TEL-TRU®

Technical Brief

TEMPERATURE

Recommendation for Checking Bimetal Thermometer Accuracy

Using a dry block reference device and three temperature points

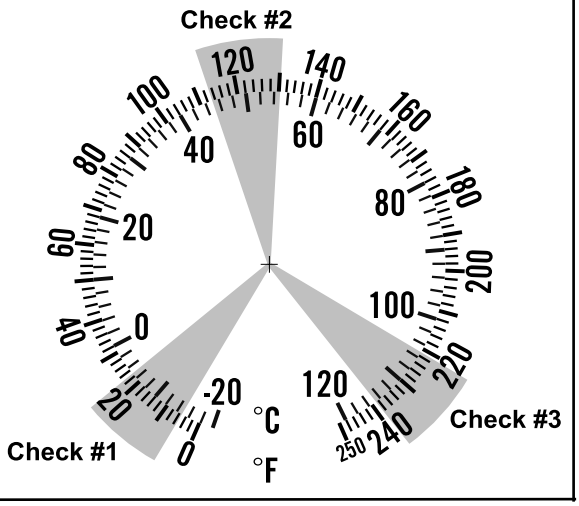
- Dry block calibrator must be certified and NIST traceable. The accuracy of the equipment must be at least four times more accurate than the accuracy of the product being calibrated.
- Do not reset or adjust the calibration **until after all check point readings are recorded**. Adjusting the set point at a different point than the original set point can cause the thermometer to become out of tolerance at the other end of the range.
- For each test point complete these steps:
  - Insert the stem of the thermometer into the calibration reference device so that the groove on the stem is completely immersed into the temperature zone
  - Let the thermometer rest until the pointer is stable, a minimum of 2-3 minutes
  - Lightly tap the case to stabilize the instrument
  - Record the reading

Check Temperature Point #1
- Set the reference device at a **temperature point approximately 10% of the temperature span**
- Complete the test steps

Check Temperature Point #2
- Set the reference device at a **temperature point approximately 50% of the temperature span**
- Complete the test steps

Check Temperature Point #3
- Set the reference device at a **temperature point approximately 90% of the temperature span**
- Complete the test steps

Example below shows the check point areas recommended for 0/250F and -20/120C.



After checking all the check points:

If any of the temperature readings are outside the accuracy tolerance the set point will need to be adjusted. Please contact Tel-Tru for help if you are unsure of the correct adjustment; we will need to know your temperature check points and thermometer readings. Tel-Tru thermometers are set at the mid scale of the range so they will be within tolerance at the low and high ends of the range.

To discuss thermometer care feel free to call our experts at 800-232-5335 or visit www.teltru.com

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