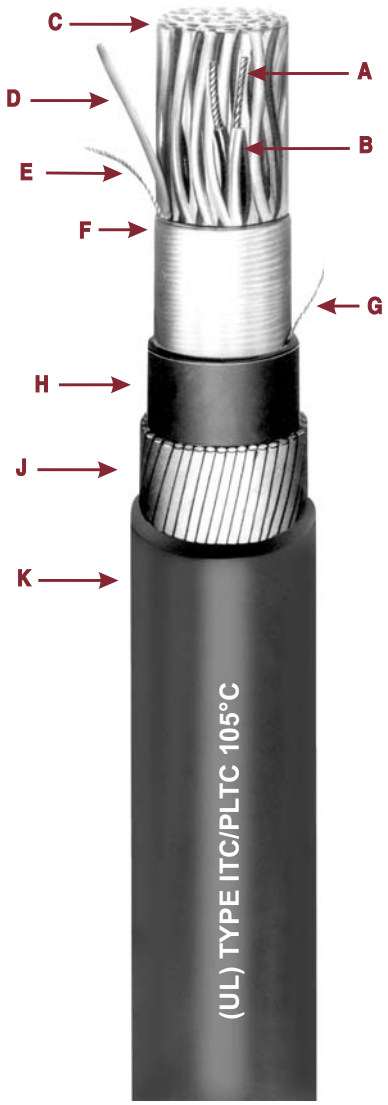
Wire Armor Type P-OS

Type ITC/PLTC Armored Instrumentation Cable

Multiple Pairs or Triads - Overall Shield
300 Volts - 105°C Rating
For Cable Tray Use



A Bare Stranded Copper Conductor
B Okoseal Insulation
C Twisted Pairs/Triads
D Communication Wire
E Tinned Stranded Copper Drain Wire
F Double Faced Aluminum/Polyester BackedTape
G Rip Cord
H Inner Black Okoseal Jacket
J Galvanized Steel Served Wire Armor
K Outer Black Okoseal Jacket

Specifications

Conductors: Bare soft annealed copper, Class B, 7-strand concentric per ASTM B-8.
Insulation: Flame-retardant Okoseal® (PVC) per UL 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 13 and UL 2250.
Classifications: 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 cable core complies with UL 2250 for ITC 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. Suitable for use in 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.
The wire armor provides excellent longitudinal strength for use as a messenger cable or for support in vertical drops (NEC Article 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 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

Catalog Number	Size AWG/Strands	Number of Pairs	Number of Triads	Inner Jacket Thickness - mils	Inner Jacket Nominal O.D. In.	Number & SWG* Armor	Nominal Armor O.D. - Inches	Outer Jacket mils	Nominal Cable O.D. - (In.)	Cross-Sectional Area † (sq in)	Approx Net Weight (lbs/1000')	Approx Ship Weight (lbs/1000')
264-10-8204	20(7X)	4	40	.39	33 x 20	.46	40	.54	.23	243	267
264-10-8208		8	50	.49	30 x 18	.59	50	.68	.36	410	449
264-10-8210		10	50	.56	35 x 18	.65	50	.76	.45	480	519
264-10-8212		12	50	.58	36 x 18	.68	50	.79	.49	510	549
264-10-8216		16	60	.66	31 x 16	.79	60	.92	.66	722	786
264-10-8220		20	60	.72	34 x 16	.84	60	.98	.75	816	880
264-10-8224		24	60	.77	35 x 16	.90	60	1.03	.83	880	944
264-10-8236		36	60	.87	32 x 14	1.03	60	1.16	1.06	1234	1314
264-10-8250		50	70	1.02	20 x 12	1.23	70	1.38	1.50	1597	1713
264-15-8204		4	50	.43	36 x 20	.50	50	.61	.29	302	326
264-15-8212		12	50	.61	29 x 16	.74	50	.85	.57	679	743
264-15-8216		16	60	.69	33 x 16	.82	60	.95	.71	837	901
264-15-8224		24	60	.81	30 x 14	.97	60	1.10	.95	1182	1262
264-15-8236		36	70	.93	34 x 14	1.09	70	1.24	1.21	1517	1633
264-10-8304	18(7X)	4	50	.46	28 x 18	.56	50	.67	.35	368	407
264-10-8308		8	50	.55	33 x 18	.64	50	.75	.44	480	519
264-10-8310		10	60	.65	31 x 16	.77	60	.90	.64	706	770
264-10-8312		12	60	.68	31 x 16	.81	60	.94	.69	742	806
264-10-8316		16	60	.73	34 x 16	.85	60	.99	.77	853	917
264-10-8320		20	60	.81	30 x 14	.97	60	1.10	.95	114	1194
264-10-8324		24	60	.86	31 x 14	1.01	60	1.15	1.04	1204	1284
264-10-8336		36	70	1.00	36 x 14	1.16	70	1.31	1.35	1552	1668
264-10-8350		50	70	1.15	32 x 12	1.35	70	1.51	1.79	2195	2338
264-15-8304		4	50	.49	30 x 18	.57	50	.68	.36	416	444
264-15-8312		12	60	.71	33 x 16	.83	60	.96	.72	864	928
264-15-8316		16	60	.78	36 x 16	.90	60	1.03	.83	1007	1071
264-15-8324		24	70	.92	34 x 14	1.08	70	1.23	1.19	1496	1602
264-15-8336		36	70	1.04	29 x 12	1.25	70	1.41	1.56	2126	2242
264-10-8404	16(7X)	4	50	.51	31 x 18	.61	50	.72	.41	432	471
264-10-8408		8	50	.62	29 x 16	.75	50	.86	.58	674	713
264-10-8410		10	60	.73	34 x 16	.85	60	.98	.75	839	903
264-10-8412		12	60	.76	35 x 16	.88	60	1.01	.80	900	964
264-10-8416		16	60	.82	30 x 14	.98	60	1.11	.97	1181	1261
264-10-8420		20	70	.93	34 x 14	1.09	70	1.24	1.21	1413	1519
264-10-8424		24	70	1.00	36 x 14	1.16	70	1.31	1.35	1552	1668
264-10-8436		36	70	1.11	31 x 12	1.32	70	1.47	1.70	2209	2325
264-10-8450		50	80	1.32	38 x 12	1.53	80	1.71	2.30	2867	3054
264-15-8404		4	50	.53	33 x 18	.63	50	.74	.43	495	534
264-15-8412		12	60	.79	30 x 14	.95	60	1.09	.93	1212	1292
264-15-8416		16	70	.89	33 x 14	1.05	70	1.21	1.15	1468	1574
264-15-8424		24	70	1.04	29 x 12	1.25	70	1.40	1.54	2123	2266
264-15-8436		36	70	1.18	33 x 12	1.39	70	1.54	1.86	2692	2835

ELECTRICAL SPECIFICATIONS
Per UL Subject 13 & 2250

Conductor Resistance, nominal .....ohms/1000 ft. @20°C
- 20 AWG..... 10.4
- 18 AWG..... 6.5
- 16 AWG..... 4.1

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 M ohms/1000 ft.

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

Loop Resistance, nominal (2 conductor) ohms-1000 ft @20°C
- 20 AWG..... 20.8
- 18 AWG..... 13.0
- 16 AWG..... 8.2

Mutual Capacitance (PF/ft.)*
- #20 37
- #18 41
- #16 44

*Typical Value

* **SWG -** Steel Wire Gage
† **Cross-sectional** area for calculation of cable tray fill in accordance with NEC Section 392.22.
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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