

IWPTL SERIES

LOW RANGE INDUSTRIAL WIRELESS PRESSURE TRANSDUCER



Typical Applications Include

- Simple cable replacement installation
 - dispense with expensive cable runs
- Environmental monitoring
 - rainwater harvesting, environmental engineering
- Facilities management
 - boiler rooms, laboratory testing, tank gauging
- Asset monitoring
 - tanks farms, process plants, HVAC and building management
- Service Contract
 - temporary installation for servicing and field trials

SPECIFICATIONS

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

The IWPTL 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 silicon 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 either an IWR-1 or IWR-5 receiver. A line-of-sight range of up to 500 m 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.

Features

- Suitable for liquids and gases
- Pressure ranges from 0-50mbar to 0-1000mbar gauge
- Up to 500 m line-of-site range (depending on receiver)
- Piezo-resistive stainless steel 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 4-20 mA receiver outputs
- Receiver clean contacts provide process alarm functions

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	316 Stainless Steel
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
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	

Instrument Power Source

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

Environmental Conditions & Thermal Effects

Media Temperature	-20°C to +135°C
Ambient Temperature	-20°C to +80°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

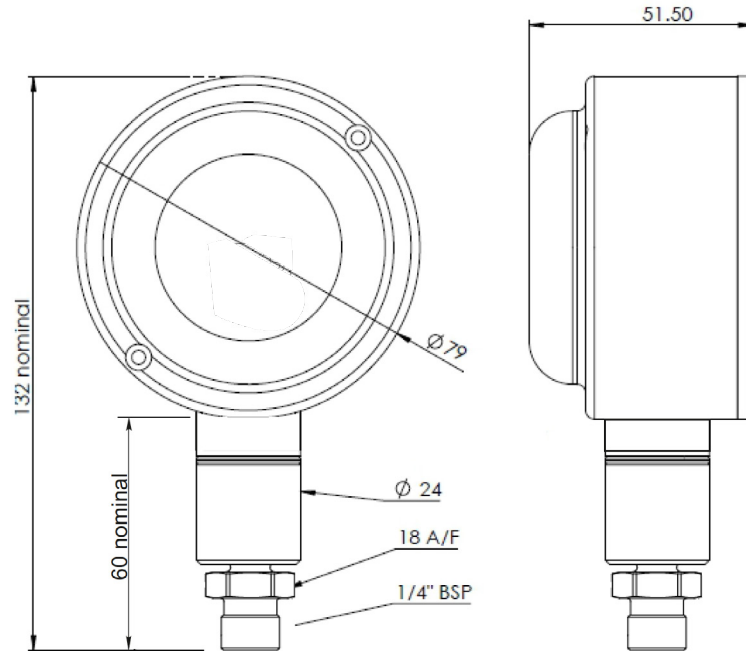
Pressure Ranges and Passive mV/V Outputs

Nominal Pressure, Gauge	mbar	50	100	250	500	750	1000
Nominal Pressure, Absolute	mbar				500	750	1000
Permissible Overpressure	mbar	2 bar	2 bar	2 bar	5 bar	5 bar	5 bar



DIMENSIONS

All dimensions are in millimeters.



ORDERING OPTIONS

Pressure Transducer	See table below	RS Stock No.	Pressure Rating	Receiver Output
Spare Battery	596618, 2019450	1235243	0 - 50mbar G	1-5Vdc or 4-20mA
Receiver	IoT Gateway = 2349635	1235244	0 - 100mbar G	1-5Vdc or 4-20mA
	IWR-PORT-232 = 2349692	1235245	0 - 250mbar G	1-5Vdc or 4-20mA
	IWR-PORT-485 = 2349693	1235246	0 - 500mbar G	1-5Vdc or 4-20mA
	IWR-PORT-E = 2349695	1235247	0 - 750mbar G	1-5Vdc or 4-20mA
	IWR-USB = 2349696	1235248	0 - 1000mbar G	1-5Vdc or 4-20mA
IWR-5 = 1235253	1235249	0 - 500mbar Abs	1-5Vdc or 4-20mA	
IWR-1 = 1235252	1235250	0 - 750mbar Abs	1-5Vdc or 4-20mA	
Swivel adapter	IWPT-SA = 2349676	1235251	0 - 1000mbar Abs	1-5Vdc or 4-20mA
Five Channel Configuration Software*	IWT-IWR Configuration Software (free download*)			

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