



## General Features:

- Universal input, support RTD:Pt100, Cu50, Cu100 Thermocouple:K,E,S,B,J,T,R,N. PT1000 and WRe needs to be custom made
- 2 wire RS-485 output
- Modbus RS-485 communication
- Built-in cold junction compensation, range -40°C ~+80°C
- Can be installed in Form B connection box
- High accuracy, 0.1% for RTD, 0.2% for TC
- PC software available, you can configure the address of the device, baud rate, input type, measuring range by using our English PC software
- Operating from -30°C ~+80°C, humidity less than 80%

\*Standard version do not support PT1000 input,PT1000 input needs to be custom made

## Ordering Information

TT-510 (ModBus RS-485 communication transmitter)

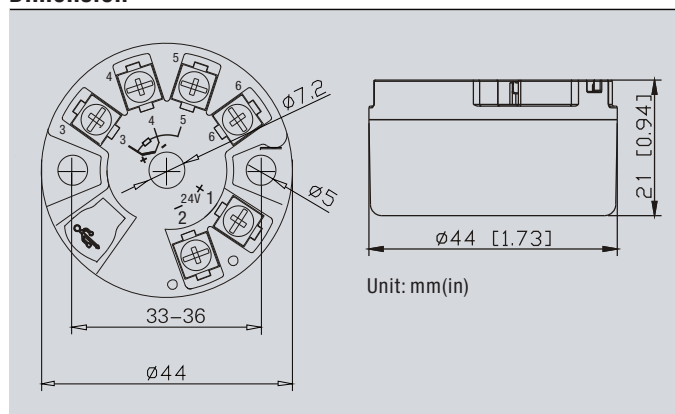
## General Specifications

| Item No                            | TT-510                                                                                                                             |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Sensor type                        | PT100,Cu50,Cu100,K,J,E,T,S,R,B,N<br>Standard version do not support PT1000 and WRe sensor, please specify if you need these inputs |
| Cold end junction compensate range | -40°C~ + 80°C                                                                                                                      |
| Compensate accuracy                | ±1°C                                                                                                                               |
| Output                             | Modbus RS-485                                                                                                                      |
| Load resistance                    | Less than 500 Ω                                                                                                                    |
| Maximum current consumption        | 20.0mA                                                                                                                             |
| Housing material                   | PA66 fire retardant plastic                                                                                                        |
| Power supply                       | 12-35VDC                                                                                                                           |
| Accuracy(ambient 20°C)             | 0.1% F.S for RTD, 0.2% F.S for TC                                                                                                  |
| Temperature drift                  | ≤ 50ppm/°C F.S                                                                                                                     |
| Baud rate                          | 1200-115200                                                                                                                        |
| Input/output isolation strength    | Isolated                                                                                                                           |
| Input/output impedance             | Isolated                                                                                                                           |
| EMC standard                       | IEC 61326-1                                                                                                                        |
| Working temperature                | -30°C ~+80°C, humidity less than 80%                                                                                               |
| Mounting screw                     | M4*2                                                                                                                               |

## Input signal and range

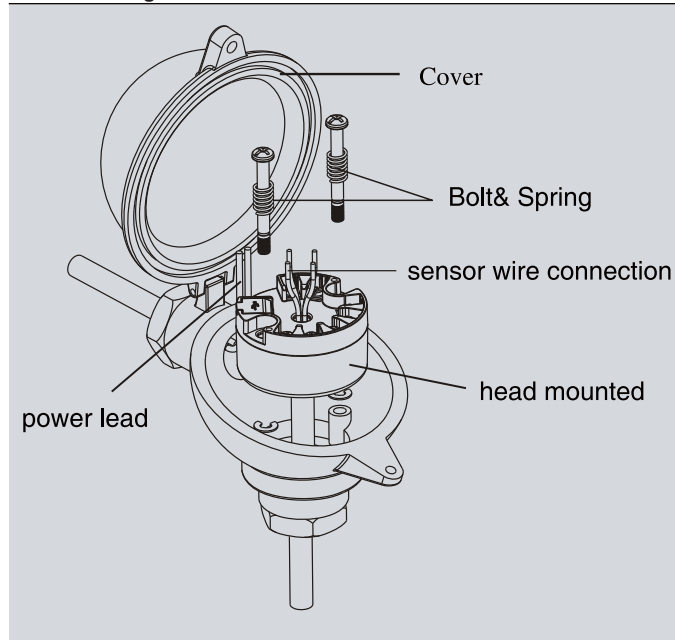
| Sensor type            | Specific sensor type | Measuring range in celcius | Measuring range in Fahrenheit |
|------------------------|----------------------|----------------------------|-------------------------------|
| RTD                    | Pt100                | -200.0~850.0°C             | -328~1562°F                   |
|                        | Cu50                 | -50.0~150.0°C              | -58~302°F                     |
|                        | Cu100                | -50.0~150.0°C              | -58~302°F                     |
| TC                     | B                    | 400~1800°C                 | 752~3272°F                    |
|                        | E                    | -100~1000°C                | -148~1832°F                   |
|                        | J                    | -100~1200°C                | -148~2192°F                   |
|                        | K                    | -180~1372°C                | -292~2501.6°F                 |
|                        | N                    | -180~1300°C                | -292~2372°F                   |
|                        | R                    | -50~1760°C                 | -58~3200°F                    |
|                        | S                    | -50~1760°C                 | -58~3200°F                    |
|                        | T                    | -200~400°C                 | -328~752°F                    |
|                        | Wre3-25              | 0~2315°C                   | 32~4199°F                     |
|                        | Wre5-26              | 0~2310°C                   | 32~4190°F                     |
| Need to be custom made | Pt1000               | -200.0~850.0°C             | -328~1562°F                   |

## Dimension

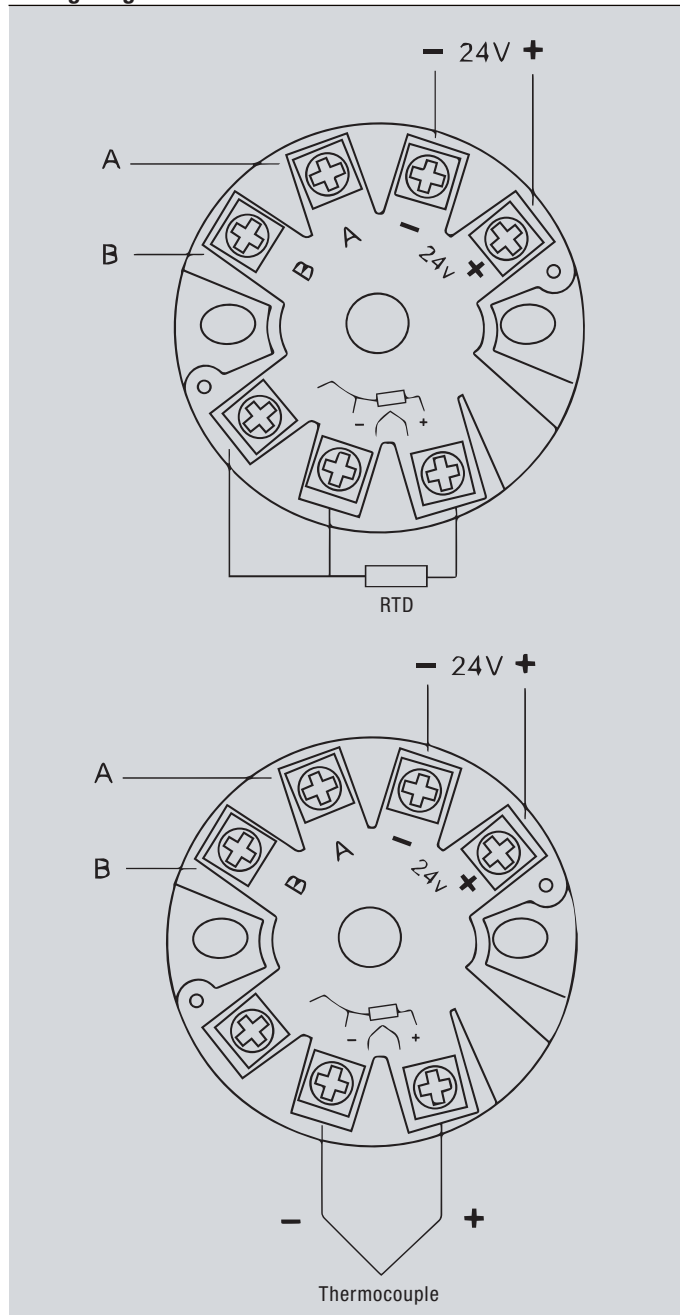


## Technical Specifications

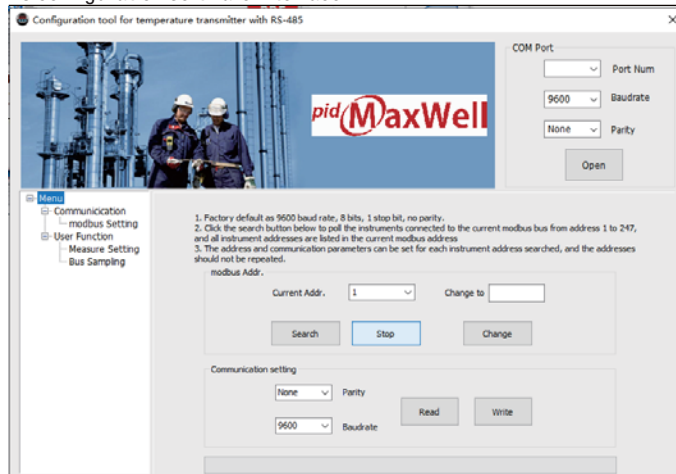
## Installation guide



## Wiring diagram



## PC configuration software interface



Parameters can be configured via the software

- 1: Baud rate
- 2: Address of the transmitter
- 3: Input type
- 4: Measuring range
- 5: Modbus parity

## Configuration guidelines

The configuration can be done via PC software



Connect the transmitter with PC via a USB to RS-485 converter. Make sure to feed the transmitter with 24VDC source while programming it.