

Standard Operating Procedure Calibration Procedure for Resistance Temperature Detector	SOP No. 6.020
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- 1 Purpose
 - 1.1 The purpose is to provide guidelines for field calibration on resistance temperature detector (RTD) after its installation.
- 2 Scope
 - 2.1 This procedure shall cover all RTDs that will be commissioned by Therma's Calibration Department.
- 3 Reference
 - 3.1 Manufacturer's Instruction Manual for RTD.
- 4 Responsibility
 - 4.1 Field calibration technician shall coordinate with user to avoid disruption of plant facilities or operations before performing calibration.
 - 4.2 Field calibration technician shall perform calibration as per the following procedures.
- 5 Tools and Test Standards
 - 5.1 Hart Scientific Digital Thermometer: $\pm 0.5\%$ accuracy
 - 5.2 Temperature Bath(s)
 - 5.3 Small hand tools
 - 5.4 Temperature unit conversion table
 - 5.5 Electrical extension cord
- 6 Procedures
 - 6.1 Gather all necessary tools and test standard. Make sure that the test standard has been calibrated and within the calibration period.
 - 6.2 Before performing calibration, perform the following maintenance for the wall thermostat.

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6.2.1 Inspect the RTD for any physical defects/damage.

6.2.2 Check all electrical connections for tightness.

6.3 Remove RTD while still connected to end user device.

6.4 Suspend the digital thermometer probe in temperature bath with RTD.

6.5 Allow sufficient time for thermometer and RTD temperature to stabilize. Record three point values in "As Found Data" section on form FN 6.020.1 (Calibration Sheet for Resistance Temperature Detector).

6.6 Perform Calibration Adjustment

6.6.1 If the RTD is not within manufacturer's specified accuracy, check RTD's wiring connections.

6.6.2 If the RTD is still out of tolerance, connect RTD to a calibrated test meter and compare the reading to an appropriate temperature conversion chart. If the RTD is not in tolerance, notify customer to replace the RTD.

6.7 If RTD is within tolerance, reconnect the RTD to end user device and make an offset adjustment at the end user device.

6.8 Place Therma's calibration sticker on the RTD upon completion of calibration.

6.9 The field calibration technician shall fill in the calibration data including test standard data on form FN 6.020.1 (Calibration Sheet for Resistance Temperature Detector) before submitting to project manager.

7 Review and Approval

7.1 The field calibration technician shall submit the form FN 6.020.1 (Calibration Sheet for Resistance Temperature Detector) to the project manager.

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Document Approval

Robert McCammond
Field Calibration

8-4-03
Date

David
Quality Assurance Manager

8-4-03
Date

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