

### ACCURACY (continued)

#### Thermocouples (TC) as per standard

STANDARD	DESIGNATION	MEASURING RANGE	TYPICAL MEASURED ERROR (±)
			Value at current output
IEC 60584-1 ASTM E230-2003	Type B	(0 to 800) °C [32 to 1472] °F	(1.61) °C [2.9] °F
	Type E		(0.34) °C [0.61] °F
	Type J		(0.39) °C [0.70] °F
	Type K		(0.51) °C [0.92] °F
	Type N		(0.62) °C [1.12] °F
	Type R		(1.43) °C [2.57] °F
	Type S		(1.45) °C [2.61] °F
	Type T	(0 to 300) °C [32 to 572] °F	(0.33) °C [0.59] °F
Voltage (mV)	-20 to 100 mV	(0 to 50) mV	25 µV

### INSTALLATION CONDITIONS

#### Environment

Ambient temperature	(-40 to 85) °C [-40 to 185] °F (For hazardous areas see EX documentation) Without display: (-40 to 85) °C [-40 to 185] °F With display: (-40 to 80) °C [-40 to 176] °F With overvoltage protection module: (-40 to 85) °C [-40 to 185] °F • The display can react slowly at temperatures < (-20) °C [-4] °F. the legibility of the display cannot be guaranteed at temperatures < (-30) °C [-22] °F
Storage temperature	Without display: (-50 to 100) °C [-58 to 212] °F With display: (-40 to 80) °C [-40 to 176] °F With overvoltage protection module: (-50 to 100) °C [-58 to 212] °F
Humidity	Permitted: 0 to 95%
Altitude	up to 4000 m (13123 ft) above sea level
Climatic class	As per IEC 60654-1, Class Dx
Degree of protection	Die-cast aluminum or stainless steel housing: IP66/67, Type 4X
Shock and Vibration protection	Shock resistance according to DIN EN 60068-2-27 and KTA 3505 (Section 5.8.4 Shock test): 30g/18ms Vibration resistance according to DIN EN 60068-2-6: - 2 to 8.6 Hz/10mm - 8.6 to 150 Hz/3g • The use of L-shaped mounting brackets can cause resonance (see pipe 2" mounting bracket #10321 in the Mechanical Construction section). Caution: vibrations at the transmitter may not exceed specifications.
Electromagnetic compatibility (EMC)	CE compliance Electromagnetic compatibility in accordance with all the relevant requirements of the IEC/EN 61326 series and NAMUR Recommendation EMC (NE21). For details, refer to the Declaration of Conformity. Maximum measured error <1% of measuring range. V. 1, Rev. 19, 7-03-2023 Interference immunity as per IEC/EN 61326 series, industrial requirements Interference emission as per IEC/EN 61326 series, Class B equipment • A shielded cable that is grounded on both sides must be used for sensor cable lengths of 30 m (98.4 ft) and more. The use of shielded sensor cable is generally recommended. Connection of the functional grounding may be needed for functional purposes. Compliance with the electrical codes of individual countries is mandatory.

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