

# ITTU Series Programmable Temperature Probes - 1/4"NPT - Thermocouple and PT100 Assemblies



- **K or J Type Thermocouples**
- **PT100 RTD Sensors**
- **4-20mA linearised output, configurable to application specific temperature range**
- **6mm stainless steel sheath**

### Temperature Sensor Style

The standard sensor type is shown in the diagram below.

The maximum ranges and factory configured ranges are as below as below:-

| Sensor type | Max. range     | Pre-configured range |
|-------------|----------------|----------------------|
| J-Type      | 0 to 1200°C    | 0-600°C = 4-20mA     |
| K-Type      | 0 to 1350°C    | 0-1000°C = 4-20mA    |
| RTD type    | -200 to +850°C | 0-200°C = 4-20mA.    |

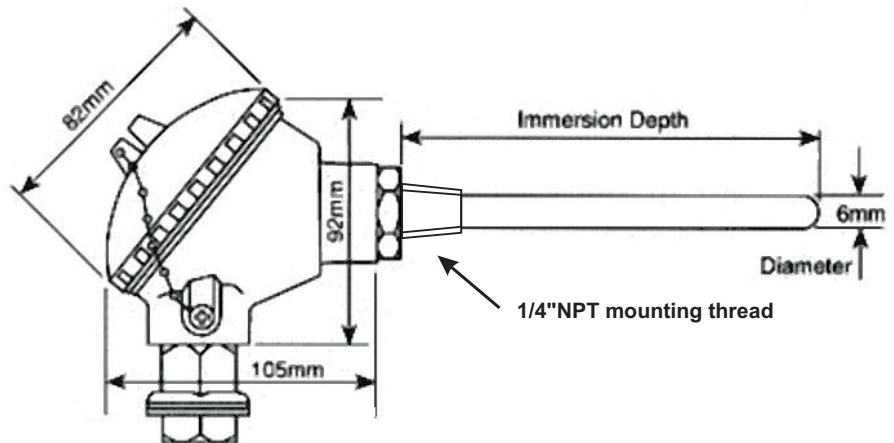
A free software download is available from the Cynergy3 website which enables the scaling of the 4-20mA output to be customised to suit your specific application\*.

The sheath length ranges from 100mm to 400mm for the PT100 sensor version and from 150mm to 400mm for the thermocouple sensor version. This style of thermocouple allows any standard 6mm compression fitting to be used, making it easy to fit the sensors to any process connection. The head mounting thread is 1/4"NPT.

\*Requires ICAB-1 USB to serial converter programming cable

### Connection Head

The dimensions of the standard aluminium connection head are shown below:



These temperature probe assemblies are all constructed using a stainless steel sheath containing either a J or K type thermocouple or a P100 RTD sensor element.

The aluminium head contains a programmable 4-20mA transmitter which, although pre-programmed for the standard temperature range of the sensor can be changed by the user\* so that the 4-20mA output corresponds to any temperature range within the sensors' capabilities.

A wide range of accessories can be chosen, from plastic and metal cable glands to compression fittings and stainless steel pockets (not supplied).

Please contact our sales department with details of the probe you are looking for and we will give you a very competitive quotation.

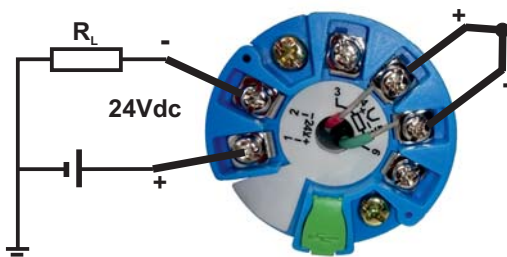
\*Requires free software download from [https://www.cynergy3.com/sites/default/files/ITT\\_Config\\_upload\\_file\\_for\\_WIN7%2B.zip](https://www.cynergy3.com/sites/default/files/ITT_Config_upload_file_for_WIN7%2B.zip) and ICAB-1 cable

### Transmitter Technical Specification

|                   |                                              |
|-------------------|----------------------------------------------|
| Power Supply      | 12-35 Vdc 2-wire system                      |
| Output            | 4-20mA                                       |
| Output Load $R_L$ | 500 $\Omega$ maximum, typically 250 $\Omega$ |
| Typical Accuracy  | RTD overall 0.1%, thermocouple overall 0.2%  |
| Temperature Drift | $\leq 25$ ppm/°C FS                          |
| Op./ambient Temp  | -20 to +50 °C                                |
| Storage Temp      | -40 to 120 °C                                |

| Part No.  | Description          | Part No.  | Description           |
|-----------|----------------------|-----------|-----------------------|
| ITTUP100A | PT100 6x100mm 4-20mA | ITTUJ200A | J type 6x200mm 4-20mA |
| ITTUP150A | PT100 6x150mm 4-20mA | ITTUJ300A | J type 6x300mm 4-20mA |
| ITTUP200A | PT100 6x200mm 4-20mA | ITTUJ400A | J type 6x400mm 4-20mA |
| ITTUP250A | PT100 6x250mm 4-20mA | ITTUK150A | K type 6x150mm 4-20mA |
| ITTUP300A | PT100 6x300mm 4-20mA | ITTUK200A | K type 6x200mm 4-20mA |
| ITTUP400A | PT100 6x400mm 4-20mA | ITTUK300A | K type 6x300mm 4-20mA |
|           |                      | ITTUK400A | K type 6x400mm 4-20mA |

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**THERMOCOUPLE**



**RTD 3-WIRE**



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