

THERMOCOUPLE WIRE

Vitreous Silica Insulated 1800°F (982°C)

APPLICATIONS

- Heat Treatment
- Component Testing
- Steel and Aluminum Industry
- Metals Production
- Furnace Surveys

AVAILABLE OPTIONS

- No tracers
- Impregnated Jacket
- Stabilized Type K & Type E Conductors
- Metal Coverings
- Tighter Than Special Limit Accuracy Tolerances
- Calibration Test Reports

PRODUCT FEATURES

- Continuous use up to 1800°F (982°C)
- Single exposure up to 2000°F (1093°C)
- **Light Build** Version of HG/HG
- Not Recommended for Abrasive Applications at High Temperatures



PRODUCT SPECIFICATIONS

CONDUCTORS: Solid or stranded thermocouple wire per ASTM E230 & ANSI MC96.1

INSULATIONS: Braided vitreous silica

CONSTRUCTION: Parallel conductors

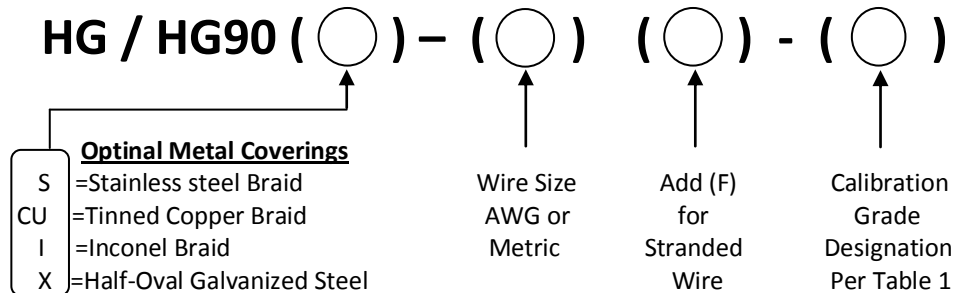
JACKET: Braided vitreous silica

OPERATING TEMPERATURE: +1800°F (+982°C) continuous
+2000°F (+1093°C) single exposure

LIMITS OF ERROR: Conforms to ASTM E230, IEC 584 and ANSI MC 96.1

COLOR CODE: Supplied white without saturants
red tracer in negative leg

Ordering Code



| Conductor Size | | Insulation Thickness | | Jacket Thickness | | Outer Diameter | | Net Weight | |
|----------------|--------|----------------------|-------|------------------|-------|----------------|-------------|------------|---------|
| AWG | (MM) | inches | (MM) | inches | (MM) | Inches | (MM) | LB/MF | (KG/KM) |
| 14 | (1.63) | .016 | (.41) | .017 | (.43) | .130 x .226 | (3.3 x 5.7) | 33 | (49) |
| 16 | (1.29) | .016 | (.41) | .017 | (.43) | .117 x .200 | (3.0 x 5.1) | 24 | (36) |
| 16°F* | (1.47) | .016 | (.41) | .017 | (.43) | .124 x .214 | (3.1 x 5.4) | 26 | (39) |
| 18 | (1.02) | .016 | (.41) | .017 | (.43) | .106 x .178 | (2.7 x 4.5) | 18 | (27) |
| 18°F* | (1.22) | .016 | (.41) | .017 | (.43) | .114 x .194 | (2.9 x 4.9) | 19 | (28) |
| 20 | (0.81) | .016 | (.41) | .017 | (.43) | .098 x .162 | (2.5 x 4.1) | 14 | (21) |
| 20°F* | (0.97) | .016 | (.41) | .017 | (.43) | .102 x .170 | (2.6 x 4.3) | 15 | (22) |
| 22 | (0.64) | .016 | (.41) | .017 | (.43) | .091 x .148 | (2.3 x 3.8) | 12 | (18) |
| 22°F* | (0.76) | .016 | (.41) | .017 | (.43) | .096 x .158 | (2.4 x 4.0) | 13 | (19) |
| 24 | (0.51) | .016 | (.41) | .017 | (.43) | .086 x .138 | (2.2 x 3.5) | 9.3 | (14) |
| 24°F* | (0.61) | .016 | (.41) | .017 | (.43) | .090 x .146 | (2.3 x 3.7) | 9.7 | (15) |

MANY ITEMS AVAILABLE FROM STOCK WITHIN 24 HOURS

The products referenced above represent the most popular constructions. Other constructions can be manufactured to meet individual specification and application requirements. Contact factory for additional information.

Table 1

Initial Calibration Tolerances Per ASTM E230 and ANSI MC96.1

| Thermocouple Type | Temperature Range °F (°C) | Grade Designation | Tolerance-Reference Junction 32°F (0°C) | | |
|--------------------------|---------------------------|-------------------|--|-------------------|---|
| | | | Standard Grade Limits °F (°C) whichever is greater | Grade Designation | Special Grade Limits °F (°C) whichever is greater |
| Thermocouple Wire | | | | | |
| T | 32 (0) to 700 (370) | T | ±1.8 (1) or ±0.75% | TT | ±0.9 (0.5) or 0.4% |
| J | 32 (0) to 1400 (760) | J | ±4 (2.2) or ±0.75% | JJ | ±2 (1.1) or 0.4% |
| E | 32 (0) to 1600 (870) | E | ±3.1 (1.7) or ±0.50% | EE | ±1.8 (1) or 0.4% |
| K or N | 32 (0) to 2300 (1260) | K or N | ±4 (2.2) or ±0.75% | KK or NN | ±2 (1.1) or 0.4% |
| T* | -328 (-200) to 32 (0) | T | ±1.8 (1) or ±1.5% | TT | ±0.9 (0.5) or 0.8%** |
| E* | -328 (-200) to 32 (0) | E | ±3.1 (1.7) or ±1% | EE | ±1.8 (1) or 0.5%** |
| K* | -328 (-200) to 32 (0) | K | ±4 (2.2) or ±2% | KK | ** |
| Extension Wire | | | | | |
| TX | 32 (0) to 212 (100) | TX | ±1.8 (1) | TTX | ±0.9 (0.5) |
| JX | 32 (0) to 400 (200) | JX | ±4 (2.2) | JJX | ±2 (1.1) |
| EX | 32 (0) to 400 (200) | EX | ±3.1 (1.7) | EEX | ±1.8 (1) |
| KX or NX | 32 (0) to 400 (200) | KX or NX | ±4 (2.2) | KKX or NNX | ±2 (1.1) |
| RX or SX | 32 (0) to 400 (200) | RX or SX | ±9 (5) | | |
| BX | 32 (0) to 212 (100) | BX*** | ±7.6 (4.2) | | |
| BX | 32 (0) to 400 (200) | BX ALLOY*** | ±6.7 (3.7) | | |

* Thermocouple material is normally supplied to meet tolerances above 0°C (32°F). If material is required to meet tolerances below 0°C (32°F), the purchase order must so state. Special selection of material is required.

** Suggested initial calibration tolerance. Requirements should be discussed between purchaser and supplier.

*** Copper vs. copper can be used as an extension for Type B thermocouples if the transition is below 100°C (212°F). Above 100°C (212°F), PCLW30-6 alloy should be used as the positive extension wire.