CENTREX TECHNICAL SALES

CHICAGO STAINLESS EQUIPMENT, INC.
QUALITY PRODUCTS SINCE 1937

SANI-FLOW TEMPERATURE SENSOR SPECIFICATIONS

CSE Temperature Transmitters and RTD's

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

Sanitary and industrial RTDs and temperature transmitters

Temperature Transmitter Electronics (Programmable)

Standard

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

USB Programmable transmitter electronics [(5)] *(standard)*

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Temperature Transmitter Electronics (Analog Adjustable)

Optional

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

Analog adjustable transmitter electronics [6] *(optional)*

RTD Element

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

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

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