



# **IWTT Series**

# Industrial Wireless Temperature Transducer



- K or J Type Thermocouples
- PT100 RTD Sensors
- 6mm stainless steel sheath
- Up to 750m 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
- Analogue, digital, RS232/485, Ethernet & USB receiver outputs
- Receiver clean contacts provide process alarm functions

### **DESCRIPTION**

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 IWPT sensor can be used with any of the IWR range of receivers. A line-of-sight range of up to 750m is possible depending on the wireless receiver used (refer to specific receiver datasheets 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 Temperature Ranges**

Standard products are factory configured as below:-

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

### **System Performance**

Accuracy (Non-Linearity & Hysteresis)  $<\pm 0.1\%$  / FS Temperature Coefficent  $\pm 500$ ppm/°C

### **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

### **Instrument Power Source**

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

Battery Shelf Life 10 years



cynergy3-iwtt-v4







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#### **Material Specifications**

Probe sheath 316 Stainless Steel

"0" ring seals Viton Wireless Enclosure Material Acetal

Weight 300g typical including battery

\*\*Installation position Anv

### **Environmental Conditions & Thermal Effects**

-200°C to +1200°C Media Temperature Op. /Ambient Temperature -20°C to +50°C -20°C to +80°C Storage Temperature

Humidity 5% to 95% RH non-condensing

Thermal Span Shift <±0.05% /°C typical

#### **Receiver Output Signals**

#### **Receiver Part Number Receiver Outputs**

1 off 4-20mA or 1-5Vdc and 1 Relay output IWR-1 5 off 4-20mA or 1-5Vdc and 1 Relay output IWR-5

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, 20, 30, 60, 120 and 600 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

## **Mechanical Stability**

See user manual

#### **Ordering Codes:-**

Temperature Transducer See table below

Spare battery

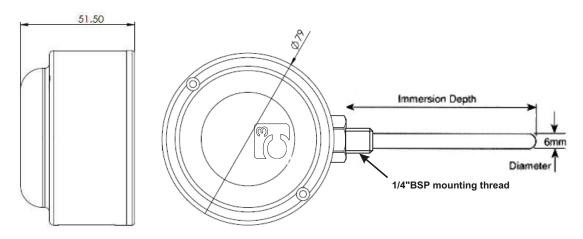
Receivers -See IWR-1. IWR-5. IWR-PORT and IWR-USB data sheets IWR-Set (free download\*)

Five Channel Configuration Software

\*Download user configuration software here:https://www.cynergy3.com/sites/default/files/IWR-Set\_v2.4\_installer.zip

Part No.	Description	Part No.	Description
IWTTP100A	PT100 6x100mm	IWTTJ200A	J type 6x200mm
IWTTP150A	PT100 6x150mm	IWTTJ300A	J type 6x300mm
IWTTP200A	PT100 6x200mm	IWTTJ400A	J type 6x400mm
IWTTP250A	PT100 6x250mm	IWTTK150A	K type 6x150mm
IWTTP300A	PT100 6x300mm	IWTTK200A	K type 6x200mm
IWTTP400A	PT100 6x400mm	IWTTK300A	K type 6x300mm
		IWTTK400A	K type 6x400mm

### **Mechanical Dimensions**



ISO9001certified www.cynergy3.com

<sup>\*\*</sup> Consult installation manual to ensure adequate signal path between transmitter and receiver