

THERMOCOUPLE EXTENSION WIRE

Individual/Overall Shield Served Wire Armor

UL Listed 300Volt PVC Insulated 221°F (105°C)

APPLICATIONS:

- Petrochemical Plants
- Utilities and Industrial Plants
- Thermocouple Circuits
- Suitable for Direct Burial and Suspension Applications
- For use in NEC Article 725 Class 1 Division 2 Hazardous Locations
- Complies with NEC 725 for use in Class 2 and Class 3 Circuits

PRODUCT FEATURES

- UL Listed Subject 13 PLTC
- Rated 105C 300 Volt
- Flame Retardant
- Passes IEEE 383 Flame Test
- Passes VW-1 Flame Test
- Available as Type ITC
- Resists Rodent and Mechanical Abuse
- Excellent Longitudinal Strength
- Sunlight Resistant

PRODUCT SPECIFICATIONS:

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

12 to 22 AWG (2.44 to .63MM)

INSULATION: Nominal .016" (.40MM) flame retardant PVC

COLOR CODE: Per ASTM E230 & ANSI MC96.1, numbered on positive conductor (other colors available)

CONSTRUCTION: Twisted pairs

INDIVIDUAL SHIELD: .00135" (.03MM) aluminum/polyester tape, 25% overlap

PAIR DRAIN WIRE: 22 AWG (.61MM) 7-strand tinned copper

COMMUNICATION WIRE: 22 AWG (.61MM) 7-strand copper insulated with nominal .015" (.38MM) orange PVC (4 pair and larger)

CABLE SHIELD: .002" (.05MM) aluminum/polyester tape, 25% overlap

CABLE DRAIN WIRE: 20 AWG (.91MM) 7-strand tinned copper

INNER JACKET: Flame retardant PVC with ripcord under jacket

ARMOR: Galvanized steel served wire, 80% nominal Coverage

OUTER JACKET: Flame retardant PVC with ripcord under jacket



ORDERING CODE:

UP/ALM/ALPWPTWK () - () () - ()

↑	↑	↑	↑
# of Pairs	Wire Size AWG or Metric	Add (F) for Stranded Wire	Calibration Grade Designation Per Table 1



Wire Size	Numbers Of Pairs	Inner/Outer Jacket Thickness		Outer Diameter		Bend Radius		Pull Tension		Net Weight	
		Inches	(MM)	Inches	(MM)	Inches	(MM)	LB	KG	LB/MF	KG/KM
16 AWG (1.29 MM) Solid	2	.053(1.35)	.064(1.63)	.660	(16.8)	7.9	(201)	206	(94)	292	(434)
	4	.053(1.35)	.064(1.63)	.732	(18.6)	8.8	(223)	317	(144)	377	(560)
	8	.064(1.63)	.074(1.88)	.952	(24.2)	11.4	(290)	602	(274)	658	(979)
	12	.064(1.63)	.074(1.88)	1.107	(28.1)	13.3	(337)	913	(415)	917	(1364)
	16	.074(1.88)	.074(1.88)	1.219	(31.0)	14.6	(372)	1138	(517)	1108	(1648)
	20	.074(1.88)	.085(2.16)	1.354	(34.4)	16.2	(413)	1464	(665)	1415	(2105)
	24	.074(1.88)	.085(2.16)	1.466	(37.2)	17.6	(447)	1717	(780)	1630	(2425)
	36	.085(2.16)	.085(2.16)	1.619	(41.1)	19.4	(493)	2338	(1063)	2079	(3093)
18 AWG (1.02 MM) Solid	2	.053(1.35)	.053(1.35)	.584	(14.8)	7.0	(178)	151	(68)	219	(326)
	4	.053(1.35)	.064(1.63)	.681	(17.3)	8.2	(208)	244	(111)	317	(472)
	8	.064(1.63)	.064(1.63)	.863	(21.6)	10.4	(263)	459	(209)	533	(792)
	12	.064(1.63)	.074(1.88)	.993	(25.2)	11.9	(303)	618	(281)	689	(1025)
	16	.064(1.63)	.074(1.88)	1.103	(28.0)	13.2	(336)	847	(385)	895	(1332)
	20	.074(1.88)	.074(1.88)	1.191	(30.3)	14.3	(363)	1012	(460)	1053	(1566)
	24	.074(1.88)	.085(2.16)	1.347	(34.2)	16.2	(411)	1288	(585)	1352	(2011)
	36	.074(1.88)	.085(2.16)	1.462	(37.1)	17.5	(446)	1729	(786)	1683	(2505)
20 AWG (0.81 MM) Solid	2	.042(1.07)	.053(1.35)	.532	(13.5)	6.4	(163)	122	(55)	182	(271)
	4	.053(1.35)	.064(1.63)	.644	(16.4)	7.7	(196)	195	(89)	280	(416)
	8	.053(1.35)	.064(1.63)	.791	(20.1)	9.5	(242)	355	(161)	445	(662)
	12	.064(1.63)	.074(1.88)	.931	(23.6)	11.2	(283)	481	(218)	597	(888)
	16	.064(1.63)	.074(1.88)	1.033	(26.2)	12.4	(315)	666	(303)	779	(1159)
	20	.064(1.63)	.074(1.88)	1.095	(27.8)	13.1	(334)	771	(350)	872	(1298)
	24	.074(1.88)	.074(1.88)	1.203	(30.6)	14.4	(367)	896	(407)	1012	(1506)
	36	.074(1.88)	.085(2.16)	1.364	(34.6)	16.4	(416)	1317	(599)	1424	(2119)

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)	Grade Designation	Special Grade Limits °F (°C)
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)
Compensating Extension Wire					
RX or SX	32 (0) to 400 (200)	RX or SX	±9 (5)		

ELECTRICAL CHARACTERISTICS

Insulation passes 3000 V ac spark test per UL Subject 13.

Completed cable passes a dielectric test of 2500 V dc for

10 seconds, conductor to conductor and conductor to shield, per UL Subject 13.