



# Technical Brief

TEMPERATURE

## Replacing Mercury Thermometers with Electronic

Although mercury-filled, liquid-in-glass thermometers were once widely used in industrial applications, we now understand the environmental and safety risks of broken glass and the resulting exposed mercury. Fortunately, alternatives exist for almost any application where a mercury-filled glass thermometer is used.

The most popular replacement solution is the digital Resistance Temperature Detector (RTD) thermometer which is known for its accuracy and stability over a wide temperature range. Most electronic thermometers such as the Digi-Tel™ from Tel-Tru feature an easy-to-read display.

A properly configured RTD thermometer can be used to replace most mercury-filled liquid thermometers. When choosing an electronic thermometer as a replacement, keep these considerations in mind:

- Electronic thermometer readouts are easy to read, easily recalibrated and can be integrated into automation systems.
- Both types of thermometers require initial validation.
- Electronic thermometers require a battery, most have a service life of about five years.
- In general, electronic thermometers cost more than mercury-filled thermometers of comparable accuracy. The advantages above can potentially offset additional costs of electronic thermometers.



For more information about mercury thermometer replacements see the guidelines on the US EPA website: <https://www.epa.gov/mercury/phasing-out-mercury-thermometers-used-industrial-and-laboratory-settings#barriers>.

For more information on how Digi-Tel thermometers can be used to meet requirements of FDA Rule 21 CFR Part 113.40 for retort applications, see <https://www.teltru.com/t-DTRetort.aspx>.

To discuss your application in more detail or find out what model Tel-Tru Digi-Tel thermometer would be best for your application, please call our experts at 800-232-5335 or visit the Tel-Tru website. <https://www.teltru.com/s-47-digital.aspx>.



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