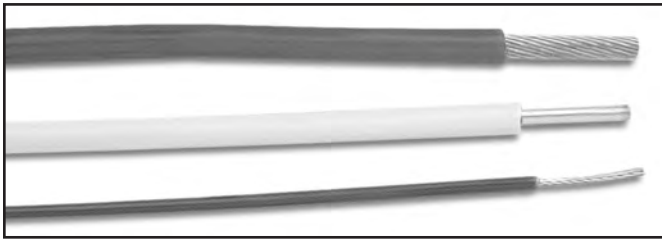


UL 3239 high-voltage lead wire—extruded modified FEP insulation



Construction Details

Insulation: Extruded modified FEP, wall thickness:

- 10 KV wire: .018" (.46 mm);
- 15 KV wire: .020" (.51 mm);
- 20 KV wire: .024" (.61 mm).

Conductor: Silver-plated copper.

Colors: Available in 10 standard colors (see page 92).

Identification: Not required by UL; available on request.

Options: Nickel-plated or tin-plated copper conductor*.

* For tin-plated conductors, the 200° C temperature rating applies only to wires with individual strand diameters .015" (26 AWG) or larger. For wires with smaller strand diameters, the temperature rating is 150° C.

UL 3239 wire is a high-voltage lead wire with extruded modified FEP (Fluorinated Ethylene Polypropylene) insulation. This insulation provides easy, clean stripping with automated equipment.

These wires are intended for use in television receivers, transformers, and other demanding high-voltage applications. Versions with different wall thicknesses are available for 10 KV, 15 KV, and 20 KV ratings.

Performance:

Voltage rating: 10,000; 15,000; or 20,000V.

Dielectric withstanding voltage: 10 KV wires: 20,000V;
15 KV wires: 30,000V;
20 KV wires: 40,000V.

Spark test: 10 KV wires: 10,000V RMS AC, 60 Hz;
15 KV wires: 12,500V RMS AC, 60 Hz;
20 KV wires: 15,000V RMS AC, 60 Hz.

Insulation tensile strength: 2,500 PSI.

Insulation elongation: 150% minimum.

Temperature rating: 200° C.

Ordering Information: Specify Thermax part number, UL style, and color.

To order with optional conductor materials:

For nickel-plated copper conductor, change **KV** in Thermax part number to **KVN**.

For tin-plated copper conductor, change **KV** in Thermax part number to **KVZ**.

Dimensions, Weights, and Resistance—UL 3239 (10KV) wires

AWG Size	Stranding	Conductor Diameter	Insulation Diameter	Weight	Maximum Resistance	Thermax P/N
10	37/26	.108 (2.74)	.157 (3.99)	9.71 (14.5)	1.19 (3.90)	10-10KV-3726
12	19/25	.084 (2.13)	.133 (3.38)	7.95 (11.8)	1.81 (5.94)	12-10KV-1925
14	19/27	.067 (1.69)	.115 (2.92)	6.53 (9.72)	2.88 (9.45)	14-10KV-1927
16	19/29	.053 (1.35)	.101 (2.57)	5.52 (8.21)	4.52 (14.8)	16-10KV-1929
18	19/30	.047 (1.19)	.095 (2.41)	5.10 (7.59)	5.79 (19.0)	18-10KV-1930
18	7/26	.048 (1.21)	.096 (2.44)	5.10 (7.59)	6.01 (19.7)	18-10KV-726
20	19/32	.038 (.955)	.085 (2.16)	4.32 (6.43)	9.10 (29.8)	20-10KV-1932
20	7/28	.038 (.960)	.085 (2.16)	3.83 (5.70)	9.56 (31.4)	20-10KV-728
20	SOLID	.032 (.813)	.068 (1.73)	3.44 (5.12)	10.3 (33.8)	20-10KV-120
22	19/34	.030 (.752)	.077 (1.96)	3.76 (5.60)	14.8 (48.5)	22-10KV-1934
22	7/30	.030 (.762)	.077 (1.96)	3.76 (5.60)	15.2 (49.9)	22-10KV-730
22	SOLID	.025 (.643)	.064 (1.63)	2.60 (3.87)	16.5 (54.1)	22-10KV-122
24	19/36	.024 (.597)	.071 (1.80)	3.34 (4.97)	23.6 (77.4)	24-10KV-1936
24	7/32	.024 (.610)	.071 (1.80)	3.34 (4.97)	23.9 (78.4)	24-10KV-732
24	SOLID	.020 (.511)	.059 (1.50)	2.30 (3.42)	25.0 (84.3)	24-10KV-124

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in Ω /1,000 feet (Ω /Km), @20° C.

All values are nominal unless otherwise indicated.

UL 3239 high-voltage lead wire—extruded modified FEP insulation

(Continued from previous page.)

Ordering Information: Specify Thermax part number, UL style, and color.

To order with optional conductor materials:

For nickel-plated copper conductor, change **KV** in Thermax part number to **KVN**.

For tin-plated copper conductor, change **KV** in Thermax part number to **KVZ**.

Dimensions, Weights, and Resistance—UL 3239 (15KV) wires

AWG Size	Stranding	Conductor Diameter	Insulation Diameter	Weight	Maximum Resistance	Thermax P/N
10	37/26	.108 (2.74)	.160 (4.06)	10.4 (15.5)	1.19 (3.90)	10-15KV-3726
12	19/25	.084 (2.13)	.136 (3.45)	8.56 (12.7)	1.81 (5.94)	12-15KV-1925
14	19/27	.067 (1.69)	.119 (3.02)	7.23 (10.8)	2.88 (9.45)	14-15KV-1927
16	19/29	.053 (1.35)	.104 (2.64)	5.98 (8.90)	4.52 (14.8)	16-15KV-1929
18	19/30	.047 (1.19)	.098 (2.49)	5.53 (8.23)	5.79 (19.0)	18-15KV-1930
18	7/26	.048 (1.21)	.099 (2.51)	5.53 (8.23)	6.01 (19.7)	18-15KV-726
20	19/32	.038 (.955)	.089 (2.26)	4.84 (7.20)	9.10 (29.8)	20-15KV-1932
20	7/28	.038 (.960)	.089 (2.26)	4.84 (7.20)	9.56 (31.4)	20-15KV-728
20	SOLID	.032 (.813)	.075 (1.91)	3.44 (5.12)	10.3 (33.8)	20-15KV-120
22	19/34	.030 (.752)	.081 (2.06)	4.23 (6.30)	14.8 (48.5)	22-15KV-1934
22	7/30	.030 (.762)	.081 (2.06)	4.23 (6.30)	15.2 (49.9)	22-15KV-730
22	SOLID	.025 (.643)	.068 (1.73)	2.99 (4.45)	16.5 (54.1)	22-15KV-122
24	19/36	.024 (.597)	.075 (1.91)	3.78 (5.63)	23.6 (77.4)	24-15KV-1936
24	7/32	.024 (.610)	.075 (1.91)	3.78 (5.63)	23.9 (78.4)	24-15KV-732
24	SOLID	.020 (.511)	.063 (1.60)	2.67 (3.97)	25.7 (84.3)	24-15KV-124

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in Ω /1,000 feet (Ω /Km), @20° C.

All values are nominal unless otherwise indicated.

Dimensions, Weights, and Resistance—UL 3239 (20KV) wires

AWG Size	Stranding	Conductor Diameter	Insulation Diameter	Weight	Maximum Resistance	Thermax P/N
10	37/26	.108 (2.74)	.170 (4.32)	12.9 (19.2)	1.19 (3.90)	10-20KV-3726
12	19/25	.084 (2.13)	.146 (3.71)	10.7 (15.9)	1.81 (5.94)	12-20KV-1925
14	19/27	.067 (1.69)	.129 (3.28)	9.09 (13.5)	2.88 (9.45)	14-20KV-1927
16	19/29	.053 (1.35)	.115 (2.92)	7.79 (11.6)	4.52 (14.8)	16-20KV-1929
18	19/30	.047 (1.19)	.109 (2.77)	7.16 (10.7)	5.79 (19.0)	18-20KV-1930
18	7/26	.048 (1.21)	.110 (2.79)	7.16 (10.7)	6.01 (19.7)	18-20KV-726
20	19/32	.038 (.955)	.099 (2.51)	6.25 (9.30)	9.10 (29.8)	20-20KV-1932
20	7/28	.038 (.960)	.099 (2.51)	6.25 (9.30)	9.56 (31.4)	20-20KV-728
20	SOLID	.032 (.813)	.083 (2.11)	4.39 (6.53)	10.3 (33.8)	20-20KV-120
22	19/34	.030 (.752)	.091 (2.31)	5.52 (8.21)	14.8 (48.5)	22-20KV-1934
22	7/30	.030 (.762)	.091 (2.31)	5.52 (8.21)	15.2 (49.9)	22-20KV-730
22	SOLID	.025 (.643)	.076 (1.93)	3.85 (5.73)	16.5 (54.1)	22-20KV-122
24	19/36	.024 (.597)	.085 (2.16)	4.97 (7.40)	23.6 (77.4)	24-20KV-1936
24	7/32	.024 (.610)	.085 (2.16)	4.97 (7.40)	23.9 (78.4)	24-20KV-732
24	SOLID	.020 (.511)	.071 (1.80)	3.47 (5.16)	25.7 (84.3)	24-20KV-124

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in Ω /1,000 feet (Ω /Km), @20° C.

All values are nominal unless otherwise indicated.