



# THERMOCOUPLE EXTENSION CABLE

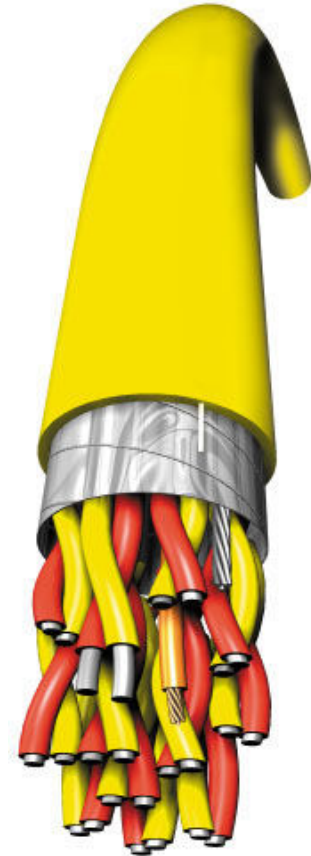
**Overall Shield**  
**UL Listed 300 Volt PVC Insulated 221°F (105°C)**

### Applications

- Petrochemical Plants
- Utilities and Industrial Plants
- Thermocouple Circuits
- 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

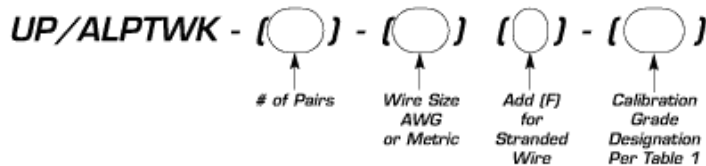
- UL Listed Subject 13 PLTC
- Rated 105C 300 Volt
- Flame Retardant
- Passes IEEE 383 Flame Test
- Passes VW-1 Flame Test
- Sunlight Resistant
- Available as Type ITC
- CPE and TPE Constructions
- ...Are Also Available



### 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
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
Outer Jacket:	Flame retardant PVC with ripcord under jacket

### Ordering Code



(Call for CSA Data)

Wire Size	Numbers of Pairs	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 (1.29MM) Solid	1	.037	(0.94)	.256	(6.5)	1.5	(39)	54	(25)	43	(64)
	4	.053	(1.35)	.471	(12.0)	2.8	(72)	172	(78)	135	(201)
	8	.053	(1.35)	.587	(14.9)	3.5	(89)	336	(153)	232	(345)
	12	.064	(1.63)	.708	(18.0)	4.2	(108)	500	(227)	340	(506)
	16	.064	(1.63)	.791	(20.1)	4.7	(121)	664	(302)	431	(642)
	20	.064	(1.63)	.825	(21.0)	5.0	(126)	828	(376)	520	(773)
	24	.074	(1.88)	.953	(24.2)	5.7	(145)	992	(451)	635	(946)
36	.074	(1.88)	1.077	(27.4)	6.5	(164)	1484	(675)	901	(1341)	

<b>18 AWG (1.02MM) Solid</b>	1	.037	(0.94)	.234	(5.9)	1.4	(36)	34	(15)	34	(51)
	4	.053	(1.35)	.424	(10.8)	2.5	(65)	112	(51)	105	(156)
	8	.053	(1.35)	.525	(13.3)	3.2	(80)	216	(98)	174	(259)
	12	.064	(1.63)	.634	(16.1)	3.8	(97)	320	(145)	255	(379)
	16	.064	(1.63)	.706	(17.9)	4.2	(108)	424	(193)	321	(478)
	20	.064	(1.63)	.734	(18.6)	4.4	(112)	528	(240)	383	(569)
	24	.064	(1.63)	.828	(21.0)	5.0	(126)	632	(287)	453	(674)
36	.074	(1.88)	.956	(24.3)	5.7	(146)	944	(429)	656	(976)	
<b>20 AWG (0.81MM) Solid</b>	1	.037	(0.94)	.218	(5.5)	1.3	(33)	21	(10)	28	(42)
	4	.042	(1.07)	.369	(9.4)	2.2	(56)	72	(33)	77	(115)
	8	.053	(1.35)	.480	(12.2)	2.9	(73)	136	(62)	136	(202)
	12	.053	(1.35)	.557	(14.1)	3.3	(85)	200	(91)	188	(280)
	16	.064	(1.63)	.643	(16.3)	3.9	(98)	264	(120)	242	(360)
	20	.064	(1.63)	.669	(17.0)	4.0	(102)	328	(149)	292	(434)
	24	.064	(1.63)	.752	(19.1)	4.5	(115)	392	(178)	343	(510)
36	.064	(1.63)	.848	(21.5)	5.1	(129)	584	(265)	479	(713)	

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

<u>Thermocouple Type</u>	<u>Temperature Range F(C)</u>	<u>Grade Designation</u>	<u>Tolerance-Reference Junction 32F (0C)</u>		
			<u>Standard Grade Limits F(C)</u>	<u>Grade Designation</u>	<u>Special Grade Limits F(C)</u>
<u>Extension Wire</u>					
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)
<u>Compensating Extension Wire</u>					
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.



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A Marmon Wire & Cable/Berkshire Hathaway Company