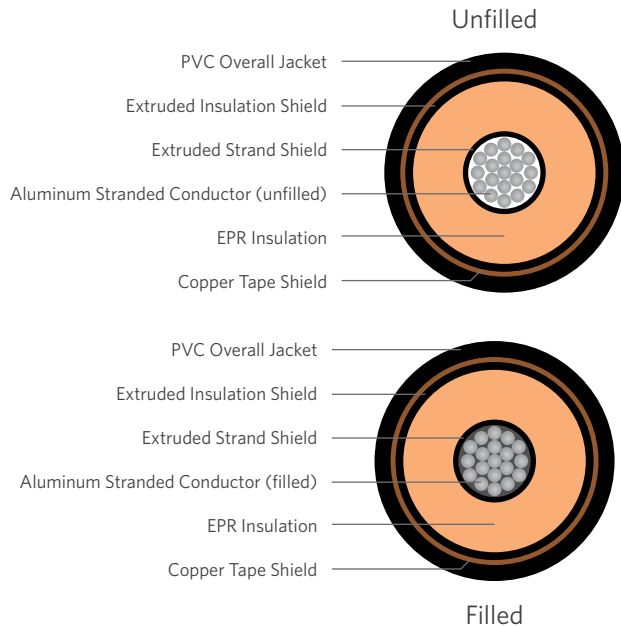


# EPR/CTS/PVC Power, Type MV-105, 5kV-35kV

Series E8 (Aluminum Conductors)



## MARKETS



## PRODUCT DESCRIPTION

The Superior Essex Medium Voltage, EPR/Cu Tape Shield/PVC, Type MV-105 Cable consist of Aluminum Class B stranded conductors, covered with ethylene propylene rubber (EPR), copper tape shield, and black PVC jacket. These cables are used in industrial power circuits.

## APPLICATIONS

- In conduit, duct, free air, and raceways, primary installations include cable trays, and outdoor locations
- In direct burial if installed in a system with a ground conductor that is in close proximity, and conforms with NEC 250.4 (A)(5)
- In wet or dry locations
- Approved for Class I, Div. 2 industrial hazardous locations per NEC
- Designed to operate continuously at a conductor temperature not exceeding
  - » 105°C for normal operations
  - » 140°C for emergency overload
  - » 250°C for short circuit

## FEATURES

- Rated at 105°C wet or dry
- Excellent corona resistance
- High dielectric strength
- Low moisture absorption
- Low dielectric loss
- Excellent sunlight resistance
- For CT USE for 1/0 AWG and larger, per UL® 1072
- Meets cold bend test at -35°C

## SPECIFICATIONS

<b>Conductor Count</b>	1 conductor
<b>Conductor</b>	Aluminum 1350 compressed lay stranded Class B (filled or unfilled) Also available with AL-8000 Series compressed strand
<b>Gauge Sizes</b>	Filled: Available in 2 AWG through 500 kcmil Unfilled: Available in 2 AWG through 1250 kcmil
<b>Conductor Strand Shield</b>	Extruded thermoset semi-conducting polymer over the conductor
<b>Insulation</b>	Ethylene Propylene Rubber (EPR)
<b>Insulation Shield</b>	Extruded thermoset semi-conducting polymer over the insulation
<b>Shield</b>	Annealed copper tape helically applied with a 25% overlap
<b>Jacket</b>	Polyvinyl Chloride (PVC)
<b>Jacket Marking</b>	<b>2 AWG - 1 AWG:</b> 00000 FT SUPERIOR ESSEX XXAWG AL 1/C XXXV XXX% INSUL LEVEL XXXMILS EPR/PVC JKT TYPE MV-105 SUN RES (UL) MADE IN USA MMDDYYYY <b>1/0 AWG - 1000 kcmil:</b> 00000 FT SUPERIOR ESSEX XXAWG AL (or XXXKCMIL) 1/C XXXV XXX% INSUL LEVEL XXXMILS EPR/PVC JKT TYPE MV-105 FOR CT USE (UL) SUN RES MADE IN USA MMDDYYYY
<b>Packaging</b>	Non-returnable wood reels in a variety of lengths and dimensions
<b>Performance Compliances</b>	ASTM B-230, ASTM B-231 UL 1072, UL 1685 (flame compliance) ICEA S-93-639/NEMA WC74, ICEA S-97-682 AIEC CS8 CSA FT4/IEEE 1202 (flame compliance) NEC
<b>Other Compliances</b>	EPA 40 CFR, Part 261 OSHA

UL is a registered trademark of UL LLC.

## PRODUCT KEY

Conductor	Stranding	Voltage	Insulation (CCV)	Shield	Jacket
Al	Filled B or B	MV	EPR	Copper Tape	PVC

# Aluminum Unfilled Cdr 5kV 100% I.L., 90-mils, Shielded Series E8ELE

## PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number <sup>6</sup>	Conductor Size AWG/kcmil	Nominal Conductor Diameter <sup>1</sup> in (mm)	Nominal Insulation Diameter <sup>1</sup> in (mm)	Nominal Jacket Thickness <sup>1</sup> in (mm)	Nominal Overall Diameter <sup>1</sup> in (mm)	Nominal Net Weight <sup>1</sup> lbs/kft (kg/km)	Ampacity	
							Conduit in Air <sup>2</sup>	Underground Duct <sup>3</sup>
E8ELE-023F01CA00	2	0.280 (7.1)	0.513 (13.03)	0.060 (1.52)	0.756 (19.2)	319 (462)	125	115
E8ELE-013F01CA00	1	0.319 (8.1)	0.552 (14.02)	0.060 (1.52)	0.795 (20.3)	354 (513)	140	135
E8ELE-1A3F01CA00	1/0	0.358 (9.1)	0.592 (15.04)	0.060 (1.52)	0.835 (21.1)	393 (569)	160	155
E8ELE-2A3F01CA00	2/0	0.401 (10.2)	0.635 (16.13)	0.060 (1.52)	0.914 (23.2)	471 (682)	185	175
E8ELE-3A3F01CA00	3/0	0.451 (11.5)	0.686 (17.42)	0.060 (1.52)	0.965 (24.5)	529 (766)	210	210
E8ELE-4A3F01CA00	4/0	0.507 (12.9)	0.742 (18.85)	0.080 (2.03)	1.021 (26.0)	598 (866)	245	240
E8ELE-A13F01CA00	250	0.552 (14.0)	0.788 (20.02)	0.080 (2.03)	1.067 (27.1)	657 (951)	270	280
E8ELE-A33F01CA00	350	0.654 (16.6)	0.891 (22.63)	0.080 (2.03)	1.170 (29.7)	802 (1,161)	325	340
E8ELE-A63F01CA00	500	0.781 (19.8)	1.019 (25.88)	0.080 (2.03)	1.298 (32.9)	1,007 (1,458)	400	425

# Aluminum Unfilled Cdr 5kV 133%/8kV 100% I.L., 115-mils, Shielded Series E8FLE

## PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number <sup>6</sup>	Conductor Size AWG/kcmil	Nominal Conductor Diameter <sup>1</sup> in (mm)	Nominal Insulation Diameter <sup>1</sup> in (mm)	Nominal Jacket Thickness <sup>1</sup> in (mm)	Nominal Overall Diameter <sup>1</sup> in (mm)	Nominal Net Weight <sup>1</sup> lbs/kft (kg/km)	Ampacity	
							Conduit in Air <sup>4</sup>	Underground Duct <sup>5</sup>
E8FLE-023F01CA00	2	0.280 (7.1)	0.563 (14.31)	0.060 (1.52)	0.806 (20.5)	356 (516)	130	130
E8FLE-013F01CA00	1	0.319 (8.1)	0.602 (15.29)	0.060 (1.52)	0.881 (22.4)	422 (611)	145	150
E8FLE-1A3F01CA00	1/0	0.358 (9.1)	0.642 (16.31)	0.060 (1.52)	0.921 (23.4)	362 (524)	165	170
E8FLE-2A3F01CA00	2/0	0.401 (10.2)	0.685 (17.41)	0.060 (1.52)	0.964 (24.5)	432 (626)	190	200
E8FLE-3A3F01CA00	3/0	0.451 (11.5)	0.736 (18.69)	0.080 (2.03)	1.015 (25.8)	487 (705)	215	225
E8FLE-4A3F01CA00	4/0	0.507 (12.9)	0.792 (20.12)	0.080 (2.03)	1.071 (27.2)	554 (802)	245	260
E8FLE-A13F01CA00	250	0.552 (14.0)	0.838 (21.29)	0.080 (2.03)	1.117 (28.4)	707 (1,024)	270	290
E8FLE-A33F01CA00	350	0.654 (16.6)	0.941 (23.91)	0.080 (2.03)	1.220 (31.0)	755 (1,093)	330	350
E8FLE-A63F01CA00	500	0.781 (19.8)	1.069 (27.15)	0.080 (2.03)	1.348 (34.2)	1,066 (1,544)	400	430
E8FLE-B23F01CA00	750	0.958 (24.3)	1.248 (31.70)	0.080 (2.03)	1.527 (38.8)	1,277 (1,849)	490	540

# Aluminum Unfilled Cdr 15kV 100% I.L., 175-mils, Shielded Series E8HLE

## PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number <sup>6</sup>	Conductor Size AWG/kcmil	Nominal Conductor Diameter <sup>1</sup> in (mm)	Nominal Insulation Diameter <sup>1</sup> in (mm)	Nominal Jacket Thickness <sup>1</sup> in (mm)	Nominal Overall Diameter <sup>1</sup> in (mm)	Nominal Net Weight <sup>1</sup> lbs/kft (kg/km)	Ampacity	
							Conduit in Air <sup>4</sup>	Underground Duct <sup>5</sup>
E8HLE-023F01CA00	2	0.280 (7.1)	0.693 (17.61)	0.060 (1.52)	0.972 (24.7)	494 (715)	130	130
E8HLE-013F01CA00	1	0.319 (8.1)	0.732 (18.59)	0.080 (2.03)	1.011 (25.6)	535 (775)	145	150
E8HLE-1A3F01CA00	1/0	0.358 (9.1)	0.772 (19.61)	0.080 (2.03)	1.051 (26.7)	582 (843)	165	170
E8HLE-2A3F01CA00	2/0	0.401 (10.2)	0.815 (20.71)	0.080 (2.03)	1.094 (27.8)	636 (921)	190	200
E8HLE-3A3F01CA00	3/0	0.451 (11.5)	0.866 (22.01)	0.080 (2.03)	1.145 (29.1)	701 (1,015)	215	225
E8HLE-4A3F01CA00	4/0	0.507 (12.9)	0.922 (23.42)	0.080 (2.03)	1.201 (30.5)	779 (1,128)	245	260
E8HLE-A13F01CA00	250	0.552 (14.0)	0.968 (24.59)	0.080 (2.03)	1.247 (31.7)	845 (1,224)	270	290
E8HLE-A33F01CA00	350	0.654 (16.6)	1.071 (27.21)	0.080 (2.03)	1.350 (34.3)	1,005 (1,455)	330	350
E8HLE-A63F01CA00	500	0.781 (19.8)	1.199 (30.45)	0.080 (2.03)	1.518 (38.6)	1,228 (1,778)	400	430

<sup>1</sup>The dimensions and weights shown are nominal and subject to industry standards and manufacturing tolerances. Other designs are available upon request.

<sup>2</sup>Ampacities are in accordance with NEC table 310.60(C)(78), Type MV-105, 2001-5000 Volts, for conduit in air.

<sup>3</sup>Ampacities are in accordance with NEC table 310.60(C)(74), Type MV-105, 2001-5000 Volts, for underground electrical duct, one circuit.

<sup>4</sup>Ampacities are in accordance with NEC table 310.60(C)(78), for MV-105, 5001-35,000 Volts, for conduit in air.

<sup>5</sup>Ampacities are in accordance with NEC table 310.60(C)(74), for MV-105, 5001-35,000 Volts, for underground electrical duct, one circuit.

<sup>6</sup>For AL-8000 series aluminum alloy compressed conductor, substitute in the Part Number the "3F" with "4G".

# Aluminum Unfilled Cdr 15kV 133% I.L., 220-mils, Shielded Series E8JLE

## PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number <sup>4</sup>	Conductor Size AWG/kcmil	Nominal Conductor Diameter <sup>1</sup> in (mm)	Nominal Insulation Diameter <sup>1</sup> in (mm)	Nominal Jacket Thickness <sup>1</sup> in (mm)	Nominal Overall Diameter <sup>1</sup> in (mm)	Nominal Net Weight <sup>1</sup> lbs/kft (kg/km)	Ampacity	
							Conduit in Air <sup>2</sup>	Underground Duct <sup>3</sup>
E8JLE-023F01CA00	2	0.280 (7.1)	0.793 (20.14)	0.080 (2.03)	1.072 (27.2)	587 (850)	130	130
E8JLE-013F01CA00	1	0.319 (8.1)	0.832 (21.13)	0.080 (2.03)	1.111 (28.2)	632 (915)	145	150
E8JLE-1A3F01CA00	1/0	0.358 (9.1)	0.872 (22.15)	0.080 (2.03)	1.151 (29.2)	682 (988)	165	170
E8JLE-2A3F01CA00	2/0	0.401 (10.2)	0.915 (23.24)	0.080 (2.03)	1.194 (30.3)	739 (1,070)	190	200
E8JLE-3A3F01CA00	3/0	0.451 (11.5)	0.966 (24.54)	0.080 (2.03)	1.245 (31.6)	809 (1,172)	215	225
E8JLE-4A3F01CA00	4/0	0.507 (12.9)	1.022 (25.96)	0.080 (2.03)	1.301 (33.0)	891 (1,290)	245	260
E8JLE-A13F01CA00	250	0.552 (14.0)	1.068 (27.13)	0.080 (2.03)	1.347 (34.2)	960 (1,390)	270	290
E8JLE-A33F01CA00	350	0.654 (16.6)	1.171 (29.74)	0.080 (2.03)	1.450 (36.8)	1,129 (1,635)	330	350
E8JLE-A63F01CA00	500	0.781 (19.8)	1.299 (32.99)	0.080 (2.03)	1.578 (40.1)	1,363 (1,974)	400	430
E8JLE-B23F01CA00	750	0.958 (24.3)	1.478 (37.50)	0.080 (2.03)	1.821 (46.3)	1,840 (2,665)	490	540

# Aluminum Unfilled Cdr 25kV 100% I.L., 260-mils, Shielded Series E8KLE

## PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number <sup>4</sup>	Conductor Size AWG/kcmil	Nominal Conductor Diameter <sup>1</sup> in (mm)	Nominal Insulation Diameter <sup>1</sup> in (mm)	Nominal Jacket Thickness <sup>1</sup> in (mm)	Nominal Overall Diameter <sup>1</sup> in (mm)	Nominal Net Weight <sup>1</sup> lbs/kft (kg/km)	Ampacity	
							Conduit in Air <sup>2</sup>	Underground Duct <sup>3</sup>
E8KLE-1A3F01CA00	1/0	0.358 (9.1)	0.952 (24.18)	0.080 (2.03)	1.231 (31.3)	767 (1,111)	165	170
E8KLE-2A3F01CA00	2/0	0.401 (10.2)	0.995 (25.27)	0.080 (2.03)	1.274 (32.4)	827 (1,198)	190	200
E8KLE-3A3F01CA00	3/0	0.451 (11.5)	1.046 (26.57)	0.080 (2.03)	1.325 (33.7)	900 (1,303)	215	225
E8KLE-4A3F01CA00	4/0	0.507 (12.9)	1.102 (27.99)	0.080 (2.03)	1.381 (35.1)	986 (1,428)	245	260
E8KLE-A13F01CA00	250	0.552 (14.0)	1.148 (29.16)	0.080 (2.03)	1.427 (36.2)	1,059 (1,534)	270	290
E8KLE-A33F01CA00	350	0.654 (16.6)	1.251 (31.78)	0.080 (2.03)	1.531 (38.9)	1,234 (1,787)	330	350
E8KLE-A63F01CA00	500	0.781 (19.8)	1.379 (35.03)	0.080 (2.03)	1.658 (42.1)	1,476 (2,137)	400	430
E8KLE-B23F01CA00	750	0.958 (24.3)	1.558 (39.60)	0.110 (2.79)	1.901 (48.3)	1,970 (2,853)	490	540

# Aluminum Unfilled Cdr 25kV 133% I.L., 320-mils, Shielded Series E8LLE

## PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number <sup>4</sup>	Conductor Size AWG/kcmil	Nominal Conductor Diameter <sup>1</sup> in (mm)	Nominal Insulation Diameter <sup>1</sup> in (mm)	Nominal Jacket Thickness <sup>1</sup> in (mm)	Nominal Overall Diameter <sup>1</sup> in (mm)	Nominal Net Weight <sup>1</sup> lbs/kft (kg/km)	Ampacity	
							Conduit in Air <sup>2</sup>	Underground Duct <sup>3</sup>
E8LLE-1A3F01CA00	1/0	0.358 (9.1)	1.072 (27.23)	0.080 (2.03)	1.351 (34.3)	766 (1,109)	165	170
E8LLE-2A3F01CA00	2/0	0.401 (10.2)	1.115 (28.32)	0.080 (2.03)	1.394 (35.4)	970 (1,405)	190	200
E8LLE-3A3F01CA00	3/0	0.451 (11.5)	1.166 (29.62)	0.080 (2.03)	1.445 (36.7)	1,048 (1,518)	215	225
E8LLE-4A3F01CA00	4/0	0.507 (12.9)	1.222 (31.04)	0.080 (2.03)	1.501 (38.1)	1,139 (1,649)	245	260
E8LLE-A13F01CA00	250	0.552 (14.0)	1.268 (32.21)	0.080 (2.03)	1.547 (39.3)	1,216 (1,761)	270	290
E8LLE-A33F01CA00	350	0.654 (16.6)	1.371 (34.82)	0.080 (2.03)	1.651 (41.9)	1,402 (2,030)	330	350
E8LLE-A63F01CA00	500	0.781 (19.8)	1.499 (38.07)	0.080 (2.03)	1.842 (46.8)	1,770 (2,563)	400	430
E8LLE-B23F01CA00	750	0.958 (24.3)	1.678 (42.60)	0.110 (2.79)	2.021 (51.3)	2,175 (3,150)	490	540

<sup>1</sup>The dimensions and weights shown are nominal and subject to industry standards and manufacturing tolerances. Other designs are available upon request.

<sup>2</sup>Ampacities are in accordance with NEC table 310.60(C)(78), for MV-105, 5001-35,000 Volts, for conduit in air.

<sup>3</sup>Ampacities are in accordance with NEC table 310.60(C)(74), for MV-105, 5001-35,000 Volts, for underground electrical duct, one circuit.

<sup>4</sup>For AL-8000 series aluminum alloy compressed conductor, substitute in the Part Number the "3F" with "4G".

# Aluminum Unfilled Cdr 35kV 100% I.L., 345-mils, Shielded Series E8MLE

## PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number <sup>4</sup>	Conductor Size AWG/kcmil	Nominal Conductor Diameter <sup>1</sup> in (mm)	Nominal Insulation Diameter <sup>1</sup> in (mm)	Nominal Jacket Thickness <sup>1</sup> in (mm)	Nominal Overall Diameter <sup>1</sup> in (mm)	Nominal Net Weight <sup>1</sup> lbs/kft (kg/km)	Ampacity	
							Conduit in Air <sup>2</sup>	Underground Duct <sup>3</sup>
E8MLE-1A3F01CA00	1/0	0.358 (9.1)	1.112 (28.24)	0.080 (2.03)	1.381 (35.1)	954 (1,381)	165	170
E8MLE-2A3F01CA00	2/0	0.401 (10.2)	1.155 (29.34)	0.080 (2.03)	1.434 (36.4)	1,020 (1,477)	190	200
E8MLE-3A3F01CA00	3/0	0.451 (11.5)	1.206 (30.63)	0.080 (2.03)	1.485 (37.7)	1,100 (1,593)	215	225
E8MLE-4A3F01CA00	4/0	0.507 (12.9)	1.262 (32.05)	0.080 (2.03)	1.531 (38.9)	1,193 (1,728)	245	260
E8MLE-A13F01CA00	250	0.552 (14.0)	1.308 (33.22)	0.080 (2.03)	1.587 (40.3)	1,271 (1,841)	270	290
E8MLE-A33F01CA00	350	0.654 (16.6)	1.411 (35.84)	0.080 (2.03)	1.754 (44.5)	1,568 (2,271)	330	350
E8MLE-A63F01CA00	500	0.781 (19.8)	1.539 (39.09)	0.110 (2.79)	1.872 (47.5)	1,835 (2,657)	400	430

# Aluminum Unfilled Cdr 35kV 133% I.L., 420-mils, Shielded Series E8NLE

## PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number <sup>4</sup>	Conductor Size AWG/kcmil	Nominal Conductor Diameter <sup>1</sup> in (mm)	Nominal Insulation Diameter <sup>1</sup> in (mm)	Nominal Jacket Thickness <sup>1</sup> in (mm)	Nominal Overall Diameter <sup>1</sup> in (mm)	Nominal Net Weight <sup>1</sup> lbs/kft (kg/km)	Ampacity	
							Conduit in Air <sup>2</sup>	Underground Duct <sup>3</sup>
E8NLE-1A3F01CA00	1/0	0.358 (9.1)	1.262 (32.05)	0.080 (2.03)	1.541 (39.1)	1,148 (1,662)	165	170
E8NLE-2A3F01CA00	2/0	0.401 (10.2)	1.305 (33.15)	0.080 (2.03)	1.584 (40.2)	1,219 (1,765)	190	200
E8NLE-3A3F01CA00	3/0	0.451 (11.5)	1.356 (34.44)	0.080 (2.03)	1.635 (41.5)	1,305 (1,890)	215	225
E8NLE-4A3F01CA00	4/0	0.507 (12.9)	1.412 (35.86)	0.080 (2.03)	1.755 (44.6)	1,513 (2,191)	245	260
E8NLE-A13F01CA00	250	0.552 (14.0)	1.458 (37.03)	0.080 (2.03)	1.801 (45.7)	1,601 (2,318)	270	290
E8NLE-A33F01CA00	350	0.654 (16.6)	1.561 (39.65)	0.110 (2.79)	1.904 (48.4)	1,809 (2,620)	330	350
E8NLE-A63F01CA00	500	0.781 (19.8)	1.689 (42.91)	0.110 (2.79)	2.032 (51.6)	2,091 (3,028)	400	430
E8NLE-B23F01CA00	750	0.958 (24.3)	1.868 (47.50)	0.110 (2.79)	2.211 (56.2)	2,684 (3,887)	490	540

<sup>1</sup>The dimensions and weights shown are nominal and subject to industry standards and manufacturing tolerances. Other designs are available upon request.

<sup>2</sup>Ampacities are in accordance with NEC table 310.60(C)(78), for MV-105, 5001-35,000 Volts, for conduit in air.

<sup>3</sup>Ampacities are in accordance with NEC table 310.60(C)(74), for MV-105, 5001-35,000 Volts, for underground electrical duct, one circuit.

<sup>4</sup>For AL-8000 series aluminum alloy compressed conductor, substitute in the Part Number the "3F" with "4G".