35kV AL 100% TRXLPE One-Twelfth Concentric Neutral Primary UD HI-DRI-PLUS®
Renewable (Solar or Wind)

Moisture Blocked Aluminum Conductors. TRXLP Insulation. Copper One-Twelfth 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-Twelfth 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)	0.351	1.079	345	1.189	6x14	0.438	50	1.417	837	11.3	633
2/0 (19)	0.395	1.123	345	1.233	7x14	0.375	50	1.461	910	11.7	798
3/0 (19)	0.443	1.171	345	1.281	9x14	0.292	50	1.509	1007	12.1	1006
250 (37)	0.558	1.294	345	1.404	13x14	0.202	75	1.682	1317	13.5	1500
350 (37)	0.661	1.397	345	1.507	18x14	0.146	75	1.785	1563	14.3	2100

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

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	0.076	0.054	0.153	3.09	0.265 + j0.748	0.211 + j0.053	3103	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	3621	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	4655	210	250
250 (37)	0.071	0.090	0.057	0.047	0.204	4.12	0.144 + j0.730	0.090 + j0.047	6724	257	302
350 (37)	0.050	0.065	0.050	0.045	0.229	4.62	0.119 + j0.723	0.065 + j0.045	9311	315	370

*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)	8.92	27.41	8.76	30.20	6x14	1.44	1.27	35.99	1246	287.02	2817
2/0 (19)	10.03	28.52	8.76	31.32	7x14	1.23	1.27	37.11	1354	297.18	3551
3/0 (19)	11.25	29.74	8.76	32.54	9x14	0.96	1.27	38.33	1499	307.34	4477
250 (37)	14.17	32.87	8.76	35.66	13x14	0.66	1.91	42.72	1960	342.90	6675
350 (37)	16.79	35.48	8.76	38.28	18x14	0.48	1.91	45.34	2326	363.22	9345

All dimensions are nominal and subject to normal manufacturing tolerances
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^ Non-UL listed

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	0.0232	0.1772	0.502	10.1378	0.265 + j0.748	0.211 + j0.053	3103	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	3621	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	4655	210	250
250 (37)	0.2329	0.30	0.0174	0.1542	0.669	13.5171	0.144 + j0.730	0.090 + j0.047	6724	257	302
350 (37)	0.1640	0.21	0.0152	0.1476	0.751	15.1575	0.119 + j0.723	0.065 + j0.045	9311	315	370

*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.