Specifications

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

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

**Conductor Identification:** Pigmented black and white in pairs, black, red and white in triads; white 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 or triads assembled with left-hand lay. Flame-retardant, non-wicking fillers included where required to provide a round cable.

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

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

**Wire Armor:** A serving of soft annealed galvanized steel wires applied with a left-hand lay and a 90% minimum coverage.

**Outer Jacket:** Black, flame-retardant, low temperature Okoseal per UL Subject 13 and UL 2250.

**Classifications:** UL Listed as ITC/PLTC - Instrument Tray Cable/Power Limited Tray Cable for use in accordance with Article 727 and Article 725 of the National Electrical Code.

The cable core complies with UL 2250 and UL 13 for PLTC, CL2 and CL3.

**Applications**

Okonite Single Wire Armored (SWA) Type P-OS (Pair/Triad - Overall Shield) instrumentation cables are designed for use as instrumentation, process control 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; for direct burial. Suitable for use in 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 Code 760. The wire armor provides excellent longitudinal strength for use as a messenger cable or for support in vertical drops (NEC Section 300-19) and provides physical protection against mechanical damage.

For dc service in wet locations X-Olene insulation having an overall aluminum C-L-X armor construction is recommended.

**Product Features**

- Passes flame test for use in cable tray.
- Sunlight resistant.
- Oil resistant.
- Excellent electromagnetic shielding.
- Individual pairs or triads are numbered and color coded for simplified hook-up.
- Good Noise rejection.
- Communication wire included in each cable for voice communication during installation or instrument calibration.

- Excellent longitudinal strength.
- Excellent cut through resistance.
- Suitable for IEC60402-1 and 60092-376 applications.
- OSHA Acceptable.

- Suitable for low temperature installation of -40°C.
**Wire Armored Type P-OS**

**Type ITC/PLTC Armored Instrumentation Cable**

Multiple Pairs or Triads - Overall Shield - 300V - 150°C Rating

For Cable Tray Use

Okoseal Insulation: 15 mils

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<th>Catalog Number</th>
<th>Size AWG/Strands</th>
<th>Number of Pairs</th>
<th>Number of Triads</th>
<th>Cross-Sectional Area</th>
<th>Approx. Net Weight (lb/1000 ft)</th>
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**Electrical Specifications**

- **Conductor Resistance**, nominal ohms/1000 ft: 20 AWG: 10.4, 18 AWG: 6.5, 16 AWG: 4.1
- **Insulation Test Voltage** (spark test): 5000 Volts ac for 15 sec.
- **Dielectric Test Voltage**: 1500 Volts ac for 30 sec.

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*SWG - Steel Wire Gage  
† Cross-sectional area for calculation of cable tray fill in accordance with NEC Section 318-8  
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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**The Okonite Company**  
Ramsey, New Jersey 07446