

In-Line Continuous Flow Process Temperature Measurement

KEY FEATURES

Ultra-clean Design:

The unique Keyhole hygienic sealing mechanism allows sensors to be inserted without creating pockets, crevices or process dead-legs that can trap product during processing.

Ease of Installation:

The lack of any process pockets or dead-legs allows Keyhole sensors to be installed in any physical orientation without impacting hygienic performance. Only FDA and 3-A approved materials are used.

Leak-Free Operation:

The Keyhole seal is designed to tighten as the process pressure increases, creating a leak-free seal up to 3,000 PSIG (200 Bar).

Sensitivity:

The thermal isolation and low mass of the immersed sensing tip provide superior response times and accuracy.

PROBE STYLES

Center Reach



Equivalent to a traditional RTD, this probe style reaches the center of the pipe.

Low Obstruction



Provides accurate in-line temperature measurement with minimal obstruction of the product flow. Also measures at the edge of the flow, near the pipe wall

Small Bore



Suitable for use in process pipe IDs down to 0,550" (14mm). Ideal for use in pilot plant or lab-scale equipment where traditional RTDs and thermowells can introduce excessive flow obstruction or product damage.

Point Measurement



Constructed from an ultra-thin stainless steel tube, this probe type is able to measure at a specific radial location in the process flow.



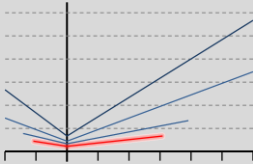


Available with RTD or thermocouple elements.

Multi-Point





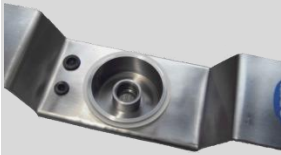


Equipped with multiple type-T thermocouples along its length, this probe is able to measure at several radial locations simultaneously to create a thermal profile and identify the critical hot and cold spots.

PROBE OPTIONS

Transmitter	Dual Element	High Precision	Connectorized	Custom
				
<p>Replaces the standard in-head terminal block with a 4-20mA loop transmitter.</p>	<p>Adds a second element inside the probe to provide redundant or dual outputs.</p>	<p>Replaces the standard Class A PT100 RTD element with higher tolerance 1/3 or 1/10 Class B elements.</p>	<p>Replaces the standard in-head terminal block with an external multi-pin screw-on wiring connection.</p>	<p>Custom probe designs and sizes can be produced to address specific measurement applications.</p>

FITTINGS

Instrument Tee	Multi-Port Tee	Flex-Fit	Custom	Calibration
				
<p>Equivalent to a traditional RTD instrument tee. Available with a variety of coupling types or butt-weld ends for welding. Shown here with Tri-Clamp flanges.</p>	<p>Allows multiple Keyhole probes to be inserted at a single location for multiple measurements. Shown here with 3 ports equally spaced at 120° and Tri-Clamp flanges.</p>	<p>Ideal for quick retrofit to existing processes, the Flex-Fit pipe fitting clamps around a pipe drilled with a small access hole. Flex-Fit has the same sanitary performance as other Keyhole Fittings.</p>	<p>Keyhole fittings can be attached to almost any customer-supplied pipe section and in almost any configuration.</p>	<p>Suitable for use with temperature-controlled oil baths, the Keyhole Temperature Calibration Cell replicates the installed operating conditions for accurate sensor calibration.</p>

