SensaCo Ltd.

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

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

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Material Specifications

Pressure Housing	316 Stainless Steel
"O" Ring Seals	Viton
Diaphragm	Ceramic Al_2O_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	-20ºC to +135ºC
Ambient Temperature	-20ºC to +50ºC
Storage Temperature	-20ºC to +80ºC
Humidity	5% to 95% RH non-condensing
Thermal Zero Shift	<±0.04% /FS/ºC
Thermal Span Shift	<±0.02% /ºC typical

Mechanical Stability

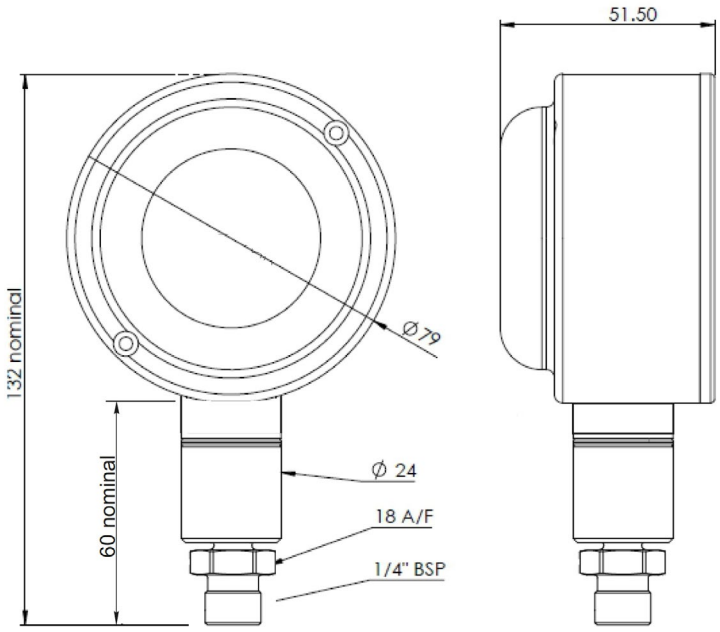
See user manual

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	IBAT-1
Receivers	See IoT Gateway, IWR-1, IWR-5, IWR-PORT and IWR-USB data sheets
Five Channel Configuration Software*	IWR-Set
Swivel Adapter	IWPT-SA