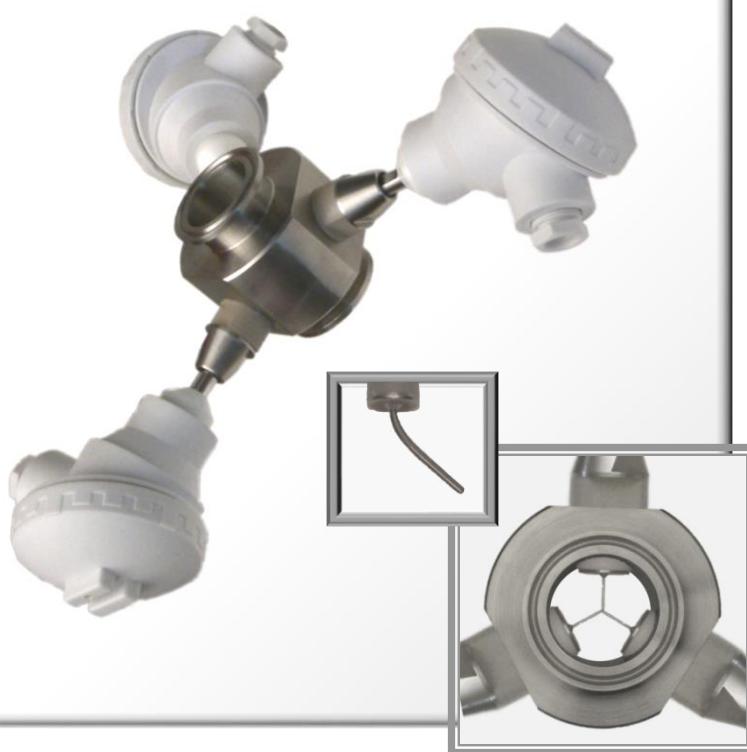


Ultra-Clean Multi-Measurement Sanitary Temperature Sensor

In-Line Continuous Flow Process Temperature Measurement



- **Food, Beverage & BioPharma**
- **Complete cross-section measurement of temperature profile**
- **No process "Dead Legs" or pockets**
- **Operates up to 750psig & 450°F**
- **CIP/SIP compatible**



US Patent: 7607364

The Multi-Measurement Sanitary Sensor and Multi-Probe fitting from Windridge Sensors together provide precise temperature profile measurement across the complete cross-section of aseptic process pipework.

This allows the user to verify correct processing temperatures are being reached across the entire product flow.

Each Keyhole probe is equipped with multiple thermocouples or RTDs embedded in an ultra-thin stainless steel tube to simultaneously measure at multiple points.

The probe tip is swept away from the flow to reduce fouling.

The Keyhole hygienic sealing technology allows each probe to be inserted into the process flow without introducing any process voids or pockets making it ultra-clean for CIP/SIP procedures.

The Keyhole technology also isolates each probe from the process equipment, providing optimum sensitivity and measurement performance.



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KEY FEATURES

Simultaneous multi-point measurement: Multiple sensors on multiple probes provide independent simultaneous temperature measurements to map thermal contours.

Edge-of-Flow Measurement: The thermal isolation between the probe and the pipe wall allows sensors to be positioned within 0.150" (3.5mm) of the wall, allowing measurements at the edge of the flow rather than just at the center.

Low Flow Obstruction: The void-free Keyhole hygienic sealing technology and ultra thin probe diameter create minimal disturbance to the product flow.

Leak-Free Operation: The Keyhole seal is designed to tighten as the process pressure increases, creating a leak-free seal up to 750psig (50 bar)

Sensitivity: The thermal isolation and low mass of the sensing probe provide superior response times and independent readings between adjacent sensors.

Cleanability: The Keyhole hygienic sealing technology allows probes to be inserted without creating pockets, crevices or process "dead legs" that trap product during processing.

Durability: Only industry approved materials are used.

SPECIFICATIONS

Sensor Types:	Type-T Thermocouple (<i>others available upon request</i>)
Accuracy:	±1°C
Response Time:	63% in <20s
Process Limits:	-50°C to 250°C 0 to 750 PSIG
Probe Tip Length:	0.2" (5mm) to 2" (51mm)
Probe Tip Diameter:	0.030" (0.8mm) to 0.058" (1.5mm)
Installed Clearance:	5. 50" (140mm)
Material:	316L SS wetted Surfaces & 3-A/FDA approved Silicone (VMQ) seal
Surface Finish:	R _a max = 32 µin on all SS wetted surfaces (<i>electropolishing available on request</i>)

For more information on this and other sensors, visit us at

www.WindridgeSensors.com

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