

IWPTU SERIES

INDUSTRIAL WIRELESS PRESSURE TRANSDUCER



Typical Applications Include

- Simple cable replacement installation
 - dispense with expensive cable runs
- Environmental monitoring
 - pumping stations, sewage plants, water treatment
- Facilities management
 - boiler rooms, plant hydraulics, plant pneumatics
- Asset monitoring
 - tanks farms, process plants, HVAC and building management
- Service Contract
 - temporary installation for servicing and field trials

SPECIFICATIONS

Transmitter Output

| | |
|--------------------------------|--------------------------------|
| *Transmission Frequency | 2.4 Ghz |
| Transmit Power | 18 dBm |
| System Channel | User selectable via DIL switch |
| Antenna | Integral 0dBi |

*Compliant with EN 300 328, V1.8.1

The IWPTU Wireless Pressure Transducer is a cost effective replacement to a traditionally wired pressure transducer that offers the advantages of a low-cost installation in inaccessible and expensive installation environments.

It is easily paired to the compatible IWR family of single- or five-channel wireless receivers thus offering a “plug and play” solution to your pressure measurement applications.

The instrument uses a piezo-resistive ceramic sensor mounted within a 316 stainless steel housing giving excellent media compatibility for the harshest of applications.

The IWPT sensor can be used with either an IWR-1 or IWR-5 receiver. A line-of-sight range of up to 1640 ft is possible depending on the wireless receiver used. (refer to datasheets IWR-1 & IWR-5 for further information)

Each device is temperature compensated, calibrated and supplied with a traceable serial number.

Features

- Suitable for use with liquids and gases
- Pressure ranges from -15 to +5800 psi gauge
- Up to 1640 ft line-of-site range (depending on receiver)
- Piezo-resistive thick film ceramic sensor with stainless steel body
- Five-year battery life at 10 second transmission update rate
- Simple DIL switch pairing with the single or five channel receiver
- Single or five channel receivers available
- User-selectable transmission update rates
- User-selectable 1-5V or 4-20 mA receiver outputs
- Receiver clean contacts provide process alarm functions

System Performance

| | |
|--|-------------------------------|
| Accuracy (Non-linearity & Hysteresis) | <±0.25% /FS (BFSL) |
| Setting Errors (offsets) | Zero & Full Scale, <±0.5% /FS |

Material Specifications

| | |
|---|---|
| Pressure Housing | 316 Stainless Steel |
| "O" Ring Seals | Viton |
| Diaphragm | Ceramic Al ₂ O ₃ 96% |
| Wireless Enclosure Material | Plastic |
| Weight | 310g including battery |
| **Installation Position | Any |
| Environmental Protection | Designed to IP68 (not recommended for submersion due to signal loss) |
| ** Consult installation manual to ensure adequate signal path between transmitter and receiver. | |

Instrument Power Source

| | |
|---------------------------|-------------------------------------|
| Battery Type | User replaceable Lithium C cell |
| Battery Life | Five years at 10 second update rate |
| Battery Shelf Life | 10 years |

Receiver Output Signals

| Receiver Part Number | Receiver Outputs |
|---|---|
| IoT Gateway | Built-in cellular modem allows all data to be sent to remote servers |
| IWR-PORT | RS-232 or RS-485 or Ethernet MODBUS Communications. Up to 128 off analog 4-20 mA or Relay outputs can be obtained by fitting extra ISOSLICE I/O modules |
| IWR-USB | Displays & Logs data on any PC running IWR-USB software |
| IWR-5 | 5 off 4-20 mA or 1-5 V dc and 1 Relay output |
| IWR-1 | 1 off 4-20 mA and 1-5 V dc and 1 Relay output |
| ***Transmission Update Rate 1, 5, 10 and 30 seconds | |
| *** Consult installation manual for set-up: | |
| - Single channel system is DIL switch configurable | |
| - Five channel system requires set-up using "IWR Set" user software | |

Environmental Conditions & Thermal Effects

| | |
|----------------------------|-----------------------------|
| Media Temperature | -20°C to +135°C |
| Ambient Temperature | -20°C to +80°C |
| Storage Temperature | -20°C to +80°C |
| Humidity | 5% to 95% RH non-condensing |
| Thermal Zero Shift | <±0.04% /FS/°C |
| Thermal Span Shift | <±0.02% /°C typical |

Mechanical Stability

See user manual

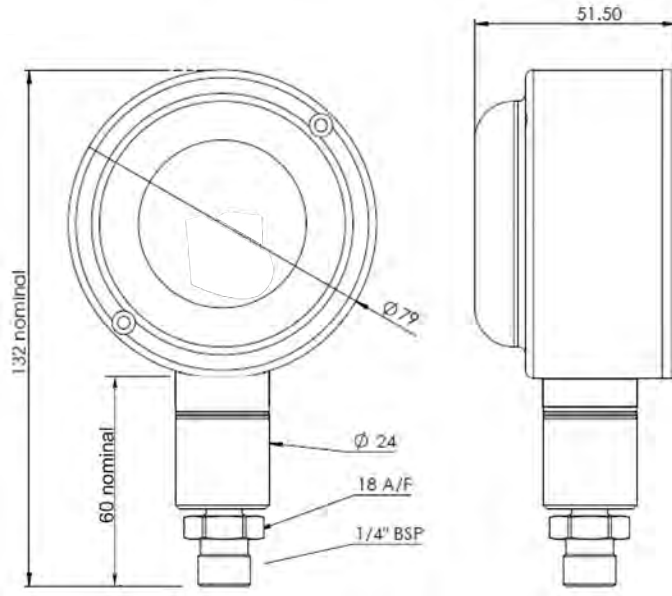
PRESSURE RANGES

Transmitter

| Nominal Pressure, Gauge | psi | 15 | 30 | 75 | 150 | 300 | 750 | 1500 | 3750 | 6000 |
|---------------------------------|-----|----------|-----------|-----------|-------------|------------|------------|------|------|------|
| Compound Range | psi | -15 to 0 | -15 to 30 | -15 to 75 | -15 to 1235 | -15 to 285 | -15 to 360 | | | |
| Permissible Overpressure | psi | 30 | 60 | 150 | 300 | 600 | 1500 | 3000 | 6000 | 9750 |
| Burst Pressure | psi | 60 | 75 | 180 | 375 | 750 | 1800 | 3750 | 7500 | 9750 |

DIMENSIONS

All dimensions are in millimeters.



ORDERING OPTIONS

Example : IWPTU-GP015-00

| | |
|----------------------------|--|
| Pressure Transducer | See table below |
| Spare Battery | IBAT-1 |
| Receiver | IoT Gateway, IWR-PORT, IWR-USB, IWR-5, IWR-1 |

| Part Number | Pressure Rating | Receiver Output |
|----------------|---------------------|------------------|
| IWPTU-GP015-00 | 0-15 psi G | 1-5Vdc or 4-20mA |
| IWPTU-GP030-00 | 0-30 psi G | 1-5Vdc or 4-20mA |
| IWPTU-C0446-00 | -14.5 to +150 psi G | 1-5Vdc or 4-20mA |
| IWPTU-GP075-00 | 0-75 psi G | 1-5Vdc or 4-20mA |
| IWPTU-GP100-00 | 0-100 psi G | 1-5Vdc or 4-20mA |
| IWPTU-C0447-00 | -14.5 to +350 psi G | 1-5Vdc or 4-20mA |
| IWPTU-GP150-00 | 0-150 psi G | 1-5Vdc or 4-20mA |
| IWPTU-GP300-00 | 0-300 psi G | 1-5Vdc or 4-20mA |
| IWPTU-GP750-00 | 0-750 psi G | 1-5Vdc or 4-20mA |
| IWPTU-GP1K5-00 | 0-1500 psi G | 1-5Vdc or 4-20mA |
| IWPTU-GP3K6-00 | 0-3600 psi G | 1-5Vdc or 4-20mA |
| IWPTU-GP5K8-00 | 0-5800 psi G | 1-5Vdc or 4-20mA |