

## 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, five and multi-channel channel receivers available (up to 128)
- User-selectable transmission update rates
- Analogue, digital, RS232/485, Ethernet & USB receiver outputs
- Receiver clean contacts provide process alarm functions
- Suitable for liquids and gases

#### 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 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 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 any of the IWR range of receivers. A line-of-sight range of up to 750m is possible depending on the wireless receiver used (refer to specific receiver datasheets 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

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

#### Transmitter Output

*Transmission Frequency	2.4 Ghz using ISM bands
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 (BFSL)
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

Cynergy3 Components Ltd. 7 Cobham Road, Ferndown Industrial Estate, Wimborne, Dorset, BH21 7PE, United Kingdom  
Telephone: +44 (0)1202 897969 Email: c3w\_sales@sensata.com

ISO9001 CERTIFIED

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## IWPT Series

### Industrial Wireless Pressure Transducer

#### Material Specifications

Pressure Housing	316 Stainless Steel
"O" ring seals	Viton
Diaphragm	Ceramic Al <sub>2</sub> O <sub>3</sub> 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

#### Receiver Output Signals

Receiver Part Number	Receiver Outputs
IWR-1	1 off 4-20mA or 1-5Vdc and 1 Relay output
IWR-5	5 off 4-20mA or 1-5Vdc and 1 Relay output
IWR-USB	Displays & Logs data on any PC running IWR-USB software
IWR-PORT	RS232 or RS485 or Ethernet MODBUS Communications. Up to 128 off analogue 4-20mA or Relay outputs can be obtained by fitting extra ISOSLICE I/O modules
IoT-Gateway	Built-in cellular modem allows all data to be sent to remote servers

\*\*\*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 +50°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

#### Ordering Codes:-

Pressure Transducer	See table below
Spare battery	IBAT-1
Receivers -	See IWR-1, IWR-5, IWR-PORT and IWR-USB data sheets
Five Channel Configuration Software	IWR-Set (free download*)
Swivel Adaptor	IWPT-SA

\*Download 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)

Part Number	Pressure Rating
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

#### Mechanical Dimensions

