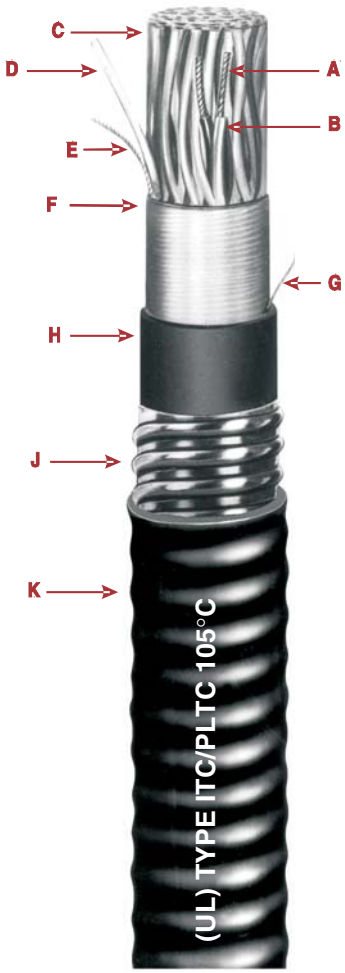
Loxarmor® Type P-OS

Type ITC/PLTC Armored Thermocouple Extension Cable

Multiple Pair - Overall Shield - 105°C Rating

For Cable Tray Use



A Solid Thermocouple Alloy Conductor
B Okoseal Insulation
C Twisted Pair
D Communication Wire
E Tinned Stranded Copper Drain Wire
F Aluminum/Synthetic Polyester Tape
G Rip Cord
H Inner Okoseal Jacket
J Galvanized Steel Interlocking Loxarmor
K Outer Okoseal Jacket

Specifications

Conductors: Solid alloys per ANSI MC 96.1.

Insulation: Flame-retardant Okoseal® (PVC) per UL 13 and UL 2250, 15 mils nominal thickness, 105°C temperature rating.

Conductor Identification: Pigmented insulation on individual conductors negative conductor numerically printed for group identification.

Communications Wire: 22 AWG, solid bare copper conductor, 12 mils nominal flame-retardant Okoseal insulation, 105°C temperature rating.

Assembly: Pairs assembled with left-hand lay. Flame-retardant, non-wicking fillers included where required to provide a round cable.

Cable Shield: Aluminum/synthetic polymer tape overlapped to provide 100% coverage, and a 7-strand tinned copper drain wire, same size as the conductor.

Inner Jacket: Color-coded, flame-retardant Okoseal per UL 13 and UL 2250. A rip cord is laid longitudinally under the jacket to facilitate removal.

Loxarmor Sheath: An interlocking galvanized steel armor provides mechanical protection against cut-through and crushing. All four sides of the steel tape are galvanized to prevent corrosion.

Outer Jacket: Color-coded, flame-retardant Okoseal per UL 13 and UL 2250.

Classification: UL Listed as Type ITC/PLTC - Instrumentation Tray Cable/Power Limited Tray Cable for use in accordance with Articles 722 and 335 of the 2023 National Electrical Code.

The cables comply with UL 2250 and UL 13 for CL2 and CL3.

Applications

Okonite Loxarmor Type P-OS (Pair-Overall Shield) Thermocouple Extension cables are designed for use as instrumentation and process control cables in ITC non-classified or labeled circuits up to 150 volts and 5 amps (750VA) and in Class 2 or 3 Power-Limited circuits where shielding against external interference is required, but shielding against interference among groups is not required; indoors or outdoors; in wet or dry locations with conductor operating temperatures up to 105°C; in cable trays; in raceways; supported by a messenger wire; under raised floors. Suitable Class I, Division 2, Class II, Division 2, or Class III, Division 1 hazardous locations. Also for use as Power-Limited fire protective signaling cable (FPL) per NEC Article 760. It may be installed in both exposed and concealed work, secured to supports not greater than 6 feet apart.

Product Features

- Passes the UL 1581 & IEEE 383-1974 vertical tray flame tests.
- Passes the IEEE 1202-1991 vertical tray flame test (8 pair and larger).
- Passes the 210,000 BTU/hr vertical tray flame test per ICEA T-29-520 and the 210,000 BTU/hr corner configuration test.
- UL listed as sunlight resistant.
- Complete pre-packaged, factory tested wiring system-color coded.
- Loxarmor cables are quality control inspected to meet or exceed applicable UL Standards.
- Loxarmor enclosure permits installation in cable tray containing light and power cables without a barrier separator.
- Individual pairs are numbered and color coded for simplified hook-up.
- Impervious, continuous sheath excludes moisture, gases and liquids.
- Excellent noise rejection.
- Excellent compression and impact resistance.
- Lower installed system cost than conduit or EMT systems.
- Also available in aluminum.
- Suitable for low temperature installation to -40°C.

LOXARMOR Type P-OS

Type ITC/PLTC Armored Thermocouple Extension Cable

Multiple Pair - Overall Shield 300V - 105°C Rating

For Cable Tray Use

Conductors: 20 AWG; Okoseal Insulation: 15 mils

ASA/ISA Type	Catalog Number	Number of Pairs	Inner Jacket Thickness - mils	Inner Jacket Nominal O.D. - (In.)	Loxarmor O.D. - Nominal Inches	Outer Jacket - mils	Nominal Cable O.D. - (In.)	Cross-Sectional Area † (sq in)	Approx Net Weight (lbs/1000')	Approx Ship Weight (lbs/1000')
EX	284-20-5504	4	40	.38	.62	50	.73	.42	286	325
	284-20-5508	8	50	.50	.72	50	.83	.54	389	428
	284-20-5510	10	50	.60	.82	50	.93	.68	468	532
	284-20-5512	12	50	.59	.81	50	.92	.66	480	544
	284-20-5516	16	60	.67	.89	50	1.00	.78	573	637
	284-20-5520	20	60	.72	.94	50	1.05	.86	639	719
	284-20-5524	24	60	.80	1.02	50	1.13	1.00	722	802
	284-20-5536	36	70	.91	1.13	50	1.24	1.21	915	1021
	284-20-5550	50	70	1.06	1.27	50	1.38	1.50	1130	1236
JX	284-20-5604	4	40	.38	.62	50	.73	.42	285	324
	284-20-5608	8	50	.50	.72	50	.83	.54	388	427
	284-20-5610	10	50	.60	.82	50	.93	.68	466	530
	284-20-5612	12	50	.59	.81	50	.92	.66	477	541
	284-20-5616	16	60	.67	.89	50	1.00	.78	570	634
	284-20-5620	20	60	.72	.94	50	1.05	.86	635	715
	284-20-5624	24	60	.80	1.02	50	1.13	1.00	717	797
	284-20-5636	36	70	.91	1.13	50	1.24	1.21	907	1013
	284-20-5650	50	70	1.06	1.27	50	1.38	1.50	1120	1226
KX	284-20-5704	4	40	.38	.62	50	.73	.42	286	325
	284-20-5708	8	50	.50	.72	50	.83	.54	389	428
	284-20-5710	10	50	.60	.82	50	.93	.68	468	532
	284-20-5712	12	50	.59	.81	50	.92	.66	480	544
	284-20-5716	16	60	.67	.89	50	1.00	.78	573	637
	284-20-5720	20	60	.72	.94	50	1.05	.86	639	719
	284-20-5724	24	60	.80	1.02	50	1.13	1.00	722	802
	284-20-5736	36	70	.91	1.13	50	1.24	1.21	915	1021
	284-20-5750	50	70	1.06	1.27	50	1.38	1.50	1130	1236
TX	284-20-5804	4	40	.38	.62	50	.73	.42	287	326
	284-20-5808	8	50	.50	.72	50	.83	.54	391	430
	284-20-5810	10	50	.60	.82	50	.93	.68	470	534
	284-20-5812	12	50	.59	.81	50	.92	.66	479	543
	284-20-5816	16	60	.67	.89	50	1.00	.78	576	640
	284-20-5820	20	60	.72	.94	50	1.05	.86	643	723
	284-20-5824	24	60	.80	1.02	50	1.13	1.00	727	807
	284-20-5836	36	70	.91	1.13	50	1.24	1.21	922	1028
	284-20-5850	50	70	1.06	1.27	50	1.38	1.50	1140	1246

ASA/ISA COLOR CODE AND LIMITS OF ERROR

ASA/ISA Type	Positive Wire		Negative Wire		Outer Jacket Color	Temperature Range°C	Limits of Error		Wire Size (AWG)	Nom. Loop Resistance Per 100' @ 20°C
	Alloy	Color	Alloy	Color			Standard	Special (1)		
EX	Chromel	Purple	Constantan	Red	Purple	0 to 200°C	± 1.7°C	—	20	70.7 ohms
JX	Iron	White	Constantan	Red	Black	0 to 200°C	± 2.2°C	± 1.1°C	20	35.7 ohms
KX	Chromel	Yellow	Alumel	Red	Yellow	0 to 200°C	± 2.2°C	—	20	59.0 ohms
TX	Copper	Blue	Constantan	Red	Blue	-60 to 100°C	± 1.0°C	± 0.5°C	20	29.8 ohms

ELECTRICAL SPECIFICATIONS
Per UL Standard 2250

Insulation Test Voltage (spark test) .....5000 Volts ac

Dielectric Test Voltage .....1500 Volts ac for 15 sec.

Shield Isolation Test
Pair to Cable Shield.....exceeds 100 Megohms/1000 ft.

Insulation Resistance Constant @60°F, minimum
(natural material typical value).....2000 Ohms-1000 ft.

SX available upon request.

(1) Special grade alloy conductors for JX and TX are available on special order.

† Cross-sectional area for calculation of cable tray fill in accordance with NEC Section 392.22.

Aluminum Loxarmor available on special order.

Length Tolerance: Cut lengths of 1000 feet or longer are subject to a tolerance of ± 10%; less than 1000 feet ± 15%.

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