MV-105 35kV AL 100% TRXLPE Two-Thirds Neutral (Based on Short Circuit) HI-DRI-PLUS® Renewable (Solar or Wind)

Moisture Blocked Aluminum Conductors. TRXLP Insulation. Two-Thirds Copper Concentric Neutral. 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 Two-Thirds 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 105°C normal operation.
- UL listed MV-105
- The concentric neutral counts and sizes listed in Table 1 are based on the ICEA P-45-482 short circuit calculation of an MV-90 design. The short circuit value in Table 1 is calculated using a higher thermal limit of a crosslinked XLPE jacket MV-105 design.

SPECIFICATIONS:

- ASTM B231 Standard Specification for Concentric-Lay-Stranded Aluminum 1350 Conductors
- ASTM B609 Standard Specification for Aluminum 1350 Round Wire, Annealed and Intermediate Tempers, for Electrical Purposes
- 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

Copyright © 2026 Southwire Company, LLC. All Rights Reserved

SAMPLE PRINT LEGEND:

{SQFTG} SOUTHWIRE(R) HI-DRI-PLUS(R) (UL) XXX AWG AL 345 MILS TRXLPE TYPE MV-105 35KV 100% INSUL LEVEL -- (NESC) -- SOUTHWIRE {MMM} {YYYY} NON-CONDUCTING JACKET

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
626288	1/0 (19)	0.362	1.072	345	1.182	8x14	0.405	50	1.41	808	7	633
TBA	2/0 (19)	0.395	1.123	345	1.243	10x14	0.324	50	1.471	997	7.4	798
TBA	3/0 (19)	0.443	1.171	345	1.291	13x14	0.249	50	1.519	1110	7.6	1006
TBA	4/0 (19)	0.498	1.226	345	1.346	16x14	0.203	50	1.574	1236	7.9	1269
TBA	250 (37)	0.558	1.294	345	1.414	19x14	0.171	75	1.692	1447	8.5	1500
457858	350 (37)	0.661	1.391	345	1.501	26x14	0.125	75	1.783	1555	8.9	2100
TBA	500 (37)	0.789	1.525	345	1.675	23x12	0.089	75	1.987	2154	9.9	3000

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
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	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	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
1/0 (19)	0.167	0.229	0.067	0.053	0.526+j0.199	0.230+j0.059	4142	160	195
2/0 (19)	0.133	0.182	0.065	0.052	0.442+j0.150	0.184+j0.057	5178	185	220
3/0 (19)	0.105	0.144	0.061	0.05	0.360+j0.107	0.146+j0.055	6732	210	250
4/0 (19)	0.084	0.115	0.056	0.048	0.298+j0.082	0.118+j0.053	8285	235	280
250 (37)	0.07	0.096	0.052	0.047	0.254+j0.067	0.099+j0.052	9838		
350 (37)	0.051	0.07	0.046	0.045	0.189+j0.047	0.074+j0.049	13463	315	370
500 (37)	0.036	0.05	0.041	0.043	0.137+j0.036	0.056+j0.047	18904	380	435

Copyright © 2026 Southwire Company, LLC. All Rights Reserved

*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)

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
626288	1/0 (19)	9.19	27.23	8.76	30.02	8x14	1.33	1.27	35.81	1202	177.80	2817
TBA	2/0 (19)	10.03	28.52	8.76	31.57	10x14	1.06	1.27	37.36	1484	187.96	3551
TBA	3/0 (19)	11.25	29.74	8.76	32.79	13x14	0.82	1.27	38.58	1652	193.04	4477
TBA	4/0 (19)	12.65	31.14	8.76	34.19	16x14	0.67	1.27	39.98	1839	200.66	5647
TBA	250 (37)	14.17	32.87	8.76	35.92	19x14	0.56	1.91	42.98	2153	215.90	6675
457858	350 (37)	16.79	35.33	8.76	38.13	26x14	0.41	1.91	45.29	2314	226.06	9345
TBA	500 (37)	20.04	38.73	8.76	42.55	23x12	0.29	1.91	50.47	3206	251.46	13350

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
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

Table 4 – Electrical and Engineering Data (Metric)

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	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	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
1/0 (19)	0.5479	0.75	0.0204	0.1739	0.526+j0.199	0.230+j0.059	4142	160	195
2/0 (19)	0.4364	0.60	0.0198	0.1706	0.442+j0.150	0.184+j0.057	5178	185	220
3/0 (19)	0.3445	0.47	0.0186	0.1640	0.360+j0.107	0.146+j0.055	6732	210	250
4/0 (19)	0.2756	0.38	0.0171	0.1575	0.298+j0.082	0.118+j0.053	8285	235	280
250 (37)	0.2297	0.31	0.0158	0.1542	0.254+j0.067	0.099+j0.052	9838		
350 (37)	0.1673	0.23	0.0140	0.1476	0.189+j0.047	0.074+j0.049	13463	315	370
500 (37)	0.1181	0.16	0.0125	0.1411	0.137+j0.036	0.056+j0.047	18904	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.

Concentric Neutral Calculator

Copyright © 2026 Southwire Company, LLC. All Rights Reserved