TC-CG

0°C to +480°C



Construction
Conductor: Thermocouple Alloy (Type K / N / E / J) · Stranded
Core Insulation: Wrapped · Fiberglass
Cabling: Parallel · Duplex parallel flat core pair
Core Identification: Color-coded fiberglass tracer per IEC 60584-3 (Type K: +White w/ Green tracer / -White) or ASTM E230 on request
Jacket: Braided · Fiberglass

Thermal Characteristics
Operating Temperature: 0°C to +480°C
Short-Term Peak Temperature: +540°C (single-exposure E-glass limit)
Saturant & Tracer Volatilization: Silicone resin saturant and organic dye tracers volatilize or fade above +204°C while braided fiberglass maintains continuous electrical separation up to +480°C; retain polarity tags at cold terminations.

Electrical Characteristics
Signal Circuit Duty: Dry-location low-voltage thermoelectric millivolt EMF measurement circuits only; porous fiberglass insulation is not voltage-rated for mains power circuits.

Application
Industrial Furnaces, Kilns and Heat Treatment: For temperature measurement and extension wiring on heat-treating furnaces, ceramic kilns, ovens and thermal processing lines.
Autoclaves, Cryogenic Chambers and Test Rigs: For precision thermal profiling in aerospace autoclaves, environmental test chambers, semiconductor tools and laboratory instrumentation.
Sensors and Instrumentation: For connections between sensors, measuring instruments and associated control equipment.

General Characteristics
Calibrated EMF Accuracy: Matched thermoelectric conductor pairs maintain stable electromotive force characteristics across the rated temperature span.
Ultra-Thin Compact Profile: Compact parallel duplex geometry reduces bundle cross-section for tight sensor feedthroughs, vacuum chambers and test fixtures.
High-Temperature Thermal Stability: Heat-resistant insulation and jacketing resist thermal aging, embrittlement and cut-through in elevated-temperature zones.
Flexibility: Flexible construction facilitates routing, bending and installation where space is limited.

Standards & Approvals
IEC 60584-1 / IEC 60584-3: Thermocouple-grade EMF tolerances (Class 1 / Class 2) and high-temperature fiberglass tracer color identification.
ASTM E230 / E230M: Thermocouple-grade standard and special limits of error, wire-gauge temperature limits, and North American tracer color coding.

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CABLES FOR EXTREMES

TC-CG

0°C to +480°C



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)					
710232C26-K-XX	2	26	7	0.16	0.48	0.13	0.74	0.2	1.9	0.2	1.1	0.2
710232C24-K-XX	2	24	7	0.2	0.6	0.13	0.86	0.2	2.1	0.2	1.3	0.2
710232C22-K-XX	2	22	7	0.254	0.76	0.13	1.02	0.2	2.4	0.2	1.4	0.2
710232C20-K-XX	2	20	7	0.32	0.96	0.13	1.22	0.2	2.8	0.2	1.6	0.2
710232C18-K-XX	2	18	7	0.39	1.17	0.13	1.43	0.2	3.3	0.2	1.8	0.2
710232C16-K-XX	2	16	19	0.3	1.5	0.13	1.76	0.2	3.9	0.2	2.2	0.2
710232C14-K-XX	2	14	19	0.37	1.85	0.13	2.11	0.2	4.6	0.2	2.5	0.2

Table Notes

* "-K-" = Type K thermocouple-grade alloy pair (NiCr / NiAl, standard). Substitute "-N-" (Type N), "-E-" (Type E), or "-J-" (Type J; note wire-gauge oxidation limit: 26–24 AWG ≤ +370°C, 22–20 AWG ≤ +480°C). Extension-grade alloys and Type T are not supplied for +480°C fiberglass service.

† "-XX" = color-code suffix: IEC 60584-3 fiberglass tracer code supplied as standard (e.g., GN for Type K); ASTM E230 tracer code available upon request (see Color Code Chart below). Organic dye tracers and silicone saturant volatilize/fade above +204°C; retain polarity tags at cold terminations.

COLOR CODE CHART					
Cond. #	Color	Cond. #	Color	Cond. #	Color
IEC K	+White w/ Green tracer / -White (Jkt: White w/ Green tracer)	IEC N	+White w/ Pink tracer / -White (Jkt: White w/ Pink tracer)	ASTM E	+Purple tracer / -Red tracer (Jkt: Brown or Purple tracer)
IEC J	+White w/ Black tracer / -White (Jkt: White w/ Black tracer)	ASTM K	+Yellow tracer / -Red tracer (Jkt: Brown or Yellow tracer)	ASTM N	+Orange tracer / -Red tracer (Jkt: Brown or Orange tracer)
IEC E	+White w/ Violet tracer / -White (Jkt: White w/ Violet tracer)	ASTM J	+White / -Red tracer (Jkt: Brown or Black tracer)		

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