



# Okozel<sup>®</sup>-Okozel Type P-OS Type ITC/PLTC Instrumentation Cable

Single Pair, Triad, or Quad - Overall Shield  
300 Volts - 150°C Rating  
For Cable Tray Use



- A Bare Stranded Copper Conductor
- B Okozel Insulation
- C Twisted Pair/Triad/Quad
- D Aluminum-Nomex-Polyester Cable Shield
- E Tinned Stranded Copper Drain Wire
- F Black Okozel Jacket

### Insulation and Jacket

Okozel is Okonite's trade name for ETFE Fluoropolymer, a modified Ethylene Tetrafluoroethylene. Okozel is extremely rugged with excellent resistance to cut-through and abrasion. It is chemically inert. Okozel is flame-retardant and non-propagating, passes the IEEE 383 vertical tray flame test, and is rated "non-burning" under ASTM D635. It is rated for 150°C (302°F) conductor operating temperature for continuous use and retains all useful physical properties at temperatures down to -100°C (-148°F).

### Specifications

**Conductors:** Bare soft annealed copper, Class B, 7-strand concentric per ASTM B-8.

**Insulation:** Flame-retardant, radiation-resistant Okozel, a modified ETFE fluoropolymer. Exceeds requirements for UL 13 and UL 2250.

**Conductor Identification:** Pigmented black, white, red, and blue.

**Assembly:** Conductors assembled with left-hand lay.

**Cable Shield:** Aluminum-nylon-polyester tape overlapped to provide 100% coverage, and a 7-strand coated copper drain wire, same size as conductor.

**Jacket:** Black, heavy duty, flame-retardant, radiation, oil, fuel, and chemical-resistant Okozel. Cable meets or exceeds the requirements of UL 13 and UL 2250, NEMA HP-100, and is rated "non-burning" under ASTM D635.

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

The cables comply with UL 2250 for ITC and UL Standard 13 for PLTC, CL2 and CL3.

### Applications

Okonite Okozel Type P-OS (Pair/triad - Overall Shield) instrumentation cables are recommended for use in fossil fueled generating stations where continuity of critical control circuits is of primary importance. Designed for use as instrumentation, process control, and computer 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; rated

150°C in dry locations and 75°C in wet locations; in cable trays; in raceways; supported by a messenger wire; under raised floors; for direct burial. Suitable Class I, Division 2; Class II, Division 2; or Class III, Division 2 hazardous locations. Also for use as Power-Limited fire protective signaling cable (FPL) per NEC Article 760.

Okozel instrumentation cables are also recommended for high ambient temperature areas up to 150°C (302°F) in industrial applications or for cold weather installations in excess of -65°C (-85°F).

### Product Features

- 100% shield coverage for reduced electrostatic noise.
- Twisted to reduce electromagnetic pick-up.
- Good noise rejection.
- Low surface friction provides easier installation.
- Smaller and lighter diameter permits more cables per tray.
- 150°C continuous operating temperature.
- Cold installation temperature in excess of -65°C.
- Exceptional abrasion resistance will not cut or tear.
- Flame-retardant and non-propagating. Passes IEEE 383 and UL Vertical Tray Flame Tests.
- Low smoke emission.
- Chemically inert - unaffected by typical acids, bases, solvents and cleaning agents, fuels and hydraulic fluids.
- High dielectric strength.
- Low dielectric constant.
- Special designs available that are qualified for nuclear generating stations at 90°C in accordance with IEEE Standards 383-74 and 323-74.

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## Product Data Section 5: Sheet 32

Catalog Number	Conductor Size- AWG (Strands)	Number of Pairs	Number of Triads	Number of Quads	Insulation Thickness - (mils)	Jacket Thickness	Nominal Cable O.D. - (In.)	Approx Net Weight (lbs/1000')	Approx Ship Weight (lbs/1000')
264-40-3301 264-45-3301 264-50-3301	18(7X)	1	1	1	9	15	0.20 0.21 0.23	29 37 46	34 42 51
264-40-4401 264-45-4401 264-50-4401	16(7X)	1	1	1	9	15	0.22 0.24 0.26	40 52 64	45 57 69
264-40-5501 264-45-5501 264-50-5501	14(7X)	1	1	1	12	15	0.25 0.27 0.29	57 74 92	62 79 97
264-40-6601	12(7X)	1			12	15	0.29	83	88

### ELECTRICAL SPECIFICATIONS Per UL Standards 13 and 2250

Conductor Resistance, maximum .....ohms/1000 ft. @20°C	@25°C
18 AWG .....	6.90 . . . 7.04
16 AWG .....	4.34 . . . 4.43
14 AWG .....	2.72 . . . 2.78
12 AWG .....	1.71 . . . 1.75
Insulation Test Voltage (spark test).....	5000 volts ac
Dielectric Test Voltage .....	1500 volts ac for 15 sec.
Insulation Resistance Constant @60°F minimum (natural material typical value).....	50,000 Megohms-1000 ft.
Loop Resistance, maximum (2 cdr.).....ohms-1000 ft @20°C	@25°C
18 AWG .....	13.80 . . . 14.08
16 AWG.....	8.68 . . . 8.86
14 AWG.....	5.44 . . . 5.56
12 AWG .....	3.42 . . . 3.50

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

