25kV AL 100% EPR Full Neutral LLDPE Primary UD

Single Conductor, 260 Mils Ethylene Propylene Rubber (EPR), 100% Insulation Level, Full Concentric Neutral, Linear Low Density Polyethylene (LLDPE) Jacket

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Moisture blocked class B compressed Aluminum ASTM B231 1350 ¾ hard H16/H26 (Non Moisture Blocked Optional)
2. **Conductor Shield:** Conventional Semi-conducting cross-linked copolymer; Supersmooth conductor shield optional; A conductor tape is used for cable size larger than or equal to 1500 Kcmil
3. **Insulation:** 260 Mils Ethylene Propylene Rubber (EPR) 100% insulation level
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Concentric Neutral:** Helically applied soft drawn bare copper full concentric neutral
6. **Overall Jacket:** Linear Low Density Polyethylene (LLDPE) Jacket, black with red extruded stripes; PowerGlide® LLDPE jacket optional

APPLICATIONS AND FEATURES:

Southwire's 25kV cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, sunlight, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 105°C for normal operation. 140°C for emergency overload, and 250°C for short circuit conditions. Jacket types available that can be installed in conduit without the aid of lubrication. Rated for 1000 lbs./FT maximum sidewall pressure.

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
- 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
- UL 1072 - Listed Listed as MV 90 When Specified

SAMPLE PRINT LEGEND:

SOUTHWIRE HI-DRI(R) [CONDUCTOR SIZE] [AWG or KCMIL] AL 25000 VOLTS EPR INSULATION 260 MILS -- (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
TBA	1 (1)	0.289	0.846	260	0.926	13x14	0.202	50	1.154	687	13.8	502
TBA	1 (19)	0.322	0.879	260	0.959	13x14	0.202	50	1.187	720	14.2	502
616133	1/0 (1)	0.325	0.882	260	0.962	16x14	0.164	50	1.190	764	14.3	634
616134	1/0 (19)	0.352	0.909	260	0.989	16x14	0.164	50	1.217	792	14.6	634
618503#	1/0 (19)	0.352	0.909	260	0.989	16x14	0.164	50	1.217	792	14.6	634
TBA	2/0 (19)	0.395	0.952	260	1.032	13x12	0.128	50	1.292	927	15.5	799
TBA	3/0 (19)	0.443	1.000	260	1.080	16x12	0.104	50	1.340	1049	16.1	1007
TBA	4/0 (19)	0.498	1.055	260	1.155	13x10	0.080	50	1.459	1275	17.5	1270
TBA	250 (37)	0.558	1.124	260	1.224	16x10	0.065	50	1.528	1461	18.3	1500
TBA	350 (37)	0.661	1.227	260	1.327	16x9	0.052	50	1.656	1786	19.9	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
# Hi-Dri-Plus® - Water Blocking Powder

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 (1)	0.211	0.265	0.053	0.051	0.271	78.166	0.456+j0.093	0.267+j0.050	4513.5	140	175
1 (19)	0.211	0.265	0.050	0.049	0.288	83.243	0.456+j0.092	0.267+j0.049	4513.5	140	175
1/0 (1)	0.168	0.211	0.050	0.049	0.290	83.703	0.371+j0.074	0.213+j0.049	5555.1	155	195
1/0 (19)	0.168	0.211	0.047	0.048	0.304	87.823	0.371+j0.073	0.213+j0.048	5555.1	155	195
1/0 (19)	0.168	0.211	0.047	0.048	0.304	87.823	0.371+j0.073	0.213+j0.048	5555.1	155	195
2/0 (19)	0.133	0.167	0.044	0.047	0.327	94.339	0.296+j0.059	0.170+j0.046	7171.1	180	225
3/0 (19)	0.105	0.132	0.041	0.045	0.352	101.559	0.238+j0.048	0.136+j0.044	8825.9	205	250
4/0 (19)	0.0836	0.105	0.038	0.045	0.380	109.776	0.186+j0.042	0.110+j0.043	11399.0	235	285
250 (37)	0.0707	0.089	0.035	0.043	0.416	120.020	0.156+j0.036	0.094+j0.041	14029.6		
350 (37)	0.0505	0.064	0.031	0.041	0.468	135.211	0.117+j0.032	0.070+j0.038	17692.4	305	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 (1)	7.34	21.49	6.60	23.52	13x14	0.66	1.27	29.31	1022	350.52	2234
TBA	1 (19)	8.18	22.33	6.60	24.36	13x14	0.66	1.27	30.15	1071	360.68	2234
616133	1/0 (1)	8.25	22.40	6.60	24.43	16x14	0.54	1.27	30.23	1137	363.22	2821
616134	1/0 (19)	8.94	23.09	6.60	25.12	16x14	0.54	1.27	30.91	1179	370.84	2821
618503#	1/0 (19)	8.94	23.09	6.60	25.12	16x14	0.54	1.27	30.91	1179	370.84	2821
TBA	2/0 (19)	10.03	24.18	6.60	26.21	13x12	0.42	1.27	32.82	1380	393.70	3556
TBA	3/0 (19)	11.25	25.40	6.60	27.43	16x12	0.34	1.27	34.04	1561	408.94	4481
TBA	4/0 (19)	12.65	26.80	6.60	29.34	13x10	0.26	1.27	37.06	1897	444.50	5652
TBA	250 (37)	14.17	28.55	6.60	31.09	16x10	0.21	1.27	38.81	2174	464.82	6675
TBA	350 (37)	16.79	31.17	6.60	33.71	16x9	0.17	1.27	42.06	2658	505.46	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
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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 (1)	0.6923	0.87	0.0162	0.1673	0.889	256.4501	0.456+j0.093	0.267+j0.050	4513.5	140	175
1 (19)	0.6923	0.87	0.0152	0.1608	0.945	273.1070	0.456+j0.092	0.267+j0.049	4513.5	140	175
1/0 (1)	0.5512	0.69	0.0152	0.1608	0.951	274.6161	0.371+j0.074	0.213+j0.049	5555.1	155	195
1/0 (19)	0.5512	0.69	0.0143	0.1575	0.997	288.1332	0.371+j0.073	0.213+j0.048	5555.1	155	195
1/0 (19)	0.5512	0.69	0.0143	0.1575	0.997	288.1332	0.371+j0.073	0.213+j0.048	5555.1	155	195
2/0 (19)	0.4364	0.55	0.0134	0.1542	1.073	309.5112	0.296+j0.059	0.170+j0.046	7171.1	180	225
3/0 (19)	0.3445	0.43	0.0125	0.1476	1.155	333.1988	0.238+j0.048	0.136+j0.044	8825.9	205	250
4/0 (19)	0.2743	0.34	0.0116	0.1476	1.247	360.1575	0.186+j0.042	0.110+j0.043	11399.0	235	285
250 (37)	0.2320	0.29	0.0107	0.1411	1.365	393.7664	0.156+j0.036	0.094+j0.041	14029.6		
350 (37)	0.1657	0.21	0.0094	0.1345	1.535	443.6056	0.117+j0.032	0.070+j0.038	17692.4	305	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)