



hendrix[®] **kerite**[®]

Power Cable Product Catalog

Introduction

The Power Cable business unit markets through two highly respected industry-recognized brands.

- **Hendrix Wire & Cable** manufactures TRXLPE-insulated, medium voltage cables, rated 15kV to 46kV in the Milford, NH location.
- **The Kerite Company** manufactures specialized, DR-EPR insulated, 5kV to 138kV cables and PILC replacement cable in the Seymour, CT location.

Marmon Utility LLC is comprised of two separate business units that serve the electric utility, contractor and petroleum markets:

- Power Cable, Hendrix and Kerite
 - Medium Voltage Cable
 - High Voltage Cable
 - Cable Services
 - Pump Cable
- Hendrix Overhead Solutions

Marmon Utility LLC is part of the Marmon Electrical Division. This division is just one of many business segments of The Marmon Group.

Applicable Standards

The UL 1072 Standard is for a certified cable. It contains 120 pages of criteria and is supplemented by UL 2556 (test methods) which contains another 220 pages of criteria. These cables are designed and installed in accordance with the **National Electric Code (NEC)**.

The ICEA 5-97-682 Standard/AEIC CS8 Specification is for a non-certified utility cable. They contain 101 pages of ICEA criteria, 34 pages of AEIC criteria and are supplemented by other ASTM and ICEA referenced standards. These cables are designed and installed in accordance with the **National Electric Safety Code (NESC)**.

ICEA 5-94-649 Standard/AEIC CS8 Specification is for a non-certified utility cable. They contain 107 pages of ICEA criteria, 34 pages of AEIC criteria and are supplemented by other ASTM and ICEA referenced standards. These cables are designed and installed in accordance with the **National Electric Safety Code (NESC)**.

There are obviously significant potential differences between the UL and ICEA standards that are beyond reviewing and listing. The end user needs to determine whether they are installing the cable in a **NEC** application or a **NESC** application, then pick the appropriate standard; not both.

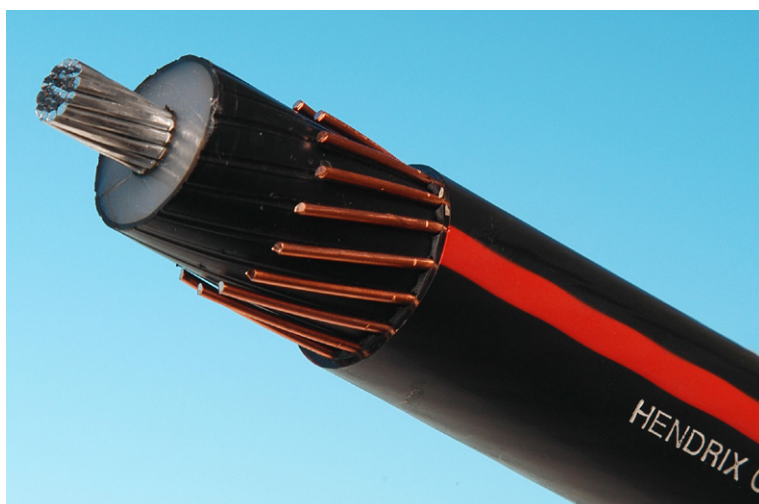
The issue is not whether or not Marmon can meet the requirements of the needed standard. The issue is the non-applicable references make it difficult or even impossible to identify the desired requirements.

Table of Contents

Introduction	2
Applicable Standards	2
Hendrix TRXLPE	4
Underground Residential Distribution Cables (URD)	
15kV	5
25kV	9
35kV	11
🇨🇦 28kV	13
Electrical Data.....	15
Kerite DR-EPR Medium Voltage	19
Underground Residential Distribution Cables (URD)	
15kV	20
25kV	22
35kV	24
URD Ampacities	26
Power Cables	
5kV.....	27
15kV	28
25kV	29
35kV	30
Paper Insulated Lead Cable (PILC) Replacement Cable	
15kV, 25kV, 35kV.....	31
5-35kV Cable Ampacities.....	32
Ampacity Calculation Notes.....	34
Kerite High Voltage	36
Transmission Class	
46kV	39
69kV	41
115kV	43
138kV.....	45
Ampacity Calculation Notes.....	47
Specialty Cables	
Preassembled Aerial (15kV – 35kV).....	49
Subsea (5kV – 35kV).....	50
Marine Cathodic Protection Cable	51
Portable Substation Cable	51
Nuclear Qualified Cable	52
Non-Shielded Mining Cable	52
Cable Services & Solutions	53
Electrical Formulas	54
Short Circuits	54
Conductor Selection	55

Underground Residential Distribution Cables (URD)

15kV	5
25kV	9
35kV	11
28kV	13
Electrical Data.....	15

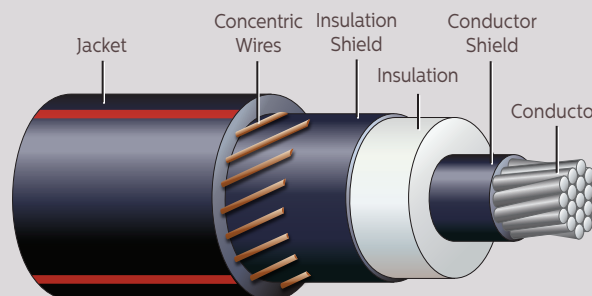




- Conductor Shield – Semi-Conducting Layer
- Insulation – TRXLPE
- Insulation Shield – Semi-Conducting EzStrip® Layer
- Concentric Wires – One-third and Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

15kV Aluminum Conductor 90°C
(100% – .175")



Hendrix URD Cable – 15kV

Aluminum	Conductor		Copper Neutral		Diameter* (per ANSI/ICEA S-94-649)				Weights (lbs/ft)			
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG	Conductor	Min. Over Insulation	Max. Over Insulation	Over Embedded Jacket	Conductor	Neutral	Total Without Jacket	Total With Embedded Jacket
Full Neutral	2	SOLID	10	14	0.258	0.610	0.695	0.960	0.0611	0.130	0.356	0.477
	2	7	10	14	0.283	0.635	0.720	0.990	0.0623	0.130	0.370	0.487
	1	SOLID	13	14	0.289	0.645	0.725	0.995	0.0785	0.173	0.424	0.543
	1	19	13	14	0.322	0.675	0.760	1.015	0.0785	0.173	0.437	0.556
	1/0	SOLID	16	14	0.325	0.680	0.760	1.030	0.0972	0.210	0.494	0.615
	1/0	19	16	14	0.362	0.715	0.800	1.055	0.0991	0.210	0.510	0.632
	2/0	19	13	12	0.406	0.760	0.845	1.100	0.1249	0.276	0.616	0.760
	3/0	19	16	12	0.456	0.810	0.895	1.170	0.1575	0.340	0.730	0.874
	4/0	19	20	12	0.512	0.865	0.950	1.235	0.1986	0.425	0.875	1.030
One-Third Neutral	1/0	SOLID	6	14	0.325	0.680	0.760	1.030	0.0972	0.080	0.356	0.460
	1/0	19	6	14	0.362	0.715	0.800	1.055	0.0991	0.080	0.373	0.515
	2/0	19	7	14	0.406	0.760	0.845	1.100	0.1249	0.094	0.434	0.575
	3/0	19	9	14	0.456	0.810	0.895	1.150	0.1575	0.120	0.510	0.655
	4/0	19	11	14	0.512	0.865	0.950	1.200	0.1986	0.147	0.598	0.759
	250	37	13	14	0.558	0.920	1.005	1.265	0.2347	0.174	0.684	0.889
	350	37	11	12	0.661	1.025	1.110	1.390	0.3286	0.238	0.913	1.175
	500	37	16	12	0.789	1.150	1.235	1.550	0.4694	0.341	1.207	1.498
	750	61	15	10	0.968	1.340	1.425	1.805	0.7040	0.508	1.685	2.057
	1000	61	20	10	1.117	1.485	1.575	2.025	0.9387	0.683	2.210	2.516

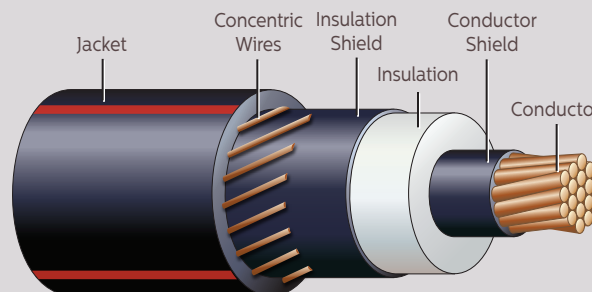
*Meets CSA C68.5 requirements



- Conductor Shield – Semi-Conducting Layer
- Insulation – TRXLPE
- Insulation Shield – Semi-Conducting EzStrip® Layer
- Concentric Wires – One-third and Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

15kV Copper Conductor 90°C
(100% – .175")



Copper	Conductor		Copper Neutral		Diameter* (per ANSI/ICEA S-94-649)				Weights (lbs/ft)			
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG	Conductor	Min. Over Insulation	Max. Over Insulation	Over Embedded Jacket	Conductor	Neutral	Total Without Jacket	Total With Embedded Jacket
Full Neutral	2	7	16	14	0.283	0.635	0.720	0.990	0.205	0.232	0.642	0.700
	1	19	13	12	0.322	0.675	0.760	1.015	0.259	0.300	0.504	0.570
	1/0	19	16	12	0.362	0.715	0.800	1.090	0.326	0.370	0.923	0.993
	2/0	19	20	12	0.406	0.760	0.845	1.135	0.411	0.462	1.107	1.176
	3/0	19	25	12	0.456	0.810	0.895	1.150	0.518	0.578	1.334	1.402
	4/0	19	20	10	0.512	0.865	0.950	1.280	0.653	0.740	1.642	1.708
One-Third Neutral	1/0	19	9	14	0.362	0.715	0.800	1.055	0.326	0.131	0.708	0.777
	2/0	19	11	14	0.406	0.760	0.845	1.100	0.411	0.160	0.836	0.907
	3/0	19	14	14	0.456	0.810	0.895	1.130	0.518	0.203	1.002	1.074
	4/0	19	11	12	0.512	0.865	0.950	1.200	0.653	0.255	1.227	1.317
	250	37	13	12	0.558	0.920	1.005	1.265	0.772	0.301	1.427	1.546
	350	37	12	10	0.661	1.025	1.110	1.425	1.080	0.440	1.904	2.055
	500	37	17	10	0.789	1.150	1.235	1.595	1.544	0.623	2.664	2.823
	750	61	25	10	0.968	1.340	1.425	1.875	2.316	0.917	3.794	3.964
	1000	61	26	9	1.117	1.485	1.575	2.015	3.088	1.211	4.948	5.127

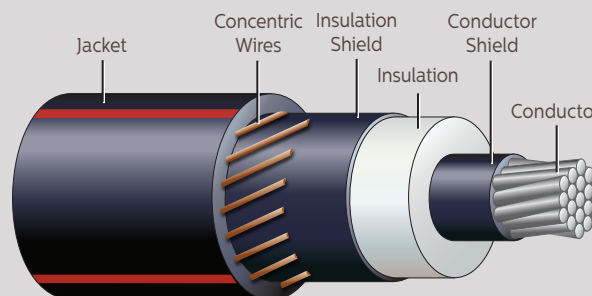
*Meets CSA C68.5 requirements



- Conductor Shield – Semi-Conducting Layer
- Insulation – TRXLPE
- Insulation Shield – Semi-Conducting EzStrip® Layer
- Concentric Wires – One-third and Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

15kV Aluminum Conductor 90°C
(133% – .220")



Hendrix URD Cable – 15kV

Aluminum	Conductor		Copper Neutral		Diameter* (per ANSI/ICEA S-94-649)				Weights (lbs/ft)			
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG	Conductor	Min. Over Insulation	Max. Over Insulation	Over Embedded Jacket	Conductor	Neutral	Total Without Jacket	Total With Embedded Jacket
Full Neutral	2	SOLID	10	14	0.258	0.700	0.790	1.055	0.0610	0.130	0.401	0.537
	2	7	10	14	0.283	0.725	0.815	1.080	0.0623	0.130	0.415	0.549
	1	SOLID	13	14	0.289	0.735	0.820	1.085	0.0770	0.173	0.470	0.604
	1	19	13	14	0.322	0.765	0.855	1.110	0.0785	0.173	0.487	0.619
	1/0	SOLID	16	14	0.325	0.770	0.855	1.120	0.0972	0.210	0.544	0.680
	1/0	19	16	14	0.362	0.805	0.895	1.150	0.0991	0.210	0.562	0.697
	2/0	19	13	12	0.406	0.850	0.935	1.190	0.1249	0.275	0.670	0.830
	3/0	19	16	12	0.456	0.900	0.985	1.260	0.1575	0.340	0.787	0.946
One-Third Neutral	4/0	19	20	12	0.512	0.955	1.045	1.330	0.1986	0.425	0.934	1.148
	1/0	SOLID	6	14	0.325	0.770	0.855	1.120	0.0972	0.080	0.423	0.562
	1/0	19	6	14	0.362	0.805	0.895	1.150	0.0991	0.080	0.441	0.580
	2/0	19	7	14	0.406	0.850	0.935	1.190	0.1249	0.094	0.490	0.643
	3/0	19	9	14	0.456	0.900	0.985	1.240	0.1575	0.120	0.567	0.725
	4/0	19	11	14	0.512	0.955	1.045	1.295	0.1986	0.147	0.656	0.842
	250	37	13	14	0.558	1.010	1.100	1.380	0.2347	0.173	0.781	1.013
	350	37	11	12	0.661	1.115	1.200	1.480	0.3286	0.228	0.987	1.266
	500	37	16	12	0.789	1.240	1.330	1.710	0.4694	0.340	1.284	1.597
	750	61	15	10	0.968	1.430	1.520	1.900	0.7040	0.506	1.774	2.230
	1000	61	20	10	1.117	1.575	1.670	2.120	0.9387	0.681	2.301	2.718

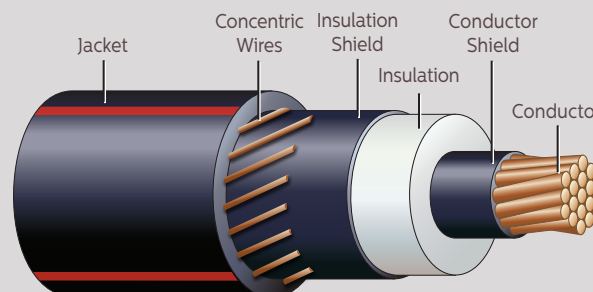
*Meets CSA C68.5 requirements



- Conductor Shield – Semi-Conducting Layer
- Insulation – TRXLPE
- Insulation Shield – Semi-Conducting EzStrip® Layer
- Concentric Wires – One-third and Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

15kV Copper Conductor 90°C
(133% – .220")



Copper	Conductor		Copper Neutral		Diameter* (per ANSI/ICEA S-94-649)				Weights (lbs/ft)			
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG	Conductor	Min. Over Insulation	Max. Over Insulation	Over Embedded Jacket	Conductor	Neutral	Total Without Jacket	Total With Embedded Jacket
Full Neutral	2	7	16	14	0.283	0.725	0.815	1.080	0.205	0.232	0.695	0.760
	1	19	13	12	0.322	0.765	0.855	1.110	0.259	0.300	0.559	0.633
	1/0	19	16	12	0.362	0.805	0.895	1.180	0.326	0.370	0.982	1.060
	2/0	19	20	12	0.406	0.850	0.935	1.225	0.411	0.462	1.169	1.246
	3/0	19	25	12	0.456	0.900	0.985	1.290	0.518	0.578	1.399	1.475
	4/0	19	20	10	0.512	0.955	1.045	1.370	0.653	0.740	1.747	1.825
One-Third Neutral	1/0	19	9	14	0.362	0.805	0.895	1.150	0.326	0.131	0.767	0.842
	2/0	19	11	14	0.406	0.850	0.935	1.190	0.411	0.160	0.897	0.975
	3/0	19	14	14	0.456	0.900	0.985	1.250	0.518	0.203	1.066	1.145
	4/0	19	11	12	0.512	0.955	1.045	1.295	0.653	0.255	1.333	1.434
	250	37	13	12	0.558	1.010	1.100	1.380	0.772	0.301	1.539	1.673
	350	37	12	10	0.661	1.115	1.200	1.515	1.080	0.440	1.987	2.149
	500	37	17	10	0.789	1.240	1.330	1.750	1.544	0.624	2.754	2.924
	750	61	25	10	0.968	1.430	1.520	1.965	2.316	0.918	3.952	4.138
	1000	61	26	9	1.117	1.575	1.670	2.200	3.088	1.211	5.061	5.251

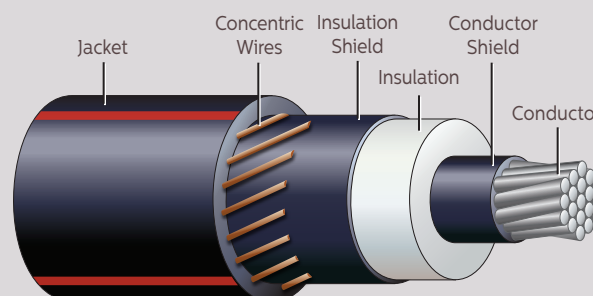
*Meets CSA C68.5 requirements



- Conductor Shield – Semi-Conducting Layer
- Insulation – TRXLPE
- Insulation Shield – Semi-Conducting EzStrip® Layer
- Concentric Wires – One-third and Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

25kV Aluminum Conductor 90°C
(100% – .260")



Aluminum	Conductor		Copper Neutral		Diameter* (per ANSI/ICEA S-94-649)				Weights (lbs/ft)			
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG	Conductor	Min. Over Insulation	Max. Over Insulation	Over Embedded Jacket	Conductor	Neutral	Total Without Jacket	Total With Embedded Jacket
Full Neutral	1	SOLID	13	14	0.289	0.805	0.895	1.170	0.0785	0.174	0.518	0.671
	1	19	13	14	0.322	0.835	0.925	1.195	0.0787	0.174	0.535	0.687
	1/0	SOLID	16	14	0.325	0.840	0.930	1.205	0.0972	0.212	0.590	0.748
	1/0	19	16	14	0.362	0.875	0.965	1.230	0.0991	0.212	0.614	0.767
	2/0	19	13	12	0.406	0.920	1.010	1.275	0.1249	0.276	0.722	0.905
	3/0	19	16	12	0.456	0.970	1.060	1.370	0.1575	0.340	0.875	1.065
	4/0	19	20	12	0.512	1.025	1.115	1.430	0.1986	0.425	1.025	1.241
One-Third Neutral	1/0	SOLID	6	14	0.325	0.840	0.930	1.205	0.0972	0.080	0.460	0.631
	1/0	19	6	14	0.362	0.875	0.965	1.230	0.0991	0.080	0.475	0.650
	2/0	19	7	14	0.406	0.920	1.010	1.275	0.1249	0.093	0.540	0.715
	3/0	19	9	14	0.456	0.970	1.060	1.350	0.1575	0.120	0.655	0.842
	4/0	19	11	14	0.512	1.025	1.115	1.400	0.1986	0.145	0.750	0.966
	250	37	13	14	0.558	1.080	1.175	1.460	0.2347	0.173	0.852	1.117
	350	37	11	12	0.661	1.185	1.275	1.565	0.3286	0.240	1.060	1.380
	500	37	16	12	0.789	1.310	1.405	1.795	0.4694	0.340	1.369	1.721
	750	61	15	10	0.968	1.500	1.595	2.010	0.7040	0.505	1.920	2.373
	1000	61	20	10	1.117	1.645	1.740	2.205	0.9387	0.680	2.405	2.870

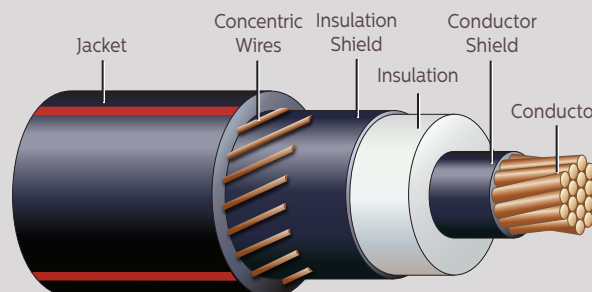
*Meets CSA C68.5 requirements



- Conductor Shield – Semi-Conducting Layer
- Insulation – TRXLPE
- Insulation Shield – Semi-Conducting EzStrip® Layer
- Concentric Wires – One-third and Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

25kV Copper Conductor 90°C
(100% – .260")



Hendrix URD Cable – 25kV

Copper	Conductor		Copper Neutral		Diameter* (per ANSI/ICEA S-94-649)				Weights (lbs/ft)			
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG	Conductor	Min. Over Insulation	Max. Over Insulation	Over Embedded Jacket	Conductor	Neutral	Total Without Jacket	Total With Embedded Jacket
Full Neutral	1	19	13	12	.322	0.835	0.925	1.195	0.259	0.301	0.615	0.701
	1/0	19	16	12	.362	0.875	0.965	1.265	0.326	0.370	1.044	1.133
	2/0	19	20	12	.406	0.920	1.010	1.310	0.411	0.463	1.232	1.321
	3/0	19	25	12	.456	0.970	1.060	1.380	0.518	0.578	1.502	1.594
	4/0	19	20	10	.512	1.025	1.115	1.475	0.653	0.740	1.828	1.919
One-Third Neutral	1/0	19	9	14	.362	0.875	0.965	1.230	0.326	0.131	0.826	0.912
	2/0	19	11	14	.406	0.920	1.010	1.275	0.411	0.160	0.960	1.048
	3/0	19	14	14	.456	0.970	1.060	1.320	0.518	0.203	1.168	1.261
	4/0	19	11	12	.512	1.025	1.115	1.400	0.653	0.255	1.414	1.528
	250	37	13	12	.558	1.080	1.175	1.460	0.772	0.301	1.628	1.780
	350	37	12	10	.661	1.185	1.275	1.600	1.080	0.440	2.083	2.266
	500	37	17	10	.789	1.310	1.405	1.835	1.544	0.624	2.858	3.050
	750	61	25	10	.968	1.500	1.595	2.080	2.316	0.918	4.071	4.280
	1000	61	26	9	1.117	1.645	1.740	2.280	3.088	1.212	5.190	5.404

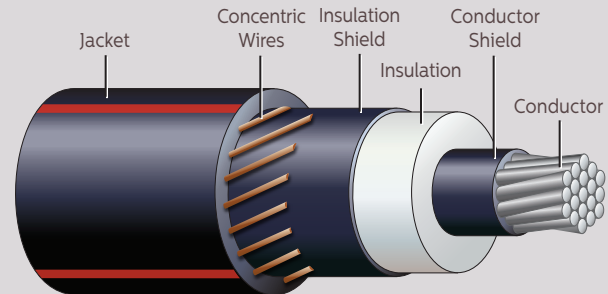
*Meets CSA C68.5 requirements



- Conductor Shield – Semi-Conducting Layer
- Insulation – TRXLPE
- Insulation Shield – Semi-Conducting EzStrip® Layer
- Concentric Wires – One-third and Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

35kV Aluminum Conductor 90°C
(100% – .345")



Aluminum	Conductor		Copper Neutral		Diameter* (per ANSI/ICEA S-94-649)				Weights (lbs/ft)			
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG	Conductor	Min. Over Insulation	Max. Over Insulation	Over Embedded Jacket	Conductor	Neutral	Total Without Jacket	Total With Embedded Jacket
Full Neutral	1/0	SOLID	16	14	0.325	1.010	1.110	1.405	0.0972	0.212	0.745	0.934
	1/0	19	16	14	0.362	1.045	1.145	1.430	0.0990	0.212	0.768	0.957
	2/0	19	13	12	0.406	1.090	1.190	1.475	0.1250	0.275	0.885	1.105
	3/0	19	16	12	0.456	1.140	1.240	1.520	0.1575	0.340	1.010	1.231
	4/0	19	20	12	0.512	1.195	1.295	1.575	0.1986	0.425	1.170	1.421
One-Third Neutral	1/0	SOLID	6	14	0.325	1.010	1.110	1.405	0.0972	0.080	0.610	0.817
	1/0	19	6	14	0.362	1.045	1.145	1.430	0.0991	0.080	0.635	0.840
	2/0	19	7	14	0.406	1.090	1.190	1.475	0.1249	0.093	0.703	0.911
	3/0	19	9	14	0.456	1.140	1.240	1.500	0.1575	0.120	0.790	1.003
	4/0	19	11	14	0.512	1.195	1.295	1.575	0.1986	0.145	0.890	1.120
	250	37	13	14	0.558	1.250	1.350	1.705	0.2347	0.173	1.005	1.305
	350	37	11	12	0.661	1.355	1.455	1.810	0.3286	0.240	1.225	1.584
	500	37	16	12	0.789	1.480	1.580	2.000	0.4694	0.340	1.599	2.001
	750	61	15	10	0.968	1.670	1.770	2.190	0.7040	0.506	2.125	2.623
	1000	61	20	10	1.117	1.815	1.920	2.380	0.9387	0.681	2.730	3.137

*Meets CSA C68.5 requirements

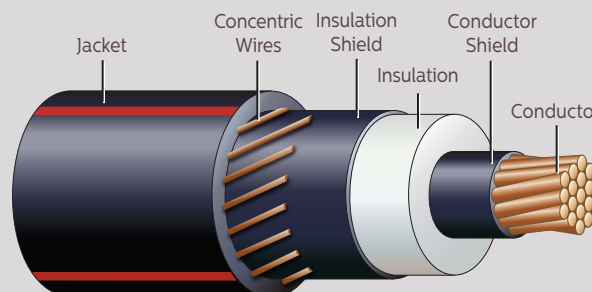
Hendrix URD Cable – 35kV



- Conductor Shield – Semi-Conducting Layer
- Insulation – TRXLPE
- Insulation Shield – Semi-Conducting EzStrip® Layer
- Concentric Wires – One-third and Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

35kV Copper Conductor 90°C
(100% – .345")



Copper	Conductor		Copper Neutral		Diameter* (per ANSI/ICEA S-94-649)				Weights (lbs/ft)			
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG	Conductor	Min. Over Insulation	Max. Over Insulation	Over Embedded Jacket	Conductor	Neutral	Total Without Jacket	Total With Embedded Jacket
Full Neutral	1/0	19	16	12	0.362	1.045	1.145	1.465	0.326	0.370	1.218	1.327
	2/0	19	20	12	0.406	1.090	1.190	1.505	0.411	0.463	1.414	1.522
	3/0	19	25	12	0.456	1.140	1.240	1.620	0.518	0.579	1.653	1.760
	4/0	19	20	10	0.512	1.195	1.295	1.720	0.653	0.741	1.992	2.099
One-Third Neutral	1/0	19	9	14	0.362	1.045	1.145	1.430	0.326	0.131	.999	1.102
	2/0	19	11	14	0.406	1.090	1.190	1.475	0.411	0.160	1.139	1.244
	3/0	19	14	14	0.456	1.140	1.240	1.520	0.518	0.203	1.316	1.423
	4/0	19	11	12	0.512	1.195	1.295	1.575	0.653	0.255	1.576	1.707
	250	37	13	12	0.558	1.250	1.350	1.640	0.772	0.301	1.799	1.971
	350	37	12	10	0.661	1.355	1.455	1.845	1.080	0.441	2.269	2.427
	500	37	17	10	0.789	1.480	1.580	2.045	1.544	0.624	3.177	3.337
	750	61	25	10	0.968	1.670	1.770	2.255	2.316	0.918	4.300	4.531
	1000	61	26	9	1.117	1.815	1.920	2.600	3.088	1.212	5.435	5.671

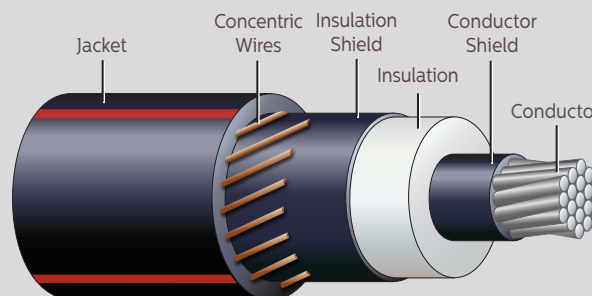
*Meets CSA C68.5 requirements



- Conductor – Compact Aluminum
- Conductor Shield – Semiconducting Layer
- Insulation – TRXLPE
- Insulation Shield – Semiconducting Layer
- Concentric Wires – One-Third and Full Neutral
- Jacket – Nonconducting Polyethylene (LLDPE) with 3 Red Stripes, Semiconducting Available

Underground Residential Distribution Cable (URD)

28kV Aluminum Conductor 90°C
(100% – .280 in.)



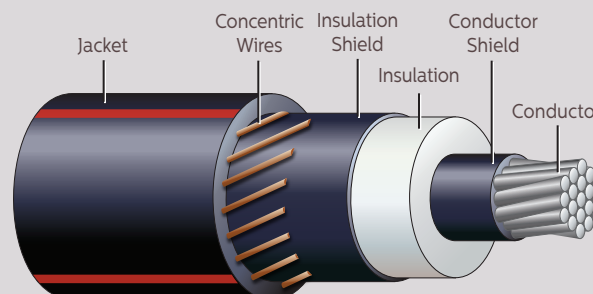
Aluminum	Conductor		Copper Neutral		Diameter (mm/in) (per CSA C68.5 Appendix C)				Weight (lbs/ft)		
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG	Conductor	Min. over Insulation	Max. over Insulation	Over Embedded Jacket	Conductor	Neutral	Total with Embedded Jacket
Compact Full Neutral	1/0	19	16	14	8.530 (0.336)	22.606 (0.890)	25.019 (0.985)	31.115 (1.225)	0.0991	0.212	0.7545
	2/0	19	13	12	9.550 (0.376)	23.622 (0.930)	26.035 (1.025)	33.020 (1.300)	0.1249	0.276	0.8810
	3/0	19	16	12	10.700 (0.423)	24.765 (0.975)	27.178 (1.070)	34.163 (1.345)	0.1575	0.340	0.9982
	4/0	19	20	12	12.100 (0.475)	26.162 (1.030)	28.488 (1.120)	35.560 (1.400)	0.1986	0.425	1.1456
Compact One-Third Neutral	1/0	19	6	14	8.530 (0.336)	22.606 (0.890)	25.019 (0.985)	31.115 (1.225)	0.0991	0.080	0.6370
	2/0	19	7	14	9.550 (0.376)	23.622 (0.930)	26.035 (1.025)	32.258 (1.270)	0.1249	0.093	0.7508
	3/0	19	9	14	10.700 (0.423)	24.765 (0.975)	27.178 (1.070)	33.401 (1.315)	0.1575	0.120	0.7833
	4/0	19	11	14	12.100 (0.475)	26.162 (1.030)	28.488 (1.120)	34.674 (1.365)	0.1986	0.145	0.8794
	250	37	13	14	13.200 (0.520)	27.432 (1.080)	29.845 (1.175)	35.814 (1.410)	0.2347	0.173	0.9643
	350	37	11	12	15.600 (0.616)	29.972 (1.180)	32.385 (1.275)	39.116 (1.540)	0.3286	0.240	1.1959
	500	37	16	12	18.700 (0.736)	33.020 (1.300)	35.433 (1.395)	42.164 (1.660)	0.4694	0.340	1.4976
	750	61	15	10	23.100 (0.908)	37.592 (1.480)	40.005 (1.575)	49.149 (1.935)	0.7040	0.505	2.1197
	1000	61	20	10	26.900 (1.060)	41.402 (1.630)	43.815 (1.725)	53.975 (2.125)	0.9387	0.680	2.6443



- Conductor – Compressed Aluminum
- Conductor Shield – Semiconducting Layer
- Insulation – TRXLPE
- Insulation Shield – Semiconducting EzStrip® Layer
- Concentric Wires – One-Third and Full Neutral
- Jacket – Nonconducting Polyethylene (LLDPE) with 3 Red Stripes, Semiconducting Available

Underground Residential Distribution Cable (URD)

28kV Aluminum Conductor 90°C
(100% – .280 in.)



Aluminum	Conductor		Copper Neutral		Diameter (mm/in) (per CSA C68.5 Appendix C)				Weight (lbs/ft)		
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG	Conductor	Min. over Insulation	Max. over Insulation	Over Embedded Jacket	Conductor	Neutral	Total with Embedded Jacket
Compressed Full Neutral	1/0	19	16	14	9.190 (0.362)	23.241 (0.915)	25.654 (1.010)	31.877 (1.255)	0.0991	0.212	0.7718
	2/0	19	13	12	10.300 (0.406)	24.384 (0.960)	26.797 (1.055)	33.782 (1.330)	0.1249	0.276	0.9016
	3/0	19	16	12	11.600 (0.456)	25.654 (1.010)	28.067 (1.105)	35.052 (1.380)	0.1575	0.340	1.0213
	4/0	19	20	12	13.000 (0.512)	27.051 (1.065)	29.464 (1.160)	36.449 (1.435)	0.1986	0.425	1.1720
Compressed One-Third Neutral	1/0	19	6	14	9.190 (0.362)	23.241 (0.915)	25.654 (1.010)	31.877 (1.255)	0.0991	0.080	0.6542
	2/0	19	7	14	10.300 (0.406)	24.384 (0.960)	26.797 (1.055)	32.893 (1.295)	0.1249	0.093	0.7188
	3/0	19	9	14	11.600 (0.456)	25.654 (1.010)	28.067 (1.105)	34.163 (1.345)	0.1575	0.120	0.8057
	4/0	19	11	14	13.000 (0.512)	27.051 (1.065)	29.464 (1.160)	35.687 (1.405)	0.1986	0.145	0.9050
	250	37	13	14	14.200 (0.558)	28.448 (1.120)	30.861 (1.215)	36.830 (1.450)	0.2347	0.173	0.9933
	350	37	11	12	16.800 (0.661)	31.115 (1.225)	33.528 (1.320)	40.259 (1.585)	0.3286	0.240	1.2274
	500	37	16	12	20.000 (0.789)	34.290 (1.350)	36.703 (1.445)	45.085 (1.775)	0.4694	0.340	1.6091
	750	61	15	10	24.600 (0.968)	39.116 (1.540)	41.529 (1.635)	51.308 (2.020)	0.7040	0.505	2.2056
	1000	61	20	10	28.400 (1.117)	42.799 (1.685)	45.339 (1.785)	55.118 (2.170)	0.9387	0.680	2.6941



Electrical Data

.175" TRXLPE 15KV concentric neutral underground cable, 100% insulation thickness, compressed stranding and solid conductors.

Aluminum	Conductor		Copper Neutral		Resistance DC OHMS per 1000' @ 90°C	Inductive Reactance OHMS per 1000'	Ampacity – 20°C Ambient 100% LF, RHO-90		
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG			1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
Full Neutral	2	SOLID	10	14	.3280	.032	170	115	100
	2	7	10	14	.3360	.030	170	115	100
	1	SOLID	13	14	.2600	.030	195	140	123
	1	19	13	14	.2650	.029	195	140	123
	1/0	SOLID	16	14	.2060	.028	230	155	135
	1/0	19	16	14	.2110	.028	230	155	135
	2/0	19	13	12	.1670	.025	270	185	162
	3/0	19	16	12	.1320	.024	295	210	184
	4/0	19	20	12	.1050	.023	335	240	210
One-Third Neutral						OHMS to Neutral per 1000'	3/C Direct Buried 8" Spacing	3/C Triplex in Duct	3/C Duct In Air
	1/0	SOLID	6	14	.2060	.102	230	165	145
	1/0	19	6	14	.2110	.099	230	165	145
	2/0	19	7	14	.1670	.097	250	190	167
	3/0	19	9	14	.1320	.094	280	215	189
	4/0	19	11	14	.1050	.092	320	245	215
	250	37	13	14	.0890	.089	345	270	237
	350	37	11	12	.0635	.085	405	325	285
	500	37	16	12	.0445	.082	460	385	338
	750	61	15	10	.0296	.077	515	475	417
	1000	61	20	10	.0222	.074	565	540	475
Copper	Conductor		Copper Neutral		Resistance DC OHMS per 1000' @ 90°C	Inductive Reactance OHMS per 1000'	Ampacity – 20°C Ambient 100% LF, RHO-90		
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG			1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
Full Neutral	2	7	16	14	.2020	.030	225	160	140
	1	19	13	12	.1610	.029	260	185	162
	1/0	19	16	12	.1270	.028	295	210	185
	2/0	19	20	12	.1020	.025	330	240	210
	3/0	19	25	12	.0802	.024	375	270	237
	4/0	19	20	10	.0635	.023	430	305	268
One-Third Neutral						OHMS to Neutral per 1000'	3/C Direct Buried 8" Spacing	3/C Triplex in Duct	3/C Duct In Air
	1/0	19	9	14	.1270	.099	290	210	185
	2/0	19	11	14	.1020	.097	320	240	210
	3/0	19	14	14	.0802	.094	350	275	241
	4/0	19	11	12	.0635	.092	390	315	276
	250	37	13	12	.0539	.089	415	340	298
	350	37	12	10	.0385	.085	475	415	364
	500	37	17	10	.0270	.082	525	480	420
	750	61	25	10	.0180	.077	560	530	465
	1000	61	26	9	.0135	.074	600	590	518



Electrical Data

.220" TRXLPE 15kV concentric neutral underground cable, 133% insulation thickness, compressed stranding and solid conductors.

Aluminum	Conductor		Copper Neutral		Resistance DC OHMS per 1000' @ 90°C	Inductive Reactance OHMS per 1000'	Ampacity – 20°C Ambient 100% LF, RHO-90		
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG			1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
Full Neutral	2	SOLID	10	14	.3280	.033	170	115	100
	2	7	10	14	.3360	.031	170	115	100
	1	SOLID	13	14	.2600	.031	195	140	123
	1	19	13	14	.2650	.029	195	140	123
	1/0	SOLID	16	14	.2060	.028	230	155	135
	1/0	19	16	14	.2110	.028	230	155	135
	2/0	19	13	12	.1670	.026	270	185	162
	3/0	19	16	12	.1320	.024	295	210	184
	4/0	19	20	12	.1050	.024	335	240	210
One-Third Neutral						OHMS to Neutral per 1000'	3/C Direct Buried 8" Spacing	3/C Triplex in Duct	3/C Duct In Air
	1/0	SOLID	6	14	.2060	.102	230	165	145
	1/0	19	6	14	.2110	.099	230	165	145
	2/0	19	7	14	.1670	.097	250	190	167
	3/0	19	9	14	.1320	.094	280	215	189
	4/0	19	11	14	.1050	.092	320	245	215
	250	37	13	14	.0890	.089	345	270	237
	350	37	11	12	.0635	.085	405	325	285
	500	37	16	12	.0445	.082	460	385	338
	750	61	15	10	.0296	.077	515	475	417
	1000	61	20	10	.0222	.074	565	540	475
Copper	Conductor		Copper Neutral		Resistance DC OHMS per 1000' @ 90°C	Inductive Reactance OHMS per 1000'	Ampacity – 20°C Ambient 100% LF, RHO-90		
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG			1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
Full Neutral	2	7	16	14	.2020	.031	225	160	140
	1	19	13	12	.1610	.029	260	185	162
	1/0	19	16	12	.1270	.028	295	210	185
	2/0	19	20	12	.1020	.026	330	240	210
	3/0	19	25	12	.0802	.024	375	270	237
	4/0	19	20	10	.0635	.024	430	305	268
One-Third Neutral						OHMS to Neutral per 1000'	3/C Direct Buried 8" Spacing	3/C Triplex in Duct	3/C Duct In Air
	1/0	19	9	14	.1270	.099	290	210	185
	2/0	19	11	14	.1020	.097	320	240	210
	3/0	19	14	14	.0802	.094	350	275	241
	4/0	19	11	12	.0635	.092	390	315	276
	250	37	13	12	.0539	.089	415	340	298
	350	37	12	10	.0385	.085	475	415	364
	500	37	17	10	.0270	.082	525	480	420
	750	61	25	10	.0180	.077	560	530	465
	1000	61	26	9	.0135	.074	600	590	518



Electrical Data

.260" TRXLPE 25kV concentric neutral underground cable, 100% insulation thickness, compressed stranding and solid conductors.

Aluminum	Conductor		Copper Neutral		Resistance DC OHMS per 1000' @ 90°C	Inductive Reactance OHMS per 1000'	Ampacity – 20°C Ambient 100% LF, RHO-90		
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG			1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
Full Neutral	1	SOLID	13	14	.2600	.033	195	145	127
	1	19	13	14	.2650	.031	195	145	127
	1/0	SOLID	16	14	.2060	.031	220	165	145
	1/0	19	16	14	.2110	.030	220	165	145
	2/0	19	13	12	.1670	.028	250	190	167
	3/0	19	16	12	.1320	.027	290	210	185
	4/0	19	20	12	.1050	.026	325	245	215
One-Third Neutral						OHMS to Neutral per 1000'	3/C Direct Buried 8" Spacing	3/C Triplex in Duct	3/C Duct In Air
	1/0	SOLID	6	14	.2060	.102	225	165	145
	1/0	19	6	14	.2110	.099	225	165	145
	2/0	19	7	14	.1670	.097	250	180	158
	3/0	19	9	14	.1320	.094	275	205	180
	4/0	19	11	14	.1050	.092	310	240	210
	250	37	13	14	.0890	.089	335	260	228
	350	37	11	12	.0635	.085	395	325	285
	500	37	16	12	.0445	.082	445	390	342
	750	61	15	10	.0296	.077	515	475	417
	1000	61	20	10	.0222	.074	560	525	460

Copper	Conductor		Copper Neutral		Resistance DC OHMS per 1000' @ 90°C	Inductive Reactance OHMS per 1000'	Ampacity – 20°C Ambient 100% LF, RHO-90		
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG			1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
Full Neutral	1	19	13	12	.1610	.031	245	185	162
	1/0	19	16	12	.1270	.030	280	215	189
	2/0	19	20	12	.1020	.028	315	240	210
	3/0	19	25	12	.0802	.027	360	275	241
	4/0	19	20	10	.0635	.026	415	315	276
One-Third Neutral						OHMS to Neutral per 1000'	3/C Direct Buried 8" Spacing	3/C Triplex in Duct	3/C Duct In Air
	1/0	19	9	14	.1270	.099	275	215	189
	2/0	19	11	14	.1020	.097	310	250	220
	3/0	19	14	14	.0802	.094	345	285	250
	4/0	19	11	12	.0635	.092	385	320	280
	250	37	13	12	.0539	.089	410	345	303
	350	37	12	10	.0385	.085	460	405	355
	500	37	17	10	.0270	.082	520	470	412
	750	61	25	10	.0180	.077	567	550	483
	1000	61	26	9	.0135	.074	625	615	540



Electrical Data

.345" TRXLPE 35kV concentric neutral underground cable, 100% insulation thickness, compressed stranding and solid conductors.

Aluminum	Conductor		Copper Neutral		Resistance DC OHMS per 1000' @ 90°C	Inductive Reactance OHMS per 1000'	Ampacity – 20°C Ambient 100% LF, RHO-90		
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG			1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
Full Neutral	1/0	SOLID	16	14	.2060	.036	220	165	145
	1/0	19	16	14	.2110	.034	220	165	145
	2/0	19	13	12	.1670	.032	250	195	310
	3/0	19	16	12	.1320	.030	285	220	193
	4/0	19	20	12	.1050	.029	325	250	220
One-Third Neutral						OHMS to Neutral per 1000'	3/C Direct Buried 8" Spacing	3/C Triplex in Duct	3/C Duct In Air
	1/0	SOLID	6	14	.2060	.102	215	165	145
	1/0	19	6	14	.2110	.099	215	165	145
	2/0	19	7	14	.1670	.097	245	190	167
	3/0	19	9	14	.1320	.094	275	215	189
	4/0	19	11	14	.1050	.092	305	245	215
	250	37	13	14	.0890	.089	335	270	238
	350	37	11	12	.0635	.085	390	320	280
	500	37	16	12	.0445	.082	440	385	338
	750	61	15	10	.0296	.077	515	475	417
	1000	61	20	10	.0222	.074	570	535	470

Copper	Conductor		Copper Neutral		Resistance DC OHMS per 1000' @ 90°C	Inductive Reactance OHMS per 1000'	Ampacity – 20°C Ambient 100% LF, RHO-90		
	AWG or kcmil	Number of Strands	Number of Wires	Size AWG			1/C Direct Buried	1/C Duct Buried	1/C Duct In Air
Full Neutral	1/0	19	16	12	.1270	.034	280	215	189
	2/0	19	20	12	.1020	.032	310	240	211
	3/0	19	25	12	.0802	.030	355	275	241
	4/0	19	20	10	.0635	.029	410	315	276
One-Third Neutral						OHMS to Neutral per 1000'	3/C Direct Buried 8" Spacing	3/C Triplex in Duct	3/C Duct In Air
	1/0	19	9	14	.1270	.099	270	215	189
	2/0	19	11	14	.1020	.097	305	240	211
	3/0	19	14	14	.0802	.094	340	280	246
	4/0	19	11	12	.0635	.092	380	315	276
	250	37	13	12	.0539	.089	405	340	298
	350	37	12	10	.0385	.085	460	400	350
	500	37	17	10	.0270	.082	520	470	412
	750	61	25	10	.0180	.077	567	550	483
	1000	61	26	9	.0135	.074	625	615	540

Discharge Resistant EPR



Underground Residential Distribution Cables (URD)

15kV	20
25kV	22
35kV	24
URD Ampacities	26

Power Cables

5kV	27
15kV	28
25kV	29
35kV	30

PILC Replacement Cable

15kV, 25kV, 35kV	31
5-35kV Cable Ampacities	32
Ampacity Calculation Notes	34

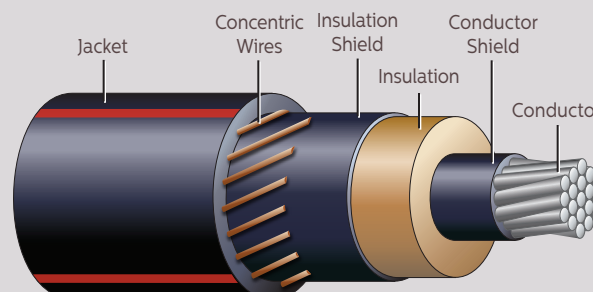




- Conductor Shield – Non-Conducting Permashield® Stress Control Layer
- Insulation – Discharge Resistant EPR Insulation
- Insulation Shield – Extruded Free Stripping Semi-Conducting Layer
- Concentric Wires – One-third or Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

15kV Aluminum Conductor 90°C



One-Third Neutral			175 mil Insulation (100%)				220 mil Insulation (133%)			
Size (AWG/kcmil)	No. of Strands	Copper Neutral Wires (No.-#AWG)	O.D. Over Insulation (Inches)		O.D. Over Jacket (Inches)	Cable Weight (lbs/ft)	O.D. Over Insulation (Inches)		O.D. Over Jacket (Inches)	Cable Weight (lbs/ft)
			Min.	Max.			Min.	Max.		
2	SOL	6 - #14	0.610	0.695	0.960	0.397	0.700	0.790	1.055	0.466
2	7	6 - #14	0.635	0.720	0.990	0.411	0.725	0.815	1.080	0.482
1	SOL	6 - #14	0.645	0.725	0.955	0.427	0.735	0.820	1.085	0.498
1	7	6 - #14	0.675	0.760	1.015	0.441	0.765	0.855	1.110	0.514
1/0	SOL	6 - #14	0.680	0.760	1.030	0.464	0.770	0.855	1.120	0.537
1/0	19	6 - #14	0.715	0.800	1.055	0.480	0.805	0.895	1.150	0.555
2/0	SOL	7 - #14	0.720	0.800	1.070	0.522	0.810	0.895	1.160	0.598
2/0	19	7 - #14	0.760	0.845	1.100	0.539	0.850	0.935	1.190	0.617
4/0	19	11 - #14	0.865	0.950	1.200	0.711	0.955	1.045	1.295	0.798
250	37	13 - #14	0.920	1.005	1.265	0.805	1.010	1.100	1.380	0.916
350	37	18 - #14	1.025	1.110	1.390	1.032	1.115	1.200	1.480	1.134
500	37	16 - #12	1.150	1.235	1.550	1.339	1.240	1.330	1.710	1.522
750	61	15 - #10	1.340	1.425	1.805	1.916	1.430	1.520	1.900	2.048
1000	61	20 - #10	1.485	1.575	2.025	2.439	1.575	1.670	2.120	2.585
Full Neutral			175 mil Insulation (100%)				220 mil Insulation (133%)			
2	SOL	10 - #14	0.610	0.695	0.960	0.449	0.700	0.790	1.055	0.518
2	7	10 - #14	0.635	0.720	0.990	0.463	0.725	0.815	1.080	0.534
1	SOL	13 - #14	0.645	0.725	0.995	0.518	0.735	0.820	1.085	0.589
1	7	13 - #14	0.675	0.760	1.015	0.532	0.765	0.855	1.110	0.605
1/0	SOL	16 - #14	0.680	0.760	1.030	0.595	0.770	0.855	1.120	0.668
1/0	19	16 - #14	0.715	0.800	1.055	0.611	0.805	0.895	1.150	0.686
2/0	SOL	20 - #14	0.720	0.800	1.070	0.692	0.810	0.895	1.160	0.768
2/0	19	20 - #14	0.760	0.845	1.100	0.709	0.850	0.935	1.190	0.787
4/0	19	20 - #12	0.865	0.950	1.235	0.985	0.955	1.045	1.330	1.073

Five minute AC Final Test Voltages

175 mil Insulation Level: 35kV

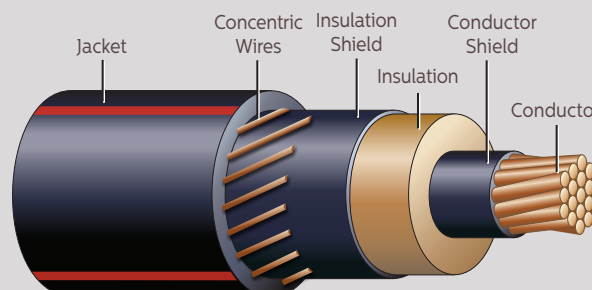
220 mil Insulation Level: 44kV



- Conductor Shield – Non-Conducting Permashield® Stress Control Layer
- Insulation – Discharge Resistant EPR Insulation
- Insulation Shield – Extruded Free Stripping Semi-Conducting Layer
- Concentric Wires – One-third or Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

15kV Copper Conductor 90°C



Kerite URD Cable – 15kV

One-Third Neutral			175 mil Insulation (100%)				220 mil Insulation (133%)			
Size (AWG/kcmil)	No. of Strands	Copper Neutral Wires (No.-#AWG)	O.D. Over Insulation (Inches)		O.D. Over Jacket (Inches)	Cable Weight (lbs/ft)	O.D. Over Insulation (Inches)		O.D. Over Jacket (Inches)	Cable Weight (lbs/ft)
			Min.	Max.			Min.	Max.		
2	7	6 - #14	0.635	0.720	0.990	0.549	0.725	0.815	1.080	0.618
1	19	7 - #14	0.675	0.760	1.015	0.628	0.765	0.855	1.110	0.700
1/0	19	9 - #14	0.715	0.800	1.055	0.740	0.805	0.895	1.150	0.814
2/0	19	11 - #14	0.760	0.845	1.100	0.871	0.850	0.935	1.190	0.947
4/0	19	18 - #14	0.865	0.950	1.200	1.251	0.955	1.045	1.295	1.336
250	37	21 - #14	0.920	1.005	1.265	1.441	1.010	1.100	1.380	1.549
350	37	18 - #12	1.025	1.110	1.425	1.917	1.115	1.200	1.515	2.017
500	37	17 - #10	1.150	1.235	1.595	2.640	1.240	1.330	1.750	2.822
750	61	20 - #9	1.340	1.425	1.875	3.864	1.430	1.520	1.965	3.992
1000	61	26 - #9	1.485	1.575	2.035	5.140	1.575	1.670	2.155	5.300
Full Neutral			175 mil Insulation (100%)				220 mil Insulation (133%)			
2	7	16 - #14	0.635	0.720	0.990	0.680	0.725	0.815	1.080	0.749
1	19	20 - #14	0.675	0.760	1.015	0.798	0.765	0.855	1.110	0.870
1/0	19	16 - #12	0.715	0.800	1.090	0.957	0.805	0.895	1.180	1.032
2/0	19	20 - #12	0.760	0.845	1.135	1.145	0.850	0.935	1.225	1.222
4/0	19	20 - #10	0.865	0.950	1.280	1.682	0.955	1.045	1.370	1.768

Five minute AC Final Test Voltages

175 mil Insulation Level: 35kV

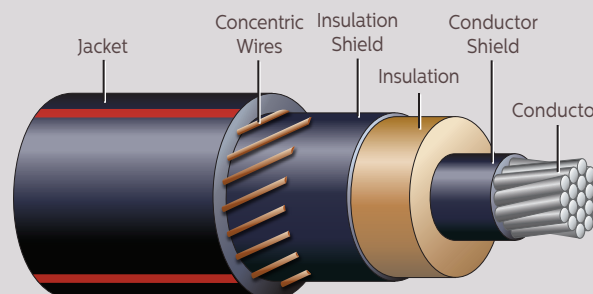
220 mil Insulation Level: 44kV



- Conductor Shield – Non-Conducting Permashield® Stress Control Layer
- Insulation – Discharge Resistant EPR Insulation
- Insulation Shield – Extruded Free Stripping Semi-Conducting Layer
- Concentric Wires – One-third or Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

25kV Aluminum Conductor 90°C



One-Third Neutral			260 mil Insulation (100%)				320 mil Insulation (133%)			
Size (AWG/kcmil)	No. of Strands	Copper Neutral Wires (No.-#AWG)	O.D. Over Insulation (Inches)		O.D. Over Jacket (Inches)	Cable Weight (lbs/ft)	O.D. Over Insulation (Inches)		O.D. Over Jacket (Inches)	Cable Weight (lbs/ft)
			Min.	Max.			Min.	Max.		
1	SOL	6 - #14	0.805	0.895	1.170	0.570	0.925	1.020	1.295	0.687
1	7	6 - #14	0.835	0.925	1.195	0.585	0.955	1.055	1.320	0.705
1/0	SOL	6 - #14	0.840	0.930	1.205	0.611	0.960	1.055	1.330	0.733
1/0	19	6 - #14	0.875	0.965	1.230	0.630	0.995	1.095	1.380	0.773
2/0	SOL	7 - #14	0.880	0.970	1.245	0.675	1.000	1.095	1.390	0.819
2/0	19	7 - #14	0.920	1.010	1.275	0.696	1.040	1.135	1.420	0.844
4/0	19	11 - #14	1.025	1.115	1.400	0.904	1.145	1.245	1.525	1.046
250	37	13 - #14	1.080	1.175	1.460	1.008	1.200	1.300	1.590	1.158
350	37	18 - #14	1.185	1.275	1.565	1.234	1.305	1.400	1.760	1.467
500	37	16 - #12	1.310	1.405	1.795	1.633	1.430	1.530	1.920	1.815
750	61	15 - #10	1.500	1.595	2.010	2.215	1.620	1.720	2.140	2.420
1000	61	20 - #10	1.645	1.740	2.205	2.724	1.765	1.870	2.330	2.945
Full Neutral			260 mil Insulation (100%)				320 mil Insulation (133%)			
1	SOL	13 - #14	0.805	0.895	1.170	0.661	0.925	1.020	1.295	0.778
1	7	13 - #14	0.835	0.925	1.195	0.676	0.955	1.055	1.320	0.796
1/0	SOL	16 - #14	0.840	0.930	1.205	0.742	0.960	1.055	1.330	0.864
1/0	19	16 - #14	0.875	0.965	1.230	0.761	0.995	1.095	1.380	0.904
2/0	SOL	20 - #14	0.880	0.970	1.245	0.845	1.000	1.095	1.390	0.989
2/0	19	20 - #14	0.920	1.010	1.275	0.866	1.040	1.135	1.420	1.014
4/0	19	20 - #12	1.025	1.115	1.430	1.178	1.145	1.245	1.560	1.321

Five minute AC Final Test Voltages

260 mil Insulation Level: 52kV

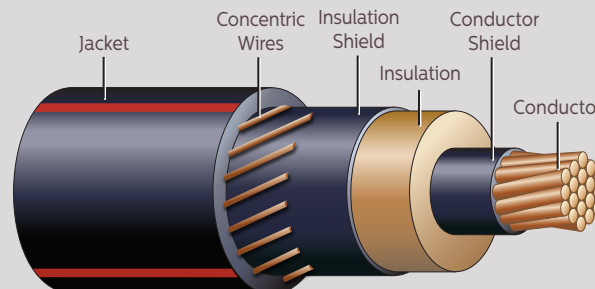
320 mil Insulation Level: 64kV



- Conductor Shield – Non-Conducting Permashield® Stress Control Layer
- Insulation – Discharge Resistant EPR Insulation
- Insulation Shield – Extruded Free Stripping Semi-Conducting Layer
- Concentric Wires – One-third or Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

25kV Copper Conductor 90°C



One-Third Neutral			260 mil Insulation (100%)				320 mil Insulation (133%)			
Size (AWG/kcmil)	No. of Strands	Copper Neutral Wires (No.-#AWG)	O.D. Over Insulation (Inches)		O.D. Over Jacket (Inches)	Cable Weight (lbs/ft)	O.D. Over Insulation (Inches)		O.D. Over Jacket (Inches)	Cable Weight (lbs/ft)
			Min.	Max.			Min.	Max.		
1	19	7 - #14	0.835	0.925	1.195	0.769	0.955	1.055	1.320	0.866
1/0	19	9 - #14	0.875	0.965	1.230	0.887	0.995	1.095	1.380	1.026
2/0	19	11 - #14	0.920	1.010	1.275	1.023	1.040	1.135	1.420	1.168
4/0	19	18 - #14	1.025	1.115	1.400	1.439	1.145	1.245	1.525	1.577
250	37	21 - #14	1.080	1.175	1.460	1.639	1.200	1.300	1.590	1.784
350	37	18 - #12	1.185	1.275	1.600	2.115	1.305	1.400	1.790	2.344
500	37	17 - #10	1.310	1.405	1.835	2.930	1.430	1.530	1.960	3.107
750	61	20 - #9	1.500	1.595	2.080	4.156	1.620	1.720	2.205	4.354
1000	61	26 - #9	1.645	1.740	2.225	5.833	1.765	1.870	2.350	5.947
Full Neutral			260 mil Insulation (100%)				320 mil Insulation (133%)			
1	19	20 - #14	0.835	0.925	1.195	0.939	0.955	1.055	1.320	1.056
1/0	19	16 - #12	0.875	0.965	1.265	1.104	0.995	1.095	1.410	1.244
2/0	19	20 - #12	0.920	1.010	1.310	1.297	1.040	1.135	1.455	1.443
4/0	19	20 - #10	1.025	1.115	1.475	1.870	1.145	1.245	1.600	2.009

Five minute AC Final Test Voltages

260 mil Insulation Level: 52kV

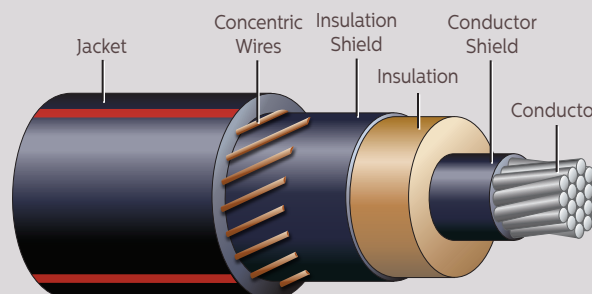
320 mil Insulation Level: 64kV



- Conductor Shield – Non-Conducting Permashield® Stress Control Layer
- Insulation – Discharge Resistant EPR Insulation
- Insulation Shield – Extruded Free Stripping Semi-Conducting Layer
- Concentric Wires – One-third or Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

35kV Aluminum Conductor 90°C



One-Third Neutral			345 mil Insulation (100%)				420 mil Insulation (133%)			
Size (AWG/kcmil)	No. of Strands	Copper Neutral Wires (No.-#AWG)	O.D. Over Insulation (Inches)		O.D. Over Jacket (Inches)	Cable Weight (lbs/ft)	O.D. Over Insulation (Inches)		O.D. Over Jacket (Inches)	Cable Weight (lbs/ft)
			Min.	Max.			Min.	Max.		
1/0	SOL	6 - #14	1.010	1.110	1.405	0.792	1.150	1.255	1.565	0.972
1/0	19	6 - #14	1.045	1.145	1.430	0.815	1.185	1.290	1.590	0.998
2/0	SOL	7 - #14	1.050	1.150	1.445	0.862	1.190	1.295	1.605	1.046
2/0	19	7 - #14	1.090	1.190	1.475	0.888	1.230	1.335	1.635	1.076
4/0	19	11 - #14	1.195	1.295	1.575	1.092	1.335	1.440	1.800	1.368
250	37	13 - #14	1.250	1.350	1.705	1.276	1.390	1.500	1.865	1.493
350	37	18 - #14	1.355	1.455	1.810	1.520	1.495	1.600	2.000	1.793
500	37	16 - #12	1.480	1.580	2.000	1.911	1.620	1.730	2.160	2.163
750	61	15 - #10	1.670	1.770	2.190	2.482	1.810	1.920	2.350	2.761
1000	61	20 - #10	1.815	1.920	2.380	3.011	1.955	2.065	2.540	3.310
Full Neutral			345 mil Insulation (100%)				420 mil Insulation (133%)			
1/0	SOL	16 - #14	1.010	1.110	1.405	0.923	1.150	1.255	1.565	1.103
1/0	19	16 - #14	1.045	1.145	1.430	0.946	1.185	1.290	1.590	1.129
2/0	SOL	20 - #14	1.050	1.150	1.445	1.032	1.190	1.295	1.605	1.216
2/0	19	20 - #14	1.090	1.190	1.475	1.058	1.230	1.335	1.635	1.246
4/0	19	20 - #12	1.195	1.295	1.610	1.366	1.335	1.440	1.835	1.644

Five minute AC Final Test Voltages

345 mil Insulation Level: 69kV

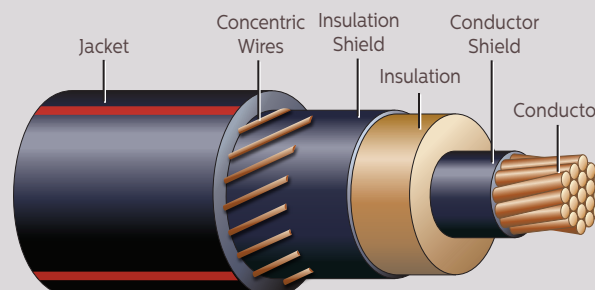
420 mil Insulation Level: 84kV



- Conductor Shield – Non-Conducting Permashield® Stress Control Layer
- Insulation – Discharge Resistant EPR Insulation
- Insulation Shield – Extruded Free Stripping Semi-Conducting Layer
- Concentric Wires – One-third or Full Neutral
- Jacket – Non-Conducting Polyethylene (LLDPE) with 3 Red Stripes, Semi-Conducting Available

Underground Residential Distribution Cable (URD)

35kV Copper Conductor 90°C



One-Third Neutral			345 mil Insulation (100%)				420 mil Insulation (133%)			
Size (AWG/kcmil)	No. of Strands	Copper Neutral Wires (No.-#AWG)	O.D. Over Insulation (Inches)		O.D. Over Jacket (Inches)	Cable Weight (lbs/ft)	O.D. Over Insulation (Inches)		O.D. Over Jacket (Inches)	Cable Weight (lbs/ft)
			Min.	Max.			Min.	Max.		
1/0	19	9 - #14	1.045	1.145	1.430	1.081	1.185	1.290	1.590	1.264
2/0	19	11 - #14	1.090	1.190	1.475	1.226	1.230	1.335	1.635	1.414
4/0	19	18 - #14	1.195	1.295	1.575	1.639	1.335	1.440	1.800	1.915
250	37	21 - #14	1.250	1.350	1.640	1.919	1.390	1.500	1.865	2.136
350	37	18 - #12	1.355	1.455	1.845	2.416	1.495	1.600	2.035	2.689
500	37	17 - #10	1.480	1.580	2.045	3.223	1.620	1.730	2.205	3.476
750	61	20 - #9	1.670	1.770	2.255	4.441	1.810	1.920	2.415	4.720
1000	61	26 - #9	1.815	1.920	2.400	5.800	1.955	2.065	2.545	6.100
Full Neutral			345 mil Insulation (100%)				420 mil Insulation (133%)			
1/0	19	16 - #12	1.045	1.145	1.465	1.298	1.185	1.290	1.625	1.481
2/0	19	20 - #12	1.090	1.190	1.505	1.500	1.230	1.335	1.735	1.760
4/0	19	20 - #10	1.195	1.295	1.720	2.141	1.335	1.440	1.880	2.350

Five minute AC Final Test Voltages

345 mil Insulation Level: 69kV

420 mil Insulation Level: 84kV

Kerite URD Cable – 35kV

Aluminum Conductor URD Ampacities

Size (AWG/kcmil)	Installation											
	Direct Burial						Nonmetallic Conduit					
	1/C Single Phase (Full Neutral)			3-1/C Cables Paralleled or Triplexed (1/3 Neutral)			1/C Single Phase (Full Neutral)			3-1/C Cables Paralleled or Triplexed (1/3 Neutral)		
	15kV	25kV	35kV	15kV	25kV	35kV	15kV	25kV	35kV	15kV	25kV	35kV
2	170	-	-	135	-	-	125	-	-	125	-	-
1	190	200	-	155	155	-	140	145	-	145	145	-
1/0	215	225	235	175	180	185	160	165	170	165	165	170
2/0	240	250	260	200	200	205	185	190	195	185	190	195
4/0	305	320	330	250	255	260	240	245	255	245	245	250
250	-	-	-	275	280	285	-	-	-	270	270	280
350	-	-	-	330	335	340	-	-	-	325	320	335
500	-	-	-	395	400	410	-	-	-	390	395	405
750	-	-	-	475	485	500	-	-	-	485	480	500
1000	-	-	-	540	550	565	-	-	-	535	550	565

Copper Conductor URD Ampacities

Size (AWG/kcmil)	Installation											
	Direct Burial						Nonmetallic Conduit					
	1/C Single Phase (Full Neutral)			3-1/C Cables Paralleled or Triplexed (1/3 Neutral)			1/C Single Phase (Full Neutral)			3-1/C Cables Paralleled or Triplexed (1/3 Neutral)		
	15kV	25kV	35kV	15kV	25kV	35kV	15kV	25kV	35kV	15kV	25kV	35kV
2	215	-	-	175	-	-	160	-	-	160	-	-
1	245	255	-	200	200	-	180	185	-	185	190	-
1/0	275	285	295	225	225	235	205	210	215	210	215	220
2/0	310	320	335	250	255	265	235	240	250	235	245	250
4/0	390	405	420	320	325	335	310	320	325	310	310	320
250	-	-	-	350	355	365	-	-	-	340	340	355
350	-	-	-	410	420	430	-	-	-	405	405	420
500	-	-	-	480	490	505	-	-	-	475	485	500
750	-	-	-	560	575	595	-	-	-	570	565	595

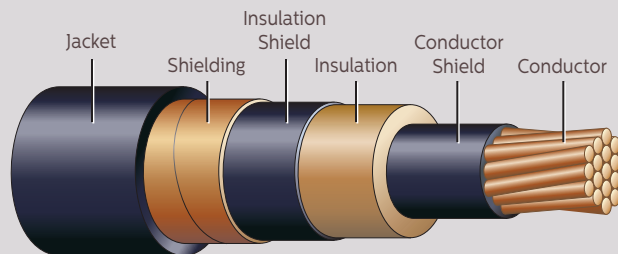
Ampacity assumptions:
 Earth Rho = 90° C-cm/Watt
 Earth Ambient Temperature = 20° C
 Direct Burial Maximum Cable Surface Temperature = 45° C
 Load Factor = 75%
 Burial Depth = 36"
 Multi-Point Bonded Shield



- Conductor – Copper or Aluminum
- Conductor Shield – Non-Conducting Permashield® Stress Control Layer
- Insulation – Discharge Resistant EPR Insulation
- Insulation Shield – Extruded Free Stripping Semi-Conducting Layer
- Shielding – 5 mil Copper Tape
- Jacket – Polyvinyl Chloride (PVC)

Power Cables – Type MV 105

5kV Shielded 105°C Rating



Kerite Power Cable – 5kV

115 mil Insulation (133%)					
Size (AWG/kcmil)	Number of Strands	O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)
			Thickness (mils)	O.D. (inches)	
2	7	0.571	60	0.785	0.478
1	19	0.599	60	0.813	0.545
1/0	19	0.638	60	0.852	0.632
2/0	19	0.681	80	0.939	0.776
4/0	19	0.784	80	1.042	1.073
250	37	0.816	80	1.074	1.214
350	37	0.912	80	1.170	1.575
500	37	1.032	80	1.306	2.210
750	61	1.225	80	1.499	3.013
1000	61	1.417	80	1.691	3.883
1250	91	1.621	110	1.977	4.991
1500	91	1.741	110	2.097	5.846
1750	127	1.857	110	2.213	6.704
2000	127	1.960	110	2.316	7.547

* For conductors larger than 1000 kcmil 140 mils of insulation is required.

Five minute AC Final Test Voltages

115 mil Insulation Level: 23kV

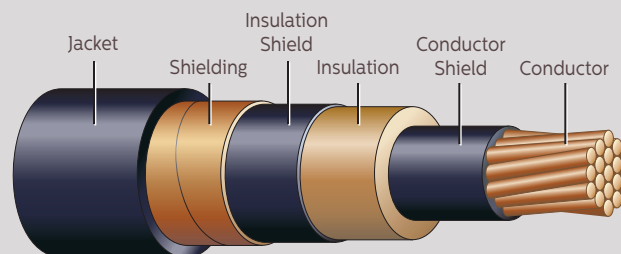
140 mil Insulation Level: 28kV



- Conductor – Copper or Aluminum
- Conductor Shield – Non-Conducting Permashield® Stress Control Layer
- Insulation – Discharge Resistant EPR Insulation
- Insulation Shield – Extruded Free Stripping Semi-Conducting Layer
- Shielding – 5 mil Copper Tape
- Jacket – Polyvinyl Chloride (PVC)

Power Cables – Type MV 105

15kV Shielded 105°C Rating



Size (AWG/ kcmil)	Number of Strands	175 mil Insulation (100%)				220 mil Insulation (133%)			
		O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)	O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)
			Thickness (mils)	O.D. (inches)			Thickness (mils)	O.D. (inches)	
2	7	0.681	80	0.939	0.603	0.773	80	1.031	0.687
1	19	0.709	80	0.967	0.674	0.801	80	1.059	0.761
1/0	19	0.748	80	1.006	0.766	0.840	80	1.098	0.856
2/0	19	0.791	80	1.049	0.879	0.883	80	1.141	0.971
4/0	19	0.894	80	1.152	1.185	0.986	80	1.244	1.286
250	37	0.926	80	1.184	1.328	1.018	80	1.312	1.469
350	37	1.022	80	1.296	1.714	1.114	80	1.388	1.827
500	37	1.142	80	1.416	2.255	1.234	80	1.508	2.376
750	61	1.335	80	1.609	3.167	1.427	80	1.701	3.304
1000	61	1.527	110	1.883	4.195	1.619	110	1.975	4.354
1250	91	–	–	–	–	1.777	110	2.133	5.276
1500	91	–	–	–	–	1.897	110	2.253	6.147
1750	127	–	–	–	–	2.013	110	2.369	7.021
2000	127	–	–	–	–	2.116	110	2.472	7.877

* For conductors larger than 1000 kcmil 220 mils of insulation is required.

Five minute AC Final Test Voltages

175 mil Insulation Level: 35kV

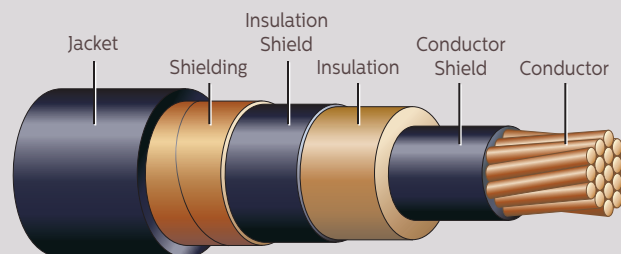
220 mil Insulation Level: 44kV



- Conductor – Copper or Aluminum
- Conductor Shield – Non-Conducting Permashield® Stress Control Layer
- Insulation – Discharge Resistant EPR Insulation
- Insulation Shield – Extruded Free Stripping Semi-Conducting Layer
- Shielding – 5 mil Copper Tape
- Jacket – Polyvinyl Chloride (PVC)

Power Cables – Type MV 105

25kV Shielded 105°C Rating



Size (AWG/ kcmil)	Number of Strands	260 mil Insulation (100%)				320 mil Insulation (133%)			
		O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)	O.D. Over Insulation (Inches)	Jacket		Cable Weight (lbs/ft)
			Thickness (mils)	O.D. (inches)			Thickness (mils)	O.D. (inches)	
1	19	0.885	80	1.143	0.846	1.011	80	1.269	0.985
1/0	19	0.924	80	1.182	0.943	1.050	80	1.324	1.104
2/0	19	0.967	80	1.225	1.061	1.093	80	1.367	1.226
4/0	19	1.070	80	1.344	1.402	1.196	80	1.470	1.562
250	37	1.102	80	1.376	1.550	1.228	80	1.502	1.713
350	37	1.198	80	1.472	1.935	1.324	80	1.598	2.109
500	37	1.318	80	1.592	2.495	1.444	110	1.784	2.791
750	61	1.511	110	1.851	3.551	1.637	110	1.993	3.791
1000	61	1.703	110	2.059	4.506	1.829	110	2.185	4.742
1250	91	1.861	110	2.217	5.439	1.987	110	2.343	5.693
1500	91	1.981	110	2.337	6.319	2.107	110	2.463	6.586
1750	127	2.097	110	2.453	7.201	2.223	110	2.579	7.481
2000	127	2.200	110	2.556	8.065	2.326	110	2.682	8.355

Five minute AC Final Test Voltages

260 mil Insulation Level: 52kV

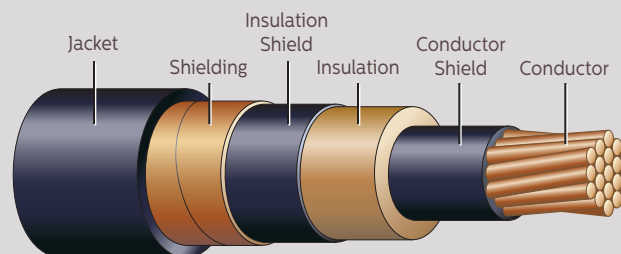
320 mil Insulation Level: 64kV



- Conductor – Copper or Aluminum
- Conductor Shield – Non-Conducting Permashield® Stress Control Layer
- Insulation – Discharge Resistant EPR Insulation
- Insulation Shield – Extruded Free Stripping Semi-Conducting Layer
- Shielding – 5 mil Copper Tape
- Jacket – Polyvinyl Chloride (PVC)

Power Cables – Type MV 105

35kV Shielded 105°C Rating



Size (AWG/ kcmil)	Number of Strands	345 mil Insulation (100%)				420 mil Insulation (133%)			
		O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)	O.D. Over Insulation (Inches)	Jacket		Cable Weight (lbs/ft)
			Thickness (mils)	O.D. (inches)			Thickness (mils)	O.D. (inches)	
1/0	19	1.102	80	1.376	1.167	1.262	80	1.536	1.377
2/0	19	1.145	80	1.419	1.292	1.305	80	1.579	1.509
4/0	19	1.248	80	1.522	1.632	1.408	80	1.682	1.862
250	37	1.280	80	1.554	1.786	1.440	80	1.714	2.019
350	37	1.376	80	1.650	2.184	1.536	110	1.892	2.574
500	37	1.496	110	1.836	2.875	1.656	110	2.012	3.176
750	61	1.689	110	2.045	3.885	1.849	110	2.205	4.187
1000	61	1.881	110	2.237	4.845	2.041	110	2.397	5.174
1250	91	2.039	110	2.395	5.802	2.199	110	2.555	6.152
1500	91	2.159	110	2.515	6.701	2.319	110	2.675	7.066
1750	127	2.275	110	2.631	7.600	2.435	140	2.857	8.162
2000	127	2.378	110	2.734	8.479	2.538	140	2.960	9.062

Five minute AC Final Test Voltages

345 mil Insulation Level: 69kV

420 mil Insulation Level: 84kV

Paper Insulated Lead Cable (PILC) Replacement Cable

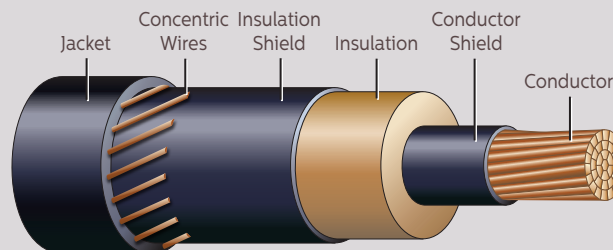


- Conductor – Compact Copper
- Conductor Shield – Non-Conducting Permashield® Stress Control Layer
- Insulation – Reduced Wall Discharge Resistant EPR Insulation
- Insulation Shield – Extruded Semi-Conducting Layer
- Shielding – Flat Strap Copper Concentric Neutrals
- Jacket – Reduced Wall Polypropylene (PP)

Replacing PILC cable with Kerite Compact Power Cable cuts nearly 50% of costs. These cables consist of compact copper strand conductors (that provide an 8-10% diameter reduction over full round conductors), Kerite's exclusive Permashield® and EPR insulation system extruded to exacting tolerances, flat strap concentric neutrals and a polypropylene jacket. During installation, Kerite cable terminates and splices faster than other solid dielectric cables for substantial savings compared to PILC lead wipes, splices and terminations. Like all Kerite cable, our PILC replacement cables offer excellent reliability and a proven track record.

Compact Power Cables

15kV, 25kV, 35kV Shielded 105°C Rating
 For replacement of Paper-Insulated Lead Covered (PILC) cables



Summary of Benefits Over PILC Cable

PILC Cables

- Lead and Oil Used in Manufacture
- Labor Intensive
- High Skill Level Required
- Materials (Lead Wipe, Lead Pot)
- Installation (Heavy Limit Pulls)
- Environmental Issues

Kerite Compact Power Cables

- No Lead and No Oil Used
- Labor Savings
- Standard Lineperson Skills Required
- Materials (No Lead Sleeve Required)
- 30% Lighter Cables (Longer, Easier Pulls)
- Environmentally Friendly Materials

Voltage and Insulation System	Size (kcmil)	Flat Straps (No.-AWG)	1/C		3-1/C	
			O.D. (inches)	Cable Weight (lbs/ft)	O.D. (inches)	Cable Weight (lbs/ft)
15kV 140 mil Insulation	350	8 - #14	1.166	1.521	2.512	4.700
	500	11 - #14	1.286	2.073	2.771	6.406
	750	16 - #14	1.469	2.997	3.165	9.261
	1000	22 - #14	1.621	3.915	3.493	12.097
25kV 210 mil Insulation	350	8 - #14	1.326	1.677	2.857	5.182
	500	11 - #14	1.446	2.246	3.116	6.940
	750	16 - #14	1.629	3.194	3.510	9.869
	1000	22 - #14	1.781	4.133	3.838	12.771
35kV 278 mil Insulation	350	8 - #14	1.442	1.803	3.107	5.571
	500	11 - #14	1.562	2.385	3.366	7.370
	750	16 - #14	1.745	3.352	3.760	10.358
	1000	22 - #14	1.897	4.304	4.087	13.299

5-35kV Cable Ampacities

5-35kV – Aluminum Conductors

Conductor Size (AWG/ kcmil)	Underground in Ducts – One Cable Per Duct									Direct Buried						In Air	
	1 Circuit (Fig.1)			2 Circuits (Fig.2)			4 Circuits (Fig.3)			1 Circuit (Fig.4)			2 Circuits (Fig.5)			Indoor Fig.6	Outdoor Fig.6
	Load Factor (%)																
	50	75	100	50	75	100	50	75	100	50	75	100	50	75	100		
2	161	152	142	152	137	124	137	118	102	210	169	136	202	154	123	159	197
1	185	173	161	173	156	141	155	134	115	240	191	153	229	173	139	184	228
1/0	224	209	195	209	188	168	187	161	139	244	204	173	216	174	144	235	287
2/0	256	239	221	238	213	190	213	182	157	276	230	195	243	196	162	271	331
4/0	335	312	287	309	275	244	275	234	200	354	293	247	310	249	206	360	438
250	370	343	315	341	302	268	302	255	218	387	320	270	339	271	224	400	486
350	451	416	381	413	364	321	363	306	260	463	382	321	404	322	265	494	599
500	555	510	465	505	443	389	441	369	313	561	460	385	488	387	318	618	745
750	704	642	582	635	553	482	549	456	385	697	568	474	603	476	390	799	956
1000	829	753	680	745	644	560	639	527	443	812	658	547	699	550	450	955	1136
1500	1040	938	842	926	795	687	787	644	539	1003	807	668	859	671	547	1223	1431
1750	1131	1017	910	1003	858	739	848	692	578	1083	869	718	925	721	587	1344	1569
2000	1213	1088	972	1072	915	787	903	735	613	1155	924	763	985	766	623	1456	1697

5-35kV – Copper Conductors

Conductor Size (AWG/ kcmil)	Underground in Ducts – One Cable Per Duct									Direct Buried						In Air	
	1 Circuit (Fig.1)			2 Circuits (Fig.2)			4 Circuits (Fig.3)			1 Circuit (Fig.4)			2 Circuits (Fig.5)			Indoor Fig.6	Outdoor Fig.6
	Load Factor (%)																
	50	75	100	50	75	100	50	75	100	50	75	100	50	75	100		
2	209	196	183	196	178	160	176	152	132	266	218	175	257	197	158	206	250
1	239	224	209	224	202	181	201	172	149	305	246	197	294	223	178	237	288
1/0	273	256	237	255	230	206	228	195	168	349	277	223	333	251	201	272	332
2/0	312	292	270	291	261	233	259	221	190	400	312	251	376	283	226	314	383
4/0	409	380	350	379	338	300	335	284	243	525	397	318	478	359	286	417	509
250	451	419	385	418	371	329	368	311	265	574	433	347	522	391	312	463	562
350	549	507	465	506	447	394	443	372	316	684	515	412	621	464	370	570	692
500	676	621	566	619	543	477	538	448	380	823	618	493	745	556	443	712	863
750	849	775	703	773	674	588	667	552	464	1010	757	604	912	680	541	907	1082
1000	995	905	818	901	782	680	772	636	534	1162	870	694	1048	780	620	1079	1279
1500	1230	1110	997	1105	950	821	938	766	640	1398	1043	831	1258	934	741	1364	1609
1750	1325	1193	1068	1187	1017	877	1003	816	681	1492	1112	885	1340	994	789	1485	1747
2000	1409	1265	1131	1258	1075	926	1060	860	716	1572	1171	931	1411	1046	830	1593	1871

See 'Ampacity Calculation Notes'.

5–35kV Cable Ampacities

5–35kV — Aluminum Conductors (Triplexed or Paralleled)

Conductor Size (AWG/ kcmil)	Underground in Ducts – Three 1/C Cables Per Duct									Direct Buried Three 1/C Cables per Circuit						In Air	
	1 Circuit (Fig.7)			2 Circuits (Fig.8)			4 Circuits (Fig.9)			1 Circuit (Fig.10)			2 Circuits (Fig.11)			Indoor Fig.12	Outdoor Fig.12
	Load Factor (%)																
	50	75	100	50	75	100	50	75	100	50	75	100	50	75	100		
2	134	127	120	128	118	109	118	105	93	182	146	118	173	131	105	137	171
1	153	145	137	146	135	123	134	119	105	208	165	133	196	148	119	157	197
1/0	174	165	156	166	153	140	153	134	118	239	187	150	222	167	134	181	226
2/0	199	188	177	189	174	158	173	152	134	273	211	169	250	189	151	208	260
4/0	260	245	229	246	225	204	224	196	171	356	270	216	320	241	192	276	344
250	286	270	252	271	247	224	246	214	187	390	295	236	350	263	210	307	381
350	349	327	304	329	298	269	297	257	223	468	353	283	419	314	250	378	467
500	428	400	371	402	363	326	361	311	269	567	427	341	506	378	301	472	581
750	539	501	463	504	452	404	449	384	330	704	528	421	624	465	370	608	743
1000	629	584	537	587	524	466	520	442	379	816	614	490	724	539	429	717	855

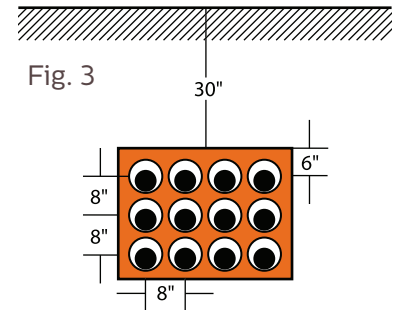
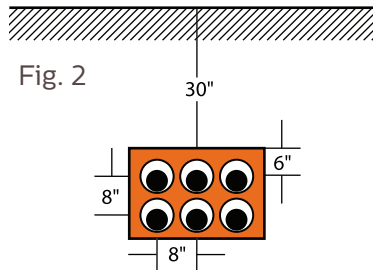
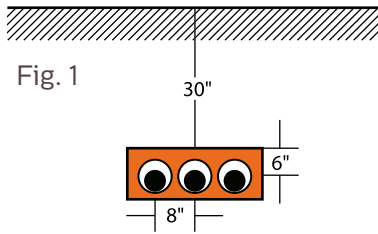
5–35kV — Copper Conductors (Triplexed or Paralleled)

Conductor Size (AWG/ kcmil)	Underground in Ducts – Three 1/C Cables Per Duct									Direct Buried Three 1/C Cables per Circuit						In Air	
	1 Circuit (Fig.7)			2 Circuits (Fig.8)			4 Circuits (Fig.9)			1 Circuit (Fig.10)			2 Circuits (Fig.11)			Indoor Fig.12	Outdoor Fig.12
	Load Factor (%)																
	50	75	100	50	75	100	50	75	100	50	75	100	50	75	100		
2	174	166	156	167	154	141	154	136	120	234	189	152	224	170	136	179	219
1	199	189	178	190	175	160	175	154	135	268	214	172	254	192	153	205	252
1/0	227	215	202	216	199	181	198	174	153	306	242	194	287	216	173	235	289
2/0	259	245	230	246	226	205	225	197	173	351	273	219	324	244	195	270	332
4/0	337	317	297	319	291	264	290	253	221	460	349	279	413	310	248	358	439
250	372	350	326	352	320	289	319	277	241	504	382	306	452	339	271	398	485
350	450	422	392	424	384	346	383	331	287	603	455	364	539	404	322	488	594
500	549	513	475	516	465	417	463	398	344	727	547	437	647	483	385	605	735
750	680	633	584	696	571	510	568	485	418	892	671	536	791	590	470	760	905
1000	786	728	670	733	654	582	651	533	474	1023	767	612	903	672	535	893	1056

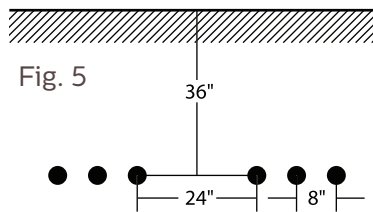
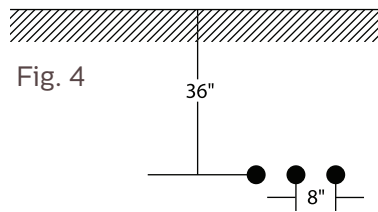
See 'Ampacity Calculation Notes'.

Ampacity Calculation Notes

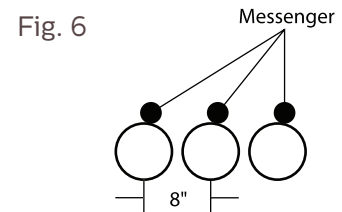
One Single Conductor Cable per Conduit (in Ducts)



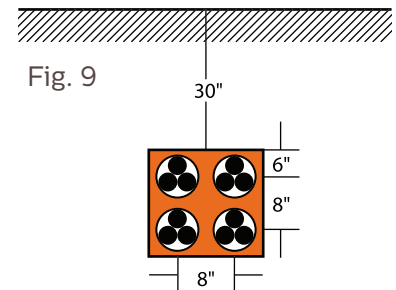
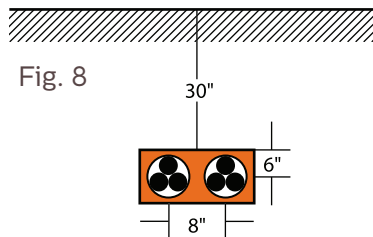
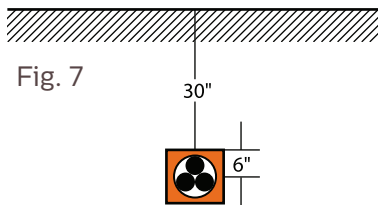
Three Single Conductor Cables (Direct Burial)



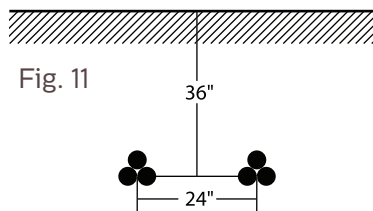
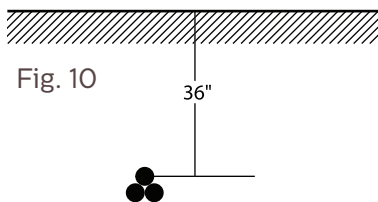
Single Conductor Installations in Air



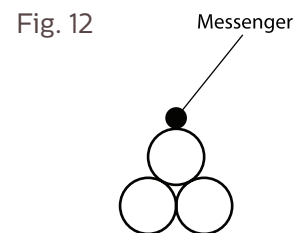
Three Single Conductor Cables Paralleled/Triplexed per Conduit (in Ducts)



Three Single Conductor Cables Paralleled/Triplexed (Direct Burial)



Three Conductor Installations in Air



Assumptions Made for Ampacity Calculations											
Indoors Ambient Temp (°C)	Outdoors Ambient Temp (°C)	Earth Ambient Temp (°C)	Rho Values (°C-cm/watt)	Metallic Shield Grounding	Conductor Temp (°C)	Duct Diameter (inches)	Maximum Surface Temp (°C)	Surface Emissivity	Surface Absorptivity	Atmospheric Pressure (atm)	Air Speed (ft/sec)
40	35	20	90 (Earth) 60 (Concrete) 600 (Duct)	Single-Point	105 (MV) 90 (HV)	5	45 (Direct Burial)	0.85	0.33	1	4
MV Cable Design	Single Conductor, 100% Insulation Level, 5 mil Copper Tape Shield, PVC Jacket										
HV Cable Design	Single Conductor, 100% Insulation Level, 15 #12 AWG Copper Concentric Wire Shield, PE Jacket										

Derating Factors for Cables in Air, Separated by 1/4 to 1 Cable Diameters

No. of Cables Vertically	No. of Cables Horizontally					
	1	2	3	4	5	6
2	0.89	0.83	0.79	0.76	0.75	0.74
3	0.80	0.75	0.72	0.70	0.69	0.68
4	0.77	0.72	0.68	0.67	0.66	0.65
5	0.75	0.70	0.66	0.65	0.64	0.63
6	0.74	0.69	0.64	0.63	0.62	0.61

Derating Factors for Cables in Air, One Layer Spaced Cables in a Horizontal Line

Separation of Cable Surfaces	Derating Factors
S	Ka
0"	0.840
1"	0.890
2"	0.920
4"	0.960
6"	0.980
8"	0.990
10"	1.000

Derating Factors for Cables in Conduits in Air, Separated by 1/4 to 1 Conduit Diameters

No. of Conduits Vertically	No. of Conduits Horizontally					
	1	2	3	4	5	6
1	1.00	0.94	0.91	0.88	0.87	0.86
2	0.92	0.87	0.84	0.81	0.80	0.79
3	0.85	0.81	0.78	0.76	0.75	0.74
4	0.82	0.78	0.74	0.73	0.72	0.72
5	0.80	0.76	0.72	0.71	0.70	0.70
6	0.79	0.75	0.71	0.70	0.69	0.68

If the conduits or cables are spaced 10" vertically and horizontally, no correction need be applied in any case.

High Voltage Cable



Transmission Class

46kV	39
69kV	41
115kV	43
138kV	45
Ampacity Calculation Notes.....	47

Specialty Cables

Preambled Aerial (15kV – 35kV).....	49
Subsea (5kV – 35kV).....	50
Marine Cathodic Protection Cable	51
Portable Substation Cable	51
Nuclear Qualified Cable	52
Non-Shielded Mining Cable	52





Why Kerite?

For over 150 years, Kerite has manufactured the most reliable electrical power cable available. Kerite's reputation for reliability is based on decades of use in real world environmental conditions. Utility customers today are more demanding than ever about the reliability of their electrical service. Kerite cable is a key component of grid reliability.

Long Service Life

Cable service life is a function of its design properties, manufacturing and installation. Kerite is confident enough to warranty our cable for the life of the installation.

Discharge Resistant EPR™ Insulation

The foundation of that reliability is Kerite's proprietary Discharge Resistant Ethylene Propylene Rubber (DR-EPR™) insulation. Kerite has been formulating, compounding, and manufacturing its own Discharge Resistant EPR cable insulation for decades. Every batch of Discharge Resistant EPR insulation is inspected and tested to Kerite's quality standards before extrusion. Kerite's Discharge Resistant EPR has electrical, mechanical, thermal and chemical properties that work together to create superior cable insulation. Millions of feet of Kerite cables have been installed in all types of environments with no known cable failures due to insulation degradation or weakness. This record is unequalled in the electrical power cable industry.

Permashield®

All Kerite cables have our Permashield® stress control layer between the conductor and the insulation. Permashield reduces electrical stress in the primary insulation and limit the available free discharge that can damage the insulation and cause premature cable failure. Permashield's non-conducting properties permit 100% testing during extrusion to verify there are no voids in the stress control layer which could lead to early cable insulation failures.

Superior Underwater Performance and Durability

Moisture in a power cable is a fact of underground and subsea applications and must be addressed by blocking the moisture ingress or selecting an insulation that is impervious to the deterioration which occurs in a wet environment. Kerite cable has the only insulation that utilizes a wet design approach; it performs normally when fully immersed in water. This wet design approach has been used by Kerite cables that have been in service since the 1920s and continue to operate today.

More Reasons to Choose Kerite

Kerite insulation has additional features that contribute to Kerite cables' exceptional reliability.

- Corona Immunity
- Long-term Over-voltage Endurance
- Transient Attenuation

Kerite Power Cable has been manufactured in the USA since 1854.

ISO 9001:2015 registered



Catalog Number Matrix

000A00-A0000	000A00-A0000	000A00-A0000	000A00-A0000	-	000A00-A0000	000A00-A0000	000A00-A0000	000A00-A0000	000A00-A0000
Number of Conductors	Conductor Size	Conductor Material	Voltage		Insulation System	Metallic Shielding	Individual Jacket	Assembly	Outer Assembly Finish
1 1/C	06 6 AWG*	A Aluminum	05 5kV		A SPS HVK 100% Thermoplastic Semi-Conducting	1 Full Concentric	1 Black Polyethylene (PE)	0 None	0 None
	04 4 AWG*					2 All Other Concentric	2 Black Polyethylene (PE) & Red Stripes	1 Paralleled	
	02 2 AWG	C Copper	15 15kV				4 Polyvinyl Chloride (PVC)		1 Polyethylene (PE) Jacket
	01 1 AWG		C SPS HVK 133% Thermoplastic Semi-Conducting			3 1/3 Concentric	5 Black Polyvinyl Chloride (PVC)	2 Triplexed	
	11 1/0 AWG	F Filled Aluminum			25 25kV		7 Semi-Conducting Polyethylene (SCPE)	3 Triplexed with Neutrals	2 Polyvinyl Chloride (PVC) Jacket
	21 2/0 AWG				G Filled Copper	35 35kV			
	41 4/0 AWG	I SPS Reduced	4 5 mil Copper Tape			7 Semi-Conducting Polyethylene (SCPE)	3 Triplexed with Neutrals	2 Polyvinyl Chloride (PVC) Jacket	
	25 250 kcmil		J SPS HVK 100% Thermoset Semi-Conducting		6 Cupro-Nickel Tape	8 Semi-Conducting Polyethylene (SCPE)	4 Cabled	8 Polyethylene (PE) Jacketed Galvanized Steel Armor Wires	
3 3/C or 3-1/C (Paralleled or Triplexed)	35 350 kcmil	S Solid Aluminum			46 46kV	9 All Other	F Thermoplastic Rubber (TPR)*		5 Cabled with Neutrals
	50 500 kcmil		T Solid Copper					69 69kV	
	75 750 kcmil	X Compact Copper			95 115kV				
	90 1000 kcmil				98 138kV				
	92 1250 kcmil								
	95 1500 kcmil								
	97 1750 kcmil								
	99 2000 kcmil								

Example: Catalog Number 102C15-C4400 = 1/C Single #2 AWG Copper Conductor, 15kV, Single Permashield® with 100% Insulation Level Thickness of HVK Insulation, 5 mil Copper Tape Shield and a Polyvinyl Chloride Jacket.

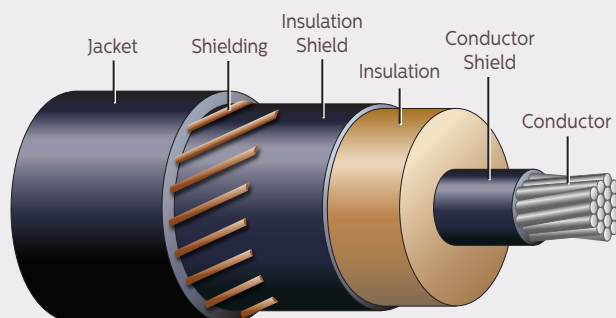
- Note: 1. This is a matrix of standard parts. Not all available options are listed above. Consult factory for availability.
 2. Caution should be exercised in using the above matrix, as not all possible combinations are appropriate for all voltages.
 3. (*)None standard cable configurations. Contact your Marmon Utility representative for availability.



- **Conductor** – Aluminum Strand
- **Conductor Shield** – Non-Conducting Permashield® Stress Control Layer
- **Insulation** – Discharge Resistant EPR Insulation
- **Insulation Shield** – Thermoset Semi-Conducting Layer
- **Shielding** – Flat Strap Copper Concentric Neutrals
- **Jacket** – Polyethylene (PE)

Power Cable

46kV 90°C Rating



Kerite HV Cable – 46kV

Cable Data – Weight & Dimensions

Catalog Number Suffix = JH100 445 mil Insulation						
Catalog Number Prefix	Size (AWG/kcmil)	Number of Strands	O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)
				Thickness (mils)	O.D. (inches)	
141A46-	4/0	19	1.460	80	1.788	1.662
125A46-	250	37	1.524	80	1.868	1.788
135A46-	350	37	1.627	80	1.971	1.994
150A46-	500	37	1.755	80	2.099	2.279
175A46-	750	61	1.944	80	2.288	2.724
190A46-	1000	61	2.903	80	2.437	3.122
192A46-	1250	91	2.251	80	2.595	3.548
195A46-	1500	91	2.371	80	2.715	3.917
197A46-	1750	127	2.487	80	2.831	4.270
199A46-	2000	127	2.590	80	2.934	4.620

Cable shield (15 #12 AWG wires) designed to carry 26kA for 6 cycles or 22kA for 8 cycles or 20kA for 10 cycles. Consult factory for custom shield designs. Five minute AC Final Test Voltage: 89kV

46kV Aluminum Conductor Ampacities:

Conductor Size (AWG/ kcmil)	Underground in Ducts – One Cable Per Duct									Direct Buried						In Air	
	1 Circuit (Fig.1)			2 Circuits (Fig.2)			4 Circuits (Fig.3)			1 Circuit (Fig.4)			2 Circuits (Fig.5)			Indoor Fig.6	Outdoor Fig.6
	Load Factor (%)																
	50	75	100	50	75	100	50	75	100	50	75	100	50	75	100		
4/0	321	299	276	299	268	239	266	227	195	363	298	250	336	271	225	320	366
250	353	329	304	329	294	262	292	248	213	397	326	273	367	296	245	355	406
350	430	398	366	398	354	314	352	298	254	474	388	324	438	352	291	436	499
500	529	488	447	488	431	381	428	360	306	573	467	389	529	422	348	544	623
750	669	614	559	614	539	473	535	446	378	712	576	478	654	520	428	700	802
1000	789	721	655	721	629	550	624	518	437	827	667	553	759	601	493	837	957
1250	895	815	737	814	708	618	702	580	488	930	746	617	852	672	550	959	1092
1500	990	899	811	898	778	677	771	635	533	1020	816	674	933	734	600	1072	1218
1750	1073	972	876	971	840	729	831	683	573	1102	879	724	1007	790	645	1167	1318
2000	1151	1041	936	1039	896	776	887	727	609	1176	935	770	839	839	685	1263	1425

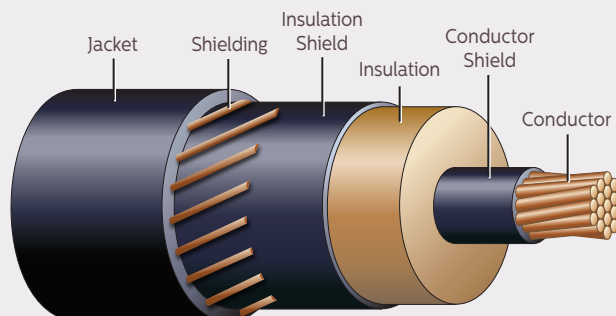
See 'Ampacity Calculation Notes' (pgs. 50-51, Typical thru changes).



- **Conductor** – Copper Strand
- **Conductor Shield** – Non-Conducting Permashield® Stress Control Layer
- **Insulation** – Discharge Resistant EPR Insulation
- **Insulation Shield** – Thermoset Semi-Conducting Layer
- **Shielding** – Flat Strap Copper Concentric Neutrals
- **Jacket** – Polyethylene (PE)

Power Cable

46kV Shielded 90°C Rating



Cable Data – Weight & Dimensions

Catalog Number Suffix = JH100 445 mil Insulation						
Catalog Number Prefix	Size (AWG/kcmil)	Number of Strands	O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)
				Thickness (mils)	O.D. (inches)	
141C46-	4/0	19	1.460	80	1.788	2.069
125C46-	250	37	1.524	80	1.868	2.276
135C46-	350	37	1.627	80	1.971	2.688
150C46-	500	37	1.755	80	2.099	3.284
175C46-	750	61	1.944	80	2.288	4.257
190C46-	1000	61	2.903	80	2.437	5.180
192C46-	1250	91	2.251	80	2.595	6.135
195C46-	1500	91	2.371	80	2.715	7.031
197C46-	1750	127	2.487	80	2.831	7.930
199C46-	2000	127	2.590	80	2.934	8.809

Cable shield (15 #12 AWG wires) designed to carry 26kA for 6 cycles or 22kA for 8 cycles or 20kA for 10 cycles. Consult factory for custom shield designs. Five minute AC Final Test Voltage: 89kV

46kV Copper Conductor Ampacities:

Conductor Size (AWG/ kcmil)	Underground in Ducts – One Cable Per Duct									Direct Buried						In Air	
	1 Circuit (Fig.1)			2 Circuits (Fig.2)			4 Circuits (Fig.3)			1 Circuit (Fig.4)			2 Circuits (Fig.5)			Indoor Fig.6	Outdoor Fig.6
	Load Factor (%)																
	50	75	100	50	75	100	50	75	100	50	75	100	50	75	100		
4/0	405	376	346	375	333	296	335	284	243	463	381	320	404	322	265	410	474
250	447	414	380	412	365	323	367	310	265	506	416	349	441	351	289	454	525
350	540	498	457	496	438	386	440	370	315	606	495	414	526	417	342	554	635
500	662	609	555	606	532	467	534	447	379	731	595	496	633	499	409	690	791
750	833	761	690	757	660	576	662	550	464	901	730	606	777	610	499	883	1011
1000	975	887	801	882	764	665	766	634	533	1041	839	696	894	700	571	1048	1199
1250	1096	993	895	987	853	739	855	704	591	1160	931	770	993	775	631	1191	1356
1500	1201	1085	975	1078	928	802	930	763	639	1261	1009	833	1077	838	682	1319	1500
1750	1292	1165	1044	1157	993	857	994	813	680	1348	1076	887	1149	892	725	1433	1629
2000	1367	1230	1101	1222	1046	902	1048	856	715	1425	1134	934	1212	939	762	1521	1715

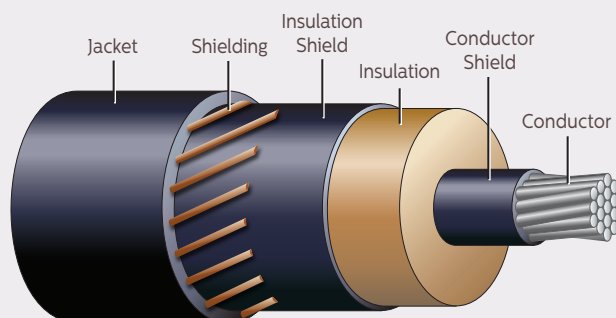
See 'Ampacity Calculation Notes' (pgs. 50-51, Typical thru changes).



- **Conductor** – Aluminum Strand
- **Conductor Shield** – Non-Conducting Permashield® Stress Control Layer
- **Insulation** – Discharge Resistant EPR Insulation
- **Insulation Shield** – Thermoset Semi-Conducting Layer
- **Shielding** – Flat Strap Copper Concentric Neutrals
- **Jacket** – Polyethylene (PE)

Power Cable

69kV Shielded 90°C Rating



Cable Data – Weight & Dimensions

Catalog Number Suffix = JH100 650 mil Insulation						
Catalog Number Prefix	Size (AWG/kcmil)	Number of Strands	O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)
				Thickness (mils)	O.D. (inches)	
141A69-	4/0	19	1.884	110	2.298	2.489
125A69-	250	37	1.948	110	2.362	2.619
135A69-	350	37	2.051	110	2.465	2.868
150A69-	500	37	2.179	110	2.593	3.204
175A69-	750	61	2.368	110	2.782	3.725
190A69-	1000	61	2.517	140	2.997	4.309
192A69-	1250	91	2.675	140	3.155	4.806
195A69-	1500	91	2.795	140	3.275	5.229
197A69-	1750	127	2.911	140	3.391	5.630
199A69-	2000	127	3.014	140	3.494	6.027

Cable shield (15 #12 AWG wires) designed to carry 26kA for 6 cycles or 22kA for 8 cycles or 20kA for 10 cycles. Consult factory for custom shield designs. Five minute AC Final Test Voltage: 100kV

69kV Aluminum Conductor Ampacities:

Conductor Size (AWG/ kcmil)	Underground in Ducts – One Cable Per Duct									Direct Buried						In Air	
	1 Circuit (Fig.1)			2 Circuits (Fig.2)			4 Circuits (Fig.3)			1 Circuit (Fig.4)			2 Circuits (Fig.5)			Indoor Fig.6	Outdoor Fig.6
	Load Factor (%)																
	50	75	100	50	75	100	50	75	100	50	75	100	50	75	100		
4/0	318	297	275	296	266	236	263	225	193	365	300	251	338	272	225	315	351
250	351	326	301	326	291	260	289	246	211	399	327	273	369	296	245	349	389
350	426	395	363	394	351	311	347	294	251	477	389	325	440	352	291	429	477
500	523	483	442	481	426	377	421	354	302	577	468	389	530	423	348	533	594
750	660	607	553	605	532	467	525	438	372	715	577	478	655	520	427	685	764
1000	775	710	645	707	619	542	610	508	429	831	668	553	761	601	492	813	901
1250	878	802	727	798	696	608	685	568	479	933	747	616	852	671	549	931	1031
1500	971	883	799	879	764	666	752	621	522	1023	816	673	933	732	598	1039	1151
1750	1055	957	864	953	825	717	811	668	561	1103	878	723	1005	787	642	1138	1260
2000	1131	1024	922	1019	881	764	865	710	595	1176	934	767	1070	836	681	1230	1361

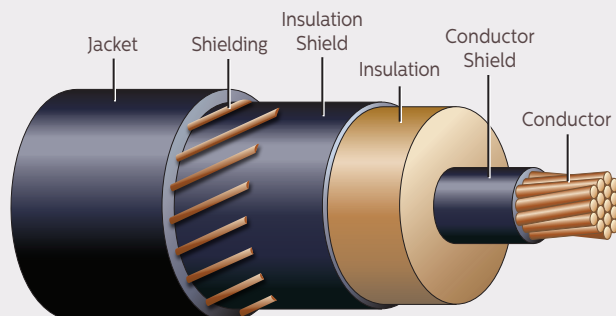
See 'Ampacity Calculation Notes' (pgs. 50-51).



- **Conductor** – Copper Strand
- **Conductor Shield** – Non-Conducting Permashield® Stress Control Layer
- **Insulation** – Discharge Resistant EPR Insulation
- **Insulation Shield** – Thermoset Semi-Conducting Layer
- **Shielding** – Flat Strap Copper Concentric Neutrals
- **Jacket** – Polyethylene (PE)

Power Cable

69kV Shielded 90°C Rating



Cable Data – Weight & Dimensions

Catalog Number Suffix = JH100 650 mil Insulation						
Catalog Number Prefix	Size (AWG/kcmil)	Number of Strands	O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)
				Thickness (mils)	O.D. (inches)	
141C69-	4/0	19	1.884	110	2.298	2.875
125C69-	250	37	1.948	110	2.362	3.087
135C69-	350	37	2.051	110	2.465	3.543
150C69-	500	37	2.179	110	2.593	4.190
175C69-	750	61	2.368	110	2.782	5.238
190C69-	1000	61	2.517	140	2.997	6.347
192C69-	1250	91	2.675	140	3.155	7.373
195C69-	1500	91	2.795	140	3.275	8.324
197C69-	1750	127	2.911	140	3.391	9.273
199C69-	2000	127	3.014	140	3.494	10.198

Cable shield (15 #12 AWG wires) designed to carry 26kA for 6 cycles or 22kA for 8 cycles or 20kA for 10 cycles. Consult factory for custom shield designs. Five minute AC Final Test Voltage: 100kV

69kV Copper Conductor Ampacities:

Conductor Size (AWG/ kcmil)	Underground in Ducts – One Cable Per Duct									Direct Buried						In Air	
	1 Circuit (Fig.1)			2 Circuits (Fig.2)			4 Circuits (Fig.3)			1 Circuit (Fig.4)			2 Circuits (Fig.5)			Indoor Fig.6	Outdoor Fig.6
	Load Factor (%)																
	50	75	100	50	75	100	50	75	100	50	75	100	50	75	100		
4/0	402	373	344	371	330	293	330	280	240	467	383	321	406	323	265	403	448
250	442	410	377	407	362	320	362	306	262	511	418	350	443	351	289	445	496
350	535	494	453	491	434	383	434	365	311	610	497	415	527	417	342	546	608
500	656	603	550	598	526	462	525	440	373	735	597	497	633	499	408	678	756
750	822	752	683	746	651	569	650	540	457	906	731	607	777	609	497	865	965
1000	961	875	792	868	753	656	751	621	524	1045	840	695	893	698	569	1025	1142
1250	1079	980	884	970	839	729	836	689	579	1163	931	769	990	772	628	1164	1296
1500	1176	1066	960	1055	910	789	905	745	625	1264	1009	832	1074	834	678	1277	1414
1750	1265	1143	1027	1131	973	841	967	793	665	1350	1075	885	1144	888	720	1386	1535
2000	1344	1211	1086	1198	1028	887	1021	835	699	1426	1133	931	1206	933	757	1484	1641

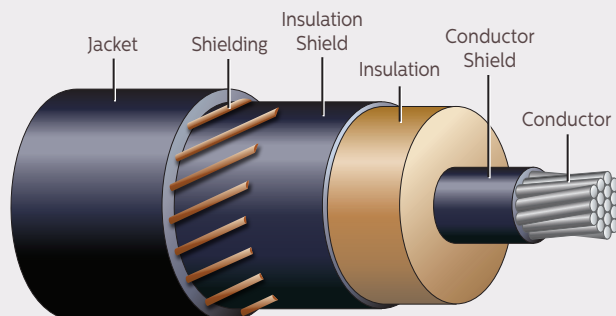
See 'Ampacity Calculation Notes' (pgs. 50-51).



- **Conductor** – Aluminum Strand
- **Conductor Shield** – Non-Conducting Permashield® Stress Control Layer
- **Insulation** – Discharge Resistant EPR Insulation
- **Insulation Shield** – Thermoset Semi-Conducting Layer
- **Shielding** – Flat Strap Copper Concentric Neutrals
- **Jacket** – Polyethylene (PE)

Power Cable

115kV Shielded 90°C Rating



Cable Data – Weight & Dimensions

Catalog Number Suffix = JH100 800 mil Insulation (100%)						
Catalog Number Prefix	Size (AWG/kcmil)	Number of Strands	O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)
				Thickness (mils)	O.D. (inches)	
150A95-	500	37	2.479	140	2.959	4.007
175A95-	750	61	2.668	140	3.148	4.583
190A95-	1000	61	2.817	140	3.297	5.087
192A95-	1250	91	2.975	140	3.455	5.624
195A95-	1500	91	3.095	140	3.575	6.078
197A95-	1750	127	3.211	140	3.691	6.509
199A95-	2000	127	3.314	140	3.794	6.931

Cable shield (15 #12 AWG wires) designed to carry 26kA for 6 cycles or 22kA for 8 cycles or 20kA for 10 cycles. Consult factory for custom shield designs. Five minute AC Final Test Voltage: 135kV

115kV Aluminum Conductor Ampacities:

Conductor Size (AWG/ kcmil)	Underground in Ducts – One Cable Per Duct									Direct Buried						In Air	
	1 Circuit (Fig.1)			2 Circuits (Fig.2)			4 Circuits (Fig.3)			1 Circuit (Fig.4)			2 Circuits (Fig.5)			Indoor Fig.6	Outdoor Fig.6
	Load Factor (%)																
	50	75	100	50	75	100	50	75	100	50	75	100	50	75	100		
500	508	470	431	465	413	366	402	339	290	573	465	387	524	418	344	515	557
750	639	589	538	582	513	452	499	418	355	709	573	475	647	513	422	659	713
1000	751	689	628	681	598	525	579	483	409	823	662	547	749	592	485	784	849
1250	850	777	706	767	671	587	648	538	455	922	739	610	838	660	540	896	970
1500	938	856	776	844	735	642	709	587	494	1010	807	665	916	720	588	999	1080
1750	1018	926	838	912	793	691	762	630	530	1089	867	714	986	773	631	1093	1183
2000	1091	990	894	974	845	735	811	668	561	1160	922	757	1049	821	669	1181	1276

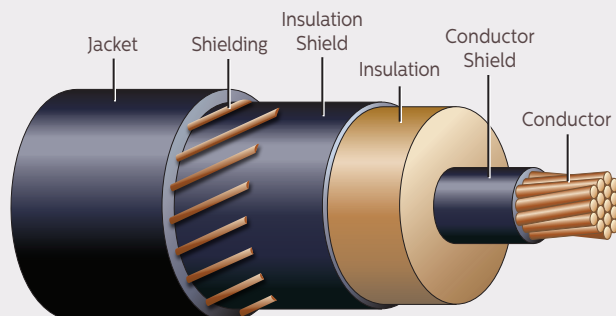
See 'Ampacity Calculation Notes' (pgs. 50-51).



- **Conductor** – Copper Strand
- **Conductor Shield** – Non-Conducting Permashield® Stress Control Layer
- **Insulation** – Discharge Resistant EPR Insulation
- **Insulation Shield** – Thermoset Semi-Conducting Layer
- **Shielding** – Flat Strap Copper Concentric Neutrals
- **Jacket** – Polyethylene (PE)

Power Cable

115kV Shielded 90°C Rating



Cable Data – Weight & Dimensions

Catalog Number Suffix = JH100 800 mil Insulation (100%)						
Catalog Number Prefix	Size (AWG/kcmil)	Number of Strands	O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)
				Thickness (mils)	O.D. (inches)	
150C95-	500	37	2.479	140	2.959	4.979
175C95-	750	61	2.668	140	3.148	6.083
190C95-	1000	61	2.817	140	3.297	7.112
192C95-	1250	91	2.975	140	3.455	8.178
195C95-	1500	91	3.095	140	3.575	9.159
197C95-	1750	127	3.211	140	3.691	10.139
199C95-	2000	127	3.314	140	3.794	11.090

Cable shield (15 #12 AWG wires) designed to carry 26kA for 6 cycles or 22kA for 8 cycles or 20kA for 10 cycles. Consult factory for custom shield designs. Five minute AC Final Test Voltage: 135kV

115kV Copper Conductor Ampacities:

Conductor Size (AWG/ kcmil)	Underground in Ducts – One Cable Per Duct									Direct Buried						In Air	
	1 Circuit (Fig.1)			2 Circuits (Fig.2)			4 Circuits (Fig.3)			1 Circuit (Fig.4)			2 Circuits (Fig.5)			Indoor Fig.6	Outdoor Fig.6
	Load Factor (%)																
	50	75	100	50	75	100	50	75	100	50	75	100	50	75	100		
500	636	586	536	577	509	448	500	420	357	730	593	493	624	492	403	654	708
750	796	730	664	717	628	550	616	514	435	899	726	602	764	599	489	832	900
1000	928	847	769	832	724	632	708	588	497	1036	833	689	876	686	559	983	1064
1250	1040	947	857	928	805	701	786	650	548	1151	923	762	971	757	616	1114	1206
1500	1137	1032	932	1010	874	759	851	702	590	1249	998	823	1050	817	664	1230	1330
1750	1221	1106	996	1081	933	808	906	745	625	1334	1063	875	1118	868	705	1334	1442
2000	1295	1171	1052	1143	984	851	953	782	656	1407	1119	919	1177	912	740	1426	1542

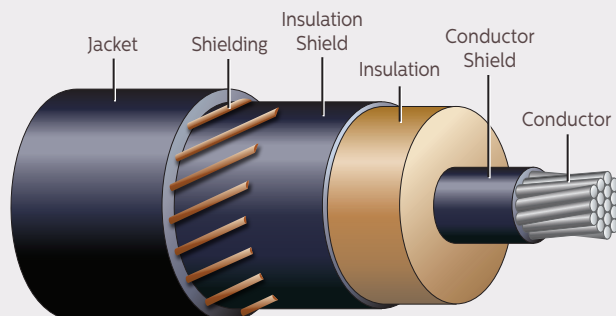
See 'Ampacity Calculation Notes' (pgs. 50-51).



- **Conductor** – Aluminum Strand
- **Conductor Shield** – Non-Conducting Permashield® Stress Control Layer
- **Insulation** – Discharge Resistant EPR Insulation
- **Insulation Shield** – Thermoset Semi-Conducting Layer
- **Shielding** – Flat Strap Copper Concentric Neutrals
- **Jacket** – Polyethylene (PE)

Power Cable

138kV Shielded 90°C Rating



Cable Data – Weight & Dimensions

Catalog Number Suffix = JH100 850 mil Insulation (100%)						
Catalog Number Prefix	Size (AWG/kcmil)	Number of Strands	O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)
				Thickness (mils)	O.D. (inches)	
150A98-	500	37	2.579	140	3.059	4.254
175A98-	750	61	2.768	140	3.248	4.847
190A98-	1000	61	2.917	140	3.397	5.363
192A98-	1250	91	3.075	140	3.555	5.914
195A98-	1500	91	3.195	140	3.675	6.378
197A98-	1750	127	3.311	140	3.791	6.818
199A98-	2000	127	3.414	140	3.894	7.250

Cable shield (15 #12 AWG wires) designed to carry 26kA for 6 cycles or 22kA for 8 cycles or 20kA for 10 cycles. Consult factory for custom shield designs. Five minute AC Final Test Voltage: 140kV

138kV Aluminum Conductor Ampacities:

Conductor Size (AWG/ kcmil)	Underground in Ducts – One Cable Per Duct									Direct Buried						In Air	
	1 Circuit (Fig.1)			2 Circuits (Fig.2)			4 Circuits (Fig.3)			1 Circuit (Fig.4)			2 Circuits (Fig.5)			Indoor Fig.6	Outdoor Fig.6
	Load Factor (%)																
	50	75	100	50	75	100	50	75	100	50	75	100	50	75	100		
500	499	463	425	456	406	360	392	331	283	568	463	385	520	415	342	505	541
750	628	579	530	570	504	444	484	406	346	704	569	472	641	509	418	646	691
1000	738	678	618	666	586	515	561	468	397	817	658	544	742	587	481	769	823
1250	834	764	695	749	657	575	627	521	441	915	734	606	829	654	535	878	939
1500	920	840	763	823	719	629	684	568	479	1002	801	660	906	713	583	977	1046
1750	997	909	823	890	775	676	735	608	512	1079	861	709	974	765	625	1070	1143
2000	1068	972	878	950	825	719	780	644	542	1149	915	752	1036	812	662	1154	1234

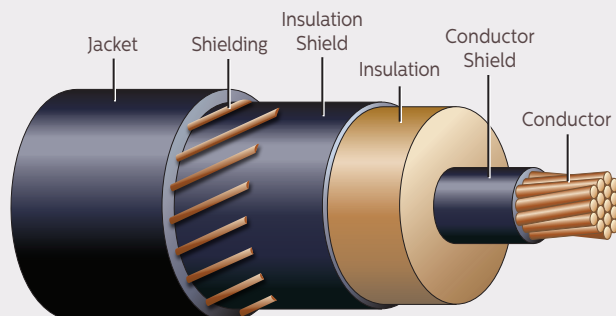
See 'Ampacity Calculation Notes' (pgs. 50-51).



- **Conductor** – Copper Strand
- **Conductor Shield** – Non-Conducting Permashield® Stress Control Layer
- **Insulation** – Discharge Resistant EPR Insulation
- **Insulation Shield** – Thermoset Semi-Conducting Layer
- **Shielding** – Flat Strap Copper Concentric Neutrals
- **Jacket** – Polyethylene (PE)

Power Cable

138kV Shielded 90°C Rating



Cable Data – Weight & Dimensions

Catalog Number Suffix = JH100 850 mil Insulation (100%)						
Catalog Number Prefix	Size (AWG/kcmil)	Number of Strands	O.D. Over Insulation (inches)	Jacket		Cable Weight (lbs/ft)
				Thickness (mils)	O.D. (inches)	
150C98-	500	37	2.579	140	3.059	5.221
175C98-	750	61	2.768	140	3.248	6.342
190C98-	1000	61	2.917	140	3.397	7.384
192C98-	1250	91	3.075	140	3.555	8.463
195C98-	1500	91	3.195	140	3.675	9.455
197C98-	1750	127	3.311	140	3.791	10.444
199C98-	2000	127	3.414	140	3.894	11.405

Cable shield (15 #12 AWG wires) designed to carry 26kA for 6 cycles or 22kA for 8 cycles or 20kA for 10 cycles. Consult factory for custom shield designs. Five minute AC Final Test Voltage: 140kV

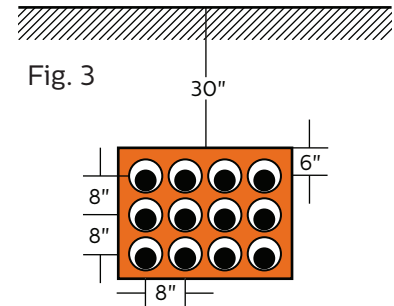
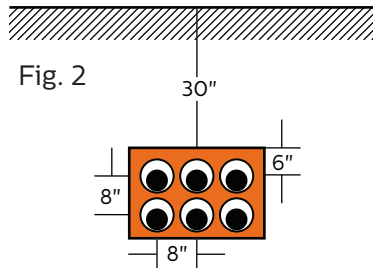
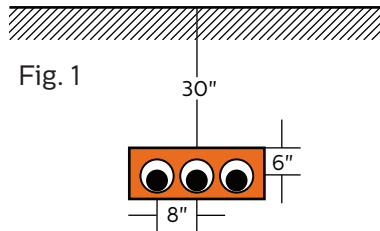
138kV Copper Conductor Ampacities:

Conductor Size (AWG/ kcmil)	Underground in Ducts – One Cable Per Duct									Direct Buried						In Air	
	1 Circuit (Fig.1)			2 Circuits (Fig.2)			4 Circuits (Fig.3)			1 Circuit (Fig.4)			2 Circuits (Fig.5)			Indoor Fig.6	Outdoor Fig.6
	Load Factor (%)																
	50	75	100	50	75	100	50	75	100	50	75	100	50	75	100		
500	626	578	529	566	499	440	487	409	348	723	590	491	617	488	399	643	688
750	782	718	654	702	615	540	597	499	423	892	722	599	755	593	485	817	874
1000	911	833	757	813	709	620	685	570	482	1028	828	685	866	678	553	964	1033
1250	1020	930	843	906	788	686	759	629	530	1142	916	757	958	748	609	1092	1169
1500	1115	1013	916	985	854	742	820	677	570	1239	991	817	1036	807	656	1205	1290
1750	1196	1085	979	1053	910	790	871	718	603	1322	1055	868	1102	857	696	1305	1396
2000	1268	1148	1033	1113	959	831	916	753	631	1394	1110	913	1159	900	730	1395	1493

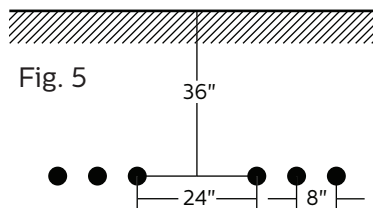
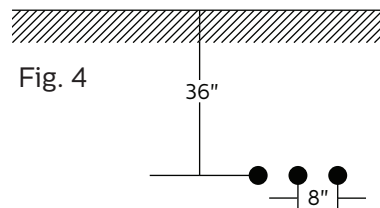
See 'Ampacity Calculation Notes' (pgs. 50-51).

Ampacity Calculation Notes

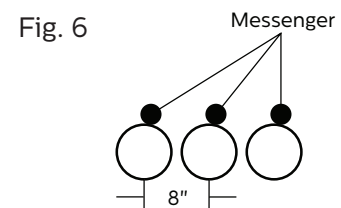
One Single Conductor Cable per Conduit (in Ducts)



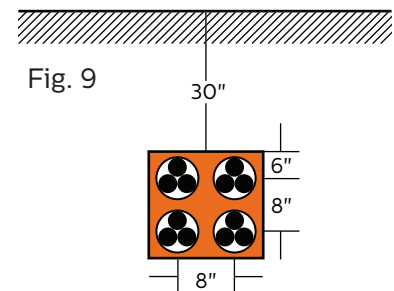
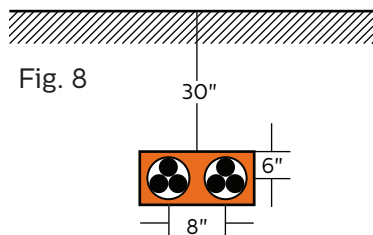
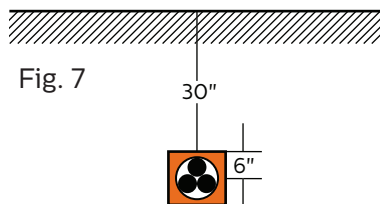
Three Single Conductor Cables (Direct Burial)



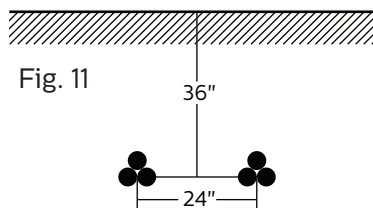
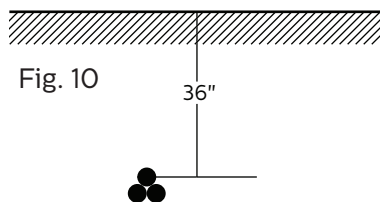
Single Conductor Installations in Air



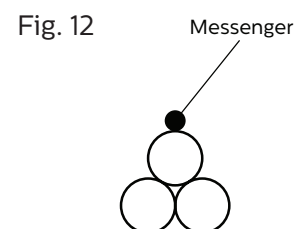
Three Single Conductor Cables Paralleled/Triplexed per Conduit (in Ducts)



Three Single Conductor Cables Paralleled/Triplexed (Direct Burial)



Three Conductor Installations in Air



Assumptions Made for Ampacity Calculations											
Indoors Ambient Temp (°C)	Outdoors Ambient Temp (°C)	Earth Ambient Temp (°C)	Rho Values (°C-cm/watt)	Metallic Shield Grounding	Conductor Temp (°C)	Duct Diameter (inches)	Maximum Surface Temp (°C)	Surface Emissivity	Surface Absorptivity	Atmospheric Pressure (atm)	Air Speed (ft/sec)
40	35	20	90 (Earth) 60 (Concrete) 600 (Duct)	Single-Point	105 (MV) 90 (HV)	5	45 (Direct Burial)	0.85	0.33	1	4
HV Cable Design	Single Conductor, 100% Insulation Level, 15 #12 AWG Copper Concentric Wire Shield, PE Jacket										

Note: Consult factory about ampacities for specific applications.

Derating Factors for Cables in Air, Separated by 1/4 to 1 Cable Diameters

No. of Cables Vertically	No. of Cables Horizontally					
	1	2	3	4	5	6
2	0.89	0.83	0.79	0.76	0.75	0.74
3	0.80	0.75	0.72	0.70	0.69	0.68
4	0.77	0.72	0.68	0.67	0.66	0.65
5	0.75	0.70	0.66	0.65	0.64	0.63
6	0.74	0.69	0.64	0.63	0.62	0.61

Derating Factors for Cables in Air, One Layer Spaced Cables in a Horizontal Line

Separation of Cable Surfaces	Derating Factors
S	Ka
0"	0.840
1"	0.890
2"	0.920
4"	0.960
6"	0.980
8"	0.990
10"	1.000

Derating Factors for Cables in Conduits in Air, Separated by 1/4 to 1 Conduit Diameters

No. of Conduits Vertically	No. of Conduits Horizontally					
	1	2	3	4	5	6
1	1.00	0.94	0.91	0.88	0.87	0.86
2	0.92	0.87	0.84	0.81	0.80	0.79
3	0.85	0.81	0.78	0.76	0.75	0.74
4	0.82	0.78	0.74	0.73	0.72	0.72
5	0.80	0.76	0.72	0.71	0.70	0.70
6	0.79	0.75	0.71	0.70	0.69	0.68

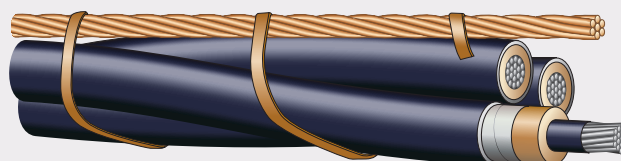
If the conduits or cables are spaced 10" vertically and horizontally, no correction need be applied in any case.



- **Conductor** – Stranded and Compact, Three Copper or Aluminum Conductors
- **Conductor Shield** – Non-Conducting Permashield® Stress Control Layer
- **Insulation** – Discharge Resistant EPR Insulation
- **Insulation Shield** – Extruded Free Stripping Semi-Conducting Layer
- **Metallic Shield** – Copper tape, Cupro Nickel tape
- **Jacket** – Optional
- **Support** – Copper Clad Messenger Wire
- **Custom Built**

Preassembled Aerial Cable

15kV-35kV Shielded 105°C Rating



Kerite's Preassembled Aerial cable comes completely assembled on the reel, with 3 conductors tri-plexed and wrapped with a strap to a copper clad messenger wire. It's ready to go up on the pole and is used in locations closer to the public, it is completely insulated with no touch potential. Also installs quicker than 3 individual cables on insulators.

15kV-35kV Cable Ampacities (Triplexed or Paralleled)

Aluminum Conductors		
Conductor Size (AWG/kcmil)	In Air	
	Indoor	Outdoor
2	137	171
1	157	197
1/0	181	226
2/0	208	260
3/0	276	344
250	307	381
350	378	467
500	472	581
750	608	743
1000	717	855

Copper Conductors		
Conductor Size (AWG/kcmil)	In Air	
	Indoor	Outdoor
2	179	219
1	205	252
1/0	235	289
2/0	270	332
3/0	358	439
250	398	485
350	488	594
500	605	735
750	760	905
1000	893	1056

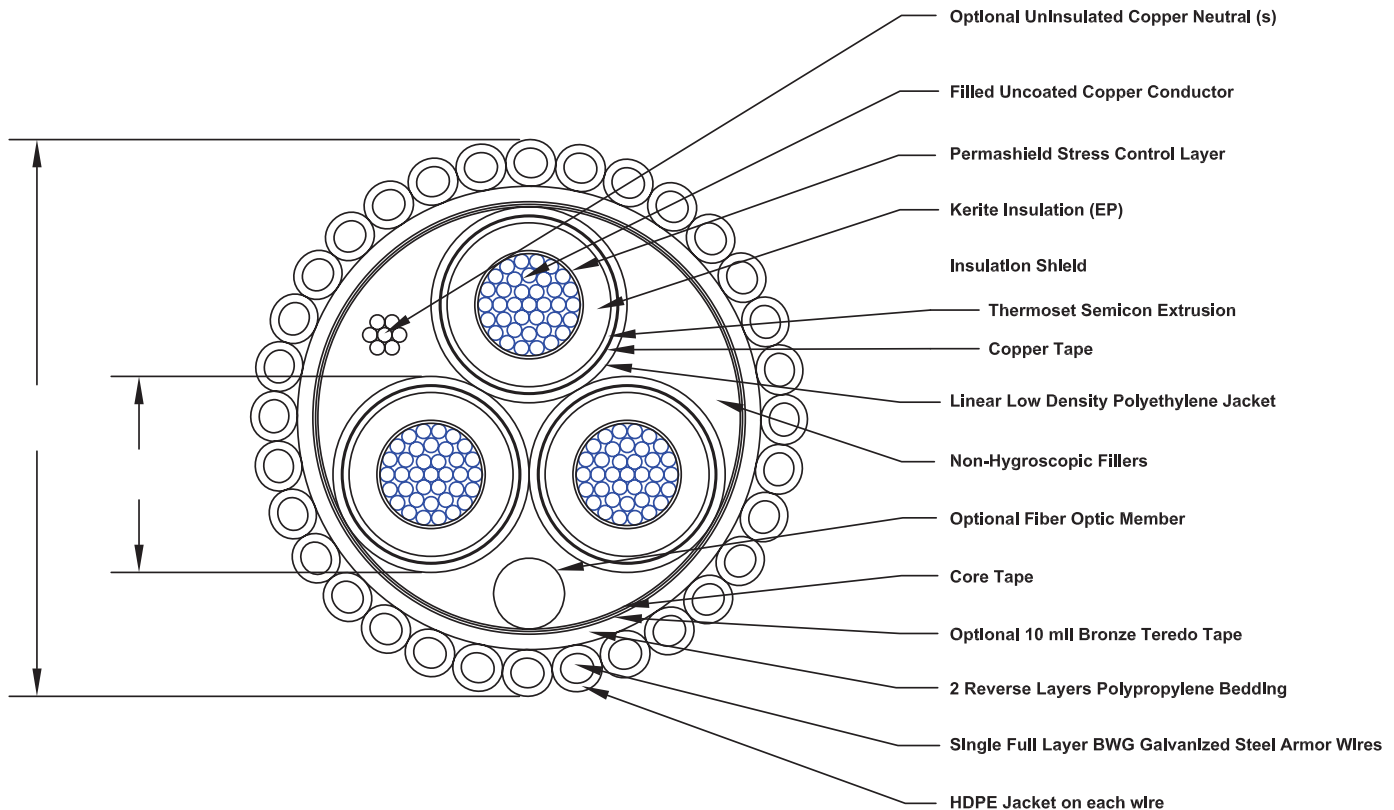
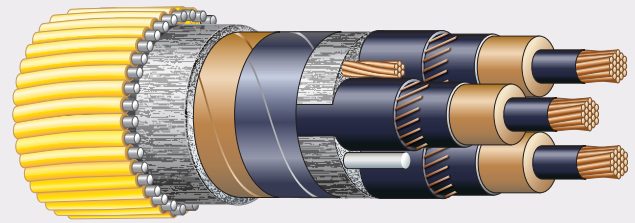


- **Conductor** – Stranded or Filled Copper
- **Conductor Shield** – Non-Conducting Permashield® Stress Control Layer
- **Insulation** – Discharge Resistant EPR Insulation
- **Insulation Shield** – Extruded Free Stripping Semi-Conducting Layer
- **Metallic Shield** – Copper tape or Concentric wires
- **Jacket** – Polyethylene (PE)
- **Optional Fiber Optic or Separate Ground Wire**
- **Optional 10 mil Bronze Tape** – Teredo Protection
- **Galvanized Steel Armor Wires** – Individually (Jacketed HDPE)
- **Custom Built** – For special requirements, contact factory

Kerite's DR-EPR™ insulation formula enables our cables to operate in direct contact with water, without the need for an impervious coating. The cable can be covered with individually jacketed steel armor wires for mechanical protection and ease of installation pulling.

Subsea Cable

5kV-35kV Copper Conductor 105°C Rating



APPROXIMATE OVERALL DIAMETER = TBD"
APPROXIMATE WEIGHT IN AIR = TBD LBS PER FOOT
APPROXIMATE WEIGHT IN SALT WATER = TBD LBS PER FOOT

Note: TBD = Data to be determined based upon options that you select.
Note: All dimensional data subject to manufacturing tolerances.

Kerite Specialty Cables

- **Conductor** – Stranded, Filled, Compact Copper
- **Conductor Shield** – Non-Conducting Permashield® Stress Control Layer
- **Insulation** – Discharge Resistant EPR™ Insulation
- **Insulation Shield** – Extruded Free Stripping Semi-Conducting Layer
- **Inner Jacket** – Low Smoke Zero Halogen (LSZH)
- **Galvanized Steel Armor Wires** – Protection
- **Jacket** – High Density Polyethylene (HDPE)

Kerite's Marine Cathodic Protection Cable is manufactured, tested, and qualified to the American Petroleum Institute (API-17E) Specifications. This special design cable is used by the Oil & Gas industry to connect the oil platform, to the cathodic protection units, placed on the seabed around the platform.

Kerite Marine Cathodic Protection Cable

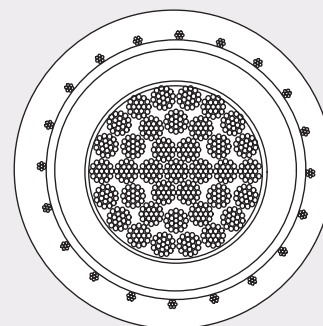


- **Conductor** – Flexible Stranded Copper
- **Conductor Shield** – Non-Conducting Permashield® Stress Control Layer
- **Insulation** – Discharge Resistant EPR™ Insulation
- **Insulation Shield** – Extruded Free Stripping Semi-Conducting Layer
- **Metallic Shield** – Stranded Concentric Wires
- **Jacket** – Thermoplastic (TF)

Portable Substation Cable is the most flexible cable design possible to meet the durability requirements when connecting portable power, substations or transformers. The conductor has a flexible high stranding, the concentrics are stranded instead of solid, and the jacket is a flexible and durable TF material.

Kerite Portable Substation Cable

5kv-138kV



- Completely immune to corona and tracking
- Rubber jacket resistant to moisture, heat and oil
- Flexible and mechanically rugged
- Perfect choice for coal mine power centers
- Easier to install in place of expensive, rigid copper bus
- Available in #2, 2/0, 4/0 AWG, 350 and 500 kcmil



Kerite partners with RSCC, also a Marmon Wire and Cable/ Berkshire Hathaway company, to provide medium voltage, nuclear qualified cables to the Nuclear Power Industry. These cables are for both safety and non-safety applications. Kerite has a very long history manufacturing, testing and qualifying cable to this market.



Cable Services and Solutions



Kerite Cable Services (KCS) Turnkey Capabilities

- Project Management
 - System Layout and Design
 - Ampacities
 - Short Circuit Calculations
 - Cable Pulling Calculations
 - Custom Cable Designs
 - Power cables from 5kV to 138kV
 - Cable Installation, Splicing and Terminating
 - System Testing
 - Complete Project Documentation
 - Emergency Repair or Replacement
- Extended Warranty for Termination & Cable available



Electrical Formulas

To Find	Direct Current	Alternating Current	
		Single-Phase	Three-Phase
Amperes (Given Horsepower)	$\frac{HP \times 1000}{E \times Eff}$	$\frac{HP \times 746}{E \times Eff \times PF}$	$\frac{HP \times 746}{1.73 \times E \times Eff \times PF}$
Amperes (Given Kilowatts)	$\frac{KW \times 1000}{E}$	$\frac{KW \times 1000}{E \times PF}$	$\frac{KW \times 1000}{1.73 \times E \times PF}$
Amperes (Given KVA)	$\frac{KVA \times 1000}{E}$	$\frac{KVA \times 1000}{E}$	$\frac{KVA \times 1000}{1.73 \times E}$
Kilowatts	$\frac{I \times E}{1000}$	$\frac{I \times E \times PF}{1000}$	$\frac{I \times E \times 1.73 \times PF}{1000}$
Kilovolt Amperes	$\frac{I \times E}{1000}$	$\frac{I \times E}{1000}$	$\frac{I \times E \times 1.73}{1000}$
Horsepower (Output)	$\frac{I \times E \times Eff}{746}$	$\frac{I \times E \times Eff \times PF}{746}$	$\frac{I \times E \times 1.73 \times Eff \times PF}{746}$

Where:

I = Amperes

E = Phase-to-Phase Volts

Eff = Efficiency Expressed as a Decimal (85% = 0.85),

PF = Power Factor Expressed as a Decimal (95% = 0.95)

KW = Kilowatts

KVA = Kilovolt Amperes

HP = Horsepower

Short Circuits

On power systems with particularly high KVA capacity, the available short circuit current must be considered in the selection of the conductor size and the cable shield design. The graphs on the following pages show the maximum currents Kerite cables and shields can carry for various periods of time without degradation to the insulation system and jackets.

Fault Currents

When calculating the time a conductor can carry a particular fault current, or determining the fault current which can be carried for a specific time, it is conservatively assumed that the total heat generated is stored in the conductor, for the brief duration of the short circuit, without any dissipation of heat to the environment.

Either the allowable fault current (I), the allowable duration of time (t), or the cross sectional area (A) of metal necessary to sustain a particular fault can be computed when two of the three variables are known.

$$I = \sqrt{\frac{k \times A^2}{t}}$$

A = Total cross-sectional area of concentric neutral, tape shield, or phase conductor (circular mils)
I = Fault current (amperes)
t = Duration of fault (seconds)
k = Constant for conductor or shield material with fixed initial and final temperatures

The k value in the above equation can be obtained in the following table:

k Value	Shield Material		Conductor Material			
	Copper	Cupro-Nickel	Copper (HV)	Aluminum (HV)	Copper (MV)	Aluminum (MV)
	6.258 x 10 ⁻³	0.560 x 10 ⁻³	5.215 x 10 ⁻³	2.341 x 10 ⁻³	4.627 x 10 ⁻³	2.077 x 10 ⁻³
Starting Temp	65°C		90°C		105°C	
Max Final Temp	250°C					

Conductor Selection

For most applications the selection of copper versus aluminum is an economic decision. As conductor sizes increase the difference in initial cost favors aluminum. The diameter of the aluminum cable becomes increasingly larger than copper for similar ampacity because of aluminum's lower conductivity. Larger diameter cables may require larger ducts, conduits, and racks/trays potentially offsetting initial cable cost savings.

The selection of a conductor size is mainly dependent on the amount of current it must carry and the installation type. The following table of electrical formulas can be used for determining amperage in a particular circuit.

Setting Initial Cable Cost Savings.					Aluminum Conductors		Copper Conductors		
Conductor Size (AWG/kcmil)	Standing (No.xMils)	Diameter (inch)	Circular Mil Area (kcmil)	Area (mm²)	Weight (lbs/kft)	DC Resistance @ 25°C (Ω/kft)	Weight (lbs/kft)	DC Resistance @ 25°C (Ω/kft)	
					Class B Stranded Conductors				
6	7 x 61.2	0.178	26.2	13.3	25	0.6740	81	0.4109	
4	7 x 77.2	0.225	41.7	21.1	39	0.4242	129	0.2580	
2	7 x 97.4	0.283	66.4	33.6	62	0.2661	205	0.1621	
1	19 x 66.4	0.313	83.7	42.4	78	0.2111	258	0.1285	
1/0	19 x 74.5	0.352	105.6	53.5	99	0.1672	326	0.1020	
2/0	19 x 83.7	0.395	133.1	67.4	125	0.1326	411	0.0811	
4/0	19 x 105.5	0.498	211.6	107	199	0.0836	653	0.0510	
250	37 x 82.2	0.558	250	127	234	0.0708	772	0.0431	
350	37 x 97.3	0.661	350	177	328	0.0505	1081	0.0308	
500	37 x 116.2	0.789	500	253	469	0.0354	1544	0.0216	
750	61 x 110.9	0.968	750	380	703	0.0236	2316	0.0144	
1000	61 x 128.0	1.117	1000	507	937	0.0176	3088	0.0108	
1250	91 x 117.2	1.250	1250	633	1172	0.0141	3859	0.0086	
1500	91 x 128.4	1.370	1500	760	1408	0.0118	4631	0.0072	
1750	127 x 117.4	1.480	1750	887	1643	0.0101	5403	0.0062	
2000	127 x 125.5	1.583	2000	1013	1877	0.0088	6175	0.0054	
	Solid Conductors								
	2	–	0.259	66.4	33.6	61.1	0.261	201	0.1594
	1	–	0.289	83.7	42.4	77.1	0.207	253	0.1263
	1/0	–	0.325	105.6	53.5	97.2	0.164	320	0.1002
	2/0	–	0.365	133.1	67.5	122.5	0.130	403	0.0795
	Compact Conductors								
	250	–	0.520	250	127	235	0.0707	772	0.0431
	350	–	0.616	350	177	329	0.0505	1080	0.0308
	500	–	0.736	500	253	469	0.0354	1542	0.0216
	750	–	0.908	750	380	704	0.0236	2316	0.0144
1000	–	1.060	1000	507	939	0.0177	3086	0.0108	



POWER⚡CABLE

⚡Hendrix® ⚡kerite®



marmonutility.com