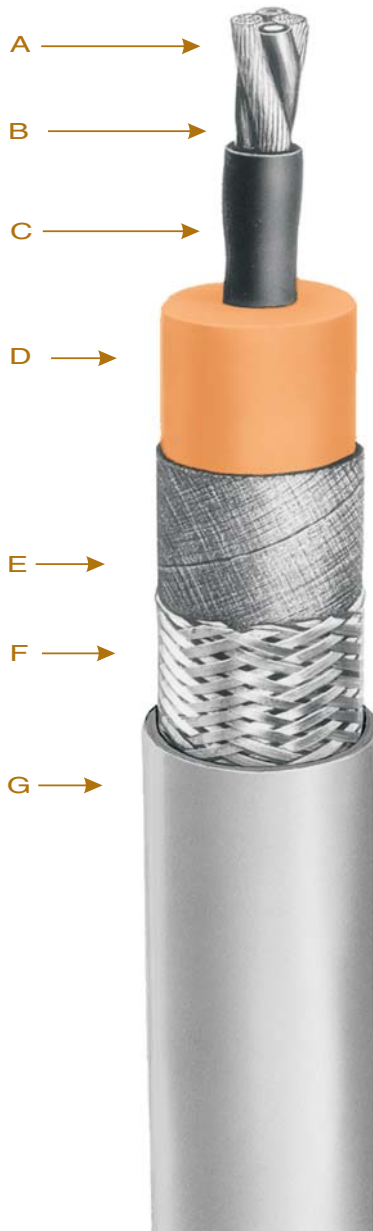




Okonite X-Ray/Hi-Voltage Cable

65kV, 75kV and 100kV dc Rating
Three Conductor or Four Conductor



- A Coated Stranded Copper Conductors
- B Polyester Insulation
- C Extruded Semiconducting Layer
- D Insulation – Okoguard
- E Semiconducting Tape
- F Coated Copper Braid
- G Jacket – Okoseal

Applications

Okonite X-Ray cables are suitable for use on X-Ray apparatus for medical, industrial, research and control applications. They give trouble-free performance where pulse type high voltages are required. Although primarily used with medical diagnostic imaging equipment, Okonite X-Ray cables are also used with equipment in industrial applications as well as in research projects where high voltages, low power are required.

Typically, Okonite X-Ray cables are used to supply the anode and cathode voltages to the X-Ray tube. Since one terminal operates at a negative potential and the other at a positive potential, the voltage across the X-Ray tube is twice (2X) the rated voltage of the cable.

The two usual constructions are (1) three conductor (3/C) used on typical cathode cable installations, and (2) four conductor (4/C) utilized on installations with a grid controlled lead. Upon request, designs and constructions can be developed for special applications.

Product Features

- Performance tested for long trouble-free service.
- Small diameter.
- Flexible construction.
- Excellent flexing endurance.
- Mechanically rugged.
- Easy to strip and terminate.
- Resistant to most oils and chemicals.
- Complies with NEMA Standard XR-7 where applicable.

Installation

The minimum bending radius for permanent installation or flexing in service is four times the cable diameter.

Specifications

Cable Core: Each cable contains two #15 AWG (19x) [1.65mm²] tinned copper filament wires insulated with heat sealed color coded polyester tape. Three conductor cores include two uninsulated #18 AWG [0.83mm²] flex stranded tinned copper wires. Four conductor cables include one #20 AWG (7x)

[0.52mm²] copperweld conductor per ASTM - 45 insulated with heat sealed polyester and shielded with metalized red polyester. The four conductor core includes three uninsulated #18 AWG flex stranded tinned copper wires.

All conductors are twisted together into a composite assembly.

Core Shield: An extruded layer of semiconducting compound encapsulates the composite core assembly.

Insulation: Okonite's premium high voltage EPR (ethylene propylene rubber) insulation is extruded in tandem with the semiconducting compound ensuring an intimate contaminant free bond between the layers

Shield: A semiconducting tape is applied over the insulation with a tinned copper wire braid. Minimum coverage indicated in table.

Jacket: A light gray flexible Okoseal (specially compounded PVC) jacket is extruded over the shield to provide additional mechanical strength and resistance to most oils and chemicals.

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Product Data Section 6: Sheet 2

	Description	Catalog Number	#34 AWG T.C. Braid Coverage (%)	Cellophane Wrap (1)	Jacket Color	Insulation O.D. Inches ± 0.010	Insulation O.D. mm ± 0.25	Jacket O.D. Inches ± 0.015	Jacket O.D. mm ± 0.38	Net. Wt. (lbs/1000 ft.)	Net. Wt. (kg/100m)	Approx. Ship Weight (lbs/1000')	Approx. Ship Weight (kg/100m)
65kV	3 Conductors 2-#15 AWG insulated 1-(2-#18 AWG) un-insulated	504-22-6040	80	yes	Gray	0.465	11.81	0.605	15.40	219	33	252	38
		504-22-6041	80	no									
75kV	3 Conductors 2-#15 AWG insulated 1-(2-#18 AWG) un-insulated	▲ 504-22-3165	80	yes	Gray	0.510	12.95	0.650	16.50	236	35	273	41
		504-22-3164	80	no									
		504-22-3836	95	yes									
	4 Conductors 2-#15 AWG insulated 1-#20 AWG Copperweld, insulated 1-(3-#18 AWG) un-insulated	504-22-2164	80	no	Gray	0.570	14.48	0.715	18.20	289	43	333	50
75kV Extra Small Diameter	3 Conductors 2-#15 AWG insulated 1-(2-#18 AWG) un-insulated	▲ 504-22-3015	80	no	Gray	0.490	12.45	0.600	15.25	224	34	248	37
100kV	3 Conductors 2-#15 AWG insulated 1-(2-#18 AWG) un-insulated	504-22-1033	80	no	Gray	0.620	15.75	0.785	19.90	332	49	371	55
		504-22-1035		yes									
	4 Conductors 2-#15 AWG insulated 1-(#20 AWG) Copperweld, insulated 1-(3-#18 AWG) un-insulated	504-22-2041	80	no	Gray	0.660	16.75	0.845	21.50	380	57	441	66

▲ **Authorized stock item.** Available from our Customer Service Centers.

(1) Cable is helically wrapped with a cellophane tape to maintain cleanliness during installation and includes a pull cord for ease of removal.

- Designs for special applications upon request.

- Refer to Product Data Section 6 Sheet 1 for X-Ray Cable - Low Noise constructions.

Electrical Characteristics				
Rated Voltage Rectified dc kV (2)	Number of Conductors	Core to Shield Capacitance ± 10%		4/C only: Copperweld grid lead capacitance = 70 pF/ft. (230 pF/m).
		pF/ft.	pF/m	
65	3	52	170	Conductor resistance @ 25°C: #16 AWG (1.31 mm ²) tinned copper = 4.18 ohms/1000 ft (1.37 ohms/100 m) #15 AWG (1.65 mm ²) tinned copper = 3.51 ohms/1000 ft (1.15 ohms/100 m) #18 AWG (0.83 mm ²) tinned copper = 7.16 ohms/1000 ft (2.34 ohms/100 m) 2 X #18 AWG (0.83 mm ²) tinned copper = 3.58 ohms/1000 ft (1.17 ohms/100 m) 3 X #18 AWG (0.83 mm ²) tinned copper = 2.39 ohms/1000 ft (0.78 ohms/100 m) #20 AWG (0.52 mm ²) copperweld = 24.12 ohms/1000 ft (7.91 ohms/100 m)
75 (ESD)	3	49.5	162	
75	3	47	154	
75	4	57	187	
100	3	40	131	
100	4	49	159	
160	3	35	115	
250	3	31	101	
(2) Voltage rating is between the conductor and the shielding braid.				