



Technical Brief

TEMPERATURE

Immersion methods of RTD probes

An immersion sensor is one of the most reliable and accurate ways to measure temperature. There are two primary ways to install immersion sensors into the system; direct and indirect.

The direct method involves installing the RTD assembly directly into the system (Figure 1), through the wall of a pipe or vessel for example. This can be accomplished through a number of process fittings which are specific to the application.

The main advantages of the direct method are:

- faster response time
- lower cost

The disadvantage is reduced durability.

The indirect method incorporates a separate thermowell (Figure 2). With the thermowell properly installed, there is no contact between the fluid or gas and the RTD sensor assembly itself.

The main advantages of the indirect method are:

- isolation from high pressures, high flow rates and corrosive effects
- option to remove the sensor if needed without breaching the system

The disadvantage is generally a slower response time.

If you need help deciding which method is best for your industrial or sanitary application, feel free to contact the Tel-Tru technical team at 800-232-5335 for support.

For more information about the Tel-Tru line of RTDs please visit <https://www.teltru.com/s-159-rtds.aspx>.

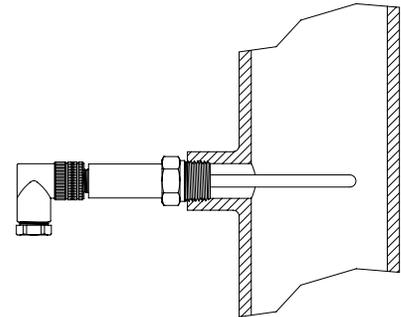


Figure 1: Direct Method

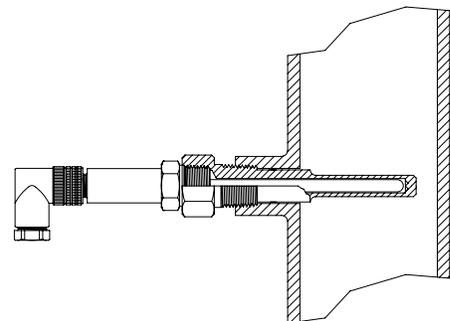


Figure 2: Indirect Method



Tel-Tru Manufacturing Company

408 St. Paul Street, Rochester, NY 14605

Phone: 800.232.5335 • 585.232.1440 • Fax: 585.232.3857 • E-mail: info@teltru.com • Web: www.teltru.com

TB518
©2018