

## Firewall® III

### Control Cable

K-1 Color Code  
(XLPE/CSPE)

90°C\*, 600 Volt  
Class 1E Nuclear

Spec. RSS-3-021

## Scope

Firewall® III (K-1) control cable is a totally thermoset construction specifically designed for applications in utility generating plants and substations. It is intended for use in harsh and demanding environments, in-

cluding Class 1E nuclear applications. It may be installed in trays, ducts, conduits or in direct burial applications to perform a variety of low voltage control and related functions.

## Features

- Thermoset insulation and jacket for enhanced thermal stability
- Specially formulated insulation for superior long term water resistance
- Extremely flame retardant
- Nuclear qualified with a minimum 40-year thermal life expectancy at 90°C
- Radiation resistant (up to 200 megarads)
- Full traceability
- Excellent mechanical properties
- Tin-coated copper conductors for improved terminations and corrosion resistance
- All singles pass a wet dielectric (tank) test prior to cabling to verify electrical integrity
- All jackets have printed sequential footage markers for improved inventory control
- Easy strippability for installation ease

## Performance Standards

- Insulation in accordance with ICEA Standard S-66-524
- Jackets in accordance with ICEA Standard S-19-81 for heavy-duty chlorosulfonated polyethylene (CSPE) and neoprene
- Class 1E qualified in accordance with IEEE-383 1974 and IEEE-323 (Rockbestos Reports QR-5804 or QR-5805)
- Cable passes IEEE-383 1974 70,000 BTU/hr vertical tray flame test as modified by NRC Reg. Guide 1.131
- Cable passes ICEA 210,000 BTU/hr vertical tray flame test (Standard T-29-520)
- Single conductors pass the vertical flame tests specified in IEEE-383 1974 para. 2.5.6 (ICEA S-19-81 Section 6.19.6) and UL VW-1
- Quality assurance program in accordance with 10 CFR 50 Appendix B
- Upon specific request, can be UL listed as Type TC for NEC tray installations (UL 1277)

## Construction

### Conductor:

Annealed, tin-coated copper, Class "B" strand (ASTM B-8 & B-33)

### Insulation:

Proprietary heat, moisture and radiation resistant flame retardant crosslinked polyethylene

### Circuit Identification:

Colored insulation per ICEA Method 1, Table K-1

### Fillers:

(When required)

### Binder Tape:

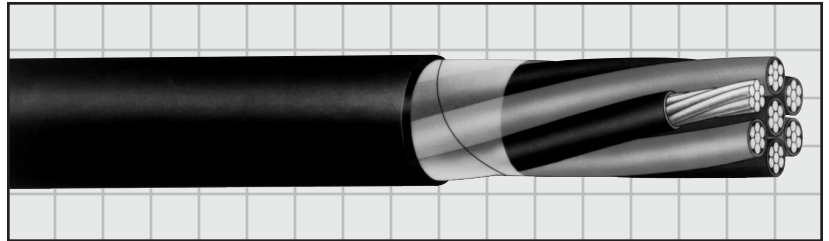
Helically applied

### Jacket:

Black, heavy-duty chlorosulfonated polyethylene

\* Rated 90°C for normal operation in wet and dry locations, 130°C for emergency overload conditions, and 250°C for short circuit conditions.

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## 14 AWG, 7 Strand

Product Code	Number of Conductors	Insulation Thickness		Insulated Conductor Diameter (Inch)	Jacket Thickness (Mils)	Nominal Overall Diameter		Approximate Net Weight (Lbs/M')
		(Inch)	(mm)			(Inch)	(mm)	
C53-0020	2	.030	.76	.14	45	.37	9.40	85
C53-0030	3	.030	.76	.14	45	.39	9.91	110
C53-0040	4	.030	.76	.14	45	.42	10.67	130
C53-0050	5	.030	.76	.14	45	.46	11.68	160
C53-0070	7	.030	.76	.14	45	.50	12.70	185
C53-0090	9	.030	.76	.14	60	.62	15.75	260
C53-0120	12	.030	.76	.14	60	.69	17.53	325
C53-0190	19	.030	.76	.14	60	.80	20.32	470
C53-3499	25	.030	.76	.14	80	.97	24.64	655
C53-3501	37	.030	.76	.14	80	1.11	28.19	910

## 12 AWG, 7 Strand

C52-0020	2	.030	.76	.16	45	.41	10.41	110
C52-0030	3	.030	.76	.16	45	.43	10.92	140
C52-0040	4	.030	.76	.16	45	.47	11.94	175
C52-0050	5	.030	.76	.16	45	.51	12.95	215
C52-0070	7	.030	.76	.16	60	.59	14.99	275
C52-0090	9	.030	.76	.16	60	.68	17.27	355
C52-0120	12	.030	.76	.16	60	.76	19.30	445
C52-1190	19	.030	.76	.16	80	.93	23.62	690
C52-3637	25	.030	.76	.16	80	1.07	27.18	895
C52-3406	37	.030	.76	.16	80	1.24	31.50	1275

## 10 AWG, 7 Strand

C51-0020	2	.030	.76	.18	45	.45	11.43	150
C51-0030	3	.030	.76	.18	45	.48	12.19	195
C51-0040	4	.030	.76	.18	45	.56	14.22	260
C51-0050	5	.030	.76	.18	60	.62	15.75	330
C51-0070	7	.030	.76	.18	60	.66	16.76	380
C51-0090	9	.030	.76	.18	60	.78	19.81	505
C51-0120	12	.030	.76	.18	80	.91	23.11	665
C51-1190	19	.030	.76	.18	80	1.07	27.18	980
C51-3570	25	.030	.76	.18	80	1.24	31.50	1270
C51-3571	37	.030	.76	.18	80	1.40	35.56	1810

\* Rated 90°C for normal operation in wet and dry locations, 130°C for emergency overload conditions, and 250°C for short circuit conditions.