

IWTT SERIES

INDUSTRIAL WIRELESS TEMPERATURE TRANSDUCER



The IWTT Wireless Temperature Transducer is a cost effective replacement to a traditionally wired temperature 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 either J or K type thermocouples or 3-wire RTD sensors fitted to an acetal housing giving excellent media compatibility for the harshest of applications. Compression fittings are available which allow the head to be orientated in the required direction.

The IWTT 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

- K or J Type Thermocouples
- PT100 RTD Sensors
- 6 mm stainless steel sheath
- Up to 500 m line-of-site range (depending on receiver)
- 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

System Performance

Accuracy (Non-linearity & Hysteresis)	<±0.1% /FS
Temperature Coefficient	±500ppm/°C

SPECIFICATIONS

Transmitter Temperature Ranges

Standard products are factory configured as below:

J-Type	0°C to +1200°C
K-Type	0°C to +1200°C
RTD Type	-200°C to +800°C

Instrument Power Source

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

Material Specifications

Probe Sheath	316 Stainless Steel
"O" Ring Seals	Viton
Wireless Enclosure Material	Acetal
Weight	300g typical including battery
**Installation Position	Any

** 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

Transmitter Output

*Transmission Frequency	2.4 Ghz IEEE 802.15.4
Transmit Power	18 dBm
System Channel	User selectable via DIL switch
Antenna	Integral Odbi

*Compliant with EN 300 328, V1.8.1

Environmental Conditions & Thermal Effects

Media Temperature	-200°C to +1200°C
Op. /Ambient Temperature	-20°C to +50°C
Storage Temperature	-20°C to +80°C
Humidity	5% to 95% RH non-condensing
Thermal Span Shift	<±0.05% /°C typical

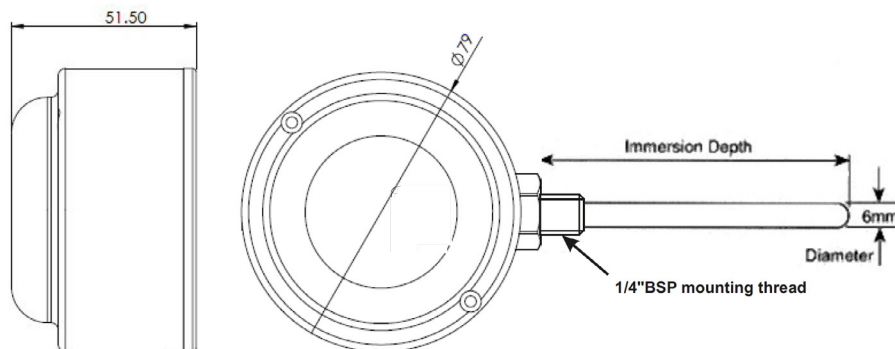
Mechanical Stability

See user manual



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
Five Channel Configuration Software* See Datasheet IWPTL	IWT-IWR Configuration Software (free download*)

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

RS Stock No.	Description	RS Stock No.	Description
1754812	PT100 6x100mm	1754804	J type 6x200mm
1754813	PT100 6x150mm	1754805	J type 6x300mm
1754814	PT100 6x200mm	1754806	J type 6x400mm
1754816	PT100 6x250mm	1754807	K type 6x150mm
1754817	PT100 6x300mm	1754808	K type 6x200mm
1754818	PT100 6x400mm	1754810	K type 6x300mm
		1754811	K type 6x400mm