



• 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												
Stock Number	Cond. Size	Conductor Overall Dia.	Dia. Over Insulation	Insul. Thickness	Dia. Over Insul. Shield	Concentric Neutral	Neutral 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
TBA	4/0 (19)	0.512	1.39	420	1.5	18x14	0.146	75	1.778	1957	14.2	1692
TBA	250 (37)	0.558	1.444	420	1.554	21x14	0.125	75	1.832	2170	14.7	2000
TBA	350 (37)	0.661	1.547	420	1.687	29x14	0.09	75	1.965	2733	15.7	2800
628291	500 (37)	0.789	1.669	420	1.809	17x10	0.061	75	2.166	3420	17.3	4000
TBA	750 (61)	0.968	1.864	420	2.004	25x10	0.041	75	2.358	4738	18.9	6000
TBA	1000 (61)	1.117	2.013	420	2.173	32x10	0.032	75	2.527	5929	20.2	8000

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											
Cond. Size	D.C. Resistance @ 25°C	A.C. 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	A	A	A
4/0 (19)	0.051	0.065	0.067	0.05	0.171	3.5	0.119+j0.729	0.065+j0.051	6277	300	360
250 (37)	0.043	0.056	0.064	0.049	0.18	3.6	0.110+j0.726	0.056+j0.049	7323	328	
350 (37)	0.031	0.041	0.057	0.047	0.201	4.1	0.095+j0.719	0.041+j0.047	10113	400	460
500 (37)	0.022	0.03	0.051	0.045	0.227	4.6	0.084+j0.710	0.030+j0.045	14973	470	525
750 (61)	0.014	0.023	0.044	0.042	0.261	5.3	0.077+j0.701	0.023+j0.042	22019	560	590
1000 (61)	0.011	0.019	0.04	0.04	0.291	5.9	0.073+j0.695	0.019+j0.040	28184		

-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)												
Stock Number	Cond. Size	Conductor Overall Dia.	Dia. Over Insulation	Insul. Thickness	Dia. Over Insul. Shield	Concentric Neutral	Neutral 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
TBA	4/0 (19)	13	35.31	10.67	38.1	18x14	0.48	1.91	45.16	2912	360.68	7529
TBA	250 (37)	14.17	36.68	10.67	39.47	21x14	0.41	1.91	46.53	3229	373.38	8900
TBA	350 (37)	16.79	39.29	10.67	42.85	29x14	0.3	1.91	49.91	4067	398.78	12460
628291	500 (37)	20.04	42.39	10.67	45.95	17x10	0.2	1.91	55.02	5090	439.42	17800
TBA	750 (61)	24.59	47.35	10.67	50.9	25x10	0.13	1.91	59.89	7051	480.06	26700
TBA	1000 (61)	28.37	51.13	10.67	55.19	32x10	0.1	1.91	64.19	8823	513.08	35600

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)											
Cond. Size	D.C. Resistance @ 25°C	A.C. 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	A	A	A
4/0 (19)	0.1673	0.21	0.0204	0.164	0.561	11.4829	0.119+j0.729	0.065+j0.051	6277	300	360
250 (37)	0.1411	0.18	0.0195	0.1608	0.591	11.811	0.110+j0.726	0.056+j0.049	7323	328	
350 (37)	0.1017	0.13	0.0174	0.1542	0.659	13.4514	0.095+j0.719	0.041+j0.047	10113	400	460
500 (37)	0.0722	0.1	0.0155	0.1476	0.745	15.0919	0.084+j0.710	0.030+j0.045	14973	470	525
750 (61)	0.0459	0.08	0.0134	0.1378	0.856	17.3885	0.077+j0.701	0.023+j0.042	22019	560	590
1000 (61)	0.0361	0.06	0.0122	0.1312	0.955	19.357	0.073+j0.695	0.019+j0.040	28184		

-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.