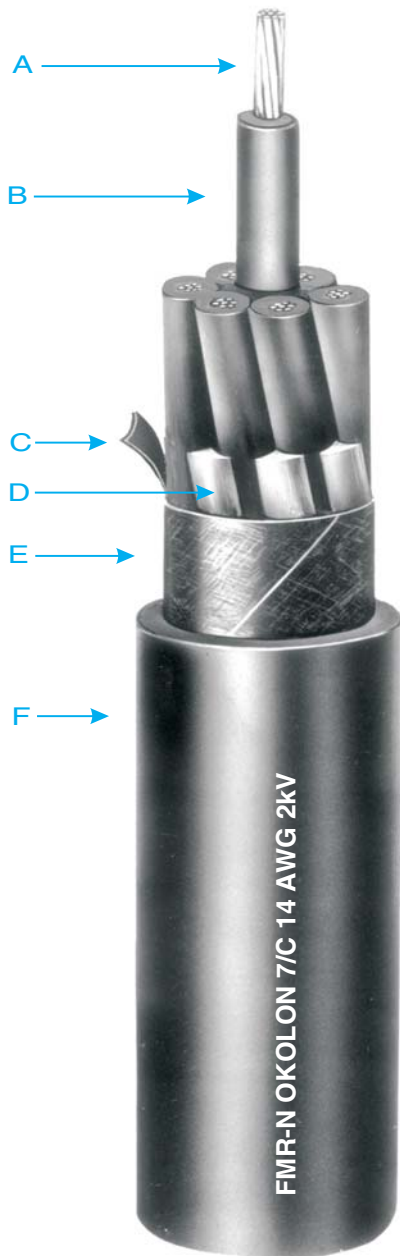




Okonite® FMR-N® Okolon® TS-CPE

1000/2000 Volt Control Cable

Multiple Copper Conductors/90°C Rating
For Central Station Applications



- A Stranded Copper Conductors
- B Okonite FMR-N Insulation
- C Marker Strip
- D Flame and Moisture Resistant Fillers (as needed)
- E Cable Tape
- F Okolon TS-CPE Jacket

Insulation

Okonite FMR-N is Okonite's trade name for its heat, moisture, flame and chemically resistant, mechanically rugged nuclear plant qualified ethylene-propylene insulation compound. Its physical properties and flame retardancy permit its use without a jacket on the single conductors.

The properties of Okonite FMR-N insulation substantially enhance the well known features of ethylene propylene rubber insulations.

Nuclear qualified Okonite FMR-N cables meet IEEE Standard - 383 LOCA and flame test criteria.

Overall Jacket

The overall Okolon TS-CPE jacket is a thermoset chlorinated polyethylene compound. This combination construction assures circuit security because of its high mechanical strength and excellent resistance to moisture, ozone, oil and most chemicals.

Applications

Okonite FMR-N Control Cables are recommended for use in either power generating plants and in substations; designed especially for critical circuits where continuity of service is of prime importance. This premium quality control cable is recommended for wet or dry, ac or dc service at conductor temperatures to 90°C. They may be installed in conduits, ducts, cable troughs, trays, messenger supported, or directly buried in the earth.

Specifications

Conductors: Copper per ASTM B-3, Class B stranded per ASTM B-8.

Insulation: Okonite FMR-N meets or exceeds the electrical and physical requirements of ICEA S-73-532.

Color Coding: Base colors and tracers as shown on reverse of Data Sheet.

Assembly: Conductors cabled using flame and moisture resistant fillers.

Overall Jacket: The Okolon TS-CPE compound meets or exceeds the requirements of ICEA S-73-532

Product Features

- Qualified as Class 1E cable
- Flame retardant - passes the IEEE 383 and 1202 flame test requirements.
- Quality Assurance traceability
- 90°C rated control cable, factory assembled for indoor or outdoor installation in cable trays, in raceways, direct burial in the earth, or supported by messenger wire.
- Mechanically rugged.
- Flexible, easy to install and terminate.
- Color coded conductors.
- Resistant to water, oil and most chemicals.
- Thermally stable at elevated temperatures.
- High insulation resistance, even at elevated temperatures.
- Small diameter, lightweight.

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Product Data Section 4: Sheet 28

Okonite FMR-N Insulation — 1000/2000V

Catalog Number	Conductor Size (AWG)	Number of Conductors	Insulation Thickness - mils	Jacket Thickness - mils	Jacket Thickness - mm	Approx O.D. - Inches	Approx O.D. - mm	Approx Net Weight (lbs/1000')	Approx Ship Weight (lbs/1000')	90°C Wet or Dry Ampacity (1)			
1000V													
202-18-2053	16 (7x) 1.31 mm ²	3	45	1.14	0.45	11.4	124	137	16	45 mm			
202-18-2054		4		1.14	0.49	12.4	157	170	14				
202-18-2055		5		1.14	0.54	13.7	182	198	13				
202-18-2057		7		1.52	0.61	15.5	240	258	10				
202-18-2059		9		1.52	0.71	18.0	324	353	9				
202-18-2062		12		1.52	0.83	21.1	410	487	7				
202-18-2069		19		2.03	0.97	24.6	560	611	6				
202-18-2087		37		2.03	1.29	32.8	994	1084	4				
2000V													
202-18-2153		14 (7x) 2.08 mm ²		3	45	1.14	0.48	12.2	157		175	21	1.14 mm
202-18-2154				4		1.14	0.53	13.5	187		205	19	
202-18-2155				5		1.52	0.61	15.5	250		271	17	
202-18-2157	7		1.52	0.66		16.8	284	316	14				
202-18-2159	9		1.52	0.76		19.3	386	425	12				
202-18-2162	12		1.52	0.86		21.8	479	534	10				
202-18-2169	19		2.03	1.04		26.4	710	774	8				
202-18-2187	37		2.03	1.38		35.1	1562	1678	6				
202-18-2302	12 (7x) 3.33 mm ²		2	45		1.14	0.49	12.4	151	169	32	1.14 mm	
202-18-2303			3			1.14	0.52	13.2	190	208	27		
202-18-2304			4			1.52	0.60	15.2	250	271	24		
202-18-2305			5			1.52	0.66	16.8	303	335	22		
202-18-2307		7	1.52		0.71	18.0	363	402	19				
202-18-2309		9	1.52		0.88	21.1	493	548	16				
202-18-2312		12	2.03		0.98	24.9	668	732	14				
202-18-2319		19	2.03		1.13	28.7	917	997	11				
202-18-2337		37	2.03		1.51	38.4	1644	1787	8				
202-18-2452		10 (7x) 5.26 mm ²	2		45	1.14	0.54	13.7	198	216	42		1.14 mm
202-18-2453			3			1.52	0.61	15.5	281	305	35		
202-18-2454			4			1.52	0.66	16.8	342	374	32		
202-18-2455	5		1.52	0.72		18.3	408	447	28				
202-18-2457	7		1.52	0.79		20.1	501	540	23				
202-18-2459	9		2.03	0.96		24.4	701	765	20				
202-18-2462	12		2.03	1.08		27.4	892	959	17				
202-18-2652	9 (19x) 6.63 mm ²		2	45		1.52	0.60	15.2	256	280	49	1.14 mm	
202-18-2653			3			1.52	0.64	16.3	315	347	40		
202-18-2654			4			1.52	0.70	17.8	386	425	36		
202-18-2655			5			1.52	0.76	19.3	462	501	32		
202-18-2657			7			1.52	0.83	21.1	574	629	27		
202-18-2659		9	2.03		1.01	25.7	835	899	23				
202-18-2662		12	2.03		1.13	28.7	1024	1104	20				

Okonite's web site, www.okonite.com contains the most up to date information.

(1) Ampacities are based on one cable in conduit in air, 90°C rated conductor & 40°C ambient.

For cables installed in cable tray, see ANSI/ICEA P-54-440 (NEMA WC 51-2003).

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Product Data Section 4: Sheet 28

Conductor Color Coding Sequence — Sizes 16 - 9 AWG

Conductor Number	Background or Base Color	Tracer Color
1	Black	
2	White	
3	Red	
4	Green	
5	Orange	
6	Blue	
7	White	Black
8	Red	Black
9	Green	Black
10	Orange	Black
11	Blue	Black
12	Black	White
13	Red	White
14	Green	White
15	Blue	White
16	Black	Red
17	White	Red
18	Orange	Red
19	Blue	Red
20	Red	Green
21	Orange	Green

Color Coding per
ICEA Method 1,
E-1

Alternate color code shall be used for greater than 21 conductor count.