eltec

EMPOWERING PROCESS MANAGEMENT

FIBER GLASS INSULATED TWISTED THERMOCOUPLE WIRE:

FIBER GLASS INSULATION *is ideal for general application requiring moderate abrasion, moisture resistance & high temperature resistance. Fiber Glass is closely & tightly braided over the thermocouple conductors and pair twisted. It is widely used in consumable application especially used in sensor manufacturing & heat treatment applications and has a superior performance in high abrasive elements.*

APPLICATIONS	PRODUCT FEATURES
• *Temperature Sensors*	• *Continuous use up to 500 °C*
• *Heat Treatment*	• *Single exposure up to 650 °C*
• *Component Testing*	• *Good Thermal Durability & Strength*
• *Furnaces & Ovens Testing*	• *Flame Retardant*
• *Metal Production*	• *Superior Abrasion Resistance*
• *Various Processing Industries*	• *Better flexibility*

PRODUCT SPECIFICTIONS:	
Conductor	*Solid or stranded thermocouple extension grade wires from 12 AWG to 24 AWG (2.44mm to 0.51mm)*
Core Insulation	*Braided Fiber Glass with high temperature impregnation*
Construction	*Twisted Conductors*
No. of Pair	*1, 2 or more*
Color Coding	*Confirms to ANSI MC 96.1 (International Color Codes available)*

- *Impregnation maintained up to **200 °C**. Option for supply of wire without impregnation for continuous operation at elevated temperature.*
- *Other sizes in SWG and also different construction in other stranded sizes are available on request*
- *Duplex construction are also available*
- *Optional Color coding: IEC 60584 – 3, BS 1843, DIN 13711, JIS C 1610 – 1981, NFC 42334 as per requirement*

TYPE OF TC	Metal Alloy + ve leg	Metal Alloy – ve leg	Thermal Tolerance
J	*Fe*	*Cu Ni*	*ASTM E 230 – ANSI MC 96.1 & IEC EN 60584 - 2*
K	*Ni Cr*	*Ni Al*	*ASTM E 230 – ANSI MC 96.1 & IEC EN 60584-2*
T	*Cu*	*Cu Ni*	*ASTM E 230 – ANSI MC 96.1 & IEC EN 60584- 2*
E	*Ni Cr*	*Cu Ni*	*ASTM E 230 – ANSI MC 96.1 & IEC EN 60584 - 2*
N	*Ni Cr Si*	*Ni Si*	*ASTM E 230 – ANSI MC 96.1 & IEC EN 60584 - 2*

- *Thermocouple wires are normally supplied to meet tolerance above 0 °C. If material is reqd. to meet tolerance below 0 °C, the purchaser should clarify the same in Purchase Order. Special selection of material is reqd.*
- *Initial calibration & Tolerance suggested, its requirement should be discussed well in advance before placing the order.*
- ***R & S** extension wires are also manufactured with copper as positive and different nickel alloys respective for R & S.*
- ***B** Type extension wire is manufactured with Copper as positive & negative for transition below 100 °C*

ELTEC CABLES & INSTRUMENTS
16, Bhaktinagar Station Plot, Rajkot-360 002. INDIA.
Tel. : +91 281 2480400 URL : www.thermocouplewire.co.in
E-mail : eltecin@gmail.com I sales@thermocouplewire.co.in

eltec

EMPOWERING PROCESS MANAGEMENT

TYPE OF CABLE	Wire Size AWG	Type of Wire	Type K	Type J	Type T	Type N	Type E
FIBER GLASS BRAID	7 * 32	Stranded	Kt-7*32 F	Jt-7*32 F	Tt-7*32 F	Nt-7*32 F	Et-7*32 F
	24	Solid	Kt-24 F	Jt-24 F	Tt-24 F		
	22	Solid	Kt-22 F	Jt-22 F			
	20	Solid	Kt-20 F	Jt-20 F			
	18	Solid	Kt-20 F	Jt-18 F			
	16	Solid	Kt-20 F	Jt-16 F			
	14	Solid	Kt-20 F	Jt-14 F			
	12	Solid	Kt-20 F	Jt-12 F			

- *Duplex construction are suffix with D i.e. KxD ___*
- *Extension & Compensating Grade Wire are suffix with t & c respectively.*

Initial Calibration Tolerances as per ASTM E230 and ANSI MC96.1

Tolerance-Reference Junction 0°C (32 °F)

Thermocouple Designation	Temperature Range °C (°F)	Standard Grade Limits ° C (°F) whichever is greater	Special Grade Limits °C(°F) Whichever is greater
Thermocouple Grade Wires			
Jt	0 (32) to 750 (1382)	±2.2 (4.0) or ±0.75%	±1.1 (2.0) or 0.4%
Kt	0 (32) to 1250 (2282) -200 (-328) to 0 (32)	±2.2 (4.0) or ±0.75% ±2.2 (4.0) or ±2%	±1.1 (2.0) or 0.4% -----
Tt	0 (32) to 350 (662) -200 (-328) to 0 (32)	±1.0 (1.8) or ±0.75% ±1.0 (1.8) or ±1.5%	±0.5 (1.0) or 0.4% -----
Et	0 (32) to 900 (1652) -200 (-328) to 0 (32)	±1.7 (3.0) or ±0.5% ±1.7 (3.0) or ±1%	±1.0 (1.8) or 0.4% -----
Nt	0 (32) to 1300 (2372) -270(-454) to 0 (32)	±2.2 (4.0) or ±0.75% ±2.2 (4.0) or ±2%	±1.1 (2.0) or 0.4% -----
Extension / Compensating Grade Wires			
Jx	0 (32) to 200 (400)	±2.2 (4.0)	
Kx or Kc	0 (32) to 200 (400)	±2.2 (4.0)	
Tx	32 (0) to 100 (212)	±1.0 (1.8)	
Ex	0 (32) to 200 (400)	±1.7 (3.1)	
Nx or Nc	0 (32) to 200 (400)	±2.2 (4.0)	
Rc or Sc or Bc	0 (32) to 200 (400)	±5.0 (9.0)	

ELTEC CABLES & INSTRUMENTS
16, Bhaktinagar Station Plot, Rajkot-360 002. INDIA.
Tel. : +91 281 2480400 URL : www.thermocouplewire.co.in
E-mail : eltecin@gmail.com I sales@thermocouplewire.co.in