

## SANI-FLOW TEMPERATURE SENSOR SPECIFICATIONS

### CSE Temperature Transmitters and RTD's

<b>Compliance</b>	3-A <sup>(1)</sup> ; NEMA 4X; IP67; ISO 9001; ISO 13485
<b>Product Contact Material</b>	316L stainless steel
<b>Housing Material</b>	316L stainless steel
<b>Product Contact Finish</b>	Ra = 8 µin (0.20 µm) <sup>(1)</sup>
<b>Connector</b>	Std. 12mm Industrial Connector (Gold plated copper contacts & polyphthalamide (PPA) keyed insert)
<b>CIP/SIP</b>	Yes
<b>Autoclave</b>	Yes <sup>(2)</sup>
<b>Process Temperature Limits</b>	-50° to 150°C (-58° to 302°F) <sup>(3)</sup>
<b>Ambient Temperature Limits (RTD)</b>	-50° to 150°C (-58° to 302°F) <sup>(4)</sup>
<b>Ambient Temperature Limits (Transmitter)</b>	-40° to 85°C (-40° to 185°F)



Sanitary and industrial RTDs and temperature transmitters

### Temperature Transmitter Electronics (Programmable)

**Standard**

<b>Typical Accuracy</b>	± 0.15% of span
<b>Range</b>	-30° to 150°C (-22 to 302°F) factory or field rangeable <sup>(5)</sup>
<b>Input</b>	8 to 32 VDC
<b>Output</b>	4 to 20 mA (temperature linear)
<b>Resolution</b>	5 µA (0.005 mA)
<b>Linearity</b>	±0.1% of span
<b>Long-term Stability</b>	±0.2% of span/year
<b>Output Load</b>	$R_{Load} = (V_{Supply} - 8.0V)/0.022$
<b>Sensor Failure Detection (burnout)</b>	Upscale
<b>Isolation</b>	Non-isolated
<b>Calibration</b>	Field calibratable <sup>(5)</sup> Zero and Span adjustable <sup>(5)</sup> Rangeable <sup>(5)</sup>
<b>Zero Adjustment</b>	Any value within range limits <sup>(5)</sup>
<b>Minimum Span</b>	10°C (18°F) <sup>(5)</sup>



USB Programmable transmitter electronics<sup>(5)</sup>  
*(standard)*

## SANI-FLOW TEMPERATURE SENSOR SPECIFICATIONS

### Temperature Transmitter Electronics (Analog Adjustable)

*Optional*

<b>Typical Accuracy</b>	<b>± 0.15% of span</b>
<b>Range</b>	<b>-30° to 150°C (-22° to 302°F)</b> factory or field rangeable <sup>(6)</sup>
<b>Input</b>	<b>6.5 to 32 VDC</b>
<b>Output</b>	<b>4 to 20 mA (temperature linear)</b>
<b>Linearity</b>	<b>± 0.1% of span</b>
<b>Long-Term Stability</b>	<b>± 0.1% of span/year</b>
<b>Output Load</b>	<b><math>R_{Load} = (V_{supply} - 6.5V)/0.025</math></b>
<b>Sensor Failure Detection (burnout)</b>	<b>Upscale</b>
<b>Isolation</b>	<b>Non-isolated</b>
<b>Calibration</b>	<b>Field calibratable<sup>(6)</sup></b> <b>Zero and Span adjustable<sup>(6)</sup></b> <b>Rangeable<sup>(6)</sup></b>
<b>Zero Adjustment</b>	<b>-50° to 50°C (-60° to 120°F)<sup>(6)</sup></b>
<b>Fine Adjustment</b>	<b>± 10%<sup>(6)</sup></b>
<b>Span Adjustment Minimum</b>	<b>50°C (100°F)<sup>(6)</sup></b>
<b>Span Adjustment Interval</b>	<b>50°C (100°)<sup>(6)</sup></b>



Analog adjustable transmitter electronics <sup>(6)</sup>  
*(optional)*

### RTD Element

<b>Type</b>	<b>Pt 100 Thin Film</b>
<b>Tolerance</b>	<b>F 0.15 (Class A)<sup>(7)</sup></b>
<b>Nominal Resistance</b>	<b>100Ω at 0°C (32°F)</b>
<b>Coefficient</b>	<b>Alpha = 0.00385 Ω/Ω/°C</b>
<b>Specification</b>	<b>DIN EN 60751 / IEC 751<sup>(7)</sup></b>
<b>Long-Term Stability</b>	<b>Max. R0-Drift 0.04% after</b> <b>1,000 hrs at 500°C (932°F)</b>
<b>Measuring Current</b>	<b>0.3 to 1.0 mA</b>



Thin-film RTD element  
 potted in probe with  
 thermally conductive paste

<sup>(1)</sup> Sanitary connections only. For a detailed list of sanitary fittings please consult factory  
<sup>(2)</sup> Autoclave to 150°C (302°F) maximum – electronics MUST be removed from housing  
<sup>(3)</sup> For higher temperature applications please consult factory  
<sup>(4)</sup> Verify temperature limit of mating cable  
<sup>(5)</sup> By a knowledgeable/qualified technician using optional USB communication kit  
<sup>(6)</sup> By a knowledgeable/qualified technician. Fine adjustments via variable resistors; Span and Zero setting via solder pads  
<sup>(7)</sup> Tolerance in °C = ±0.15 + 0.002|t| : where t = temperature