INPUT

Resistance Thermometer Input (RTD)

TYPE	MEASUREMENT RANGE	MINIMUM RANGE
Pt100 (α = 0.003 85)	(-51 to 160) °C [-60 to 320] °F	10 ˚C [18 ˚F]
Connection Type	4 wire connection (standard)	
Sensor current	≤ 0.6 mA	

OUTPUT

Output (Analog)

Output signal	(4 to 20) mA or (20 to 4) mA
Transmission as	Temperature linear
Maximum load	$(V_{power\ supply}$ - 10 V) / 0.023 A (current output)
Induced current required	≤ 3.5 mA
Current limit	≤ 23 mA
Switch on delay	2 s
Electronic response time	1 s

Failure Mode

Undershooting measurement range	Decreases to 3.8 mA
Exceeding measurement range	Increases to 20.5 mA
Sensor breakage/short circuit	≤ 3.6 mA or ≥ 21.0 mA

ACCURACY

Accuracy

Electronics measurement error	0.1 °C or 0.08% [1]
Reference conditions	Calibration temperature (23 ± 5) °C [73 ± 9] °F
Sensor measurement error	Class A ± (0.15 + 0.002 |t|) °C Class B ± (0.3 + 0.005 |t|) °C Grade B ± (0.25 + 0.0042 |t|) °C Class AA ± (0.01 + 0.0017 |t|) °C 1/5 Class B ± (0.06 + 0.001 |t|) °C |t| = value of temperature without regard to sign, °C
Influence of power supply	± 0.01%/V deviation from 24 V [2]
Load influence	± 0.02%/100 Ω [2]
Temperature drift	T_d = ± (15 ppm/°C × (full scale value + 200) + 50 ppm/°C of set measuring range) × Δ° Δ° = deviation of ambient temperature from the reference operation condition
Electronics long term stability	≤ 0.1 °C/year [3] or ≤ 0.05%/year [1][3]

[1] % is related to the adjusted measurement range (the value to be applied is the greater)
[2] All data is related to a measurement and value of 20 mA
[3] Under reference conditions