35kV AL 100% TRXLPE One-Half Neutral (Based on Short Circuit) Primary UD HI-DRI-PLUS® Renewable (Solar or Wind)

Moisture Blocked Aluminum Conductors. TRXLP Insulation. One-Half Copper Concentric Neutrals. XLPE Jacket

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Moisture Blocked 1350 H16/H26 Aluminum, Class B Compressed or Compressed Unilay Stranded
2. **Strand Shield:** Semi-conducting Crosslinked Polyethylene
3. **Insulation:** Tree Retardant Crosslinked Polyethylene (TRXLP)
4. **Insulation Shield:** Strippable Semi-conducting Crosslinked Polyethylene
5. **Concentric Neutral:** Annealed Copper Wires Helically Applied One-Half Concentric Neutral
6. **Overall Jacket & Water Block:** HI-DRI-PLUS® Water Swellable Powder Black Crosslinked Polyethylene (XLPE) with Red Extruded Stripes

APPLICATIONS AND FEATURES:

- Predominately used for renewable projects with wind or solar applications.
- Suitable for use in wet or dry locations, direct burial, underground ducts, and exposure to direct sunlight.
- To be used at conductor temperature not to exceed 105ºC normal operation.
- UL listed MV-105
- Under short circuit conditions, the maximum allowable shield temperature for crosslinked jackets is 350ºC as opposed to only 200ºC for a PE type of jacket. The higher temperature allows for more fault current capacity, thus reducing the amount of copper required in the neutral design.
- Not recommended for use above 90ºC in wind farm applications

SPECIFICATIONS:

- UL 1072 Medium-Voltage Power Cables
- ICEA S-94-649 Standard for Concentric Neutral Cables Rated 5 - 46kV
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661

SAMPLE PRINT LEGEND:

SOUTHWIRE(R) (UL) HI-DRI-PLUS(R) AWG XX AL 35000 VOLTS TR XLPE INSULATION XX MILS (NESC) MV105 -- SOUTHWIRE (MM/YYYY) NON-CONDUCTING JACKET (PLANT) SEQUENTIAL FOOTAGE MARKS

Table 1 – Weights and Measurements

Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Concentric Neutral	Neutral DC Resistance 25°C	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension
AWG/ Kcmil	inch	inch	mil	inch	No. x AWG	Ω /1000ft	mil	inch	lb / 1000ft	inch	lb
1/0 (19)	0.361	1.089	345	1.199	8x14	0.328	50	1.427	873	11.4	633
2/0 (19)	0.395	1.123	345	1.233	10x14	0.263	50	1.461	951	11.7	798
3/0 (19)	0.443	1.171	345	1.281	13x14	0.202	50	1.509	1061	12.1	1006
250 (37)	0.558	1.294	345	1.404	19x14	0.138	75	1.682	1398	13.5	1500
350 (37)	0.661	1.397	345	1.507	11x10	0.094	75	1.861	1697	14.9	2100
500 (37)	0.789	1.525	345	1.665	15x10	0.069	75	2.019	2120	16.2	3000

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	Charging Current	Dielectric Loss	Zero Sequence Impedance*	Positive Sequence Impedance*	Short Circuit Current @ 30 Cycle	Allowable Ampacity in Duct 90°C	Allowable Ampacity Directly Buried 90°C
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	MΩ*1000ft	Ω/1000ft	A/1000ft	W/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
1/0 (19)	0.167	0.211	0.074	0.053	0.155	3.13	0.265 + j0.747	0.211 + j0.054	4138	160	195
2/0 (19)	0.133	0.167	0.071	0.052	0.164	3.31	0.221 + j0.744	0.167 + j0.051	5173	185	220
3/0 (19)	0.105	0.132	0.066	0.050	0.176	3.55	0.186 + j0.740	0.132 + j0.050	6724	210	250
250 (37)	0.071	0.090	0.057	0.047	0.204	4.12	0.144 + j0.730	0.090 + j0.047	9828		302
350 (37)	0.050	0.065	0.050	0.045	0.229	4.62	0.119 + j0.721	0.065 + j0.046	14371	315	370
500 (37)	0.035	0.046	0.044	0.043	0.260	5.25	0.100 + j0.713	0.046 + j0.043	19597	380	435

*Ampacities for Direct Buried are based on ICEA P-117-734-2016 Single-Conductor Solid Dielectric 15-35kV. Single Circuit Flat Direct Buried Figure 3
*Ampacities for Duct are based on ICEA P-117-734-2016 for Single-Conductor Solid Dielectric 15-35kV. Single Circuit Trefoil Conduit Figure 7.
*Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.

Table 3 – Weights and Measurements (Metric)

Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Concentric Neutral	Neutral DC Resistance 25°C	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension
AWG/ Kcmil	mm	mm	mm	mm	No. x AWG	Ω/km	mm	mm	kg/km	mm	newton
1/0 (19)	9.17	27.66	8.76	30.45	8x14	1.08	1.27	36.25	1299	289.56	2817
2/0 (19)	10.03	28.52	8.76	31.32	10x14	0.86	1.27	37.11	1415	297.18	3551
3/0 (19)	11.25	29.74	8.76	32.54	13x14	0.66	1.27	38.33	1579	307.34	4477
250 (37)	14.17	32.87	8.76	35.66	19x14	0.45	1.91	42.72	2080	342.90	6675
350 (37)	16.79	35.48	8.76	38.28	11x10	0.31	1.91	47.27	2525	378.46	9345
500 (37)	20.04	38.73	8.76	42.29	15x10	0.23	1.91	51.28	3155	411.48	13350

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

Table 4 – Electrical and Engineering Data (Metric)

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	Charging Current	Dielectric Loss	Zero Sequence Impedance*	Positive Sequence Impedance*	Short Circuit Current @ 30 Cycle	Allowable Ampacity in Duct 90°C	Allowable Ampacity Directly Buried 90°C
AWG/ Kcmil	Ω/km	Ω/km	MΩ*km	Ω/km	A/km	W/km	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
1/0 (19)	0.5479	0.69	0.0226	0.1739	0.509	10.2690	0.265 + j0.747	0.211 + j0.054	4138	160	195
2/0 (19)	0.4364	0.55	0.0216	0.1706	0.538	10.8596	0.221 + j0.744	0.167 + j0.051	5173	185	220
3/0 (19)	0.3445	0.43	0.0201	0.1640	0.577	11.6470	0.186 + j0.740	0.132 + j0.050	6724	210	250
250 (37)	0.2329	0.30	0.0174	0.1542	0.669	13.5171	0.144 + j0.730	0.090 + j0.047	9828		302
350 (37)	0.1640	0.21	0.0152	0.1476	0.751	15.1575	0.119 + j0.721	0.065 + j0.046	14371	315	370
500 (37)	0.1148	0.15	0.0134	0.1411	0.853	17.2244	0.100 + j0.713	0.046 + j0.043	19597	380	435

*Ampacities for Direct Buried are based on ICEA P-117-734-2016 Single-Conductor Solid Dielectric 15-35kV. Single Circuit Flat Direct Buried Figure 3
*Ampacities for Duct are based on ICEA P-117-734-2016 for Single-Conductor Solid Dielectric 15-35kV. Single Circuit Trefoil Conduit Figure 7.
*Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.