



EMPOWERING PROCESS MANAGEMENT



PTFE Insulated Thermocouple Wire Max. Temp. Up to 260 °C



PTFE Insulation becomes an excellent solution where chemical fumes & other liquids make all type of Insulation vulnerable as it is chemically inert to most of industrial chemicals. It has outstanding mechanical & electrical properties and has temperature range from **-65 °C to 260 °C**. It is flame retardant and none propagating in fire conditions.

ELTEC PTFE Insulated Thermocouple Wires conforms to US Military MIL – W – 16878 and Indian defense specifications JSS 51034. As per these standards, these wires are classified in three main working voltage grades.

HV TEST

GRADE	SPARK TESTING	DIE ELECTRIC TESTING
ET (250 V)	2500 V AC	1500 V AC
E (600 V)	3400 V AC	2000 V AC
EE (1000 V)	5000 V AC	3000 V AC

APPLICATIONS

- Manufacturing of Temperature Sensors
- Aerospace & Cryogenics
- FDA Approved Products
- Chemicals & Pharmaceuticals
- Laboratories
- Food Processing Plants
- Packaging

PRODUCT FEATURES

- Continuous use up to 260 °C
- Single exposure up to 400 °C
- Inert to most chemical & fluids
- Unaffected by lubricants
- Flame Retardant
- Immune to agene fungus & water absorption
- Resistant to gamma radiation

PRODUCT SPECIFICATIONS:

Conductor	Solid or Multi stranded from 12 AWG to 24 AWG , Refer table for type of cable
Core Insulation	Fused PTFE tape
Construction	Parallel Conductors
No. of Pair	1
Outer Sheath	Fused PTFE tape
Color Coding	Confirms to ANSI MC 96.1 (International Color Code Available)

- Other sizes in SWG and also different construction in other stranded sizes are available on request
- Optional construction of twisted conductors.
- Duplex construction are also available
- Optional Color coding: IEC 60584 – 3, BS 1843, DIN 13711, JIS C 1610 – 1981, NFC 42334 as per requirement





ELTEC CABLES & INSTRUMENTS

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TYPE OF CABLE	Wire Size AWG	Type of Wire	Type K	Type J	Type T	Type N	Type E
Individual Core & Overall Jacket of Fused PTFE - TT 	7 * 32	Stranded	Kt-7*32 TT	Jt-7*32TT	Tt-7*32TT	Nt-7*32TT	Et-7*32TT
	24	Solid	Kt-24 TT	Jt-24TT	Tt-24TT		
	22	Solid	Kt-22 TT	Jt-22TT			
	20	Solid	Kt-20 TT	Jt-20TT			
	18	Solid	Kt-18 TT	Jt-18TT			
	16	Solid	Kt-16 TT	Jt-16TT			
	14	Solid	Kt-14 TT	Jt-14TT			
	12	Solid	Kt-12 TT	Jt-12TT			
Individual Core & Jacket of Fused PTFE with Outside SS Metal Over Braid - TTS 	7 * 32	Stranded	Kt-7*32 TTS	Jt-7*36TTS	Tt-7*36TTS	Nt-7*36TTS	Et-7*36TT
	24	Solid	Kt-24 TTS	Jt-24TTS	Tt-24TTS		
	22	Solid	Kt-22 TT S	Jt-22TTS			
	20	Solid	Kt-20 TTS	Jt-20TTS			
	18	Solid	Kt-18 TTS	Jt-18TTS			
	16	Solid	Kt-16 TTS	Jt-16TTS			
	14	Solid	Kt-14 TTS	Jt-14TTS			
	12	Solid	Kt-12 TTS	Jt-12TTS			

- Duplex construction are suffix with D i.e. KtD ____
- Thermocouple Original, Extension & Compensating Grade Wire are suffix with t, x & c respectively i.e. Kt, Kx & Kc

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

Thermocouple Designation	Temperature Range °C (°F)	Standard Grade Limits °C (°F) whichever is greater	Tolerance-Reference Junction 0°C (32 °F)
			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)	±2.2 (4.0) or ±0.75%	±1.1 (2.0) or 0.4%
Tt	-200 (-328) to 0 (32)	±2.2 (4.0) or ±2%	-----
	0 (32) to 350 (662)	±1.0 (1.8) or ±0.75%	±0.5 (1.0) or 0.4%
Et	-200 (-328) to 0 (32)	±1.0 (1.8) or ±1.5%	-----
	0 (32) to 900 (1652)	±1.7 (3.0) or ±0.5%	±1.0 (1.8) or 0.4%
Nt	-200 (-328) to 0 (32)	±1.7 (3.0) or ±1%	-----
	0 (32) to 1300 (2372)	±2.2 (4.0) or ±0.75%	±1.1 (2.0) or 0.4%
	-270(-454) to 0 (32)	±2.2 (4.0) or ±2%	-----
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)	

- 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.



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