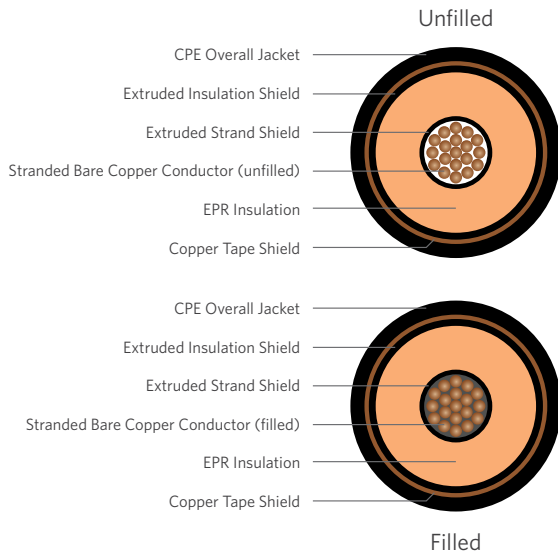


EPR/CTS/CPE Power, Type MV-105, 5kV-35kV

Series E8 (Copper Conductors)



MARKETS



PRODUCT DESCRIPTION

The Superior Essex Medium Voltage, EPR/Cu Tape Shield/CPE, Type MV-105 Cable consist of fully annealed bare copper Class B stranded conductors, covered with ethylene propylene rubber (EPR), copper tape shield, and black CPE 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

Conductor Count	1 conductor
Conductor	Fully annealed bare copper Class B compressed strand (filled or unfilled)
Gauge Sizes	Filled: Available in 2 AWG through 1000 kcmil Unfilled: Available in 2 AWG through 1000 kcmil
Conductor Strand Shield	Extruded thermoset semi-conducting polymer over the conductor
Insulation	Ethylene Propylene Rubber (EPR)
Insulation Shield	Extruded thermoset semi-conducting polymer over the insulation
Shield	Annealed copper tape helically applied with a 25% overlap
Jacket	Chlorinated Polyethylene (CPE)
Jacket Marking	2 AWG - 1 AWG: 00000 FT SUPERIOR ESSEX XXAWG 1/C XXXKV XXX% INSUL LEVEL XXXMILS EPR/CPE JKT TYPE MV-105 SUN RES (UL) MADE IN USA MMDDYYYY 1/0 AWG - 1000 kcmil: 00000 FT SUPERIOR ESSEX XXAWG (or XXXKCMIL) 1/C XXXKV XXX% INSUL LEVEL XXXMILS EPR/CPE JKT TYPE MV-105 FOR CT USE (UL) SUN RES MADE IN USA MMDDYYYY
Packaging	Non-returnable wood reels in a variety of lengths and dimensions
Performance Compliances	ASTM B8 UL 1072, UL 1685 (flame compliance) ICEA S-93-639/NEMA WC74, ICEA S-97-682 AEIC CS8 CSA FT4/IEEE1202 (flame compliance) NEC
Other Compliances	EPA 40 CFR, Part 261 OSHA

UL is a registered trademark of UL LLC.

PRODUCT KEY

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

Copper Unfilled Cdr 5kV 100% I.L., 90-mils, Shielded Series E8EME

PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number	Conductor Size AWG/kcmil	Nominal Conductor Diameter ¹ in (mm)	Nominal Insulation Diameter ¹ in (mm)	Nominal Jacket Thickness ¹ in (mm)	Nominal Overall Diameter ¹ in (mm)	Nominal Net Weight ¹ lbs/kft (kg/km)	Ampacity	
							Conduit in Air ²	Underground Duct ³
E8EME-021B01CA00	2	0.280 (7.1)	0.513 (13.03)	0.060 (1.52)	0.756 (19.2)	461 (686)	145	155
E8EME-011B01CA00	1	0.319 (8.1)	0.552 (14.02)	0.060 (1.52)	0.795 (20.3)	534 (795)	175	180
E8EME-1A1B01CA00	1/0	0.358 (9.1)	0.592 (15.04)	0.060 (1.52)	0.835 (21.1)	621 (924)	200	210
E8EME-2A1B01CA00	2/0	0.401 (10.2)	0.635 (16.13)	0.060 (1.52)	0.914 (23.2)	758 (1,128)	225	235
E8EME-3A1B01CA00	3/0	0.451 (11.5)	0.686 (17.42)	0.060 (1.52)	0.965 (24.5)	891 (1,326)	270	270
E8EME-4A1B01CA00	4/0	0.507 (12.9)	0.742 (18.85)	0.080 (2.03)	1.021 (26.0)	1,055 (1,570)	305	310
E8EME-A11B01CA00	250	0.552 (14.0)	0.788 (20.02)	0.080 (2.03)	1.067 (27.1)	1,199 (1,784)	355	345
E8EME-A31B01CA00	350	0.654 (16.6)	0.891 (22.63)	0.080 (2.03)	1.170 (29.7)	1,562 (2,324)	430	415
E8EME-A61B01CA00	500	0.781 (19.8)	1.019 (25.88)	0.080 (2.03)	1.298 (32.9)	2,089 (3,108)	530	505
E8EME-B21B01CA00	750	0.958 (24.3)	1.198 (30.40)	0.080 (2.03)	1.477 (37.5)	2,927 (4,356)	665	630
E8EME-B51B01CA00	1000	1.106 (28.1)	1.347 (34.20)	0.080 (2.03)	1.626 (41.3)	3,768 (5,607)	755	690

Copper Unfilled Cdr 5kV 133%/8kV 100% I.L., 115-mils, Shielded Series E8FME

PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number	Conductor Size AWG/kcmil	Nominal Conductor Diameter ¹ in (mm)	Nominal Insulation Diameter ¹ in (mm)	Nominal Jacket Thickness ¹ in (mm)	Nominal Overall Diameter ¹ in (mm)	Nominal Net Weight ¹ lbs/kft (kg/km)	Ampacity	
							Conduit in Air ⁴	Underground Duct ⁵
E8FME-021B01CA00	2	0.280 (7.1)	0.563 (14.31)	0.060 (1.52)	0.806 (20.5)	498 (741)	165	165
E8FME-011B01CA00	1	0.319 (8.1)	0.602 (15.29)	0.080 (2.03)	0.881 (22.4)	603 (898)	190	185
E8FME-1A1B01CA00	1/0	0.358 (9.1)	0.642 (16.31)	0.080 (2.03)	0.921 (23.4)	692 (1,032)	215	215
E8FME-2A1B01CA00	2/0	0.401 (10.2)	0.685 (17.41)	0.080 (2.03)	0.964 (24.5)	801 (1,194)	255	245
E8FME-3A1B01CA00	3/0	0.451 (11.5)	0.736 (18.69)	0.080 (2.03)	1.015 (25.8)	937 (1,395)	290	275
E8FME-4A1B01CA00	4/0	0.507 (12.9)	0.792 (20.12)	0.080 (2.03)	1.071 (27.2)	1,102 (1,643)	330	315
E8FME-A11B01CA00	250	0.552 (14.0)	0.838 (21.29)	0.080 (2.03)	1.117 (28.4)	1,248 (1,860)	365	345
E8FME-A31B01CA00	350	0.654 (16.6)	0.941 (23.91)	0.080 (2.03)	1.220 (31.0)	1,615 (2,407)	440	415
E8FME-A61B01CA00	500	0.781 (19.8)	1.069 (27.15)	0.080 (2.03)	1.348 (34.2)	2,148 (3,200)	535	500
E8FME-B21B01CA00	750	0.958 (24.3)	1.248 (31.70)	0.080 (2.03)	1.527 (38.8)	2,994 (4,456)	655	610
E8FME-B51B01CA00	1000	1.106 (28.1)	1.427 (36.20)	0.080 (2.03)	1.770 (45.0)	3,994 (5,943)	755	690

Copper Unfilled Cdr 15kV 100% I.L., 175-mils, Shielded Series E8HME

PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number	Conductor Size AWG/kcmil	Nominal Conductor Diameter ¹ in (mm)	Nominal Insulation Diameter ¹ in (mm)	Nominal Jacket Thickness ¹ in (mm)	Nominal Overall Diameter ¹ in (mm)	Nominal Net Weight ¹ lbs/kft (kg/km)	Ampacity	
							Conduit in Air ⁴	Underground Duct ⁵
E8HME-021B01CA00	2	0.280 (7.1)	0.693 (17.61)	0.060 (1.52)	0.972 (24.7)	636 (946)	165	165
E8HME-011B01CA00	1	0.319 (8.1)	0.732 (18.59)	0.080 (2.03)	1.011 (25.6)	716 (1,066)	190	185
E8HME-1A1B01CA00	1/0	0.358 (9.1)	0.772 (19.61)	0.080 (2.03)	1.051 (26.7)	810 (1,205)	215	215
E8HME-2A1B01CA00	2/0	0.401 (10.2)	0.815 (20.71)	0.080 (2.03)	1.094 (27.8)	923 (1,374)	255	245
E8HME-3A1B01CA00	3/0	0.451 (11.5)	0.866 (22.01)	0.080 (2.03)	1.145 (29.1)	1,064 (1,583)	290	275
E8HME-4A1B01CA00	4/0	0.507 (12.9)	0.922 (23.42)	0.080 (2.03)	1.201 (30.5)	1,236 (1,839)	330	315
E8HME-A11B01CA00	250	0.552 (14.0)	0.968 (24.59)	0.080 (2.03)	1.247 (31.7)	1,386 (2,063)	365	345
E8HME-A31B01CA00	350	0.654 (16.6)	1.071 (27.21)	0.080 (2.03)	1.350 (34.3)	1,764 (2,625)	440	415
E8HME-A61B01CA00	500	0.781 (19.8)	1.199 (30.45)	0.080 (2.03)	1.518 (38.6)	2,362 (3,514)	535	500
E8HME-B21B01CA00	750	0.958 (24.3)	1.378 (35.00)	0.080 (2.03)	1.657 (42.1)	3,175 (4,726)	655	610
E8HME-B51B01CA00	1000	1.106 (28.1)	1.527 (38.80)	0.110 (2.79)	1.870 (47.5)	4,153 (6,181)	755	690

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

²Ampacities are in accordance with NEC table 310.60(C)(73), Type MV-105, 2001-5000 Volts, for conduit in air.

³Ampacities are in accordance with NEC table 310.60(C)(77), Type MV-105, 2001-5000 Volts, for underground electrical duct, one circuit.

⁴Ampacities are in accordance with NEC table 310.60(C)(73), for MV-105, 5001-35,000 Volts, for conduit in air.

⁵Ampacities are in accordance with NEC table 310.60(C)(77), for MV-105, 5001-35,000 Volts, for underground electrical duct, one circuit.

Copper Unfilled Cdr 15kV 133% I.L., 220-mils, Shielded Series E8JME

PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number	Conductor Size AWG/kcmil	Nominal Conductor Diameter ¹ in (mm)	Nominal Insulation Diameter ¹ in (mm)	Nominal Jacket Thickness ¹ in (mm)	Nominal Overall Diameter ¹ in (mm)	Nominal Net Weight ¹ lbs/kft (kg/km)	Ampacity	
							Conduit in Air ²	Underground Duct ³
E8JME-021B01CA00	2	0.280 (7.1)	0.793 (20.14)	0.080 (2.03)	1.072 (27.2)	729 (1,086)	165	165
E8JME-011B01CA00	1	0.319 (8.1)	0.832 (21.13)	0.080 (2.03)	1.111 (28.2)	812 (1,211)	190	185
E8JME-1A1B01CA00	1/0	0.358 (9.1)	0.872 (22.15)	0.080 (2.03)	1.151 (29.2)	909 (1,355)	215	215
E8JME-2A1B01CA00	2/0	0.401 (10.2)	0.915 (23.24)	0.080 (2.03)	1.194 (30.3)	1,026 (1,529)	255	245
E8JME-3A1B01CA00	3/0	0.451 (11.5)	0.966 (24.54)	0.080 (2.03)	1.245 (31.6)	1,171 (1,745)	290	275
E8JME-4A1B01CA00	4/0	0.507 (12.9)	1.022 (25.96)	0.080 (2.03)	1.301 (33.0)	1,348 (2,011)	330	315
E8JME-A11B01CA00	250	0.552 (14.0)	1.068 (27.13)	0.080 (2.03)	1.347 (34.2)	1,502 (2,238)	365	345
E8JME-A31B01CA00	350	0.654 (16.6)	1.171 (29.74)	0.080 (2.03)	1.450 (36.8)	1,888 (2,814)	440	415
E8JME-A61B01CA00	500	0.781 (19.8)	1.299 (32.99)	0.080 (2.03)	1.578 (40.1)	2,497 (3,721)	535	500
E8JME-B21B01CA00	750	0.958 (24.3)	1.478 (37.50)	0.080 (2.03)	1.821 (46.3)	3,437 (5,115)	655	610
E8JME-B51B01CA00	1000	1.106 (28.1)	1.627 (41.30)	0.110 (2.79)	1.970 (50.0)	4,321 (6,430)	755	690

Copper Unfilled Cdr 25kV 100% I.L., 260-mils, Shielded Series E8KME

PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number	Conductor Size AWG/kcmil	Nominal Conductor Diameter ¹ in (mm)	Nominal Insulation Diameter ¹ in (mm)	Nominal Jacket Thickness ¹ in (mm)	Nominal Overall Diameter ¹ in (mm)	Nominal Net Weight ¹ lbs/kft (kg/km)	Ampacity	
							Conduit in Air ²	Underground Duct ³
E8KME-1A1B01CA00	1/0	0.358 (9.1)	0.952 (24.18)	0.080 (2.03)	1.231 (31.3)	995 (1,481)	215	215
E8KME-2A1B01CA00	2/0	0.401 (10.2)	0.995 (25.27)	0.080 (2.03)	1.274 (32.4)	1,115 (1,659)	255	245
E8KME-3A1B01CA00	3/0	0.451 (11.5)	1.046 (26.57)	0.080 (2.03)	1.325 (33.7)	1,263 (1,879)	290	275
E8KME-4A1B01CA00	4/0	0.507 (12.9)	1.102 (27.99)	0.080 (2.03)	1.381 (35.1)	1,443 (2,147)	330	315
E8KME-A11B01CA00	250	0.552 (14.0)	1.148 (29.16)	0.080 (2.03)	1.427 (36.2)	1,600 (2,381)	365	345
E8KME-A31B01CA00	350	0.654 (16.6)	1.251 (31.78)	0.080 (2.03)	1.531 (38.9)	1,994 (2,966)	440	415
E8KME-A61B01CA00	500	0.781 (19.8)	1.379 (35.03)	0.080 (2.03)	1.658 (42.1)	2,558 (3,807)	535	500
E8KME-B21B01CA00	750	0.958 (24.3)	1.558 (39.60)	0.110 (2.79)	1.901 (48.3)	3,567 (5,308)	655	610
E8KME-B51B01CA00	1000	1.106 (28.1)	1.707 (43.40)	0.110 (2.79)	2.050 (52.1)	4,461 (6,638)	755	690

Copper Unfilled Cdr 25kV 133% I.L., 320-mils, Shielded Series E8LME

PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number	Conductor Size AWG/kcmil	Nominal Conductor Diameter ¹ in (mm)	Nominal Insulation Diameter ¹ in (mm)	Nominal Jacket Thickness ¹ in (mm)	Nominal Overall Diameter ¹ in (mm)	Nominal Net Weight ¹ lbs/kft (kg/km)	Ampacity	
							Conduit in Air ²	Underground Duct ³
E8LME-1A1B01CA00	1/0	0.358 (9.1)	1.072 (27.23)	0.080 (2.03)	1.351 (34.3)	1,133 (1,686)	215	215
E8LME-2A1B01CA00	2/0	0.401 (10.2)	1.115 (28.32)	0.080 (2.03)	1.394 (35.4)	1,257 (1,871)	255	245
E8LME-3A1B01CA00	3/0	0.451 (11.5)	1.166 (29.62)	0.080 (2.03)	1.445 (36.7)	1,410 (2,099)	290	275
E8LME-4A1B01CA00	4/0	0.507 (12.9)	1.222 (31.04)	0.080 (2.03)	1.501 (38.1)	1,596 (2,375)	330	315
E8LME-A11B01CA00	250	0.552 (14.0)	1.268 (32.21)	0.080 (2.03)	1.547 (39.3)	1,758 (2,616)	365	345
E8LME-A31B01CA00	350	0.654 (16.6)	1.371 (34.82)	0.080 (2.03)	1.651 (41.9)	2,161 (3,216)	440	415
E8LME-A61B01CA00	500	0.781 (19.8)	1.499 (38.07)	0.080 (2.03)	1.842 (46.8)	2,852 (4,244)	535	500
E8LME-B21B01CA00	750	0.958 (24.3)	1.678 (42.60)	0.110 (2.79)	2.021 (51.3)	3,772 (5,614)	655	610
E8LME-B51B01CA00	1000	1.106 (28.1)	1.827 (46.40)	0.110 (2.79)	2.170 (55.1)	4,681 (6,965)	755	690

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

²Ampacities are in accordance with NEC table 310.60(C)(73), for MV-105, 5001-35,000 Volts, for conduit in air.

³Ampacities are in accordance with NEC table 310.60(C)(77), for MV-105, 5001-35,000 Volts, for underground electrical duct, one circuit.

Copper Unfilled Cdr 35kV 100% I.L., 345-mils, Shielded Series E8MME

PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number	Conductor Size AWG/kcmil	Nominal Conductor Diameter ¹ in (mm)	Nominal Insulation Diameter ¹ in (mm)	Nominal Jacket Thickness ¹ in (mm)	Nominal Overall Diameter ¹ in (mm)	Nominal Net Weight ¹ lbs/kft (kg/km)	Ampacity	
							Conduit in Air ²	Underground Duct ³
E8MME-1A1B01CA00	1/0	0.358 (9.1)	1.112 (28.24)	0.080 (2.03)	1.381 (35.1)	1,170 (1,740)	215	215
E8MME-2A1B01CA00	2/0	0.401 (10.2)	1.155 (29.34)	0.080 (2.03)	1.434 (36.4)	1,307 (1,945)	255	245
E8MME-3A1B01CA00	3/0	0.451 (11.5)	1.206 (30.63)	0.080 (2.03)	1.485 (37.7)	1,462 (2,176)	290	275
E8MME-4A1B01CA00	4/0	0.507 (12.9)	1.262 (32.05)	0.080 (2.03)	1.531 (38.9)	1,636 (2,434)	330	315
E8MME-A11B01CA00	250	0.552 (14.0)	1.308 (33.22)	0.080 (2.03)	1.587 (40.3)	1,813 (2,698)	365	345
E8MME-A31B01CA00	350	0.654 (16.6)	1.411 (35.84)	0.080 (2.03)	1.754 (44.5)	2,327 (3,463)	440	415
E8MME-A61B01CA00	500	0.781 (19.8)	1.539 (39.09)	0.110 (2.79)	1.872 (47.5)	2,901 (4,316)	535	500
E8MME-B21B01CA00	750	0.958 (24.3)	1.718 (43.60)	0.110 (2.79)	2.061 (52.3)	3,843 (5,719)	655	610
E8MME-B51B01CA00	1000	1.106 (28.1)	1.867 (47.40)	0.110 (2.79)	2.210 (56.1)	4,756 (7,078)	755	690

Copper Unfilled Cdr 35kV 133% I.L., 420-mils, Shielded Series E8NME

PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number	Conductor Size AWG/kcmil	Nominal Conductor Diameter ¹ in (mm)	Nominal Insulation Diameter ¹ in (mm)	Nominal Jacket Thickness ¹ in (mm)	Nominal Overall Diameter ¹ in (mm)	Nominal Net Weight ¹ lbs/kft (kg/km)	Ampacity	
							Conduit in Air ²	Underground Duct ³
E8NME-1A1B01CA00	1/0	0.358 (9.1)	1.262 (32.05)	0.080 (2.03)	1.541 (39.1)	1,376 (2,048)	215	215
E8NME-2A1B01CA00	2/0	0.401 (10.2)	1.305 (33.15)	0.080 (2.03)	1.584 (40.2)	1,507 (2,242)	255	245
E8NME-3A1B01CA00	3/0	0.451 (11.5)	1.356 (34.44)	0.080 (2.03)	1.635 (41.5)	1,668 (2,482)	290	275
E8NME-4A1B01CA00	4/0	0.507 (12.9)	1.412 (35.86)	0.080 (2.03)	1.755 (44.6)	1,970 (2,932)	330	315
E8NME-A11B01CA00	250	0.552 (14.0)	1.458 (37.03)	0.080 (2.03)	1.801 (45.7)	2,142 (3,187)	365	345
E8NME-A31B01CA00	350	0.654 (16.6)	1.561 (39.65)	0.110 (2.79)	1.904 (48.4)	2,568 (3,821)	440	415
E8NME-A61B01CA00	500	0.781 (19.8)	1.689 (42.91)	0.110 (2.79)	2.032 (51.6)	3,173 (4,722)	535	500
E8NME-B21B01CA00	750	0.958 (24.3)	1.868 (47.50)	0.110 (2.79)	2.211 (56.2)	4,121 (6,133)	655	610
E8NME-B51B01CA00	1000	1.106 (28.1)	2.017 (51.20)	0.110 (2.79)	2.370 (60.2)	5,073 (7,549)	755	690

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

²Ampacities are in accordance with NEC table 310.60(C)(73), for MV-105, 5001-35,000 Volts, for conduit in air.

³Ampacities are in accordance with NEC table 310.60(C)(77), for MV-105, 5001-35,000 Volts, for underground electrical duct, one circuit.