

DCPt – Add on board for the UTI
Pt100/Pt1000, 4-wire configuration, long lines

In standard UTI applications, the Pt100/Pt1000 is excited by a square wave voltage between E and F, via the series connection of R_{bias} and R_{ref} . This works fine as long as the cables are short, under 20". When the connecting cables need to be longer, the parasitic capacity between the connecting wires and the grounded cable shield will degrade the signal.

Because there is one signal current flowing through the three resistors, the value of R_{Pt} can be determined by measuring the ratio between the voltage over R_{Pt} and R_{ref} .

Detailed discussion of the long lead problem is presented in APPUT108.pdf. A detailed diagram for using the DCPt is presented in DCPt.pdf.

