TECHNICAL DATA

ANSI COLOR CODE & ISA LIMITS OF ERROR FOR THERMOCOUPLES - REFERENCE JUNCTION 0°C (ANSI MC 96.1 - 1975).

					LIMITS OF ERROR in °C			LIMITS OF ERROR in °F**	
ANSI TYPE	WIRE ALLOYS	POLARITY	INDIVIDUAL T/C WIRE COLOR	TEMPERATURE RANGE °C	STANDARD (whichever is greater)	SPECIAL (whichever is greater)	TEMPERATURE RANGE °F	STANDARD (whichever is greater)	SPECIAL (whichever is greater)
T*	COPPER VS CONSTANTAN	+TP -TN	BLUE RED	0 to 350 -200 to 0	±1°C or ±0.75% ±1°C or ±1.5%	±0.5°C or ±0.4%	32 to 660 -330 to 32	±1.8 °F or ±0.75% ±1.8 °F or ±1.5%	ae0.9°F or ±0.4%
J	IRON VS CONSTANTAN	+JP -JN	WHITE RED	0 to 750	±2.2°C or ±0.75%	±1.1°C or ±0.4%	32 to 1380	±4°F or ±0.75%	±2°F or ±0.4%
E*	CHROMEL VS CONSTANTAN	+EP -EN	PURPLE RED	0 to 900 -200 to 0	±1.7°C or ±0.5% ±1.7°C or ±1%	±1°C or ±0.4%	32 to 1650 -330 to 32	±3°F or ±0.5% ±3°F or ±1%	±1.8°F or ±0.4%
K*	CHROMEL VS ALUMEL®	+KP -KN	YELLOW RED	0 to 1250 -200 to 0	±2.2°C or ±0.75% ±2.2°C or ±2%	±1.1°C or ±0.4%	32 to 2300 -330 to 32	±4°F or ±0.75% ±4°F or ±2%	±2°F or ±0.4%
N	NICROSIL VS NISIL	+NP -NP	ORANGE RED	285 to 1250 0 to 285	±2.2°C or ±0.75%	±1.1°C or ±0.4%	545 to 2300 32 to 545	±4°F or ±0.75%	±2°F or ±0.4%
R,S	PLATINUM-RHODIUM VS PLATINUM	+RP,SP -RN,SN		0 to 1450	±1.5°C or ±0.25%	±0.6°C or ±0.1%	32 to 2650	±2.7°F or ±0.25%	±1.1°F or ±0.1%
B	PLATINUM-30% RHODIUM VS PLATINUM-6% RHODIUM	+BP -BN		800 to 1700	±0.5%	±0.25%	1475 to 3100	±0.5%	±0.25%

*Thermocouples and thermocouple materials are normally supplied to meet the limits of error specified in the table for temperatures above 0°C. The same materials, however, may not fall within the sub-zero limits of error given in the table. If materials are required to meet the sub-zero limits, the purchase order must so state. Selection of materials usually will be required. There will be a substanial charge to select and calibrate thermocouples or materials at temperatures below 0°C if required.

**Percent limits apply directly to temperatures in °C units, but for °F equivalents are applied to the number of °F above or below the ice point(+32 °F). (i.e., Limit (°F)=(Temp. °F-32 °F) x Percentage.

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