

## IWPT 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

|                                |                                |
|--------------------------------|--------------------------------|
| <b>*Transmission Frequency</b> | 2.4 Ghz using ISM bands        |
| <b>Transmit Power</b>          | 18 dBm                         |
| <b>System Channel</b>          | User selectable via DIL switch |
| <b>Antenna</b>                 | Integral 0dBi                  |

\*Compliant with EN 300 328, V1.8.1

The IWPT 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 any of the range of IWR 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. A swivel adapter is available which allows the head to be easily aligned to the IWR receiver - see IWPT-SA.

The IWPT sensor can be used with any of the IWR range of receivers. A line-of-sight range of up to 500 m is possible depending on the wireless receiver used (refer to specific receiver data sheets for further information).

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

#### Features

- Pressure ranges from -1 to +400 bar gauge
- Up to 500 m 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, five and multi-channel channel receivers available (up to 128)
- User-selectable transmission update rates
- Analog, digital, RS-232/485, Ethernet & USB receiver outputs
- Receiver clean contacts provide process alarm functions
- Suitable for liquids and gases

##### System Performance

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

## Material Specifications

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

## Instrument Power Source

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

## Receiver Output Signals

| Receiver Part Number  | Receiver Outputs  |
|---|---|
| <b>IoT Gateway</b>  | Built-in cellular modem allows all data to be sent to remote servers  |
| <b>IWR-PORT</b>   | 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 |
| <b>IWR-USB</b>  | Displays & Logs data on any PC running IWR-USB software   |
| <b>IWR-5</b>  | 5 off 4-20 mA or 1-5 V dc and 1 Relay output  |
| <b>IWR-1</b>  | 1 off 4-20 mA and 1-5 V dc and 1 Relay output   |
| ***Transmission Update Rate 1, 5, 10 and 30 seconds<br>*** Consult installation manual for set-up:<br>- Single channel system is DIL switch configurable<br>- Five channel system requires set-up using "IWR Set" user software |   |

## Environmental Conditions & Thermal Effects

|                            |                             |
|----------------------------|-----------------------------|
| <b>Media Temperature</b>   | -20°C to +135°C             |
| <b>Ambient Temperature</b> | -20°C to +50°C              |
| <b>Storage Temperature</b> | -20°C to +80°C              |
| <b>Humidity</b>            | 5% to 95% RH non-condensing |
| <b>Thermal Zero Shift</b>  | <±0.04% /FS/°C              |
| <b>Thermal Span Shift</b>  | <±0.02% /°C typical         |

## Mechanical Stability

See user manual

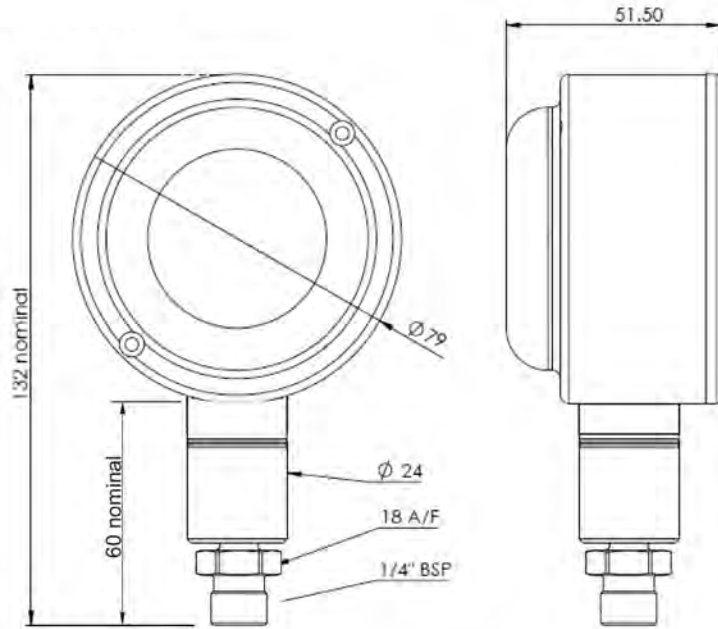
## PRESSURE RANGES

### Transmitter

|                                 |     |         |         |         |         |          |          |     |     |     |
|---------------------------------|-----|---------|---------|---------|---------|----------|----------|-----|-----|-----|
| <b>Nominal Pressure, Gauge</b>  | bar | 1       | 2       | 5       | 10      | 20       | 50       | 100 | 250 | 400 |
| <b>Compound Range, Gauge</b>    | bar | -1 to 0 | -1 to 2 | -1 to 5 | -1 to 9 | -1 to 19 | -1 to 24 |     |     |     |
| <b>Permissible Overpressure</b> | bar | 2       | 4       | 10      | 20      | 40       | 100      | 200 | 400 | 650 |
| <b>Burst Pressure</b>           | bar | 4       | 5       | 12      | 25      | 50       | 120      | 250 | 500 | 650 |

## DIMENSIONS

All dimensions are in millimeters.



## ORDERING OPTIONS

Example : IWPT

|   |   |
|---|---|
| <b>Pressure Transducer</b>                  | See table below   |
| <b>Spare Battery</b>                        | IBAT-1  |
| <b>Receivers</b>                            | See IoT Gateway, IWR-1, IWR-5, IWR-PORT and IWR-USB data sheets |
| <b>Five Channel Configuration Software*</b> | IWR-Set   |
| <b>Swivel Adapter</b>                       | IWPT-SA   |

| <b>Part Number</b> | <b>Pressure Rating</b> |
|--------------------|------------------------|
| IWPT-G1000-00      | 0 - 1 Bar G            |
| IWPT-G6000-00      | 0 - 6 Bar G            |
| IWPT-GM1P9-00      | -1 to +9 Bar G         |
| IWPT-G1002-00      | 0 - 10 Bar G           |
| IWPT-G1602-00      | 0 - 16 Bar G           |
| IWPT-C0184-00      | -1 to +24 Bar G        |
| IWPT-G2502-00      | 0 - 25 Bar G           |
| IWPT-G4002-00      | 0 - 40 Bar G           |
| IWPT-G1003-00      | 0 - 100 Bar G          |
| IWPT-G2503-00      | 0 - 250 Bar G          |
| IWPT-G4003-00      | 0 - 400 Bar G          |