eltec

EMPOWERING PROCESS MANAGEMENT

Overall Shield & Armored PVC Insulated Multi Pair THERMOCOUPLE EXTENSION CABLES

Armored Thermocouple Extension Wires are used for underground applications as GI wire armoring gives strong mechanical protection. Twisted pairs & aluminum Mylar shield provides protection against cross talk, static & magnetic noise in thermocouple circuits.

APPLICATIONS	PRODUCT FEATURES
• *Industrial Plants*	• *Temperature Range: 90 °C & Rated 300 V*
• *Petrochemicals & Oil Refineries*	• *Flame Retardant*
• *Steel & Power Plants*	• *Sunlight Resistant*

PRODUCT SPECIFICATIONS	
Conductor	*Solid or stranded thermocouple extension grade wires from 12 AWG to 22 AWG (2.44mm to 0.63mm) as per ASTM E 230 & ANSI 96.1*
Core Insulation	*Flame Retardant PVC with nominal thickness of 0.40mm*
No. of Pair	*2, 4, 6, 8, 16, 20, 24, 36 and more*
Communication Wire	*22 AWG – 7 strands Tinned Copper wire Orange color PVC Insulated (4 Pair & larger)*
Pair Laying	*Shielded Pairs with communication wire are laid suitably and binded with polyester tape*
Cable Shield	*0.05 mm Aluminum Mylar /polyester tape, 25% overlap*
Drain Wire	*22 AWG - 7 strands of Annealed Tinned Copper Wire.*
Inner Sheath	*Flame Retardant PVC*
Armoring	*GI Round Wire or strip with min. 80% coverage*
Outer Sheath	*Flame Retardant PVC*
Color Coding	*Confirms to ANSI MC 96.1 (International Color Code Available), Refer Table*

- *PVC, HR PVC, FRLS, LSOH, LSZH, HPER etc. Insulation & Outer Jacket as per clients specifications*
- *Optional Color coding: IEC 60584 – 3, BS 1843, DIN 13711, JIS C 1610 – 1981, NFC 42334 as per requirement*

ELECTRICAL PROPERTIES	
IR @ 20°C, 500V, C/C	***> 100 mΩ/Km***
IR @ 20°C, 500V, C/S	***> 50 mΩ/Km***
HV - Test, C/C	***1.2 Kv, 1.0 Min.***
HV - Test, C/S	***1. Kv, 1.0 Min.***

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 | sales@thermocouplewire.co.in

eltec

EMPOWERING PROCESS MANAGEMENT

TYPE OF TC	Metal Alloy +ve leg	Metal Alloy -ve leg	Measuring Temp. Range	Thermal Tolerance
J	*Fe*	*Cu Ni*	*0 °C to 750 °C*	*Standard Tolerance as per ASTM E 230 - ANSI MC 96.1*
K	*Ni Cr*	*Ni Al*	*0 °C to 1000 °C*	*Standard Tolerance as per ASTM E 230 – ANSI MC 96.1*
T	*Cu*	*Cu Ni*	*0 °C to 350 °C*	*Standard Tolerance as per ASTM E 230 - ANSI MC 96.1*
E	*Ni Cr*	*Cu Ni*	*0 °C to 900 °C*	*Standard Tolerance as per ASTM E 230 - ANSI MC 96.1*
N	*Ni Cr Si*	*Ni Si*	*0 °C to 1300 °C*	*Standard Tolerance as per ASTM E 230 - ANSI MC 96.1*
R or S	*Cu*	*Cu Ni*	*0 °C to 1600 °C*	*N.A.*
B	*Cu*	*Cu*	*600 °C to 1700 °C*	*N.A. Only for Transition above 100 °C*

- *Initial Calibration tolerance as per IEC 584 & ANSI MC 96.1 up to 200 °C*
- *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.*
- *Copper & Copper Nickel alloys can be used for R & S Type Extension Wire.*
- *Copper Vs Copper can be used for B Type Extension Wire for transition below 100 °C*

Initial Calibration Tolerances ***as per ASTM E230 and ANSI MC96.1 for EXTENSION GRADE WIRES***

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
Jx	0 (32) to 200 (400)	±2.2 (4.0)	------
Kx or Kc	0 (32) to 200 (400)	±2.2 (4.0)	------
Tx	0 (32) to 100 (212)	±1.0 (1.8)	------
Nx or Nc	0 (32) to 200 (400)	±2.2 (4.0)	------
Ex	0 (32) to 200 (400)	±1.7 (3.1)	------
Sc or Rc	0 (32) to 200 (400)	±5.0 (9.0)	------
Bc	0 (32) to 100 (212)	±4.2 (7.6)	------

ORDERING CODE:

Wire Size in SWG/AWG	*Type of Wire*	*Type of TC*	*TC Grade*	*No. of Pairs*	*Insulation*	*Type of Shield*	*Armored*
12 14 16 18 20 22	*Solid* *Stranded*	*J* *K* *T* *E* *N* *R* *S* *B*	*x* *c*	*2* *4* *6* *--* *--* *--* *--* *36*	*HR PVC* *FR PVC* *XLPE*	*IS* *OS*	*A* *U*

Example: ***16 AWG SOLID Kx 4P FR PVC OS A*** ***-*** *16 AWG SOLID K TYPE EXTENSION GRADE FR PVC INSULATED & SHEATHED OVER ALL SHIELD ARMORD THERMOCOUPLE CABLE*

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 | sales@thermocouplewire.co.in