ACCURACY (continued)

Thermocouple (TC)

TYPE	MEASUREMENT ACCURACY [1]
K, J, T, E, L, U N, C, D B S, R	± 0.5 °C or 0.08% ± 1.0 °C or 0.08% ± 2.0 °C or 0.08% ± 1.4 °C or 0.08%
Influence of the internal reference junction	Pt100 ± (0.30 + 0.005 |t|) °C |t| = value of temperature without regard to sign °C

Voltage (mV)

TYPE	MEASUREMENT ACCURACY	MEASUREMENT RANGE
Millivolt (mV)	± 20 µV or 0.08% [1]	(-10 to 75) mV

General Accuracy

Influence of power supply	± 0.01%/V deviation from 24 V [2]
Load influence	± 0.02%/100 Ω [2]
Temperature drift	Resistive thermometer (RTD): T_d = ± (15 ppm/°C × range end value + 50 ppm/°C measurement range) × $\Delta\vartheta$ Resistive thermometer Pt100: T_d = ± (15 ppm/°C × (range end value + 200) + 50 ppm/°C × measurement range) × $\Delta\vartheta$ Thermocouple (TC): T_d = ± (50 ppm/°C × range end value + 50 ppm/°C measurement range) × $\Delta\vartheta$ $\Delta\vartheta$ = Deviation of the ambient temperature according to the reference condition
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 end value of 20 mA
[3] Under reference conditions

INSTALLATION CONDITIONS

Ambient Conditions

Ambient temperature	(-40 to 85) °C [-40 to 185] °F
Storage temperature	(-40 to 100) °C [-40 to 212] °F
Climatic class	To EN 60 654-1, Class C
Moisture condensation	Allowable
Vibration protection	4 g / (2 to 150) Hz according to IEC 60 068-2-6
EMC immunity	Interference immunity and interference emission as per EN 61 326-1 (IEC 1326)

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