15kV CU 133% EPR Full Neutral LLDPE Primary UD

Single Conductor, 220 Mils Ethylene Propylene Rubber (EPR), 133% Insulation Level, Full Concentric Neutral, Linear Low Density Polyethylene (LLDPE) Jacket. Silicone Free

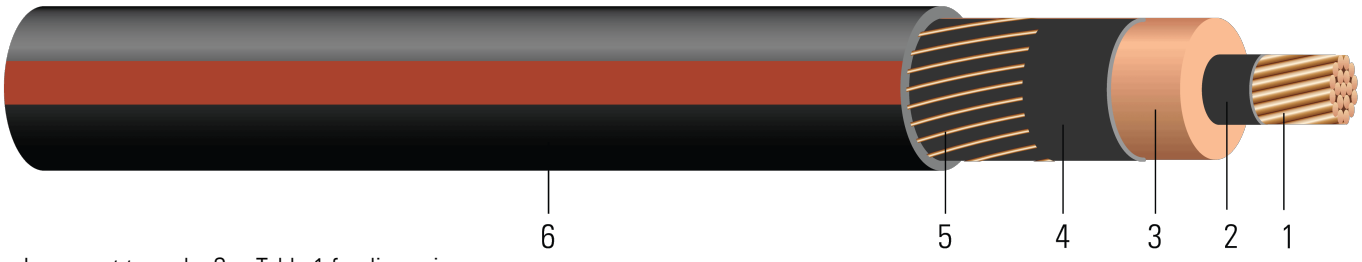

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Moisture blocked class B compressed stranded soft drawn bare copper per ASTM B3 and ASTM B8 (Conductor moisture block optional and tinned copper per ASTM B33 optional)
2. **Conductor Shield:** Conventional Semi-conducting cross-linked copolymer. A conductor tape is used for cable size larger than or equal to 1500 Kcmil
3. **Insulation:** 220 Mils Ethylene Propylene Rubber (EPR) 133% 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 15kV 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 B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- 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
- Rural Utility Standard RUS 1728F-U1 or 1728.204 (Electric standards and specifications for materials and construction)
- UL 1072 Listed as MV 90 When Specified
- Optional CSA 68.5: -40ºC and MV 90ºC optional marking available upon request

SAMPLE PRINT LEGEND:

SOUTHWIRE HI-DRI(R) [CONDUCTOR SIZE] [AWG or KCMIL] CU 15000 VOLTS EPR INSULATION 220 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	2 (1)	0.258	0.735	220	0.815	16x14	0.164	50	1.043	756	12.5	531
661908**	2 (7)	0.283	0.760	220	0.840	16x14	0.164	50	1.068	785	12.8	531
617699	2 (7)	0.283	0.760	220	0.840	16x14	0.164	50	1.068	785	12.8	531
TBA	1 (1)	0.289	0.766	220	0.846	13x12	0.128	50	1.106	902	13.3	670
TBA	1 (19)	0.322	0.799	220	0.879	13x12	0.128	50	1.139	938	13.7	670
TBA	1/0 (1)	0.325	0.802	220	0.882	16x12	0.104	50	1.142	1044	13.7	845
628027	1/0 (19)	0.362	0.839	220	0.919	16x12	0.104	50	1.179	1087	14.1	845
628029	2/0 (19)	0.405	0.882	220	0.962	13x10	0.080	50	1.266	1318	15.2	1065
TBA	3/0 (19)	0.456	0.933	220	1.013	16x10	0.065	50	1.317	1547	15.8	1342
628023	4/0 (19)	0.512	0.989	220	1.069	20x10	0.052	50	1.398	1863	16.8	1693
TBA	250 (37)	0.558	1.044	220	1.144	25x10	0.042	50	1.448	2158	17.4	2000

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
** Solid Black color jacket

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
2 (1)	0.162	0.203	0.051	0.051	0.170	29.395	0.364+j0.074	0.206+j0.050	5401.7	155	195
2 (7)	0.162	0.203	0.048	0.049	0.179	31.023	0.363+j0.073	0.205+j0.049	5401.7	155	195
2 (7)	0.162	0.203	0.048	0.049	0.179	31.023	0.363+j0.073	0.205+j0.049	5401.7	155	195
1 (1)	0.129	0.161	0.048	0.050	0.181	31.412	0.290+j0.060	0.164+j0.049	6973.1	175	220
1 (19)	0.129	0.161	0.045	0.048	0.194	33.542	0.290+j0.059	0.164+j0.048	6973.1	175	220
1/0 (1)	0.102	0.128	0.044	0.048	0.195	33.735	0.234+j0.050	0.132+j0.047	8582.3	200	250
1/0 (19)	0.102	0.128	0.042	0.047	0.208	36.105	0.234+j0.049	0.132+j0.046	8582.3	200	250
2/0 (19)	0.081	0.101	0.039	0.046	0.224	38.841	0.182+j0.042	0.106+j0.044	11084.4	225	285
3/0 (19)	0.0642	0.080	0.036	0.044	0.243	42.068	0.147+j0.036	0.086+j0.042	13642.3	260	320
4/0 (19)	0.051	0.064	0.033	0.043	0.263	45.591	0.117+j0.033	0.071+j0.040	17204.0	295	360
250 (37)	0.0431	0.054	0.031	0.042	0.283	49.037	0.097+j0.029	0.061+j0.037	21316.1		

* 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 P-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 P-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	2 (1)	6.55	18.67	5.59	20.70	16x14	0.54	1.27	26.49	1125	317.50	2363
661908**	2 (7)	7.19	19.30	5.59	21.34	16x14	0.54	1.27	27.13	1168	325.12	2363
617699	2 (7)	7.19	19.30	5.59	21.34	16x14	0.54	1.27	27.13	1168	325.12	2363
TBA	1 (1)	7.34	19.46	5.59	21.49	13x12	0.42	1.27	28.09	1342	337.82	2982
TBA	1 (19)	8.18	20.29	5.59	22.33	13x12	0.42	1.27	28.93	1396	347.98	2982
TBA	1/0 (1)	8.25	20.37	5.59	22.40	16x12	0.34	1.27	29.01	1554	347.98	3760
628027	1/0 (19)	9.19	21.31	5.59	23.34	16x12	0.34	1.27	29.95	1618	358.14	3760
628029	2/0 (19)	10.29	22.40	5.59	24.43	13x10	0.26	1.27	32.16	1961	386.08	4739
TBA	3/0 (19)	11.58	23.70	5.59	25.73	16x10	0.21	1.27	33.45	2302	401.32	5972
628023	4/0 (19)	13.00	25.12	5.59	27.15	20x10	0.17	1.27	35.51	2772	426.72	7534
TBA	250 (37)	14.17	26.52	5.59	29.06	25x10	0.14	1.27	36.78	3211	441.96	8900

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
** Solid Black color jacket

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
2 (1)	0.5315	0.67	0.0155	0.1673	0.558	96.4403	0.364+j0.074	0.206+j0.050	5401.7	155	195
2 (7)	0.5315	0.67	0.0146	0.1608	0.587	101.7815	0.363+j0.073	0.205+j0.049	5401.7	155	195
2 (7)	0.5315	0.67	0.0146	0.1608	0.587	101.7815	0.363+j0.073	0.205+j0.049	5401.7	155	195
1 (1)	0.4232	0.53	0.0146	0.1640	0.594	103.0577	0.290+j0.060	0.164+j0.049	6973.1	175	220
1 (19)	0.4232	0.53	0.0137	0.1575	0.636	110.0459	0.290+j0.059	0.164+j0.048	6973.1	175	220
1/0 (1)	0.3346	0.42	0.0134	0.1575	0.640	110.6791	0.234+j0.050	0.132+j0.047	8582.3	200	250
1/0 (19)	0.3346	0.42	0.0128	0.1542	0.682	118.4547	0.234+j0.049	0.132+j0.046	8582.3	200	250
2/0 (19)	0.2657	0.33	0.0119	0.1509	0.735	127.4311	0.182+j0.042	0.106+j0.044	11084.4	225	285
3/0 (19)	0.2106	0.26	0.0110	0.1444	0.797	138.0184	0.147+j0.036	0.086+j0.042	13642.3	260	320
4/0 (19)	0.1673	0.21	0.0101	0.1411	0.863	149.5768	0.117+j0.033	0.071+j0.040	17204.0	295	360
250 (37)	0.1414	0.18	0.0094	0.1378	0.928	160.8825	0.097+j0.029	0.061+j0.037	21316.1		

* 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 P-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 P-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)