

Primary UD TR-XLPE / PVC, Concentric Neutral

5 kV – 46 kV

CME[®]
wire and cable

A Viakable Company

Features

Low tension stripping compounds.

Sealed conductor passes the production water penetration tests per ICEA-T-31-610 at 15 psi for 60 minutes.

Strand Filled compound meets compatibility test requirements in accordance with ICEA-T-32-610.

True Triple extrusion system and closed handling raw materials system, to eliminate any contact with ambient, until extrusion of insulation and shields.

On request, can be UL Listed as MV105 for use in accordance with Article 328 of the NEC.

On request, two abrasion resistant ripcords placed longitudinally 180° apart for easy jacket removal.

Application

Underground primary residential and commercial distribution circuits.

May be used in wet or dry locations, installed in underground ducts or direct burial.

Standards

ICEA S-94-649: Standard for Concentric Neutral Rated Cables 5 – 46 kV.

AEIC CS8: Specifications for Extruded Dielectric, Shielded Power Cable, Rated 5 – 46 kV.

Specifications

Maximum operating voltage:

- 5 kV – 46 kV, 100 and 133% IL

Maximum conductor operation temperatures:

Wet and dry locations

For TR-XLPE

- Normal: 105 °C
- Emergency: 140 °C
- Short Circuit: 250 °C

For XLPE

- Normal: 90 °C
- Emergency: 130 °C
- Short Circuit: 250 °C

Engineering Information

1. Conductor: Soft annealed uncoated copper Class B compressed or unilay compressed per ASTM B8 or hard drawn aluminum Class B compressed or unilay compressed stranding per ASTM B231.

On request: strand filled.

Sizes: 8 AWG – 1000 kcmil.

On request: larger sizes.

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

On request: super clean and super smooth materials.



3. Insulation: Thermoset tree-retardant cross-linked polyethylene (TR-XLPE).

On request: cross-linked polyethylene (XLPE).

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

5. Concentric Neutral: Soft annealed solid copper wires per ASTM B3, helically applied and uniformly spaced.

Full or 1/3 Neutral.

On request options: alternate neutral constructions, Water Swellable Powder (WSP), and ripcords.

6. Binder Tape: A suitable polyester tape, as required.

7. Jacket: Overlying (sleeve) black polyvinyl chloride (PVC).

Configuration Options:

On request: Triplex or Paralleled configurations.



Technical Data

5 kV TR-XLPE Insulated

Size AWG or kcmil	Number of Strands	Nominal OD Over Insulation in	1/3 Neutral					Full Neutral				
			Number of Wires	Size AWG	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight lb/kft	Number of Wires	Size AWG	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight lb/kft
Copper 100% Insulation Level (90 mil)												
2	7	0.50	6	14	60	0.83	472	16	14	60	0.83	606
1	19	0.54	7	14	60	0.87	551	13	12	80	0.95	775
1/0	19	0.58	9	14	80	0.95	697	16	12	80	0.99	922
2/0	19	0.63	11	14	80	1.00	826	13	10	80	1.07	1131
3/0	19	0.68	14	14	80	1.05	993	16	10	80	1.12	1359
4/0	19	0.73	18	14	80	1.10	1204	16	9	80	1.20	1662
250	37	0.79	13	12	80	1.19	1385	25	10	80	1.23	1961
350	37	0.89	18	12	80	1.29	1841	22	8	80	1.39	2656
500	37	1.02	17	10	80	1.49	2578	31	8	80	1.54	3678
750	61	1.21	20	9	110	1.77	3815	—	—	—	—	—
1000	61	1.36	26	9	110	1.91	4912	—	—	—	—	—
Aluminum 100% Insulation Level (90 mil)												
2	7	0.50	6	14	60	0.83	330	10	14	60	0.83	383
1	19	0.54	6	14	80	0.91	395	13	14	80	0.91	489
1/0	19	0.58	6	14	80	0.95	431	16	14	80	0.95	564
2/0	19	0.62	7	14	80	1.00	488	13	12	80	1.03	676
3/0	19	0.67	9	14	80	1.05	567	16	12	80	1.08	792
4/0	19	0.73	11	14	80	1.10	657	13	10	80	1.18	962
250	37	0.79	13	14	80	1.16	741	16	10	80	1.24	1121
350	37	0.89	18	14	80	1.26	942	16	9	80	1.36	1400
500	37	1.02	16	12	80	1.45	1261	29	10	80	1.49	1908
750	61	1.22	15	10	110	1.76	1872	—	—	—	—	—
1000	61	1.37	16	9	110	1.93	2360	—	—	—	—	—

The above data are approximate and subject to normal manufacturing tolerances. Other sizes available upon request.
Ampacities: Refer to beginning of section.

Technical Data continued

8 kV TR-XLPE Insulated

Size AWG or kcmil	Number of Strands	Nominal OD Over Insulation in	1/3 Neutral					Full Neutral				
			Number of Wires	Size AWG	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight lb/kft	Number of Wires	Size AWG	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight lb/kft
Copper 100% Insulation Level (115 mil)												
2	7	0.55	6	14	60	0.88	498	16	14	60	0.88	632
1	19	0.59	7	14	80	0.96	617	13	12	80	1.00	805
1/0	19	0.63	9	14	80	1.00	728	16	12	80	1.04	953
2/0	19	0.68	11	14	80	1.05	858	13	10	80	1.12	1163
3/0	19	0.73	14	14	80	1.10	1027	16	10	80	1.17	1393
4/0	19	0.78	18	14	80	1.15	1240	16	9	80	1.25	1697
250	37	0.84	13	12	80	1.24	1423	—	—	—	—	—
350	37	0.94	18	12	80	1.35	1881	—	—	—	—	—
500	37	1.07	17	10	80	1.54	2624	—	—	—	—	—
750	61	1.26	20	9	110	1.82	3870	—	—	—	—	—
1000	61	1.41	26	9	110	1.97	4972	—	—	—	—	—
Aluminum 100% Insulation Level (115 mil)												
2	7	0.55	6	14	80	0.92	393	10	14	80	0.92	447
1	19	0.59	6	14	80	0.96	424	13	14	80	0.96	518
1/0	19	0.63	6	14	80	1.00	461	16	14	80	1.00	595
2/0	19	0.68	7	14	80	1.05	520	13	12	80	1.08	708
3/0	19	0.73	9	14	80	1.10	600	16	12	80	1.13	825
4/0	19	0.78	11	14	80	1.15	693	13	10	80	1.23	998
250	37	0.84	13	14	80	1.21	778	16	10	80	1.29	1158
350	37	0.94	18	14	80	1.31	983	16	9	80	1.41	1440
500	37	1.07	16	12	80	1.50	1307	29	10	80	1.54	1954
750	61	1.27	15	10	110	1.81	1927	—	—	—	—	—
1000	61	1.42	16	9	110	1.98	2419	—	—	—	—	—

The above data are approximate and subject to normal manufacturing tolerances. Other sizes available upon request.
 Ampacities: Refer to beginning of section.

Technical Data continued

15 kV TR-XLPE Insulated

Size AWG or kcmil	Number of Strands	Nominal OD Over Insulation in	1/3 Neutral					Full Neutral				
			Number of Wires	Size	Jacket Thickness	Approximate Outside Diameter	Approximate Net Weight	Number of Wires	Size	Jacket Thickness	Approximate Outside Diameter	Approximate Net Weight
				AWG	mil	in	lb/kft		AWG	mil	in	lb/kft
Copper 100% Insulation Level (175 mil)												
2	1	0.68	6	14	80	1.05	610					
2	7	0.68	6	14	80	1.05	610	16	14	80	1.05	743
1	19	0.71	7	14	80	1.09	694	13	12	80	1.12	883
1/0	19	0.75	9	14	80	1.13	808	16	12	80	1.16	1034
2/0	19	0.80	11	14	80	1.17	942	13	10	80	1.25	1247
3/0	19	0.85	14	14	80	1.22	1115	16	10	80	1.30	1481
4/0	19	0.90	18	14	80	1.28	1332	16	9	80	1.38	1790
250	37	0.96	13	12	80	1.37	1519	25	10	80	1.41	2095
350	37	1.06	18	12	80	1.49	2011	22	8	80	1.59	2826
500	37	1.19	17	10	80	1.66	2741	31	8	110	1.78	3947
750	61	1.38	20	9	110	1.94	4008	—	—	—	—	—
1000	61	1.53	26	9	110	2.12	5170	—	—	—	—	—
Aluminum 100% Insulation Level (175 mil)												
2	7	0.67	6	14	80	1.05	467	10	14	80	1.05	520
1	19	0.71	6	14	80	1.08	501	13	14	80	1.08	595
1/0	19	0.75	6	14	80	1.12	541	16	14	80	1.12	675
2/0	19	0.80	7	14	80	1.17	603	13	12	80	1.20	791
3/0	19	0.85	9	14	80	1.22	687	16	12	80	1.25	912
4/0	19	0.90	11	14	80	1.27	784	13	10	80	1.35	1089
250	37	0.96	13	14	80	1.33	874	16	10	80	1.41	1253
350	37	1.06	18	14	80	1.46	1110	16	9	80	1.56	1568
500	37	1.19	16	12	80	1.62	1422	29	10	80	1.66	2069
750	61	1.40	24	12	110	1.89	2059	—	—	—	—	—
750	61	1.40	15	10	110	1.93	2065	—	—	—	—	—
1000	61	1.54	16	9	110	2.13	2616	—	—	—	—	—

The above data are approximate and subject to normal manufacturing tolerances. Other sizes available upon request.
Ampacities: Refer to beginning of section.

Technical Data continued

15 kV TR-XLPE Insulated

Size AWG or kcmil	Number of Strands	Nominal OD Over Insulation in	1/3 Neutral					Full Neutral				
			Number of Wires	Size AWG	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight lb/kft	Number of Wires	Size AWG	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight lb/kft
Copper 133% Insulation Level (220 mil)												
2	7	0.77	6	14	80	1.14	672	16	14	80	1.14	805
1	19	0.81	7	14	80	1.18	759	13	12	80	1.21	947
1/0	19	0.85	9	14	80	1.22	875	16	12	80	1.25	1100
2/0	19	0.89	11	14	80	1.26	1012	13	10	80	1.34	1316
3/0	19	0.94	14	14	80	1.31	1187	16	10	80	1.39	1553
4/0	19	1.00	18	14	80	1.37	1407	16	9	80	1.47	1865
250	37	1.05	13	12	80	1.48	1622	25	10	80	1.52	2198
350	37	1.16	18	12	80	1.58	2097	22	8	80	1.68	2912
500	37	1.28	17	10	110	1.82	2943	31	8	110	1.87	4046
750	61	1.47	20	9	110	2.03	4118	—	—	—	—	—
1000	61	1.62	26	9	110	2.21	5291	—	—	—	—	—
Aluminum 133% Insulation Level (220 mil)												
2	7	0.76	6	14	80	1.14	528	10	14	80	1.14	582
1	19	0.80	6	14	80	1.18	565	13	14	80	1.18	658
1/0	19	0.84	6	14	80	1.22	607	16	14	80	1.22	741
2/0	19	0.89	7	14	80	1.26	671	13	12	80	1.29	859
3/0	19	0.94	9	14	80	1.31	758	16	12	80	1.34	983
4/0	19	0.99	11	14	80	1.37	858	13	10	80	1.44	1163
250	37	1.05	13	14	80	1.44	975	16	10	80	1.52	1355
350	37	1.15	18	14	80	1.55	1195	16	9	80	1.65	1653
500	37	1.28	16	12	110	1.77	1622	29	10	110	1.81	2272
750	61	1.49	15	10	110	2.02	2175	—	—	—	—	—
1000	61	1.64	16	9	110	2.23	2737	—	—	—	—	—

The above data are approximate and subject to normal manufacturing tolerances. Other sizes available upon request.
 Ampacities: Refer to beginning of section.

Technical Data continued

25 kV TR-XLPE Insulated

1/3 Neutral								Full Neutral							
Size AWG or kcmil	Number of Strands	Nominal OD Over Insulation in	Number of Wires	Size	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight lb/kft	Size AWG	Number of Strands	Nominal OD Over Insulation in	Number of Wires	Size	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight lb/kft
				AWG								AWG			
Copper 100% Insulation Level (260 mil)															
1	19	0.89	7	14	80	1.26	820	1	19	0.89	13	12	80	1.29	1009
1/0	19	0.93	9	14	80	1.30	939	1/0	19	0.93	16	12	80	1.33	1164
2/0	19	0.97	11	14	80	1.34	1077	2/0	19	0.97	32	14	80	1.34	1358
3/0	19	1.02	14	14	80	1.42	1280	2/0	19	0.97	20	12	80	1.38	1361
4/0	19	1.08	18	14	80	1.47	1504	2/0	19	0.97	13	10	80	1.42	1382
250	37	1.13	13	12	80	1.56	1698	3/0	19	1.02	16	10	80	1.49	1646
350	37	1.24	18	12	80	1.66	2178	4/0	19	1.08	16	9	80	1.57	1961
500	37	1.37	17	10	110	1.90	3035	250	37	1.13	25	10	80	1.60	2274
750	61	1.56	20	9	110	2.14	4269	350	37	1.24	22	8	110	1.82	3102
1000	61	1.70	26	9	110	2.29	5403	500	37	1.37	31	8	110	1.95	4139
Aluminum 100% Insulation Level (260 mil)															
1	19	0.88	6	14	80	1.26	626	1	19	0.88	13	14	80	1.26	719
1/0	19	0.92	6	14	80	1.30	670	1/0	19	0.92	16	14	80	1.30	804
2/0	19	0.97	7	14	80	1.34	736	2/0	19	0.97	13	12	80	1.37	925
3/0	19	1.02	9	14	80	1.41	849	3/0	19	1.02	16	12	80	1.45	1075
4/0	19	1.07	11	14	80	1.47	953	4/0	19	1.07	13	10	80	1.54	1258
250	37	1.13	13	14	80	1.53	1050	250	37	1.13	16	10	80	1.60	1430
350	37	1.23	18	14	80	1.63	1275	350	37	1.23	16	9	110	1.79	1842
500	37	1.36	16	12	110	1.85	1714	500	37	1.36	29	10	110	1.90	2363
750	61	1.57	15	10	110	2.13	2325	—	—	—	—	—	—	—	—
1000	61	1.72	16	9	110	2.31	2848	—	—	—	—	—	—	—	—

The above data are approximate and subject to normal manufacturing tolerances. Other sizes available upon request. Ampacities: Refer to beginning of section.

Technical Data continued

25 kV TR-XLPE Insulated

1/3 Neutral								Full Neutral							
Size AWG or kcmil	Number of Strands	Nominal OD Over Insulation in	Number of Wires	Size	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight lb/kft	Size AWG or kcmil	Number of Strands	Nominal OD Over Insulation in	Number of Wires	Size	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight lb/kft
				AWG								AWG			
Copper 133% Insulation Level (320 mil)															
1/0	19	1.05	9	14	80	1.44	1067	1/0	19	1.05	16	12	80	1.48	1292
2/0	19	1.09	11	14	80	1.49	1210	2/0	19	1.09	13	10	80	1.56	1515
3/0	19	1.14	14	14	80	1.54	1392	3/0	19	1.14	16	10	80	1.61	1758
4/0	19	1.20	18	14	80	1.59	1621	4/0	19	1.20	16	9	110	1.76	2184
250	37	1.26	13	12	80	1.68	1820	250	37	1.26	25	10	110	1.79	2502
350	37	1.36	18	12	110	1.85	2418	350	37	1.36	22	8	110	1.94	3239
500	37	1.49	17	10	110	2.02	3182	500	37	1.49	31	8	110	2.07	4285
750	61	1.68	20	9	110	2.27	4433	—	—	—	—	—	—	—	—
1000	61	1.83	26	9	110	2.42	5578	—	—	—	—	—	—	—	—
Aluminum 133% Insulation Level (320 mil)															
1/0	1	1.01	6	14	50	1.31	691	1/0	1	1.01	16	14	50	1.31	811
1/0	19	1.05	6	14	50	1.37	744	1/0	19	1.05	16	14	50	1.37	865
2/0	19	1.09	7	14	50	1.42	812	2/0	19	1.09	20	14	50	1.42	969
3/0	19	1.14	9	14	50	1.47	903	2/0	19	1.09	13	12	50	1.45	1007
4/0	19	1.20	11	14	50	1.52	1007	3/0	19	1.14	25	14	50	1.47	1096
250	37	1.25	13	14	50	1.58	1105	3/0	19	1.14	16	12	50	1.50	1132
350	37	1.35	18	14	80	1.74	1398	4/0	19	1.20	32	14	50	1.52	1260
500	37	1.48	25	14	80	1.87	1715	4/0	19	1.20	20	12	50	1.55	1290
500	37	1.48	16	12	80	1.91	1760	4/0	19	1.20	13	10	50	1.60	1346
750	61	1.69	24	12	80	2.14	2361	250	37	1.25	25	12	50	1.61	1461
750	61	1.69	15	10	80	2.18	2417	250	37	1.25	16	10	80	1.72	1581
1000	61	1.84	31	12	80	2.29	2846	350	37	1.35	32	12	80	1.78	1831
1000	61	1.84	20	10	80	2.33	2924	350	37	1.35	20	10	80	1.82	1876
1000	61	1.84	16	9	80	2.36	2966	350	37	1.35	16	9	80	1.84	1910
—	—	—	—	—	—	—	—	500	37	1.48	29	10	80	1.95	2389
—	—	—	—	—	—	—	—	750	61	1.69	28	8	80	2.24	3391
—	—	—	—	—	—	—	—	1000	61	1.84	37	8	80	2.39	4188

The above data are approximate and subject to normal manufacturing tolerances. Other sizes available upon request.
 Ampacities: Refer to beginning of section.

Technical Data continued

35 kV TR-XLPE Insulated

Size AWG or kcmil	Number of Strands	Nominal OD Over Insulation in	1/3 Neutral					Full Neutral				
			Number of Wires	Size	Jacket Thickness	Approximate Outside Diameter	Approximate Net Weight	Number of Wires	Size	Jacket Thickness	Approximate Outside Diameter	Approximate Net Weight
				AWG	mil	in	lb/kft		AWG	mil	in	lb/kft
Copper 100% Insulation Level (345 mil)												
1/0	19	1.10	9	14	80	1.50	1114	16	12	80	1.53	1397
2/0	19	1.15	11	14	80	1.54	1258	13	10	80	1.62	1652
3/0	19	1.20	14	14	80	1.59	1442	16	10	80	1.67	1896
4/0	19	1.25	18	14	80	1.65	1673	16	9	110	1.81	2305
250	37	1.31	13	12	110	1.80	1981	25	10	110	1.84	2596
350	37	1.41	18	12	110	1.90	2477	22	8	110	2.00	3371
500	37	1.54	17	10	110	2.10	3294	31	8	110	2.16	4448
750	61	1.73	20	9	110	2.32	4504	—	—	—	—	—
1000	61	1.88	26	9	110	2.47	5654	—	—	—	—	—
Aluminum 100% Insulation Level (345 mil)												
1/0	19	1.10	6	14	80	1.49	842	16	14	80	1.49	976
2/0	19	1.14	7	14	80	1.53	914	13	12	80	1.57	1102
3/0	19	1.19	9	14	80	1.58	1010	16	12	80	1.62	1235
4/0	19	1.25	11	14	80	1.64	1120	13	10	110	1.78	1533
250	37	1.30	13	14	110	1.76	1330	16	10	110	1.84	1714
350	37	1.40	18	14	110	1.86	1572	16	9	110	1.96	2036
500	37	1.53	16	12	110	2.06	1969	29	10	110	2.10	2619
750	61	1.74	15	10	110	2.30	2560	—	—	—	—	—
1000	61	1.89	16	9	110	2.48	3099	—	—	—	—	—

The above data are approximate and subject to normal manufacturing tolerances. Other sizes available upon request.
Ampacities: Refer to beginning of section.

Technical Data continued

35 kV TR-XLPE Insulated

Size AWG or kcmil	Number of Strands	Nominal OD Over Insulation in	1/3 Neutral					Full Neutral				
			Number of Wires	Size	Jacket Thickness	Approximate Outside Diameter	Approximate Net Weight	Number of Wires	Size	Jacket Thickness	Approximate Outside Diameter	Approximate Net Weight
				AWG	mil	in	lb/kft		AWG	mil	in	lb/kft
Copper 133% Insulation Level (420 mil)												
1/0	19	1.25	9	14	80	1.65	1264	16	12	80	1.68	1489
2/0	19	1.30	11	14	110	1.76	1517	13	10	110	1.83	1827
3/0	19	1.35	14	14	110	1.81	1709	16	10	110	1.88	2080
4/0	19	1.40	18	14	110	1.86	1948	16	9	110	1.96	2412
250	37	1.46	13	12	110	1.95	2160	25	10	110	1.99	2738
350	37	1.56	18	12	110	2.08	2716	22	8	110	2.18	3537
500	37	1.69	17	10	110	2.26	3499	31	8	110	2.31	4603
750	61	1.88	20	9	110	2.47	4728	—	—	—	—	—
1000	61	2.03	26	9	110	2.62	5892	—	—	—	—	—
Aluminum 133% Insulation Level (420 mil)												
1/0	19	1.25	6	14	80	1.64	990	16	14	80	1.64	1124
2/0	19	1.29	7	14	110	1.75	1173	13	12	110	1.78	1363
3/0	19	1.34	9	14	110	1.80	1276	16	12	110	1.83	1504
4/0	19	1.40	11	14	110	1.86	1395	13	10	110	1.93	1705
250	37	1.45	13	14	110	1.91	1507	16	10	110	1.99	1891
350	37	1.56	18	14	110	2.04	1807	16	9	110	2.15	2271
500	37	1.68	16	12	110	2.21	2172	29	10	110	2.25	2821
750	61	1.89	15	10	110	2.46	2782	—	—	—	—	—
1000	61	2.04	16	9	110	2.63	3335	—	—	—	—	—

The above data are approximate and subject to normal manufacturing tolerances. Other sizes available upon request.
Ampacities: Refer to beginning of section.

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