

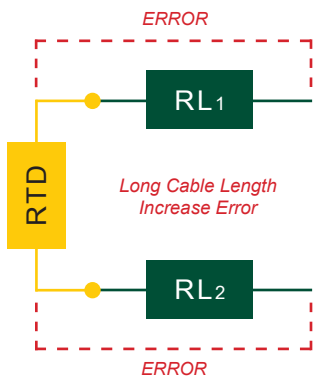


## RTD Wiring Overview Best Practice Guide for RTD Connections

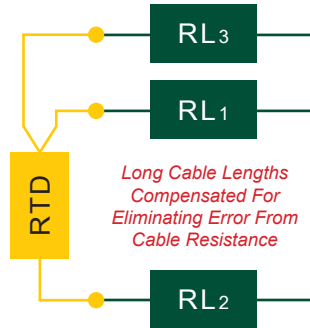
RTD's (resistance temperature detectors) are a common type of sensor used for detecting the temperature of bearings, motors, gearboxes, and processes. They are accurate, easy to use, and simple to understand.

However, many people using and specifying RTD's do not realize that 2-wire, 3-wire, and 4-wire RTD sensors can be used interchangeably with very little difference in accuracy.

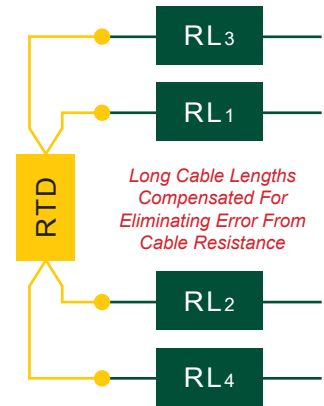
Normally a 2-wire RTD will lose accuracy due to the resistance in the cable, which can be thousands of feet long. The 3-wire RTD uses 1 additional wire and the 4-wire RTD uses 2 additional wires to compensate for the wire resistance. Generally speaking, field devices have inputs for 3-wire sensors to provide sufficient compensation of the wire resistance. However, by "pulling" 3 wires to a 2-wire or 4-wire RTD you can achieve the same thing, as illustrated below.



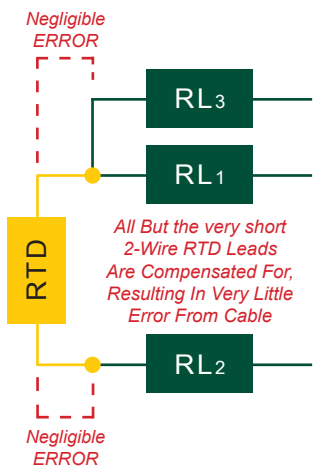
**2-WIRE RTD**  
(Not Normally Used)



**3-WIRE RTD**  
(General Applications)



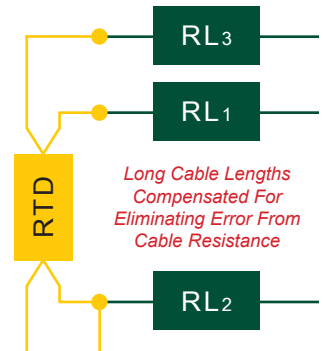
**4-WIRE RTD**  
(High Accuracy Applications)



**2-WIRE RTD  
USED AS 3-WIRE**  
(General Applications)



**ADB Bearing Temperature Sensor**  
(4-Wire PT100 - RTD Type)  
Probe Lengths Available -  
2", 3", 4", 6", 8", 10" & 12 Inches



**4-WIRE RTD  
USED AS 3-WIRE**  
(General Applications)



C US ATEX & CE Versions Available

INMETRO