



• Application

This cable configuration is suitable for high-voltage power distribution systems requiring reliable performance and balanced current distribution. Common applications include underground distribution systems, industrial facilities, utility substations, and commercial buildings. The full neutral design ensures efficient grounding and stable power transmission over long distances.

• Performance

Operating Voltage: 35kV
 Temperature Rating:
 Normal Operation: Up to 90°C
 Emergency Overload: Up to 130°C
 Short Circuit Conditions: Up to 250°C
 Ambient Temperature Range: Suitable for environments ranging from -40°C to +90°C
 Mechanical Performance:
 Maximum Sidewall Pressure: 1000 lbs./FT
 Bending Radius: 12 times the cable diameter for fixed installations, 15 times for occasional flexing.

• Construction

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)
 Conductor Shield:
 Conventional semi-conducting cross-linked copolymer
 Optional: Supersmooth conductor shield
 Conductor tape is used for cable size larger than or equal to 1500 kcmil
 Insulation:
 345 Mils Tree Retardant Cross Linked Polyethylene with 100% insulation level
 Insulation Shield:
 Strippable semi-conducting cross-linked copolymer
 Concentric Neutral:
 Helically applied soft drawn bare copper full concentric neutral
 Overall Jacket:
 Linear Low Density Polyethylene (LLDPE) Jacket, black with red extruded stripes

• Specification

-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
 -AIEC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)
 -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: -40°C and MV 90°C optional marking available upon request

• Eastful Cable Lab



We have CNAS Accredited Facility to assure conformity assessment services with a focus on quality, expertise, and customer satisfaction.
 CNAS has international mutual recognition among IAF, ILAC, APLAC and PAC.

• Accreditation

We meet the requirements of ISO9001, ISO14001, ISO45001 and ISO50001 and our cables have certificate of CCC, RoHS, CASC, UL, cUL, TÜV Rheinland and CCS.



• National Green Factory



Our facility has been awarded of National Green Factory by Ministry of Industry and Information Technology of China.
 We are committed to the development of high-end, intelligent and green manufacturing industry.

*The overall energy consumption level of green factories is better than the energy efficiency benchmark level.

● Technical Parameters

Weights and Measurements											
Conductor Size	Conductor Overall Dia.	Insulation Overall Dia.	Insul. Thickness	Insulation Shield Overall Dia.	Concentric Neutral	Max. D.C. Resistance 25°C	Jacket Thickness	Approx. Overall Dia.	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 (Solid)	0.324	1.052	345	1.162	25x14	0.105	50	1.39	1300	11.1	844
1/0 (19)	0.361	1.082	345	1.192	16x12	0.103	50	1.453	1283	11.6	844
2/0 (19)	0.405	1.126	345	1.236	13x10	0.08	50	1.539	1530	12.3	1064
3/0 (19)	0.456	1.184	345	1.294	25x12	0.066	50	1.556	1782	12.4	1342
4/0 (19)	0.512	1.232	345	1.342	20x10	0.052	50	1.645	2067	13.2	1692
4/0 (19)	0.512	1.232	345	1.342	16x9	0.051	75	1.724	2157	13.8	1692
250 (37)	0.558	1.294	345	1.404	25x10	0.041	75	1.758	2526	14.1	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

Electrical and Engineering Data											
Conductor Size	D.C. Resistance @ 25°C	A.C. Resistance @ 90°C	Capacities 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	A	A	A
1/0 (Solid)	0.102	0.128	0.079	0.055	0.146	3	0.182+j0.749	0.128+j0.053	8718	205	245
1/0 (19)	0.102	0.128	0.074	0.054	0.155	3.1	0.182+j0.746	0.128+j0.054	8865	205	245
2/0 (19)	0.081	0.102	0.07	0.053	0.166	3.4	0.156+j0.741	0.102+j0.053	11450	235	280
3/0 (19)	0.064	0.081	0.064	0.05	0.179	3.6	0.135+j0.738	0.081+j0.050	13852	265	315
4/0 (19)	0.051	0.065	0.06	0.049	0.194	3.9	0.119+j0.731	0.065+j0.050	17615	305	350
4/0 (19)	0.051	0.065	0.06	0.049	0.194	3.9	0.119+j0.731	0.065+j0.050	17771	305	350
250 (37)	0.043	0.056	0.057	0.048	0.204	4.1	0.110+j0.728	0.056+j0.048	22019	321	

-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.

● Technical Parameters

Weights and Measurements (Metric)											
Conductor Size	Conductor Overall Dia.	Insulation Overall Dia.	Insul. Thickness	Insulation Shield Overall Dia.	Concentric Neutral	Max. D.C. Resistance 25°C	Jacket Thickness	Approx. Overall Dia.	Approx. Weight	Min. Bending Radius	Max. Pull Tension
AWG/kcmil	mm	mm	mm	mm	No. x AWG	Ω/km	mm	mm	kg/km	mm	N
1/0 (Solid)	8.23	26.72	8.76	29.51	25x14	0.34	1.27	35.31	1935	281.94	3756
1/0 (19)	9.17	27.48	8.76	30.28	16x12	0.34	1.27	36.91	1909	294.64	3756
2/0 (19)	10.29	28.6	8.76	31.39	13x10	0.26	1.27	39.09	2277	312.42	4735
3/0 (19)	11.58	30.07	8.76	32.87	25x12	0.22	1.27	39.52	2652	314.96	5972
4/0 (19)	13	31.29	8.76	34.09	20x10	0.17	1.27	41.78	3076	335.28	7529
4/0 (19)	13	31.29	8.76	34.09	16x9	0.17	1.91	43.79	3210	350.52	7529
250 (37)	14.17	32.87	8.76	35.66	25x10	0.13	1.91	44.65	3759	358.14	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

Electrical and Engineering Data (Metric)											
Conductor Size	D.C. Resistance @ 25°C	A.C. Resistance @ 90°C	Capacities 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	A	A	A
1/0 (Solid)	0.3346	0.42	0.0241	0.1804	0.479	9.8425	0.182+j0.749	0.128+j0.053	8718	205	245
1/0 (19)	0.3346	0.42	0.0226	0.1772	0.509	10.1706	0.182+j0.746	0.128+j0.054	8865	205	245
2/0 (19)	0.2657	0.33	0.0213	0.1739	0.545	11.1549	0.156+j0.741	0.102+j0.053	11450	235	280
3/0 (19)	0.21	0.27	0.0195	0.164	0.587	11.811	0.135+j0.738	0.081+j0.050	13852	265	315
4/0 (19)	0.1673	0.21	0.0183	0.1608	0.636	12.7953	0.119+j0.731	0.065+j0.050	17615	305	350
4/0 (19)	0.1673	0.21	0.0183	0.1608	0.636	12.7953	0.119+j0.731	0.065+j0.050	17771	305	350
250 (37)	0.1411	0.18	0.0174	0.1575	0.669	13.4514	0.110+j0.728	0.056+j0.048	22019	321	

-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.

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