3 m (10')	PX709GW-005GI- <b>[**]</b>	PX709LGW-005GI- <b>[**]</b>
0 to 10	23.1	7.04	3 m (10')	PX709GW-010GI- <b>[**]</b>	PX709LGW-010GI- <b>[**]</b>
0 to 15	34.6	10.5	3 m (10')	PX709GW-015GI- <b>[**]</b>	PX709LGW-015GI- <b>[**]</b>
0 to 30	69.2	21.1	3 m (10')	PX709GW-030GI- <b>[**]</b>	PX709LGW-030GI- <b>[**]</b>
0 to 50	115	35.1	3 m (10')	PX709GW-050GI- <b>[**]</b>	PX709LGW-050GI- <b>[**]</b>
0 to 100	231	70.4	3 m (10')	PX709GW-100GI- <b>[**]</b>	PX709LGW-100GI- <b>[**]</b>
0 to 150	346	105	3 m (10')	PX709GW-150GI- <b>[**]</b>	PX709LGW-150GI- <b>[**]</b>
0 to 250	577	176	3 m (10')	PX709GW-250GI- <b>[**]</b>	PX709LGW-250GI- <b>[**]</b>
0 to 500	1153	351	3 m (10')	PX709GW-500GI- <b>[**]</b>	PX709LGW-500GI- <b>[**]</b>
0 to 750	1730	527	3 m (10')	PX709GW-750GI- <b>[**]</b>	PX709LGW-750GI- <b>[**]</b>
0 to 1000	2307	703	3 m (10')	PX709GW-1.0KGI- <b>[**]</b>	PX709LGW-1.0KGI- <b>[**]</b>
<b>SEALED GAGE PRESSURE (PSISG)</b>					
0 to 100	231	70.4	3 m (10')	PX709GW-100SGI- <b>[**]</b>	PX709LGW-100SGI- <b>[**]</b>
0 to 150	346	105	3 m (10')	PX709GW-150SGI- <b>[**]</b>	PX709LGW-150SGI- <b>[**]</b>
0 to 250	577	176	3 m (10')	PX709GW-250SGI- <b>[**]</b>	PX709LGW-250SGI- <b>[**]</b>
0 to 500	1153	351	3 m (10')	PX709GW-500SGI- <b>[**]</b>	PX709LGW-500SGI- <b>[**]</b>
0 to 750	1730	527	3 m (10')	PX709GW-750SGI- <b>[**]</b>	PX709LGW-750SGI- <b>[**]</b>
0 to 1000	2307	703	3 m (10')	PX709GW-1.0KSGI- <b>[**]</b>	PX709LGW-1.0KSGI- <b>[**]</b>
<b>ABSOLUTE PRESSURE (PSIA)</b>					
0 to 5	11.5	3.51	3 m (10')	PX709GW-005AI- <b>[**]</b>	PX709LGW-005AI- <b>[**]</b>
0 to 10	23.1	7.04	3 m (10')	PX709GW-010AI- <b>[**]</b>	PX709LGW-010AI- <b>[**]</b>
0 to 15	34.6	10.5	3 m (10')	PX709GW-015AI- <b>[**]</b>	PX709LGW-015AI- <b>[**]</b>
0 to 30	69.2	21.1	3 m (10')	PX709GW-030AI- <b>[**]</b>	PX709LGW-030AI- <b>[**]</b>
0 to 50	115	35.1	3 m (10')	PX709GW-050AI- <b>[**]</b>	PX709LGW-050AI- <b>[**]</b>
0 to 100	231	70.4	3 m (10')	PX709GW-100AI- <b>[**]</b>	PX709LGW-100AI- <b>[**]</b>
0 to 150	346	105	3 m (10')	PX709GW-150AI- <b>[**]</b>	PX709LGW-150AI- <b>[**]</b>
0 to 250	577	176	3 m (10')	PX709GW-250AI- <b>[**]</b>	PX709LGW-250AI- <b>[**]</b>
0 to 500	1153	351	3 m (10')	PX709GW-500AI- <b>[**]</b>	PX709LGW-500AI- <b>[**]</b>
0 to 750	1730	527	3 m (10')	PX709GW-750AI- <b>[**]</b>	PX709LGW-750AI- <b>[**]</b>
0 to 1000	2307	703	3 m (10')	PX709GW-1.0KAI- <b>[**]</b>	PX709LGW-1.0KAI- <b>[**]</b>

### 4 to 20 mA SPECIFICATIONS

**Output:** 4 to 20 mA

**Supply Voltage:** 10 to 30 Vdc [(10 to 20 Vdc above 105°C (229°F)) maximum loop res Ω = (Vs-10) x 50]

**Lightning Protection:** See application note/manual

See Common Specifications for other parameters

Comes complete with 5-point NIST traceable calibration certificate.

**[\*\*]** To order with additional cable length, specify total length in feet, **PX709GW-001GI-25**, additional cost for length over 10 feet.

Consult sales for stock cable length to assure fast delivery.

1.) To order with optional high accuracy for extra cost, insert code "**-HH**" after "**I**" for 0.08% accuracy, **PX709-150GI-HH-**[\*\*]****

2.) To order with ½ NPT Conduit fitting for extra cost, specify Model **PX709C**, for additional cost **PX709CGW-010GI**

3.) To order with optional Lightning/Surge protection for extra cost, specify model **PX709LGW**, **PX709LGW-001GI**

4.) To order with optional Lightning/Surge protection and conduit fitting for extra cost, specify model **PX709CLGW**, **PX709CLGW-001GI**

**Ordering Examples:** **PX709GW-001GI**, 1 psi gage submersible transducer with 4 to 20 mA output, 3 m (10') of cable and standard 0.2% accuracy  
**PX709LGW-005AI-HH-25FT**, 5 psi absolute pressure, lightning protected submersible transducer with 4 to 20 mA output, 7.6 m (25') of cable and high 0.08% accuracy  
**PX709CGW-2.5GI-20FT**, 2.5 psi gage submersible transducer with 4 to 20 mA output, a ½ NPT conduit fitting with 6.1 m (20') of cable.

### OPTIONS FOR SUBMERSIBLE TRANSDUCERS

<b>PX709-BOX1</b>	Terminal enclosure without surge protection - for use with all models
<b>PX709-BOX2</b>	Terminal enclosure with surge protection - for use with 4 to 20 mA without Shunt Cal (one surge protection module)
<b>PX709-BOX3</b>	Terminal enclosure with surge protection - for use with voltage output sensors and 4 to 20 mA with Shunt Cal option (two surge protection modules)
<b>A019385</b>	Replacement desiccant to keep moisture out of vent tube

# SUBMERSIBLE PRESSURE TRANSMITTERS

## BUILD A TRANSDUCER TO YOUR SPECIFICATIONS

### Build a Transducer to your Specifications

1	2	3	4	5	6	7
SERIES	TYPE	RANGE CODE	PRESSURE TYPE	OUTPUT	ACCURACY	TOTAL CABLE LENGTH (FT)
PX709	GW	015	G	I	HH	50 FT
PX709 = Cable PX709C = Conduit	GW = Stainless Steel Wetted Parts LGW = Lightning Protected (amplified models only)	Range (psi) xxx	G = Gage A = Absolute SG = Sealed gage	V = mV/V 5V = 5 Vdc 10V = 10 Vdc I = 4 to 20 mA	Blank = Std. 0.2% Accuracy HH = High 0.08% Accuracy	Total Length in Feet if not 10'  Extra cost for additional length over 10'

Optional Higher Accuracy: Add suffix "-HH" after the "V" or "I" in the model number

Optional Conduit Fitting Cable Exit: Specify model **PX709CGW**

Optional Lightning Protection: Specify model **PX709LGW**

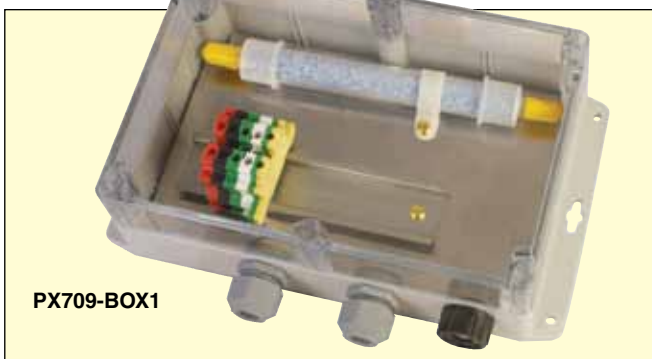
Optional Lightning Protection and Conduit fitting: Specify model **PX709CLGW**

### To select your submersible transducer all you have to do is

<b>SELECT:</b>	Accuracy
Range	Total Cable Length (see table of stocked lengths)
Pressure Type	
Output	

## STANDARD CABLE LENGTHS FOR FAST DELIVERY

OMEGA® has designed the PX709 Series to be highly modular so we can configure and ship most models in 1 week. We stock the modules and can quickly assemble and do precision calibrations for any of our several thousand possible combinations. The cable molded onto the transducer using a high pressure, temperature molding process to assure complete sealing. We stock a series of molded cable assemblies in standard lengths to suit most common applications which we can build onto your transducer and deliver in 1 week (see the list below). We also can provide custom lengths with slightly longer lead times to allow for the molding process.



PX709-BOX1

PX709-BOX1 Waterproof terminal box for PX709 provides a waterproof environment for electrical terminations and housing the desiccant. Also available with optional lightning protection for downstream instruments.



PX709C with 1/2 NPT conduit fitting.

PX709 with standard cable fitting.

**Fast Delivery - Highlighted Typically Stock to 2 Weeks!**

STANDARD LENGTHS
3 m (10')
4.6 m (15')
6.1 m (20')
7.6 m (25')
9.1 m (30')
12.2 m (40')
15.2 m (50')
18.3 m (60')
19.8 m (65')
22.5 m (74')
30.5 m (100')
45.7 m (150')
91.4 m (300')