ConLAB

RTT-2

CALIBRATION INSTRUCTIONS

The RTT-2 is a multirange RTD transmitter. Six dip-switches are located inside the enclosure for coarse ranging. Two multiturn potentiometers are located on the transmitter panel for fine tuning.

DISMANTLING THE BACK COVER

The back cover should be dismantled for getting access to the DIP switch array that determines the coarse range.
Slightly insert a suitable screw driver in the locker slot and gently twist the screw driver until the back cover is removed.
To reassemble the unit, simply locate the cover and click it.
Please notice that the back cover is polarized.

CALIBRATION

To calibrate RTT-2, the range limits must be defined.
Tmin, often called Tzero, is the temperature at which the transmitter's output current is 4mA.
Tmax, often called Tspan, is the temperature at which the transmitter's output current is 20mA.
The difference between Tmax and Tmin is defined as the Span of the transmitter.

An array of six dip-switches controls the transmitter coarse range.

According to the following tables, set switches no. 1 to 3 for the Zero (Tmin), and set switches 4 to 6 for the Span (Tmax).

Connect a Pt-100 calibrator between terminal #5 and #6 and #7.

Start the calibration by setting the calibrator to Tmin and adjust the Zero trimmer to obtain an output current of 4.000mA.

Next, set the calibrator to Tmax and adjust the Span trimmer to obtain an output current of 20.000mA.

Repeat this procedure until satisfactory results is achieved.

* Tmin and Tmax simulation resistor values are according to DIN 43760 Pt-100 table
    (a=0.00385)

RTT-2
CALIBRATION   TABLES

Zero Table   "Span" Table
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Tmin °C	SW1	SW2	SW3
-55....-25	1	1	1
-25.......7	0	1	1
7.....40	1	0	1
40.....73	0	0	1
73...105	1	1	0
105...138	0	1	0
138...170	1	0	0
170...202	0	0	0

Tspan °C	SW4	SW5	SW6
30.....55	1	1	1
55.....90	1	0	0
90...185	0	1	0
185...380	0	0	1
380...810	0	0	0

Note: "1" represent the switch "ON" state.

Note: The table ranges are overlapped, however due to components' tolerances, it might occur that in certain border values the successive state should be used.

CALIBRATION EXAMPLE:

 Needed: -50..+50°C

 Tmin: -50°C
 Tspan: +50-(-50)=100°C

1. Set the dipswitch to: 1,1,1,0,1,0 (sw1..sw6)

2. Set the calibrator for -50° and calibrate "Z" to 4.000mA.

3. Set the calibrator for +50° and calibrate "S" to 20.000mA.

4. Repeat steps 1..3 until satisfactory results are obtain.