



### Okoseal-N<sup>®</sup> Type SP-OS

### UL Type TC and cUL Type CIC Instrumentation Cable

Multiple Shielded Pairs or Triads - Overall Shield  
600 Volts - 90°C Rating Wet or Dry



- A** Stranded Bare Copper Conductor
- B** Okoseal Insulation with Nylon Jacket
- C** Tinned Stranded Copper Group Drain Wire
- D** Double Faced Aluminum/Synthetic Polymer Backed Tape
- E** Twisted, Shielded Pairs/Triads
- F** Double Faced Aluminum/Synthetic Polymer Backed Tape
- G** Stranded Tinned Copper Drain Wire
- H** Rip Cord
- J** Black Okoseal Jacket

#### Specifications

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

**Insulation:** Flame-retardant Okoseal<sup>®</sup> (PVC), 15 mils nominal thickness, nylon jacket, 4 mil nominal thickness, 90°C temperature rating, per UL Standard 1277.

**Conductor Identification:** Pigmented black and white in pairs; black, white and red in triads.

**Group Shield:** Aluminum/Polyester tape overlapped to provide 100% coverage, and a 7-strand tinned copper drain wire, two sizes smaller than the conductor. All group shields are completely isolated from each other.

**Assembly:** Pairs or triads assembled with 1 left-hand lay. Flame-retardant, non-wicking fillers included where required to provide a round cable.

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

**Jacket:** Black, flame-retardant, low temperature Okoseal per UL Standard 1277, 90°C temperature rating. A rip cord is laid longitudinally under the jacket to facilitate removal.

**Classification:** UL Listed as Type TC Article 336 of the National Electrical Code.

#### Applications

Okonite's Type SP-OS (Shielded pairs or triads - Overall Shield) instrumentation cables are designed for use on Class 1 Remote-Control Signaling circuits or where a 600V cable is desired, as instrumentation, process control, or computer cable transmitting signals at levels above 100 milli-volts in circuits where maximum noise protection is required. Protection from interference among groups as well as external sources is provided by individual group shields as well as an overall cable shield. For use indoors or outdoors; wet or dry locations; in raceways; supported by a messenger wire; for direct burial; in Class I, Division 2, Class II, Division 2 or Class III, Division 2 hazardous locations. Also for use as non power limited fired protective signaling cable (NPLF) per NEC Code 760. As an option, type TC cables can be labeled Okomarine to be used in ABS and Coast Guard approved marine applications, on special order.

#### Product Features

- Passes the UL 1277 and IEEE 383-1974 vertical tray flame tests.
- Passes IEEE 1202 vertical tray flame test (8 pr #18 and 4 pr #16 & larger).
- May be combined with 600 volt power and control cables in the same tray.
- Sunlight resistant and oil resistant.
- UL listed for direct burial (8/pr #16 AWG and larger)
- Individual pairs or triads are numbered and color-coded for simplified hook-up.
- Individual pairs or triads are completely isolated.
- 100% shield coverage for reduced electromagnetic noise pick-up.
- Good external noise rejection.
- Excellent weathering characteristics.
- OSHA Acceptable.
- Flexible, easy to handle and terminate.
- Suitable for installation at low temperatures to -40°C.
- CSA C22.2 No. 239 Type CIC.

# Okoseal-N Type SP-OS



# Product Data Section 5: Sheet 31

## UL Type TC and cUL Type CIC Instrumentation Cable

Single Pairs or Triads - Individual and Overall Shield  
600V - 90°C Rating Wet or Dry

### Okoseal Insulation - 15 mils; Nylon Jacket - 4 mils

Catalog Number	Size AWG Strands	Number of Pairs	Number of Triads	Jacket Thickness (mils)	Nominal Cable O.D. - (In.)	Cross-Sectional Area † (sq in)	Approx Net Weight (lbs/1000')	Approx Ship Weight (lbs/1000')
261-60-3304	18 (7x)	4	45	0.50	0.20	138	161	
261-60-3308		8	60	0.67	0.35	258	297	
261-60-3310	18 (7x)	10	60	0.77	0.46	316	355	
261-60-3312		12	80	0.81	0.51	395	459	
261-60-3316		16	80	0.93	0.67	496	559	
261-60-3320		20	80	1.07	0.90	597	677	
261-60-3324	18 (7x)	24	80	1.09	0.93	699	779	
261-60-3336		36	80	1.28	1.29	974	1080	
261-60-3350		50	80	1.55	1.89	1307	1450	
261-65-3304		18 (7x)	4	60	0.61	0.29	196	220
261-65-3308	8		60	0.75	0.44	317	356	
261-65-3312	12		80	0.95	0.71	516	580	
261-65-3316	18 (7x)	16	80	1.09	0.93	652	732	
261-65-3324		24	80	1.34	1.41	940	1046	
261-65-3336		36	80	1.53	1.84	1319	1462	
▲ 261-60-4402	16 (7x)	2	45	0.44	0.15	114	137	
▲ 261-60-4404		4	60	0.58	0.26	198	222	
▲ 261-60-4408		8	60	0.72	0.47	337	376	
261-60-4410	16 (7x)	10	80	0.94	0.69	452	516	
▲ 261-60-4412		12	80	0.91	0.65	515	579	
261-60-4416		16	80	1.04	0.85	650	730	
261-60-4420		20	80	1.19	1.11	787	867	
▲ 261-60-4424	16 (7x)	24	80	1.18	1.09	925	1031	
261-60-4436		36	80	1.40	1.54	1304	1410	
261-60-4450		50	110	1.79	2.52	1866	2053	
261-65-4404		16 (7x)	4	60	0.61	0.29	252	291
▲ 261-65-4408	8		80	0.79	0.49	478	542	
▲ 261-65-4412	12		80	1.00	0.79	674	754	
261-65-4416	16 (7x)	16	80	1.12	0.99	858	964	
261-65-4424		24	80	1.50	1.77	1245	1388	
261-65-4436		36	80	1.71	2.30	1761	1948	
261-60-5504	14 (7x)	4	60	0.68	0.36	272	311	
261-60-5508		8	80	0.91	0.65	511	575	
261-60-5510	14 (7x)	10	80	1.06	0.88	627	707	
261-60-5512		12	80	1.09	0.93	721	801	
261-60-5516		16	80	1.20	1.13	919	1025	
261-60-5520		20	80	1.34	1.41	1120	1226	
261-60-5524	14 (7x)	24	80	1.48	1.72	1322	1428	
261-60-5536		36	80	1.67	2.19	1886	2029	
261-60-5550		50	110	2.02	3.20	2681	2973	
261-65-5504		14 (7x)	4	60	0.75	0.44	351	390
261-65-5512	12		80	1.23	1.19	954	1060	
261-65-5516	14 (7x)	16	80	1.36	1.45	1225	1331	
261-65-5524		24	80	1.69	2.24	1794	1987	
261-65-5536		36	110	2.00	3.14	2683	2975	

ELECTRICAL SPECIFICATIONS Per UL Standard 1277			
Conductor Resistance, maximum	.....ohms/1000 ft.	@20°C	@25°C
18 AWG	.....	6.09	7.04
16 AWG	.....	4.34	4.43
14 AWG	.....	2.72	2.78
Insulation Test Voltage (spark test)			
18 - 16 AWG	.....	6000 VOLTS AC	
14 AWG	.....	7500 VOLTS AC	
Dielectric Test Voltage	.....	2000 Volts ac for 1 minute	
Insulation Resistance Constant @ 60F, minimum			
(natural material typical value)	.....	2000 ohms/1000 ft.	
Loop Resistance, maximum (2 conductor)	ohms-1000 ft		
		@20°C	@25°C
18 AWG	.....	12.18	14.08
16 AWG	.....	8.68	8.86
14 AWG	.....	5.44	5.56

† 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%.

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



**THE OKONITE COMPANY**

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