

PROGRAMMABLE TEMPERATURE TRANSMITTERS - SERIES 441

Accuracy (continued)

Thermocouple (TC)

TYPE	MEASUREMENT ACCURACY
E, J, K, L, T, U	0.5 ° C or 0.08% ⁽¹⁾
C, D, N	1.0 ° C or 0.08% ⁽¹⁾
B, MoRe5-MoRe41, R, S	2.0 ° C or 0.08% ⁽¹⁾
Influence of the internal junction	Pt100 ± 0.30 + 0.005 t ° C t = value of temperature without redard to sign ° C

Voltage (mV)

TYPE	MEASUREMENT RANGE	MINIMUM RANGE
Millivolt (mV)	± 20 µ V or 0.08% ⁽¹⁾	-10 to 100 mV

General

Influence of power supply	± 0.01%/V deviation from 24 V ⁽²⁾
Load Influence	± 0.02%/100 Ω ⁽²⁾
Temperature drift	Resistive thermometer (RTD): $T_d = \pm(15 \text{ ppm}/^{\circ}\text{C} \times \text{range end value} + 50 \text{ ppm}/^{\circ}\text{C} \times \text{measurement range})$ ± 0.5
	Resistive thermometer Pt100: $T_d = \pm(15 \text{ ppm}/^{\circ}\text{C} \times (\text{range end value} + 200) + 50 \text{ ppm}/^{\circ}\text{C} \times \text{measurement range})$ ± 0.5
	Thermocouple (TC) $T_d = \pm(50 \text{ ppm}/^{\circ}\text{C} \times \text{range end value} + 50 \text{ ppm}/^{\circ}\text{C} \times \text{measurement range})$ ± 0.5
Load Influence	± 0.5 = Deviation of the ambient temperature according to the reference condition
Long Term Stability	≤ 0.1 °C/year ⁽³⁾ or ± 0.05%/year ⁽¹⁾⁽³⁾

Installation Conditions

Environmental Conditions

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

(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