



Technical Brief

TEMPERATURE

What causes thermometers to go out of calibration?

There are several reasons thermometers can read outside a calibrated range, depending on the type of thermometer.

General conditions:

- Exposure to temperatures outside the operating range - Damage can occur to internal components, causing erroneous readings if thermometers are exposed to extreme temperatures.
- Shock and vibration - The components in a thermometer are sensitive to extreme levels of shock and vibration. The damage that occurs may not be obvious and can cause readings to be off slightly, resulting in an instrument that is out of calibration.



Vibration can cause accuracy problems and premature failure

Bimetal thermometers:

- Bent stem - Bending the stem of a bimetal thermometer can limit the movement of the internal parts, causing the pointer to show an incorrect temperature.



A bend in the probe will limit movement of the internal parts

Digital thermometers:

- Sensor aging - A small amount of drift can be expected with electronic components; it's typically insignificant but can be amplified with extreme temperatures and mechanical stress.

For additional information, please visit our [Blog page](#) or contact one of our experts at 800.232.5335 or info@teltru.com.

