

IWPT SERIES

INDUSTRIAL WIRELESS PRESSURE TRANSDUCER



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.

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

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

SPECIFICATIONS

Transmitter Output

*Transmission Frequency	2.4 Ghz using ISM bands
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

Material Specifications

Pressure Housing	316 Stainless Steel
"O" Ring Seals	Viton
Diaphragm	Ceramic Al ₂ O ₃ 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.	

Instrument Power Source

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

Receiver Output Signals

Receiver Part Number	Receiver Outputs
IoT Gateway	Built-in cellular modem allows all data to be sent to remote servers
IWR-PORT	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
IWR-USB	Displays & Logs data on any PC running IWR-USB software
IWR-5	5 off 4-20 mA or 1-5 V dc and 1 Relay output
IWR-1	1 off 4-20 mA and 1-5 V dc and 1 Relay output
***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

PRESSURE RANGES

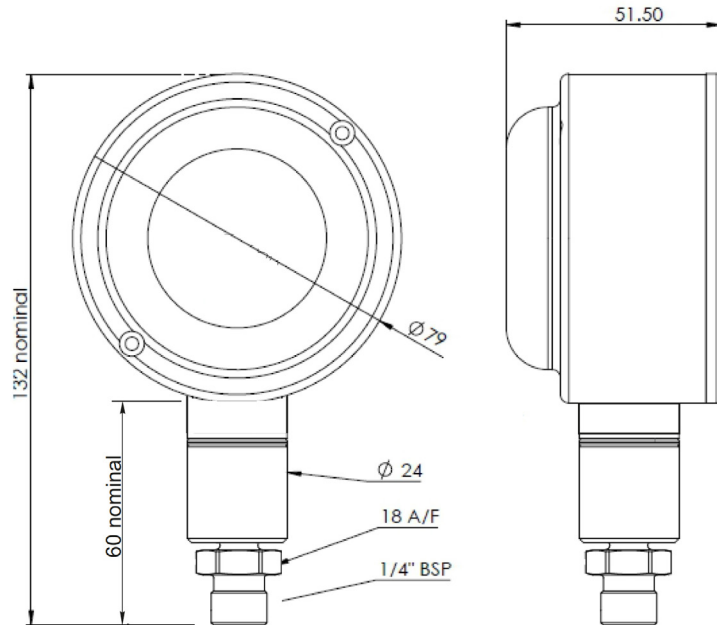
Transmitter

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



DIMENSIONS

All dimensions are in millimeters.



ORDERING OPTIONS

Pressure Transducer	See table below
Spare Battery	596618, 2019450
Receiver	IoT Gateway = 2349635 IWR-PORT-232 = 2349692 IWR-PORT-485 = 2349693 IWR-PORT-E = 2349695 IWR-USB = 2349696 IWR-5 = 1235253 IWR-1 = 1235252
Swivel adapter	IWPT-SA = 2349676
Five Channel Configuration Software*	IWT-IWR Configuration Software (free download*)

RS Stock No.	Pressure Rating
1235232	0 - 1 Bar G
1235233	0 - 6 Bar G
1235234	-1 to +9 Bar G
1235235	0 - 10 Bar G
1235236	0 - 16 Bar G
1235237	-1 to +24 Bar G
1235238	0 - 25 Bar G
1235239	0 - 40 Bar G
1235240	0 - 100 Bar G
1235241	0 - 250 Bar G
1235242	0 - 400 Bar G

*Free download user configuration software [here](#)