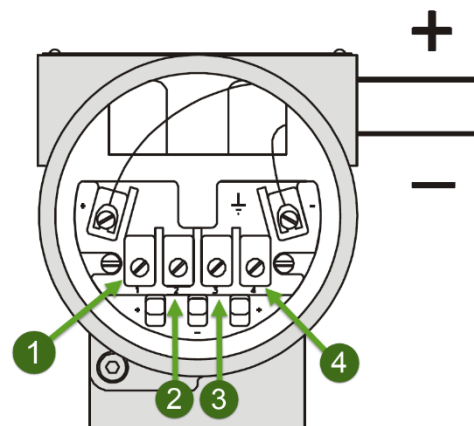


Connecting sensors to a TT302 or TT303 Universal Temperature Transmitter

The Smar TT302 FOUNDATION Fieldbus or the TT303 PROFIBUS PA Temperature Transmitter are also called universal because they can read use inputs that provides millivolts or resistance that can be interpreted as a physical measurement.

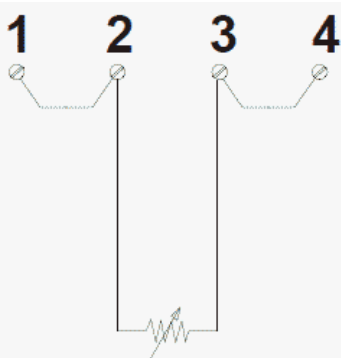
Herein, we show how to connect one or more sensors to the terminal block of these temperature transmitters.

The terminal block has 4 terminals dedicated to the sensor(s) connections. (see details on the side)

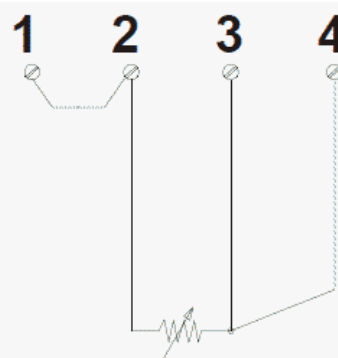


Connecting one sensor

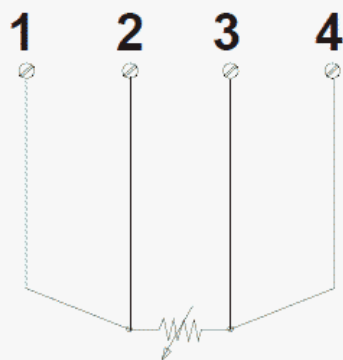
Follow the diagrams when connecting a single sensor. Then go to your system or configuration tool to set all parameters for the used sensors.



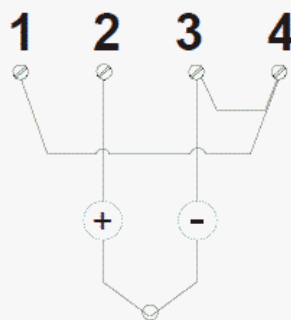
2 - WIRE RTD OR OHM INPUT



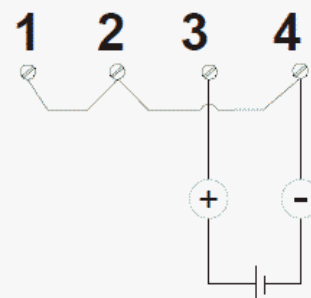
3 - WIRE RTD OR OHM INPUT



4 - WIRE RTD OR OHM INPUT



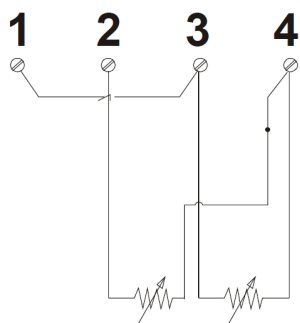
THERMOCOUPLE INPUT



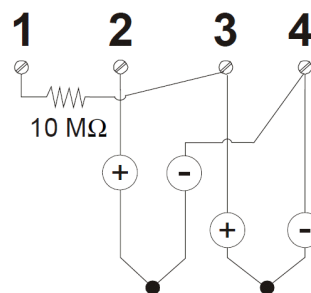
MILLIVOLT INPUT

Connecting two sensors

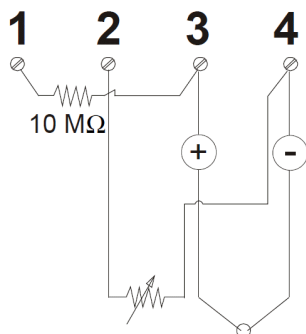
Follow the diagrams when connecting two sensors. Note that the sensor can be of different type. Make sure you go to your system or configuration tool and set all parameters related to the used sensors.



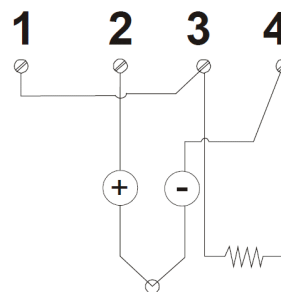
DUAL OR DIFFERENTIAL
RTD OR OHM INPUT



DUAL OR DIFFERENTIAL
THERMOCOUPLE OR
MILLIVOLT INPUT



DUAL AND DIFFERENTIAL
RTD AND TC INPUT



DUAL AND DIFFERENTIAL
RTD AND TC INPUT

Notice that when you use a second sensor on a Smar TT302 or TT303 Temperature Transmitter you can read each individual sensor. The second sensor is also used for a Backup, or reading Maximum, Minimum, or Average value.

It is important to know that while the Smar TT302 and the TT303 can indicate individual values coming from 2 connected sensors, the TT301 HART® Temperature Transmitter can only show one value. The differential value or having the Maximum, Minimum, or Average value.