

MC or MV-105 Copper, EPR Insulated

5 kV – 35 kV, Shielded

CME[®]
wire and cable

A Viakable Company

Features

UL listed as MC or MV-105.

Cable jacket rated for Sun Resistant and Oil resistant.

Sizes 1/0 and larger are UL Listed as CT USE in accordance with NEC meeting UL 1685 vertical-tray flame exposure.

Sizes 4/0 and larger are marked FT4 meeting vertical-tray test per IEEE 1202 at 70,000 BTU/Hr.

Cable with supplementary sunlight resistance jacket, and grounding conductor, is rated for Direct Burial.

True Triple extrusion system and closed handling raw materials system, to eliminate any contact with ambient, until extrusion process ends.

Application

Primary power and distribution circuits in industrial and commercial installations.

May be used in wet or dry locations, where exposed or concealed, installed in cable trays, raceways, duct, and open air, aerially or directly buried.

In hazardous (classified) locations Class I, Division 2, as permitted by NEC.

Standards

UL 1072

Medium Voltage Power Cables.

ICEA S93-639/WC 74

Standard for Utility Shielded Power Cables rated 5 kV – 46 kV.

AEIC CS8

Specification for Extruded Dielectric, Shielded Power Cables rated 5 kV – 46 kV.

Specifications

Maximum operating voltage:

- 5 kV to 35 kV 100% and 133% IL

Maximum conductor operation temperature:

- 105 °C wet and dry

Engineering Information

1. Conductor: Soft annealed uncoated copper compacted Class B per ASTM B496.

On request, compacted strand aluminum conductor.

Sizes: 8 AWG up to 1000 kcmil.

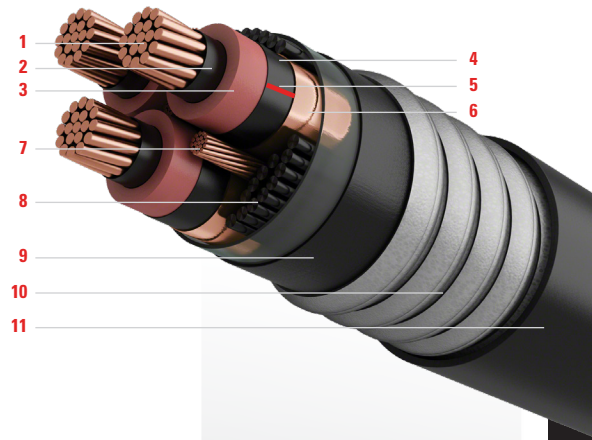
2. Conductor Shield: Semi conducting cross-linked polyethylene (XLPE).

3. Insulation: Thermoset ethylene propylene rubber (EPR).

4. Insulation Shield: Semi conducting cross-linked polyethylene (XLPE).

5. Phase ID: Colored strings (black, red and white yarns.)

On request, Other color Yarns are available.



6. Metallic Shield: Soft annealed uncoated copper tape, 5 mil thick, 25% minimum overlap.

7. Grounding: One or three soft annealed bare copper conductors cabled with phase conductors.

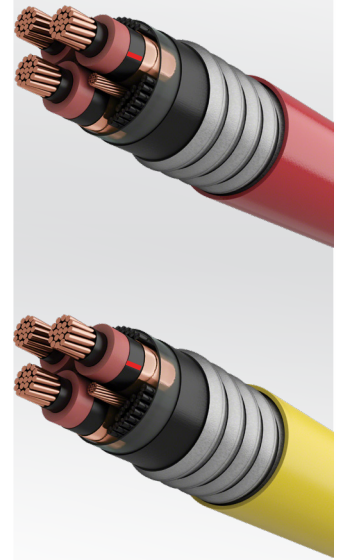
8. Assembly: Conductors cabled with non hygroscopic fillers, as required and binder tape.

9. Inner Jacket (Optional): Black sunlight resistance and flame retardant polyvinyl chloride (PVC) compound.

10. Armor: An aluminum or galvanized steel interlocked armor, applied over the binder tape or the optional inner jacket (25 mils to 30 mils thickness depending on cable construction.)

11. Jacket (Supplementary): Sunlight resistance and flame retardant polyvinyl chloride (PVC) compound.

- 5/8 kV Yellow
- 15 kV Red
- Rest Black



Technical Data

5 kV Interlocked, EPR Insulated

Size AWG or kcmil	Number of Strands	Conductor Diameter	100% and 133% Insulation Levels (90 mil)				
			Minumum Grounding Conductor*	Jacket Thickness	Approximate Outside Diameter	Approximate Net Weight	
						AWG	mil
8	7	0.13	8	50	1.27	1227	941
6	7	0.17	6	50	1.34	1427	1132
4	7	0.21	6	50	1.44	1695	1373
2	7	0.27	6	50	1.61	2005	1699
1	19	0.30	4	60	1.69	2303	1998
1/0	19	0.34	4	60	1.77	2611	2288
2/0	19	0.38	4	60	1.86	2984	2641
3/0	19	0.42	3	60	1.96	3463	3108
4/0	19	0.48	3	60	2.07	4029	3647
250	37	0.52	2	60	2.19	4573	4178
300	37	0.57	2	60	2.30	5195	4773
350	37	0.62	2	75	2.43	5884	5440
400	37	0.66	1	75	2.52	6514	6069
500	37	0.74	1	75	2.69	7709	7225
600	61	0.81	1/0	75	2.93	9089	8574
750	61	0.91	1/0	75	3.13	10834	10271
1000	61	1.06	2/0	85	3.48	13852	13243

8 kV Interlocked, EPR Insulated

Size AWG or kcmil	Number of Strands	Conductor Diameter in	100% Insulation Level (115 mil)					133% Insulation Level (140 mil)				
			Minumum Grounding Conductor*	Jacket Thickness	Approximate Outside Diameter	Approximate Net Weight		Minumum Grounding Conductor*	Jacket Thickness	Approximate Outside Diameter	Approximate Net Weight	
						AWG	mil				in	lb/kft
8	7	0.13	8	50	1.38	1382	1066	-	-	-	-	-
6	7	0.17	6	50	1.45	1589	1262	6	50	1.61	1679	1372
4	7	0.21	6	50	1.55	1864	1511	6	60	1.73	1990	1660
2	7	0.27	6	60	1.74	2211	1878	6	60	1.85	2393	2034
1	19	0.30	4	60	1.80	2481	2150	4	60	1.91	2667	2311
1/0	19	0.34	4	60	1.88	2796	2446	4	60	1.99	2989	2613
2/0	19	0.38	4	60	1.97	3175	2806	4	60	2.08	3375	2979
3/0	19	0.42	3	60	2.07	3663	3281	3	60	2.18	3871	3463
4/0	19	0.48	3	60	2.18	4237	3829	3	60	2.29	4454	4019
250	37	0.52	2	60	2.30	4791	4369	2	75	2.44	5092	4644
300	37	0.57	2	75	2.44	5495	5048	2	75	2.55	5733	5260
350	37	0.62	2	75	2.54	6122	5651	2	75	2.65	6368	5871
400	37	0.66	1	75	2.63	6758	6288	1	75	2.74	7012	6515
500	37	0.74	1	75	2.85	8083	7561	1	75	2.96	8353	7806
600	61	0.81	1/0	75	3.04	9366	8825	1/0	75	3.15	9651	9084
750	61	0.91	1/0	85	3.26	11194	10604	1/0	85	3.37	11498	10882
1000	61	1.06	2/0	85	3.59	14173	13538	2/0	85	3.70	14503	13842

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product. Other sizes available upon request.

Ampacities: Refer to beginning of section.

* At the option of manufacturer, Ground Conductor can be divided in three, one in each interstice.

Technical Data

15 kV Interlocked EPR Insulated

Size AWG or kcmil	Number of Strands	Conductor Diameter in	100% Insulation Level (175 mil)					133% Insulation Level (220 mil)				
			Minumum Grounding Conductor*	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight		Minumum Grounding Conductor*	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight	
						Steel Armor lb/kft	Aluminum Armor lb/kft				Steel Armor lb/kft	Aluminum Armor lb/kft
			AWG									
2	7	0.27	6	60	2.00	2661	2266	6	60	2.20	3032	2590
1	19	0.30	4	60	2.07	2943	2550	4	60	2.26	3323	2883
1/0	19	0.34	4	60	2.15	3273	2861	4	60	2.34	3665	3206
2/0	19	0.38	4	60	2.23	3670	3237	4	75	2.46	4149	3669
3/0	19	0.42	3	60	2.33	4176	3732	3	75	2.56	4673	4181
4/0	19	0.48	3	75	2.48	4848	4377	3	75	2.67	5288	4770
250	37	0.52	2	75	2.60	5428	4944	2	75	2.84	6001	5459
300	37	0.57	2	75	2.70	6082	5572	2	75	2.95	6674	6106
350	37	0.62	2	75	2.85	6843	6298	2	75	3.05	7337	6690
400	37	0.66	1	75	2.95	7501	6956	1	75	3.14	8008	7416
500	37	0.74	1	75	3.11	8747	8162	1	85	3.33	9345	8714
600	61	0.81	1/0	85	3.32	10133	9529	1/0	85	3.52	10694	10044
750	61	0.91	1/0	85	3.52	11938	11286	1/0	85	3.72	12528	11830
1000	61	1.06	2/0	85	3.85	14979	14282	-	-	-	-	-

25 kV Interlocked, EPR Insulated

Size AWG or kcmil	Number of Strands	Conductor Diameter in	100% Insulation Levels (260 mil)				
			Minumum Grounding Conductor*	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight	
						Steel Armor lb/kft	Aluminum Armor lb/kft
			AWG				
1	19	0.30	4	75	2.47	3760	3279
1/0	19	0.34	4	75	2.55	4115	3614
2/0	19	0.38	4	75	2.64	4537	4016
3/0	19	0.42	3	75	2.74	5074	4540
4/0	19	0.48	3	75	2.90	5821	5250
250	37	0.52	2	75	3.02	6438	5853
300	37	0.57	2	75	3.13	7124	6514
350	37	0.62	2	85	3.25	7866	7233
400	37	0.66	1	85	3.34	8550	7917
500	37	0.74	1	85	3.51	9844	9172
600	61	0.81	1/0	85	3.69	11217	10526
750	61	0.91	1/0	85	3.90	13077	12338

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product. Other sizes available upon request.

Ampacities: Refer to beginning of section.

* At the option of manufacturer, Ground Conductor can be divided in three, one in each interstice.

Technical Data

35 kV Interlocked EPR Insulated

Size AWG or kcmil	Number of Strands	Conductor Diameter	100% Insulation Levels (345 mil)				
			Minumum Grounding Conductor*	Jacket Thickness	Approximate Outside Diameter	Approximate Net Weight	
						AWG	mil
1/0	19	0.34	4	75	2.97	5111	4510
2/0	19	0.38	4	75	3.06	5559	4938
3/0	19	0.42	3	75	3.16	6127	5494
4/0	19	0.48	3	85	3.29	6858	6198
250	37	0.52	2	85	3.41	7509	6836
300	37	0.57	2	85	3.52	8226	7528
350	37	0.62	2	85	3.62	8931	8209
400	37	0.66	1	85	3.71	9640	8919
500	37	0.74	1	85	3.88	10979	10219

5 kV Interlocked, EPR Insulated, Inner Jacket

Size AWG or kcmil	Number of Strands	Conductor Diameter	100% and 133% Insulation Levels (90 mil)				
			Minumum Grounding Conductor*	Jacket Thickness	Approximate Outside Diameter	Approximate Net Weight	
						AWG	mil
8	7	0.13	8	50	1.43	1497	1164
6	7	0.17	6	50	1.51	1710	1367
4	7	0.21	6	60	1.68	1944	1625
2	7	0.27	6	60	1.80	2348	2000
1	19	0.30	4	60	1.86	2623	2277
1/0	19	0.34	4	60	1.94	2945	2580
2/0	19	0.38	4	60	2.03	3332	2947
3/0	19	0.42	3	60	2.19	3971	3559
4/0	19	0.48	3	60	2.30	4562	4123
250	37	0.52	2	75	2.45	5208	4756
300	37	0.57	2	75	2.56	5857	5379
350	37	0.62	2	75	2.66	6498	5997
400	37	0.66	1	75	2.75	7148	6647
500	37	0.74	1	75	2.92	8381	7840
600	61	0.81	1/0	75	3.16	10088	9243
750	61	0.91	1/0	85	3.45	11896	11260
1000	61	1.06	2/0	85	3.77	14943	14262

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product. Other sizes available upon request.

Ampacities: Refer to beginning of section.

* At the option of manufacturer, Ground Conductor can be divided in three, one in each interstice.

Technical Data

8 kV Interlocked EPR Insulated, Inner Jacket

Size AWG or kcmil	Number of Strands	Conductor Diameter in	100% Insulation Level (115 mil)					133% Insulation Level (140 mil)				
			Minimum Grounding Conductor*	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight		Minimum Grounding Conductor*	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight	
						Steel Armor lb/kft	Aluminum Armor lb/kft				Steel Armor lb/kft	Aluminum Armor lb/kft
			AWG					AWG				
8	7	0.13	8	50	1.56	1643	1301	–	–	–	–	–
6	7	0.17	6	60	1.69	1810	1507	6	60	1.80	1989	1663
4	7	0.21	6	60	1.79	2092	1769	6	60	1.89	2278	1933
2	7	0.27	6	60	1.91	2498	2151	6	60	2.02	2693	2323
1	19	0.30	4	60	1.97	2779	2435	4	60	2.14	3118	2737
1/0	19	0.34	4	60	2.05	3104	2744	4	60	2.22	3454	3057
2/0	19	0.38	4	60	2.20	3636	3244	4	60	2.31	3856	3442
3/0	19	0.42	3	60	2.30	4141	3741	3	75	2.44	4369	3947
4/0	19	0.48	3	75	2.44	4809	4314	3	75	2.55	5049	4606
250	37	0.52	2	75	2.56	5387	4958	2	75	2.67	5636	5186
300	37	0.57	2	75	2.67	6039	5589	2	75	2.78	6296	5826
350	37	0.62	2	75	2.77	6682	6214	2	75	2.88	6946	6459
400	37	0.66	1	75	2.86	7334	6871	1	75	2.97	7606	7123
500	37	0.74	1	75	3.08	8694	8193	1	85	3.27	9254	8718
600	61	0.81	1/0	85	3.35	10284	9761	1/0	85	3.46	10596	10053
750	61	0.91	1/0	85	3.56	12094	11536	1/0	85	3.67	12421	11845
1000	61	1.06	2/0	85	3.88	15141	14562	2/0	85	3.99	15493	14897

15 kV Interlocked, EPR Insulated, Inner Jacket

Size AWG or kcmil	Number of Strands	Conductor Diameter in	100% Insulation Level (175 mil)					133% Insulation Level (220 mil)				
			Minimum Grounding Conductor*	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight		Minimum Grounding Conductor*	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight	
						Steel Armor lb/kft	Aluminum Armor lb/kft				Steel Armor lb/kft	Aluminum Armor lb/kft
			AWG					AWG				
2	7	0.27	6	60	2.23	3179	2727	6	75	2.46	3669	3170
1	19	0.30	4	60	2.30	3475	3025	4	75	2.53	3977	3480
1/0	19	0.34	4	60	2.38	3823	3354	4	75	2.61	4339	3823
2/0	19	0.38	4	75	2.49	4315	3826	4	75	2.69	4770	4233
3/0	19	0.42	3	75	2.60	4848	4346	3	75	2.79	5317	4768
4/0	19	0.48	3	75	2.71	5472	4944	3	75	2.91	5957	5382
250	37	0.52	2	75	2.83	6079	5538	2	75	3.07	6709	6109
300	37	0.57	2	75	2.93	6757	6191	2	85	3.27	7681	7040
350	37	0.62	2	75	3.08	7553	6951	2	85	3.37	8374	7182
400	37	0.66	1	85	3.26	8506	7888	1	85	3.46	9074	8409
500	37	0.74	1	85	3.43	9802	9146	1	85	3.62	10394	9691
600	61	0.81	1/0	85	3.61	11179	10503	1/0	85	3.81	11797	11075
750	61	0.91	1/0	85	3.82	13042	12318	1/0	85	4.02	13690	12919

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product. Other sizes available upon request.

Ampacities: Refer to beginning of section.

* At the option of manufacturer, Ground Conductor can be divided in three, one in each interstice.

Technical Data

25 kV Interlocked, EPR Insulated, Inner Jacket

Size AWG or kcmil	Number of Strands	Conductor Diameter in	100% Insulation Levels (260 mil)				
			Minumum Grounding Conductor*	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight	
						Steel Armor lb/kft	Aluminum Armor lb/kft
1	19	0.30	4	75	2.70	4384	3845
1/0	19	0.34	4	75	2.78	4756	4198
2/0	19	0.38	4	75	2.87	5197	4619
3/0	19	0.42	3	75	2.97	5757	5167
4/0	19	0.48	3	75	3.13	6541	5913
250	37	0.52	2	85	3.33	7465	6809
300	37	0.57	2	85	3.44	8185	7503
350	37	0.62	2	85	3.54	8891	8185
400	37	0.66	1	85	3.63	9602	8896
500	37	0.74	1	85	3.80	10943	10199
600	61	0.81	1/0	85	3.99	12371	11607

35 kV Interlocked, EPR Insulated, Inner Jacket

Size AWG or kcmil	Number of Strands	Conductor Diameter in	100% Insulation Levels (345 mil)				
			Minumum Grounding Conductor*	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight	
						Steel Armor lb/kft	Aluminum Armor lb/kft
1/0	19	0.34	4	85	3.29	6124	5451
2/0	19	0.38	4	85	3.38	6599	5905
3/0	19	0.42	3	85	3.48	7198	6492
4/0	19	0.48	3	85	3.59	7896	7164
250	37	0.52	2	85	3.71	8582	7837
300	37	0.57	2	85	3.82	9330	8560
350	37	0.62	2	85	3.91	10063	9269
400	37	0.66	1	85	4.01	10799	10005

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product. Other sizes available upon request.

Ampacities: Refer to beginning of section.

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