IWPT Series

Industrial Wireless Pressure Transducer

- **Pressure ranges** from -1 to +400 bar gauge
- **Up to 750m 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 4-20mA receiver outputs
- **Receiver clean contacts** provide process alarm functions

**DESCRIPTION**

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 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. A swivel adaptor is available which allows the head to be easily aligned to the IWR receiver - see IWPT-SA

The IWPT sensor should be used with either an IWR-1 or IWR-5 receiver. A line-of-sight range of up to 750m 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.

**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

**Transmitter Pressure Ranges**

<table>
<thead>
<tr>
<th>Nominal Pressure, Gauge, bar</th>
<th>1</th>
<th>2</th>
<th>5</th>
<th>10</th>
<th>20</th>
<th>50</th>
<th>100</th>
<th>250</th>
<th>400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compound range, Gauge bar</td>
<td>-1 to 0</td>
<td>-1 to 2</td>
<td>-1 to 5</td>
<td>-1 to 9</td>
<td>-1 to 19</td>
<td>-1 to 24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permissible Overpressure bar</td>
<td>2</td>
<td>4</td>
<td>10</td>
<td>20</td>
<td>40</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>650</td>
</tr>
<tr>
<td>Burst Pressure bar</td>
<td>4</td>
<td>5</td>
<td>12</td>
<td>25</td>
<td>50</td>
<td>120</td>
<td>250</td>
<td>500</td>
<td>650</td>
</tr>
</tbody>
</table>

**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

**System Performance**

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

**Instrument Power Source**

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

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Material Specifications

<table>
<thead>
<tr>
<th>Material</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Housing</td>
<td>316 Stainless Steel</td>
</tr>
<tr>
<td>&quot;O&quot; ring seals</td>
<td>Viton</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>Ceramic Al O 96%</td>
</tr>
<tr>
<td>Wireless Enclosure Material</td>
<td>Plastic</td>
</tr>
<tr>
<td>Weight</td>
<td>310g including battery</td>
</tr>
</tbody>
</table>

**Installation position** Any

**Consult installation manual to ensure adequate signal path between transmitter and receiver**

**Receiver Output Signals (requires either IWR-1 or IWR-5 receiver)**

- Outputs: 1-5V or 4-20mA per channel
- Single Channel Receiver: IWR-1 (see data sheet)
- Five Channel Receiver: IWR-5 (see data sheet)

**Alarm Output** 5 Amp rated changeover contacts

**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

**Temperatures & Thermal Effects**

- Media Temperature: -20°C to +135°C
- Ambient Temperature: -20°C to +80°C
- Storage Temperature: -20°C to +80°C
- Thermal Zero Shift: <±0.04% / °C
- Thermal Span Shift: <±0.02% / °C typical

**Mechanical Stability**

See user manual

**Ordering Codes:**

- Pressure Transducer: See table below
- Spare battery: IBAT-1
- Single Channel Receiver: IWR-1
- Five Channel Receiver: IWR-5
- Five Channel Configuration Software: IWR-Set (free download*)
- Swivel Adaptor: IWPT-SA

**Part Number** | **Pressure Rating** | **Receiver Output**
----------------|--------------------|-------------------|
IWPT-G1000-00   | 0 - 1 Bar G        | 1-5Vdc or 4-20mA  |
IWPT-G6000-00   | 0 - 6 Bar G        | 1-5Vdc or 4-20mA  |
IWPT-GM109-00   | -1 to +9 Bar G     | 1-5Vdc or 4-20mA  |
IWPT-G1002-00   | 0 - 10 Bar G       | 1-5Vdc or 4-20mA  |
IWPT-G1602-00   | 0 - 16 Bar G       | 1-5Vdc or 4-20mA  |
IWPT-C0184-00   | -1 to +24 Bar G    | 1-5Vdc or 4-20mA  |
IWPT-G2502-00   | 0 - 25 Bar G       | 1-5Vdc or 4-20mA  |
IWPT-G4002-00   | 0 - 40 Bar G       | 1-5Vdc or 4-20mA  |
IWPT-G1003-00   | 0 - 100 Bar G      | 1-5Vdc or 4-20mA  |
IWPT-G2503-00   | 0 - 250 Bar G      | 1-5Vdc or 4-20mA  |
IWPT-G4003-00   | 0 - 400 Bar G      | 1-5Vdc or 4-20mA  |

**Mechanical Dimensions**

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