

## IWPTU Series

### Industrial Wireless Pressure Transducer



- Suitable for use with liquids and gases
- Pressure ranges from -15 to +5800 psi gauge
- Up to 2500ft 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 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 2500ft 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

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

#### Transmitter Output

*Transmission Frequency	2.4 Ghz
Transmit Power	18 dBm
System Channel	User selectable via DIL switch
Antenna	Integral OdBi
*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

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ISO9001 CERTIFIED

cynergy3-iwptu-v2



Made in the UK

www.cynergy3.com

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#### 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

#### 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% /FS/°C
Thermal Span Shift	<±0.02% /°C typical

#### Mechanical Stability

See user manual

#### Ordering Codes:-

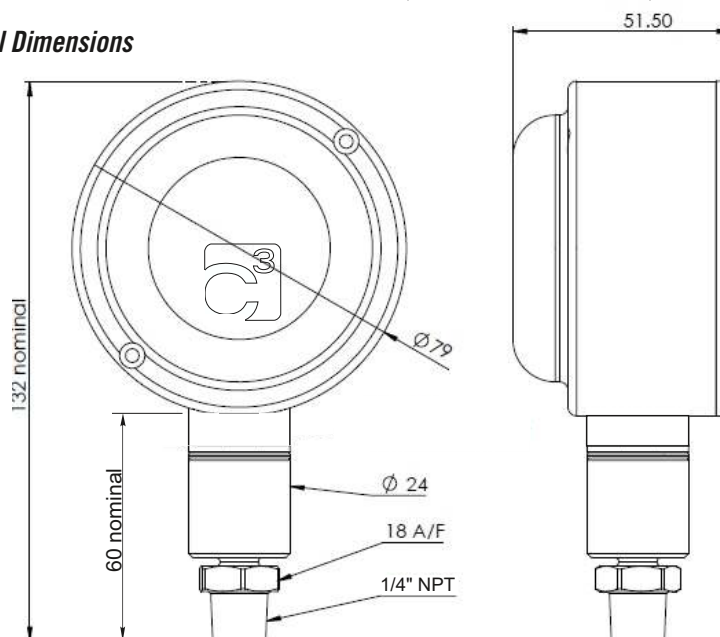
Pressure Transducer	See table below
Spare battery	IBAT-1
Single Channel Receiver	IWR-1
Five Channel Receiver*	IWR-5
Five Channel Configuration Software	IWR-Set

\*Download user configuration software here:-

[https://www.cynergy3.com/sites/default/files/IWR-Set\\_v2.1\\_installer\\_0.exe](https://www.cynergy3.com/sites/default/files/IWR-Set_v2.1_installer_0.exe)

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	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	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

#### Mechanical Dimensions



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