



Type P-OS

Type ITC/PLTC Thermocouple Extension Cable

Single Pair - Overall Shield - 105°C Rating
For Cable Tray Use



- A Solid Thermocouple Alloy Conductor
- B Okoseal Insulation
- C Twisted Pair/Triad
- D Tinned Stranded Copper Drain Wire
- E Aluminum/Polyester Tape
- F Rip Cord
- G 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.

Assembly: Pair assembled with left-hand lay.

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

Jacket: Flame-retardant, low temperature Okoseal per UL 13 and UL 2250. A rip cord is laid longitudinally under the jacket to facilitate removal.

Classifications: UL Listed as Type ITC/PLTC - Instrumentation Tray Cable/Power Limited Tray Cable, for use in accordance with Article 335 and 722 of the 2023 National Electrical Code. Cables comply with UL 2250 for ITC and UL 13 for PLTC, CL2 and CL3.

Applications

Okonite 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 of 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.

Product Features

- Passes the UL 1581 & IEEE 383-1974 vertical tray flame tests.
- Sunlight resistant & oil resistant.
- Individual pairs are color coded for simplified hook-up.
- Good noise rejection.
- Excellent weathering characteristics.
- Flexible, easy to handle terminate.
- Twisted with 100% shield coverage to reduce electromagnetic noise.
- Suitable for low temperature installation of -40°C.

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Product Data

Section 5: Sheet 18



Conductors: 16 AWG
Okoseal Insulation: 15 mils

ASA/ISA Type	Catalog Number	Number of Pairs	Jacket Thickness (mils)	Nominal Cable O.D. - (in.)	Cross-Sectional Area † (sq in)	Approx Net Weight (lbs/1000')	Approx Ship Weight (lbs/1000')
EX	▲ 284-20-1401	1	35	.24	.05	44	49
JX	▲ 284-20-2401	1	35	.24	.05	44	49
KX	▲ 284-20-3401	1	35	.24	.05	44	49
TX	284-20-4401	1	35	.24	.05	44	49

ASA/ISA COLOR CODE AND LIMITS OF ERROR									
ASA/ISA Type	Positive Wire		Negative Wire		Outer Jacket Color	Temperature Range°C	Limits of Error		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		27.8 ohms
JX	Iron	White	Constantan	Red	Black	0 to 200°C	± 2.2°C	± 1.1°C	13.9 ohms
KX	Chromel	Yellow	Alumel	Red	Yellow	0 to 200°C	± 2.2°C		23.6 ohms
TX	Copper	Blue	Constantan	Red	Blue	-60 to 100°C	± 1.0°C	± 0.5°C	12.0 ohms

▲ Authorized Stock Item: Available from our Customer Service Center.

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

ELECTRICAL SPECIFICATIONS Per UL Standard 13 and 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 100M ohms/1000 ft.
Insulation Resistance Constant @60°F minimum (natural material typical value).....	
	2000 Megohms-1000 ft.