# TC-GGG

**0°C to +480°C**



## Construction
**Conductor:** Thermocouple Alloy (Type K / N / E / J) · Stranded
**Core Insulation:** Braided · Fiberglass
**Secondary Core Insulation:** Braided · Fiberglass secondary core layer
**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.
**Process Temperature Sensing and Pyrometry:** For connecting thermocouple probes and cold-junction transmitters across chemical, petrochemical, power-generation and metallurgical plants.

## 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.
**Mechanical Strength:** Provides mechanical strength to withstand handling and installation stresses and help maintain cable integrity.
**Abrasion Resistance:** Resistant to abrasion, helping protect the cable surface against wear caused by rubbing and handling.

## 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.

Product illustrations are representative only and nominal values are for reference (Cal. Com. Code § 2313); binding acceptance is governed by CASMO's order acknowledgment, signed drawing, and applicable agency scope. Standards cited without a corresponding agency mark indicate design/test reference only. Specifications are subject to change; confirm latest revision and Terms of Sale at casmocable.com/terms.

© CASMO CABLE LLC. All rights reserved. UL®, cUL®, and UL certification marks are trademarks of UL LLC; CSA® is a trademark of CSA Group; TÜV Rheinland® is a trademark of TÜV Rheinland AG.

casmocable
CABLES FOR EXTREMES

# TC-GGG

## 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. Secondary Insulation Wall (mm) | Nom. Core O.D. (mm) | | | | | |
| 710192C26-K-XX | 2 | 26 | 7 | 0.16 | 0.48 | 0.2 | 0.2 | 1.3 | 0.2 | 3.0 | 0.2 | 1.7 | 0.2 |
| 710192C24-K-XX | 2 | 24 | 7 | 0.2 | 0.6 | 0.2 | 0.2 | 1.4 | 0.2 | 3.2 | 0.2 | 1.8 | 0.2 |
| 710192C22-K-XX | 2 | 22 | 7 | 0.254 | 0.76 | 0.2 | 0.2 | 1.6 | 0.2 | 3.6 | 0.2 | 2.0 | 0.2 |
| 710192C20-K-XX | 2 | 20 | 7 | 0.32 | 0.96 | 0.2 | 0.2 | 1.8 | 0.2 | 4.0 | 0.2 | 2.2 | 0.2 |
| 710192C18-K-XX | 2 | 18 | 7 | 0.39 | 1.17 | 0.2 | 0.2 | 2.0 | 0.2 | 4.4 | 0.2 | 2.4 | 0.2 |
| 710192C16-K-XX | 2 | 16 | 19 | 0.3 | 1.5 | 0.2 | 0.2 | 2.3 | 0.2 | 5.0 | 0.2 | 2.7 | 0.2 |
| 710192C14-K-XX | 2 | 14 | 19 | 0.37 | 1.85 | 0.2 | 0.2 | 2.7 | 0.2 | 5.8 | 0.2 | 3.1 | 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) | | |

Product illustrations are representative only and nominal values are for reference (Cal. Com. Code § 2313); binding acceptance is governed by CASMO's order acknowledgment, signed drawing, and applicable agency scope. Standards cited without a corresponding agency mark indicate design/test reference only. Specifications are subject to change; confirm latest revision and Terms of Sale at casmocable.com/terms.

© CASMO CABLE LLC. All rights reserved. UL®, cUL®, and UL certification marks are trademarks of UL LLC; CSA® is a trademark of CSA Group; TÜV Rheinland® is a trademark of TÜV Rheinland AG.