casmocable
CABLES FOR EXTREMES

TC-AA

-65°C to +260°C



Construction

Conductor: Thermocouple Alloy (Type K / J / T / E / N) or Extension / Compensating Alloy (Type KX / JX / TX / EX / NX / RX / SX) · Stranded
Core Insulation: Extruded · PFA
Cabling: Parallel · Duplex parallel flat core pair
Core Identification: Color-coded per IEC 60584-3 (Type K/KX: +Green / -White) or ASTM E230 on request
Jacket: Extruded · PFA

Thermal Characteristics

Operating Temperature: -65°C to +260°C
EMF Calibration Span: Insulation rated to +260°C continuous; extension-grade alloys (-KX-/-JX-/-EX-/-NX-/-RX-/-SX-) are EMF-calibrated up to +200°C (-TX- up to +100°C). Specify thermocouple-grade alloys (-K-/-J-/-E-/-N-) above +200°C.

Electrical Characteristics

Signal Circuit Duty: Low-voltage thermoelectric millivolt EMF measurement and extension signal circuits only (not rated for mains power distribution).

Application

Autoclaves, Cryogenic Chambers and Test Rigs: For precision thermal profiling in aerospace autoclaves, environmental test chambers, semiconductor tools and laboratory instrumentation.
Process Temperature Sensing and Pyrometry: For connecting thermocouple probes and cold-junction transmitters across chemical, petrochemical, power-generation and metallurgical plants.
Sensors and Instrumentation: For connections between sensors, measuring instruments and associated control equipment.

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General Characteristics

Calibrated EMF Accuracy: Matched thermoelectric conductor pairs maintain stable electromotive force characteristics across the rated temperature span.
High-Temperature Thermal Stability: Heat-resistant insulation and jacketing resist thermal aging, embrittlement and cut-through in elevated-temperature zones.
Chemical Resistance: Resistant to chemical exposure, helping protect the cable covering against deterioration in chemically demanding environments.
Moisture Resistance: Resistant to moisture and humidity, helping maintain the integrity of the cable covering in damp environments.

Standards & Approvals

IEC 60584-1 / IEC 60584-3: EMF tolerances (Class 1 / Class 2) and international thermocouple & extension cable color identification.
ASTM E230 / E230M: Standard and special limits of error and North American thermocouple & extension color coding.

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CASMO Part No.	Total Cores	Conductor				Insulation		Nom. Jkt. Thickness (mm)	Nom. Overall Width (mm)	Overall Width Tolerance ± (mm)	Nom. Overall Thickness (mm)	Overall Thickness Tolerance ± (mm)
		Conductor Size (AWG)	No. Of Strands	Nom. Strand Dia. (mm)	Nom. Conductor Dia. (mm)	Nom. Ins. Thickness (mm)	Nom. Core O.D. (mm)					
710102C26-KX-XX	2	26	7	0.16	0.48	0.2	0.9	0.3	2.4	0.2	1.5	0.2
710102C24-KX-XX	2	24	7	0.2	0.6	0.2	1.0	0.3	2.6	0.2	1.6	0.2
710102C22-KX-XX	2	22	7	0.254	0.76	0.2	1.2	0.3	3.0	0.2	1.8	0.2
710102C20-KX-XX	2	20	7	0.32	0.96	0.2	1.4	0.3	3.4	0.2	2.0	0.2
710102C18-KX-XX	2	18	7	0.39	1.17	0.25	1.7	0.4	4.2	0.2	2.5	0.2
710102C16-KX-XX	2	16	19	0.3	1.5	0.25	2.0	0.4	4.8	0.2	2.8	0.2
710102C14-KX-XX	2	14	19	0.37	1.85	0.25	2.4	0.4	5.6	0.2	3.2	0.2

Table Notes

* "-KX-" = Type KX extension-grade alloy pair (NiCr / NiAl, standard; EMF calibrated up to +200°C). Substitute "-JX-", "-EX-", "-NX-", "-RX-", "-SX-" (EMF calibrated ≤ +200°C), "-TX-" (EMF calibrated ≤ +100°C), or thermocouple-grade "-K-", "-J-", "-T-", "-E-", "-N-" for sensing-junction or > +200°C service (Type T wire-gauge limit: +200°C for 26–20 AWG, +260°C for 16–14 AWG).

† "-XX" = color-code suffix: IEC 60584-3 color code supplied as standard (e.g., GN for Type K/KX); ASTM E230 color code available upon request (see Color Code Chart below).

COLOR CODE CHART					
Cond. #	Color	Cond. #	Color	Cond. #	Color
IEC K / KX	+Green / -White (Jkt: Green)	IEC N / NX	+Pink / -White (Jkt: Pink)	ASTM T / TX	+Blue / -Red (TC: Brown / Ext: Blue; TX ≤100°C)
IEC J / JX	+Black / -White (Jkt: Black)	IEC RCA / SCA	+Orange / -White (Jkt: Orange; ≤100°C)	ASTM E / EX	+Purple / -Red (TC: Brown / Ext: Purple)
IEC T / TX	+Brown / -White (Jkt: Brown; TX ≤100°C)	ASTM K / KX	+Yellow / -Red (TC: Brown / Ext: Yellow)	ASTM N / NX	+Orange / -Red (TC: Brown / Ext: Orange)
IEC E / EX	+Violet / -White (Jkt: Violet)	ASTM J / JX	+White / -Red (TC: Brown / Ext: Black)	ASTM RX / SX	+Black / -Red (Ext: Green; ≤200°C)

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