

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

Moisture Blocked Aluminum Conductors. TRXLPE Insulation. Full Copper Concentric Neutrals. XLPE Jacket

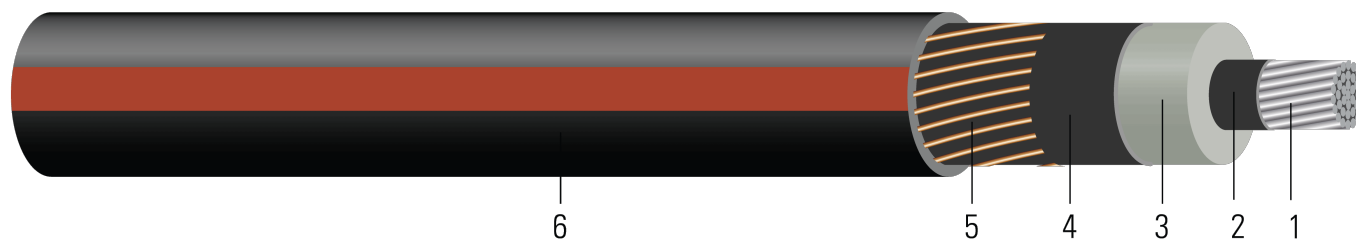


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Moisture Blocked 1350 H16/H26 Aluminum, Class B Compressed or Compressed Unilay Stranded
- Strand Shield:** Semi-conducting Crosslinked Polyethylene
- Insulation:** Tree Retardant Crosslinked Polyethylene (TRXLPE)
- Insulation Shield:** Strippable Semi-conducting Crosslinked Polyethylene
- Concentric Neutral:** Annealed Copper Wires Helically Applied Full Concentric Neutral
- 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 105°C normal operation.
- UL listed MV-105
- Under short circuit conditions, the maximum allowable shield temperature for crosslinked jackets is 350°C as opposed to only 200°C 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 90°C 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
- 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
- Buy American: Compliant with Buy American Requirements, found in 49 U.S.C. § 5323(j); specify "Made in the USA Only!" when ordering to ensure your project receives American made 600V products.

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



Southwire

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Table 1 – Weights and Measurements

Stock Number	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
TBA	1/0 (1)	0.325	1.052	345	1.152	16x14	0.164	50	1.380	861	16.6	634
626294	1/0 (19)	0.352	1.079	345	1.179	19x16	0.164	50	1.387	815	16.9	634
TBA	1/0 (19)	0.352	1.079	345	1.179	16x14	0.164	50	1.407	889	16.9	634
TBA	2/0 (19)	0.395	1.122	345	1.222	13x12	0.128	50	1.482	1029	17.8	799
TBA	3/0 (19)	0.443	1.170	345	1.270	16x12	0.104	50	1.530	1152	18.4	1007
663864	4/0 (19)	0.498	1.218	345	1.328	24x14	0.080	50	1.556	1206	12.4	1270
662826^	4/0 (19)	0.498	1.225	345	1.325	20x12	0.080	50	1.629	1362	19.5	1270
TBA	250 (37)	0.558	1.294	345	1.394	16x10	0.065	80	1.758	1614	21.1	1500
TBA	350 (37)	0.661	1.397	345	1.497	16x9	0.052	80	1.886	1947	22.6	2100

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

* Pulling tension based on pulling eye directly connected to conductor

^ 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 (1)	0.168	0.211	0.073	0.052	0.278	1.687	0.371+j0.078	0.213+j0.052	6004.7	160	195
1/0 (19)	0.168	0.211	0.069	0.051	0.291	1.765	0.371+j0.077	0.213+j0.051	6004.7	160	195
1/0 (19)	0.168	0.211	0.069	0.051	0.291	1.765	0.371+j0.077	0.213+j0.051	6004.7	160	195
2/0 (19)	0.133	0.167	0.065	0.050	0.311	1.886	0.295+j0.063	0.170+j0.049	7751.5	185	220
3/0 (19)	0.105	0.132	0.061	0.048	0.333	2.020	0.238+j0.053	0.135+j0.047	9540.3	210	250
4/0 (19)	0.0836	0.105	0.056	0.047	0.358	2.173	0.186+j0.045	0.109+j0.046	12321.7	240	285
4/0 (19)	0.0836	0.105	0.056	0.047	0.358	2.173	0.186+j0.045	0.109+j0.046	12321.7	240	285
250 (37)	0.0707	0.089	0.052	0.046	0.390	2.363	0.156+j0.039	0.094+j0.044	15165.1		
350 (37)	0.0505	0.064	0.046	0.044	0.436	2.643	0.117+j0.035	0.070+j0.041	19124.4	315	370

* Calculations are based on three cables triplexed / concentric shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

† Ampacities are based on Figure 7 of ICEA T-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)

‡ Ampacities are based on Figure 1 of ICEA T-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)



Table 3 – Weights and Measurements (Metric)

Stock Number	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
TBA	1/0 (1)	8.25	26.72	8.76	29.26	16x14	0.54	1.27	35.05	1281	421.64	2821
626294	1/0 (19)	8.94	27.41	8.76	29.95	19x16	0.54	1.27	35.23	1213	429.26	2821
TBA	1/0 (19)	8.94	27.41	8.76	29.95	16x14	0.54	1.27	35.74	1323	429.26	2821
TBA	2/0 (19)	10.03	28.50	8.76	31.04	13x12	0.42	1.27	37.64	1531	452.12	3556
TBA	3/0 (19)	11.25	29.72	8.76	32.26	16x12	0.34	1.27	38.86	1714	467.36	4481
663864	4/0 (19)	12.65	30.94	8.76	33.73	24x14	0.26	1.27	39.52	1795	314.96	5652
662826^	4/0 (19)	12.65	31.12	8.76	33.65	20x12	0.26	1.27	41.38	2027	495.30	5652
TBA	250 (37)	14.17	32.87	8.76	35.41	16x10	0.21	2.03	44.65	2402	535.94	6675
TBA	350 (37)	16.79	35.48	8.76	38.02	16x9	0.17	2.03	47.90	2897	574.04	9345

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

* Pulling tension based on pulling eye directly connected to conductor

^ 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 (1)	0.5512	0.69	0.0223	0.1706	0.912	5.5348	0.371+j0.078	0.213+j0.052	6004.7	160	195
1/0 (19)	0.5512	0.69	0.0210	0.1673	0.955	5.7907	0.371+j0.077	0.213+j0.051	6004.7	160	195
1/0 (19)	0.5512	0.69	0.0210	0.1673	0.955	5.7907	0.371+j0.077	0.213+j0.051	6004.7	160	195
2/0 (19)	0.4364	0.55	0.0198	0.1640	1.020	6.1877	0.295+j0.063	0.170+j0.049	7751.5	185	220
3/0 (19)	0.3445	0.43	0.0186	0.1575	1.093	6.6273	0.238+j0.053	0.135+j0.047	9540.3	210	250
4/0 (19)	0.2743	0.34	0.0171	0.1542	1.175	7.1293	0.186+j0.045	0.109+j0.046	12321.7	240	285
4/0 (19)	0.2743	0.34	0.0171	0.1542	1.175	7.1293	0.186+j0.045	0.109+j0.046	12321.7	240	285
250 (37)	0.2320	0.29	0.0158	0.1509	1.280	7.7526	0.156+j0.039	0.094+j0.044	15165.1		
350 (37)	0.1657	0.21	0.0140	0.1444	1.430	8.6713	0.117+j0.035	0.070+j0.041	19124.4	315	370

* Calculations are based on three cables triplexed / concentric shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

† Ampacities are based on Figure 7 of ICEA T-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)

‡ Ampacities are based on Figure 1 of ICEA T-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)

