# WPR2

## Wet to Wet Transmitter

The ACI WPR2 Series Remote Wet to Wet Differential Pressure Transmitter is designed to reduce installation time and provide mounting flexibility, often eliminating the need for additional plumbing and manifolds. The WPR2 can be ordered with standard CMP rated PVC cable or with a metal clad cable. The metal clad cable provides end to end protection of the cables with flexible metal conduit, durable and resistant to abrasions and cuts, with corrosion resistant 304 stainless steel construction. The WPR2 accurately measures wet media pressures in a variety of applications. Commonly used for monitoring pumps, these devices are also ideal for measuring pressure across filters, heat exchangers and compressors. The dual remote sensors feature a ceramic capacitive sensing element with a stainless steel diaphragm that's compatible with liquid, gases, and refrigerants suitable with 304L stainless steel. The pressure transducers are ¼"-18 NPT male (304 stainless steel) fittings. The WPR2's enclosure opens conveniently to allow it to be reconfigured between three additional ranges (see order grid) and outputs of 4 to 20 mA, 0 to 5 VDC, or 0 to 10 VDC (default). The different configurations in this series can measure both uni or bi-directional pressure ranges as low as 3 psi and as high as 300 psi, depending on the unit. The WPR2 also features a push button auto zero function for remote calibration. The LCD option will display pressure values for both the High and Low side pressures, a differential pressure value, "OVR" for values over the specified range, "ERROR" for differential pressures out of range, and "ZERO" when the auto-zero is in process.

**Note:** Order the model based upon line pressure, and not differential pressure.

**Applications:** Monitoring Pumps, Compressors, Filters, Heat Exchangers, Flow

**The WPR2 Series is covered by ACI's Five (5) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's**

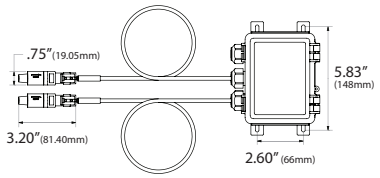
## PRODUCT SPECIFICATIONS

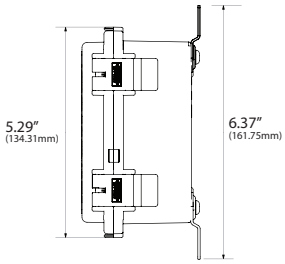
| | |
|---|---|
| **Supply Voltage:** | **4-20 mA Output:** 18-36 VDC (250 Ohm Load max.) / 20-36 VDC (500 Ohm Load max.) / 24 VAC (+/-10%) 50/60 Hz<br>**0-5 VDC / 0-10 VDC Output:** 16-36 VDC / 24 VAC (+/- 10%) 50/60 Hz |
| **Supply Current:** | **4-20 mA Output:** 24 mA minimum **\| 0-5 VDC / 0-10 VDC Outputs:** 6 mA minimum |
| **Output Signals:** | **2-wire:** Linear 4-20 mA DC Current (Field Selectable) **\| 3-wire:** 0-5 VDC; 0-10 VDC (Default) & 4-20 mA (Field Selectable) |
| **Response Time (0-100% FSO):** | 8 seconds |
| **Output Update Rate:** | 1 second |
| **Output Load Resistance:** | **4 to 20 mA**: 500 ohms maximum **\| 0-5 VDC / 0-10 VDC:** 5K ohms minimum |
| **Field Selectable Ranges:** | See "Ordering Grid" on back of product data sheet |
| **Warm Up Time:** | 15 minutes (wait 15 minutes before zeroing) |
| **Accuracy[1] (Three Highest Ranges):** | ±1.0% FSO |
| **Accuracy[1] (Lowest Range[2]):** | ±1.5% FSO |
| **Thermal Effects[3]:** | ±2.0% FSO from 32-140°F (0-60°C) |
| **Operating Temperature:** | **Transducer:** -40 to 257°F (-40 to 125°C) **\| Electronics/Housing/Cables:** 32-167°F (0-75°C) |
| **Compensated Temperature Range:** | 32 to 140°F (0 to 60°C) |
| **Storage Temperature:** | -13 to 176°F (-25 to 80°C) |
| **Operating Humidity:** | 10 to 90% RH, non-condensing |
| **Proof Pressure:** | **WPR2-30:** 60 PSI **\| WPR2-100:** 200 PSI **\| WPR2-300:** 600 PSI |
| **Burst Pressure:** | **WPR2-30:** 300 PSI **\| WPR2-100:** 1000 PSI **\| WPR2-300:** 3000 PSI |
| **Media Types:** | Any gas or liquid compatible w/ 304L or 316L Stainless Steel |
| **Process Fitting Material:** | 304 SS |
| **Process Fitting Size:** | 1/4" - 18 NPT Male; Pressure Snubber included for light oils/water |
| **Recommend Torque Specifiaction:** | 150 lbs-in (16.95 Nm) |
| **Transducer Cable Rating \| Connector Type:** | Type CMP - Plenum Rated (UL Standard 444), NEC Article 800 **\|** IP65 at the sensors Packard Connector |
| **Metal Clad Rating:** | Continuously interlocked Type 304 Stainless Steel core |
| **Enclosure Material \| Flammability Rating:** | Flame Retardant PC **\|** PBT Alloy **\|** UL94V-0 |
| **Enclosure Rating:** | NEMA 4X/IP66 |
| **Approvals:** | CE, RoHS2, WEEE, Reach |
| **Product Dimensions (L x W x D):** | 5.30" x 5.07" x 3.00" (13.46 cm x 12.88 cm x 7.62 cm) |
| **Product Weight:** | **A/WPR2 (0-xxx psid)-10':** 2.1 lbs (0.953 kg) **\| A/WPR2(0-xxx psid)-10'-LCD:** 2.2 lbs (0.998 kg)<br>**A/WPR2 (0-xxx psid)-20':** 2.4 lbs (1.09 kg) **\| A/WPR2 (0-xxx psid)-20'-LCD:** 2.5 lbs (1.138 kg)<br>**A/WPR2 (0-xxx psid)-40':** 3 lbs (1.363 kg) **\| A/WPR2 (0-xxx psid)-40'-LCD:** 3.1 lbs (1.41 kg) |

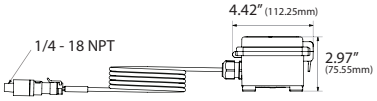
**Note[1]:** Accuracy includes Linearity, Hysteresis and Repeatability @ 71°F (21.5°C) **| Note[2]:** See the ordering grid on the back of that data sheet for selectable ranges **| Note[3]:** Shift Relative to 71°F (21.5°C)

## DIMENSIONAL DRAWING

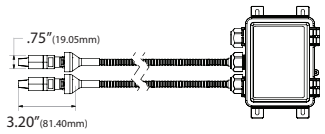
**LCD & Non LCD Models**
**Standard Cable**

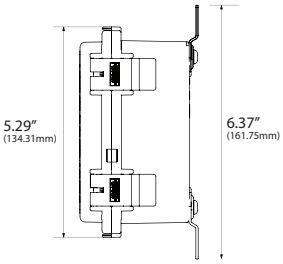


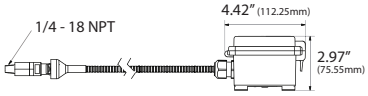




**LCD & Non LCD Models**
**Metal-Clad Cable**




| Front View | Side View | Top View |
|---|---|---|

## STANDARD ORDERING

Model # Example: A/WPR2-30-10-LCD -OR- 139367

| Model # | Item # | Ranges* | Outputs* (Default in Bold) | Armored Cable | 10' Harness | 20' Harness | 40' Harness | No LCD | w/ LCD |
|---|---|---|---|---|---|---|---|---|---|
| A/WPR2-30-10 | 139365 | **Uni-Directional**: 0-30, 0-15, 0-7.5 and 0-3 psid<br>**Bi-Directional:** +/-30, +/-15, +/-7.5 and +/-3 psid | 4-20 mA, 0-5 VDC, **0-10 VDC** (Default) | | • | | | • | |
| A/WPR2-30-M10 | 147357 | | | • | • | | | • | |
| A/WPR2-30-10-LCD | 139367 | | | | • | | | | • |
| A/WPR2-30-M10-LCD | 147358 | | | • | • | | | | • |
| A/WPR2-30-20 | 139366 | | | | | • | | • | |
| A/WPR2-30-M20 | 147359 | | | • | | • | | • | |
| A/WPR2-30-20-LCD | 139368 | | | | | • | | | • |
| A/WPR2-30-M20-LCD | 147360 | | | • | | • | | | • |
| A/WPR2-30-40 | 147370 | | | | | | • | • | |
| A/WPR2-30-40-LCD | 146111 | | | | | | • | | • |
| A/WPR2-100-10 | 138180 | **Uni-Directional**: 0-100, 0-50, 0-25 and 0-10 psid<br>**Bi-Directional:** +/-100, +/-50, +/-25 and +/-10 psid | 4-20 mA, 0-5 VDC, **0-10 VDC** (Default) | | • | | | • | |
| A/WPR2-100-M10 | 147346 | | | • | • | | | • | |
| A/WPR2-100-10-LCD | 138014 | | | | • | | | | • |
| A/WPR2-100-M10-LCD | 147347 | | | • | • | | | | • |
| A/WPR2-100-20 | 138189 | | | | | • | | • | |
| A/WPR2-100-M20 | 147348 | | | • | | • | | • | |
| A/WPR2-100-20-LCD | 138105 | | | | | • | | | • |
| A/WPR2-100-M20-LCD | 147349 | | | • | | • | | | • |
| A/WPR2-100-40 | 141010 | | | | | | • | • | |
| A/WPR2-100-40-LCD | 144521 | | | | | | • | | • |
| A/WPR2-300-10 | 138190 | **Uni-Directional**: 0-300, 0-150, 0-75 and 0-30 psid<br>**Bi-Directional:** +/-300, +/-150, +/-75 and +/-30 psid | 4-20 mA, 0-5 VDC, **0-10 VDC** (Default) | | • | | | • | |
| A/WPR2-300-M10 | 147352 | | | • | • | | | • | |
| A/WPR2-300-10-LCD | 138041 | | | | • | | | | • |
| A/WPR2-300-M10-LCD | 147353 | | | • | • | | | | • |
| A/WPR2-300-20 | 138191 | | | | | • | | • | |
| A/WPR2-300-M20 | 147354 | | | • | | • | | • | |
| A/WPR2-300-20-LCD | 138106 | | | | | • | | | • |
| A/WPR2-300-M20-LCD | 147355 | | | • | | • | | | • |
| A/WPR2-300-40 | 147363 | | | | | | • | • | |
| A/WPR2-300-40-LCD | 146690 | | | | | | • | | • |

**Note*: WPR2 model selection is based on the maximum line pressure. EX: If your maximum line pressure is below 100 PSI, and above 30 PSI, then order the WPR2-100**