

CALIBRATION INSTRUCTIONS

The RTT-2 is a multi range RTD transmitter. Six dip-switches are located inside the enclosure for coarse ranging. Two multi-turn 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 screwdriver in the locker slot and gently twist the screwdriver 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.

T_{min} , often called T_{zero} , is the temperature at which the transmitter's output current is 4mA.

T_{max} , often called T_{span} , is the temperature at which the transmitter's output current is 20mA.

The difference between T_{max} and T_{min} is defined as the Span of the transmitter.

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

According to the following tables, set switches no. 1 to 3 for the Zero (T_{min}), and set switches no.4 to 6 for the Span (T_{max}).

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

Start the calibration by setting the calibrator to T_{min} and adjust the Zero trimmer to obtain an output current of 4.000mA.

Next, set the calibrator to T_{max} and adjust the Span trimmer to obtain an output current of 20.000mA.

Repeat this procedure until satisfactory results are achieved.

* T_{min} and T_{max} simulation resistor values are according to DIN 43760 Pt-100 table ($a=0.00385$)

RTT-2
CALIBRATION TABLES

Zero Table

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

"Span" Table

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 dip-switch 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.