

## IWPTL SERIES

### LOW RANGE INDUSTRIAL WIRELESS PRESSURE TRANSDUCER



#### Typical Applications Include

- Simple cable replacement installation
  - dispense with expensive cable runs
- Environmental monitoring
  - rainwater harvesting, environmental engineering
- Facilities management
  - boiler rooms, laboratory testing, tank gauging
- 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                        |
| <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 IWPTL 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 silicon sensor mounted within a 316 stainless steel housing giving excellent media compatibility for the harshest of applications. A swivel adaptor is available which allows the head to be easily aligned to the IWR receiver - see IWPT-SA.

The IWPT sensor can be used with either an IWR-1 or IWR-5 receiver. A line-of-sight range of up to 500 m 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 liquids and gases
- Pressure ranges from 0-50mbar to 0-1000mbar gauge
- Up to 500 m line-of-site range (depending on receiver)
- Piezo-resistive stainless steel 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

|  |                               |
|--|-------------------------------|
| <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>  | 316 Stainless Steel   |
| <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. |   |

## 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 |   |

## 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                            |

## Environmental Conditions & Thermal Effects

|                            |                             |
|----------------------------|-----------------------------|
| <b>Media Temperature</b>   | -20°C to +135°C             |
| <b>Ambient Temperature</b> | -20°C to +80°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

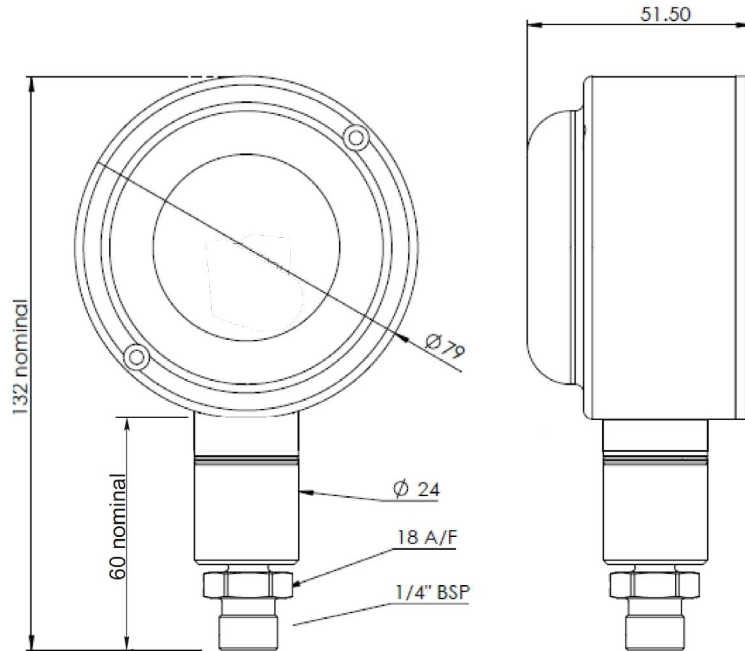
### Pressure Ranges and Passive mV/V Outputs

| Nominal Pressure, Gauge           | mbar | 50    | 100   | 250   | 500   | 750   | 1000  |
|-----------------------------------|------|-------|-------|-------|-------|-------|-------|
| <b>Nominal Pressure, Absolute</b> | mbar |       |       |       | 500   | 750   | 1000  |
| <b>Permissible Overpressure</b>   | mbar | 2 bar | 2 bar | 2 bar | 5 bar | 5 bar | 5 bar |



## DIMENSIONS

All dimensions are in millimeters.



## ORDERING OPTIONS

Example : IWPTL-G0050-00

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

| Part Number    | Pressure Rating  | Receiver Output  |
|----------------|------------------|------------------|
| IWPTL-G0050-00 | 0 - 50mbar G     | 1-5Vdc or 4-20mA |
| IWPTL-G0100-00 | 0 - 100mbar G    | 1-5Vdc or 4-20mA |
| IWPTL-G0250-00 | 0 - 250mbar G    | 1-5Vdc or 4-20mA |
| IWPTL-G0500-00 | 0 - 500mbar G    | 1-5Vdc or 4-20mA |
| IWPTL-G0750-00 | 0 - 750mbar G    | 1-5Vdc or 4-20mA |
| IWPTL-G1000-00 | 0 - 1000mbar G   | 1-5Vdc or 4-20mA |
| IWPTL-A0500-00 | 0 - 500mbar Abs  | 1-5Vdc or 4-20mA |
| IWPTL-A0750-00 | 0 - 750mbar Abs  | 1-5Vdc or 4-20mA |
| IWPTL-A1000-00 | 0 - 1000mbar Abs | 1-5Vdc or 4-20mA |

\*Download free user configuration software here:

[https://www.cynergy3.com/sites/default/files/IWR-Set\\_v2.4\\_installer.zip](https://www.cynergy3.com/sites/default/files/IWR-Set_v2.4_installer.zip)

Made in the UK

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