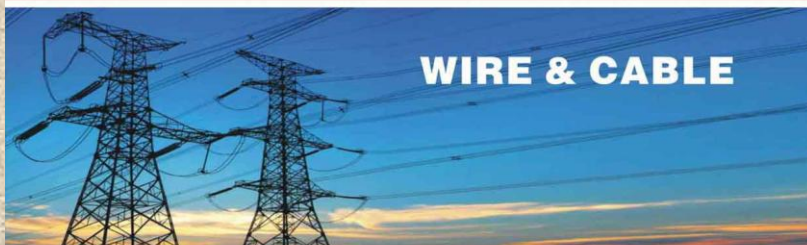


**JYTOP**

ZHENG ZHOU  
**JINYUAN**  
WIRE AND CABLE CO., LTD.

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**BARE CONDUCTOR**



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JINYUAN—YOUR POWERFUL AND RELIABLE SOLUTION FOR WIRES AND CABLES.

**ABOUT JINYUAN**

For over 20 years, Zhengzhou Jinyuan Wire and Cable Co., Ltd., as a professional cable manufacturer, has been producing customized cable for a wide range of applications based on high quality, excellent service and competitive market prices. This is an elite team with experienced personnel and strong technical support. Our achievements benefit by having access to the largest market for cheap labor and abundant resources in China and our determination to exceed our clients' expectations.

**PRODUCTS & STANDARDS**

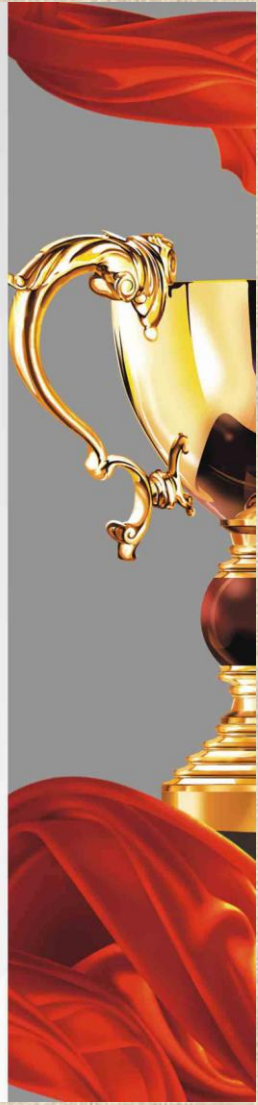
We can produce more than 2,000 types of cables and wires, such as

- Bare Conductor: AAC, AAAC, ACSR, ACSR/AW, ACAR, ACSS, ACSS/AW, Aluminum Clad Steel Wire/Strand, Bare Copper Conductors, Copper Clad Steel Wire/Strand, Copper Clad Aluminum(CCA), Galvanized Steel Wire/Strand, etc.
- Overhead Insulated Cable: Covered Line Single Core Cable and Aerial Bundled Cable(ABC). ABC includes Duplex, Triplex, Quadruplex and more Cores Service Drop Cable.
- PVC Insulated Wire up to 450/750V
- PVC or XLPE Insulated Power Cable from 1kV to 36kV
- Control Cable
- Welding Cable
- Rubber Cable

We can produce cables according to the standards of IEC, ASTM, EN (BS, DIN, NF, etc.), AS/NZ and meet customers' special requirements.

**ACHIEVEMENTS & COMMITMENT**

Our cable has been exported to South-East Asia, South Asia, Middle-East, Europe, North and South America, Africa, Australia & New Zealand and so on. Zhengzhou Jinyuan Wire and Cable Co., Ltd.'s commitment is to be recognized as a zero-defect world class manufacturer in cable industry through continuous improvement of our quality, processes, and products, and by our determination to exceed our clients' expectations.



**PART 1 BARE CONDUCTOR AS PER ASTM STANDARDS**



**1.1 AAAC-6201**

**All-Aluminum Alloy Conductor.**

**STANDARDS**

AAAC-6201 bare conductor meets or exceeds the following ASTM standards:

- B-398 Aluminum-Alloy 6201-T81 Wire for Electrical Purposes.
- B-399 Concentric-Lay-Stranded 6201-T81 Aluminum Alloy Conductors.

**CONSTRUCTION**

Aluminum alloy 6201 wires, concentrically stranded.

Code word	Size (kcmil)	Stranding	Diameter (ins.)		Weight per 1000 ft. (Lbs)	Rated strength (Lbs)	Resistance $\Omega$ /1000 ft.		Allowable ampacity* (Amps)	ACSR with equi.diam.		Approx EC cond.
			Individual wire	Complete conductor			DC at 20°C	AC at 75°C		Size	Stranding (AL/ST)	
Akron	30.58	7	0.0661	0.198	28.5	1110	.859	.785	107	6	6/1	6
Alton	48.69	7	0.0834	0.250	45.4	1780	.414	.493	143	4	6/1	4
Ames	77.47	7	0.1052	0.316	72.2	2800	.260	.310	191	2	6/1	2
Azusa	123.3	7	0.1327	0.398	115.0	4490	.163	.195	258	1/0	6/1	1/0
Anaheim	155.4	7	0.1490	0.447	144.9	5390	.130	.154	296	2/0	6/1	2/0
Ansheat	195.7	7	0.1672	0.502	182.5	6790	.103	.123	342	3/0	6/1	3/0
Alliance	246.9	7	0.1878	0.563	230.2	8560	.0816	.0973	365	4/0	6/1	4/0
Butte	312.8	19	0.1283	0.642	291.7	11000	.0644	.0789	460	268.8	26/7	268.8
Canton	394.5	19	0.1441	0.720	367.9	13300	.0511	.0610	532	336.4	26/7	336.4
Cairo	485.4	19	0.1565	0.783	434.0	15600	.0433	.0518	590	397.5	26/7	397.5
Darien	559.5	19	0.1716	0.858	521.7	18800	.0360	.0431	663	477.0	26/7	477.0
Elgin	652.4	19	0.1853	0.927	608.4	21900	.0309	.0371	729	556.5	26/7	556.5
Flint	740.8	37	0.1415	0.990	690.8	24400	.0272	.0327	790	636.0	26/7	636.0
Greeley	927.2	37	0.1583	1.108	864.6	30500	.0217	.0263	908	795.0	26/7	795.0

\*Ampacity based on 75°C conductor temperature, 25°C ambient temperature, 2 ft/sec. wind in sun, emissivity 0.5, 62.5% conductivity.



**1.2 AAC**

**All-Aluminum Conductor.**

**STANDARDS**

AAC bare conductor meets or exceeds the following ASTM standards:

- B-230 Aluminum Wire, 1350-H19 for Electrical Purposes.
- B-231 Aluminum Conductors, Concentric-Lay-Stranded.

**CONSTRUCTION**

Aluminum 1350-H19 wires, concentrically stranded.

Code word	Size (AWG or kcmil)	Stranding		Diameter (ins.)		Weight per 1000ft. (Lbs)	Rated strength (Lbs)	Resistance $\Omega$ /1000 ft.		Allowable ampacity* (Amps)
		No. of wire	Class	Individual wire	Complete cable			DC at 20°C	AC at 75°C	
Peachball	6	7	A	.0612	.164	25	563	.658	.805	103
Rose	4	7	A	.0772	.232	39	881	.414	.508	138
Iris	2	7	AAA	.0974	.292	62	1350	.260	.318	185
Pansy	1	7	AA	.1093	.328	78	1640	.207	.252	214
Poppo	1/0	7	AAA	.1228	.368	96	1990	.164	.200	247
Aster	2/0	7	AAA	.1379	.414	125	2510	.130	.159	286
Phlox	3/0	7	AAA	.1548	.464	157	3040	.103	.126	331
Oxlip	4/0	7	AAA	.1739	.522	198	3830	.0817	.0999	383
Sneezewort	250	7	AA	.189	.567	234	4520	.0691	.0846	425
Valerian	250	19	A	.1147	.574	234	4680	.0691	.0846	426
Daisy	268.8	7	AA	.1952	.586	250	4830	.0648	.0793	443
Laurel	268.8	19	A	.1185	.592	250	4970	.0648	.0793	444
Peony	300	19	A	.1257	.628	281	5480	.0576	.0706	478
Tulip	336.4	19	A	.1331	.665	315	6150	.0514	.0630	513
Daffodil	350	19	A	.1357	.679	328	6390	.0494	.0605	526
Canna	397.5	19	AAA	.1446	.723	373	7110	.0435	.0534	570
Goldentuft	450	19	AA	.1539	.789	422	7890	.0384	.0472	616
Cosmos	477	19	AA	.1584	.792	447	8390	.0362	.0445	639
Syringa	477.0	37	A	.1135	.795	447	8690	.0362	.0445	639
Zinnia	500	19	AA	.1622	.811	498	9750	.0346	.0425	658
Hyacinth	500	37	AA	.1162	.814	498	9110	.0346	.0425	658
Dahlia	556.5	19	AA	.1711	.856	522	9750	.0311	.0382	703
Mistletoe	556.5	37	AA	.1226	.858	522	9940	.0311	.0382	704
Meadowsweet	600	37	AA	.1273	.891	562	10700	.0228	.0355	738
Orchid	636.0	37	AAA	.1311	.918	598	11400	.0272	.0335	785

Heuchera	850	37	AA	.1325	.928	809	11800	.0286	.0328	775
Verbena	700	37	AA	.1375	.983	856	12500	.0247	.0305	812
Flag	700	81	A	.1071	.984	856	12900	.0247	.0305	812
Violet	715.5	37	AA	.1391	.973	871	12800	.0242	.0299	823
Nasturtium	715.5	61	AA	.1083	.975	871	13100	.0242	.0299	823
Petunia	750.0	37	AA	.1424	.997	703	13100	.0230	.0286	847
Cattail	750	61	AA	.1109	.998	703	13500	.0230	.0286	847
Arbutus	795	37	AA	.1486	1.026	745	13900	.0217	.0270	878
Lilac	795.0	61	A	.1142	1.027	745	14300	.0217	.0270	879
Cockscomb	900	37	AA	.156	1.092	844	15400	.0192	.0239	948
Snagdragon	900	61	AA	.1215	1.093	844	15900	.0192	.0239	948
Magnolia	954.0	37	AA	.1608	1.124	894	16400	.0181	.0226	982
Goldenrod	954.0	61	A	.1251	1.125	894	16900	.0181	.0226	983
Hawweed	1000	37	AA	.1644	1.151	937	17200	.0173	.0216	1010
Camellia	1000	61	AA	.128	1.152	937	17700	.0173	.0216	1011
Bluebell	1033.5	37	AA	.1671	1.17	969	17700	.0167	.0210	1031
Larkspur	1033.5	61	AA	.1302	1.171	969	18300	.0167	.0210	1032
Margold	1113.0	61	AAA	.1351	1.216	1043	19700	.0155	.0195	1079
Hawthorn	1192.5	61	AAA	.1398	1.258	1118	21100	.0145	.0183	1124
Narcissus	1272.0	61	AAA	.1444	1.3	1192	22000	.0136	.0173	1169
Columbine	1351.5	61	AAA	.1488	1.34	1267	23400	.0128	.0163	1212
Carnation	1431	61	AAA	.1532	1.378	1341	24300	.0121	.0155	1253
Gladiolus	1510.5	61	A	.1574	1.416	1416	25500	.0114	.0147	1294
Caropsis	1590.0	61	AA	.1614	1.453	1490	27000	.0109	.0141	1333
Jessamine	1750.0	61	AA	.1694	1.524	1640	29700	.00988	.0129	1408
Cowslip	2000.0	91	A	.1482	1.831	1875	34200	.00884	.0115	1518
Sagebrush	2250	91	A	.1572	1.73	2130	37500	.00776	.0105	1612
Lupine	2500.0	91	A	.1657	1.823	2366	41900	.00698	.00989	1706
Bitterroot	2750	91	A	.1738	1.912	2603	46100	.00635	.00900	1793
Trillium	3000	127	A	.1537	1.988	2839	50300	.00582	.00834	1874
Bluebonnet	3500	127	A	.166	2.158	3345	58700	.00499	.00756	2024

\*Conductor temperature of 75°C, ambient temperature 25°C, emissivity 0.5, wind 2 ft./sec. in sun.



### 1.3 ACAR

Aluminum Conductor. Aluminum Alloy Conductor Reinforced.

#### STANDARDS

ACAR bare conductor meets or exceeds the following ASTM standards:

- B-230 Aluminum Wire, 1350-H19 for Electrical Purposes.
- B-398 Aluminum-Alloy 6201-T81 for Electrical Purposes.
- B-524 Concentric-Lay-Stranded Aluminum Conductors, Aluminum Alloy Reinforced ACAR, 1350/6201.

#### CONSTRUCTION

Aluminum alloy 1350-H19 wires, concentrically stranded about an aluminum alloy 6201 core. Although the alloy strands generally comprise the core of the cable, in some constructions they are distributed in layers throughout the aluminum alloy 1350-H19 strands.

Size (kcmil)	Stranding (EC/8201)	Diameter(in)			Weight per 1000 ft. (Lbs.)	Rated strength (Lbs.)	Resistance Ω /1000 ft.		Allowable ampacity* (Amps)
		Individual wire		Complete cable			DC at 20°C	AC at 75°C	
355.0	12/7	0.1367	0.1367	0.883	332.1	8500	.0514	.0624	519
465.9	12/7	0.1566	0.1566	0.783	435.8	11000	.0392	.0477	616
503.8	12/7	0.1628	0.1628	0.814	471.1	11900	.0362	.0441	646
653.1	12/7	0.1854	0.1854	0.927	611.0	15400	.0279	.0342	760
739.8	30/7	0.1414	0.1414	0.990	692.7	16300	.0240	.0296	831
739.8	18/19	0.1414	0.1414	0.990	691.6	18800	.0252	.0308	814
853.7	30/7	0.1519	0.1519	1.063	799.3	17500	.0208	.0257	907
853.7	18/19	0.1519	0.1519	1.063	798.0	21500	.0218	.0268	890
927.2	30/7	0.1583	0.1583	1.108	868.2	19000	.0192	.0238	955
927.2	18/19	0.1583	0.1583	1.108	866.7	23400	.0201	.0247	938
1024.5	30/7	0.1664	0.1664	1.165	959.3	20900	.0173	.0216	1015
1024.5	18/19	0.1664	0.1664	1.165	957.7	25800	.0182	.0225	995
1081.0	30/7	0.1709	0.1709	1.196	1012.1	22100	.0164	.0205	1048
1081.0	18/19	0.1709	0.1709	1.196	1010.5	27200	.0172	.0213	1028
1109.0	30/7	0.1731	0.1731	1.212	1038.4	22700	.0160	.0200	1065
1109.0	18/19	0.1731	0.1731	1.212	1036.8	27900	.0168	.0208	1044
1172.0	30/7	0.1780	0.1780	1.246	1097.3	24000	.0152	.0190	1101
1172.0	18/19	0.1780	0.1780	1.246	1095.5	29500	.0159	.0198	1080
1197.0	30/7	0.1799	0.1799	1.259	1120.8	24500	.0148	.0187	1115
1197.0	18/19	0.1799	0.1799	1.259	1118.9	30200	.0156	.0194	1094
1280.0	30/7	0.1860	0.1860	1.302	1198.5	28200	.0139	.0175	1160
1280.0	18/19	0.1860	0.1860	1.302	1196.5	32200	.0146	.0182	1139
1361.0	42/19	0.1494	0.1494	1.344	1273.6	30300	.0133	.0168	1198
1527.0	42/19	0.1582	0.1582	1.424	1428.8	33600	.0118	.0151	1314
1703.0	42/19	0.1671	0.1671	1.504	1593.5	37500	.0106	.0137	1363
1933.0	42/19	0.1780	0.1780	1.602	1808.8	42500	.00936	.0123	1465
2287.0	42/19	0.1928	0.1928	1.735	2142.0	49900	.00806	.0108	1594
2493.0	72/19	0.1655	0.1655	1.821	2356.9	50400	.00722	.0099	1687
2493.0	54/37	0.1655	0.1655	1.821	2354.5	57800	.00743	.0101	1670

\*Ampacity based on 75°C conductor temperature, 25°C ambient temperature, with 2 ft./sec. wind in the sun.



1.4 ACSR

Aluminum Conductor. Steel Reinforced.

STANDARDS

ACSR bare conductor meets or exceeds the following ASTM standards:

- B-230 Aluminum Wire, 1350-H19 for Electrical Purposes.
- B-231 Aluminum Conductors, Concentric-Lay-Stranded.
- B-232 Aluminum Conductors, Concentric-Lay-Stranded, Coated Steel Reinforced (ACSR)
- B-341 Aluminum-Coated Steel, Core Wire for Aluminum Conductors, Steel Reinforced (ACSR/AZ)
- B-498 Zinc-Coated Steel Core Wire for Aluminum Conductors, Steel Reinforced (ACSR)
- B-802 Zinc-5% Aluminum-Mischmetal Alloy-Coated Steel Core Wire for Aluminum Conductors, Steel Reinforced (ACSR)

CONSTRUCTION

Aluminum 1350-H19 wires, concentrically stranded around steel core. Core wire for ACSR is available with class A, B, or C galvanizing; "aluminized" aluminum coated (AZ); or aluminum-clad (AW). Additional corrosion protection is available through the application of grease to the core or infusion of the complete cable.

Code word	Size (AWG or kcmil)	Stranding (A/VS)	Diameter (ins.)			Weight per 1000 ft. (Lbs)			Content (%)		Rated strength (Lbs)	Resistance Ω /1000 ft.		Allowable ampacity (Amps)	
			Individual wire	Steel core	Complete cable	Al	St	Total	Al	St		DC at 20°C	AC at 75°C		
															Al
Turkey	6	6/1	.0661	.0661	.0661	.198	24	12	36	67.88	32.12	1190	.841	806	105
Swan	4	7/1	.0834	.0834	.0834	.25	39	18	57	67.87	32.12	1860	.403	515	140
Swanata	4	7/1	.0772	.103	.103	.257	39	28	67	58.1	41.9	2360	.399	519	140
Sparrow	2	6/1	.1052	.1052	.1052	.316	62	29	91	67.9	32.1	2850	.254	332	184
Robin	2	7/1	.0674	.1298	.1298	.325	62	45	107	58.12	41.88	3460	.251	338	184
Robin	1	6/1	.1181	.1181	.1181	.354	78	37	115	67.88	32.12	3550	.201	268	212
Raven	1/0	6/1	.1327	.1327	.1327	.398	99	47	145	67.89	32.11	4380	.159	217	242
Quail	2/0	6/1	.1489	.1489	.1489	.447	124	59	183	67.88	32.12	5310	.128	178	279
Pigeon	3/0	6/1	.1672	.1672	.1672	.502	156	74	230	67.87	32.13	6820	.100	144	315
Pengwin	4/0	6/1	.1878	.1878	.1878	.563	197	93	291	67.89	32.12	8350	.0795	119	357
Whawing	266.8	18/1	.1217	.1217	.1217	.809	250	39	289	88.43	13.57	8880	.0843	0787	449
Partridge	266.8	26/7	.1013	.0788	.2363	.642	251	115	367	88.51	31.49	11300	.0837	.0779	475
Oatrch	300	26/7	.1074	.0835	.2506	.66	283	130	412	88.51	31.49	12700	.0867	.0863	492
Merlin	336.4	18/1	.1367	.1367	.1367	.884	315	49	365	88.43	13.57	9860	.0510	.0625	519

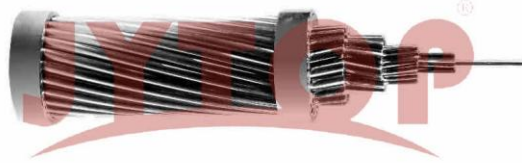
Linnat	336.4	26/7	.1137	.0885	.2654	.72	317	146	462	88.51	31.49	14100	.0555	.0618	529
Orion	336.4	30/7	.1059	.1059	.3177	.741	316	209	526	60.35	39.65	17300	.0502	.0613	535
Chickadee	397.5	18/1	.1486	.1486	.1486	.743	373	58	431	86.43	13.57	9640	.0432	.0529	578
Brant	397.5	24/7	.1287	.0858	.2574	.772	374	137	511	73.21	26.79	14600	.0430	.0526	584
Lark	397.5	26/7	.1236	.0962	.2885	.763	374	172	546	68.51	31.49	16300	.0428	.0523	587
Pelican	397.5	30/7	.1151	.1151	.3453	.808	375	247	622	60.35	39.65	20300	.0425	.0519	594
Flicker	477	18/1	.1628	.1628	.1628	.814	447	70	517	86.44	13.56	11800	.0360	.0442	646
Flicker	477	24/7	.141	.094	.2819	.846	449	164	614	73.21	26.79	17200	.0358	.0439	655
Hawk	477	26/7	.1354	.1053	.316	.858	449	207	658	68.51	31.49	19500	.0356	.0436	659
Hen	477	30/7	.1261	.1261	.3783	.883	450	296	746	60.35	39.65	23800	.0354	.0433	666
Osprey	556.5	18/1	.1758	.1758	.1758	.879	522	82	603	86.43	13.57	13700	.0308	.0379	711
Parakeet	556.5	24/7	.1523	.1015	.3045	.914	524	192	716	73.21	26.79	19800	.0307	.0376	711
Dove	556.5	26/7	.1463	.1138	.3413	.927	524	241	785	68.51	31.49	22800	.0306	.0375	728
Engle	556.5	30/7	.1362	.1362	.4086	.953	525	345	871	60.35	39.65	27800	.0303	.0372	734
Peacock	605	24/7	.1588	.1059	.3177	.953	570	209	779	73.2	26.8	21600	.0282	.0346	780
Squab	605	26/7	.1525	.1186	.3559	.966	570	262	832	68.51	31.49	24300	.0281	.0345	785
Wood duck	605.0	30/7	.142	.142	.426	.994	571	375	946	60.35	39.65	28900	.0279	.0342	774
Teal	605.0	30/19	.142	.0852	.426	.994	571	367	939	60.86	39.14	30300	.0279	.0342	773
Kingbird	636	18/1	.188	.188	.188	.94	596	94	690	86.43	13.57	15700	.0270	.0332	773
Swift	636.0	36/1	.1329	.1329	.1329	.93	596	47	643	92.72	7.28	19890	.0271	.0334	784
Rook	636	24/7	.1628	.1085	.3256	.977	599	219	818	73.22	26.78	22600	.0268	.0330	794
Groebek	636	26/7	.1564	.1216	.3649	.991	599	275	874	68.51	31.49	25200	.0267	.0328	798
Scoter	636.0	30/7	.1455	.1455	.4368	1.019	600	395	985	60.35	39.65	30400	.0256	.0325	798
Egret	636	30/19	.1456	.0874	.4368	1.019	600	396	987	60.85	39.15	31500	.0256	.0326	798
Flamingo	666.8	24/7	.1667	.1111	.3333	1	628	230	858	73.21	26.79	23700	.0256	.0315	807
Gannet	666.8	26/7	.1601	.1245	.3736	1.014	628	289	916	68.51	31.49	26400	.0255	.0313	812
Sill	715.5	24/7	.1727	.1151	.3453	1.038	674	247	920	73.21	26.79	25500	.0239	.0294	844
Starling	715.5	26/7	.1659	.129	.3871	1.051	674	310	984	68.51	31.49	29400	.0238	.0292	849
Redwing	715.5	30/19	.1544	.0927	.4633	1.081	676	435	1110	60.85	39.15	34900	.0236	.0290	859
Coot	795	36/1	.1486	.1486	.1486	1.04	745	58	804	92.72	7.28	16710	.0217	.0268	884
Drake	795	26/7	.1749	.136	.408	1.107	749	344	1083	68.51	31.49	31500	.0214	.0263	907
Tem	795	45/7	.1329	.0836	.2658	1.063	749	146	895	83.67	16.33	22100	.0216	.0269	887
Condor	795	54/7	.1213	.1213	.364	1.092	749	274	1023	73.21	26.79	26200	.0215	.0272	889
Mallard	795	30/19	.1628	.0977	.4884	1.14	751	483	1234	60.86	39.14	38400	.0213	.0261	918
Ruddy	900	45/7	.1414	.0943	.2828	1.131	848	185	1013	83.67	16.33	24400	.0191	.0236	958
Canary	900	54/7	.1291	.1291	.3873	1.162	848	310	1158	73.22	26.78	31900	.0190	.0241	961
Rail	954	45/7	.1456	.0971	.2912	1.165	899	175	1074	83.67	16.33	25900	.0180	.0225	993
Cardinal	954	54/7	.1329	.1329	.3967	1.196	899	329	1227	73.21	26.79	33800	.0179	.0228	996
Ortolan	1033.5	45/7	.1515	.101	.3031	1.212	973	190	1163	83.67	16.33	27700	.0167	.0209	1043
Curlew	1033.5	54/7	.1383	.1383	.415	1.245	973	356	1330	73.21	26.79	36900	.0165	.0211	1047
Bluejay	1113	45/7	.1573	.1048	.3145	1.258	1048	205	1253	83.67	16.33	29800	.0155	.0194	1092
Finch	1113	54/19	.1436	.0861	.4307	1.292	1053	375	1429	73.72	26.28	39100	.0154	.0197	1093
Bunting	1192.5	45/7	.1628	.1085	.3256	1.302	1123	219	1343	83.67	16.33	32000	.0144	.0182	1139
Grackle	1192.5	54/19	.1486	.0892	.4456	1.337	1129	402	1531	73.72	26.28	41900	.0144	.0184	1140
Bittern	1272	45/7	.1681	.1121	.3362	1.345	1198	234	1432	83.67	16.33	34100	.0135	.0171	1184
Pheasant	1272	54/19	.1535	.0921	.4605	1.381	1204	429	1633	73.71	26.29	43600	.0135	.0173	1187
Dipper	1351.5	45/7	.1733	.1155	.3466	1.386	1273	248	1521	83.67	16.33	36200	.0127	.0162	1229
Martin	1351.5	54/19	.1582	.0949	.4746	1.424	1279	456	1735	73.72	26.28	46300	.0127	.0163	1232
Bobolink	1431	45/7	.1783	.1189	.3566	1.427	1348	263	1611	83.67	16.33	38300	.0120	.0153	1272
Lapwing	1590	45/7	.188	.1253	.3759	1.504	1498	292	1790	83.67	16.33	42200	.0108	.0139	1354
Falcon	1590	54/19	.1716	.103	.5148	1.544	1505	536	2041	73.72	26.28	54500	.0108	.0140	1359
Chukar	1780	84/19	.1456	.0874	.4368	1.602	1885	386	2072	81.35	18.65	51000	.0097	.0125	1453
Bluebird	2156	84/19	.1602	.0962	.4808	1.762	2040	468	2508	81.34	18.66	60300	.00801	.0105	1623
Kiwi	2167	72/7	.1735	.1157	.347	1.735	2051	249	2300	89.17	10.82	49800	.00801	.0106	1607

\*Conductor temperature of 75°C, ambient temperature 25°C, emissivity 0.5, wind 2 ft./sec., in sun.

**ACSR**

Code word	Size (AWG or kcmil)	Strand-ing (Al/St)	Diameter (ins.)			Weight per 1000 ft. (Lbs)			Content (%)		Rated strength (Lbs)	Resistance $\Omega$ /1000ft.		Allowable ampacity+ (Amps)	
			Individual wire	Steel core	Complete cable	Al	St	Total	Al	St		DC at 20°C	AC at 75°C		
															Al
<b>HIGH MECHANICAL STRENGTH</b>															
Grouse	80	8/1	.1	.1667	.1667	.367	75	74	149	50.48	49.52	5200	.207	.294	204
Petrel	101.8	12/7	.0921	.0921	.2763	.461	96	158	254	37.79	62.21	10400	.158	.250	237
Minorca	110.8	12/7	.0961	.0962	.2885	.481	104	172	276	37.75	62.25	11300	.145	.235	248
Leghorn	134.6	12/7	.1059	.1059	.3177	.53	127	209	335	37.79	62.21	13600	.120	.204	273
Guinea	159.0	12/7	.1151	.1151	.3453	.576	150	247	396	37.79	62.21	16000	.101	.181	297
Dottrel	176.9	12/7	.1214	.1214	.3642	.607	167	274	441	37.79	62.21	17300	.0911	.169	312
Dorking	190.8	12/7	.1261	.1261	.3783	.63	180	296	476	37.78	62.22	18700	.0845	.160	324
Cochin	211.3	12/7	.1327	.1327	.398	.663	199	328	527	37.8	62.2	28400	.0763	.150	340

+Conductor temperature of 75°C, ambient temperature 25°C, emissivity 0.5, wind 2 ft./sec., in sun.



**1.5 ACSR/AW**

**Aluminum Conductor. Aluminum-Clad Steel Reinforced.**

**STANDARDS**

ACSR/AW bare conductor meets or exceeds the following ASTM standards:

- B-230 Aluminum wire, 1350-H19 for Electrical Purposes.
- B-502 Aluminum-Clad Steel Core Wire for Aluminum Conductors, Aluminum-Clad Steel Reinforced.
- B-549 Aluminum Conductors, Concentric-Lay-Stranded, Aluminum-Clad Steel Reinforced (ACSR/AW)

**CONSTRUCTION**

Aluminum 1350-H19 wires, concentrically stranded around an Aluminum-Clad Steel core.

Code word	Size (AWG or kcmil)	Strand-ing (Al/AW)	Diameter (ins.)				Weight per 1000 ft. (Lbs)			Rated strength (Lbs)	Resistance $\Omega$ /1000 ft.		Allowable ampacity+ (Amps)
			Individual wire		AW core	Comp. cable	Al	AW	Total		DC at 20°C	AC at 75°C	
			Al	AW									
Swan/AW	4	8/1	.0834	.0834	.0834	.25	39	16	55	1780	.3917	.4770	145
Swanate/AW	4	7/1	.0772	.103	.103	.257	39	24	63	2280	.3814	.4642	148
Sparrow/AW	2	8/1	.1052	.1052	.1052	.316	62	25	87	2760	.2462	.2997	194
Sparate/AW	2	7/1	.0974	.1298	.1298	.325	62	38	100	3510	.2396	.2917	198
Robin/AW	1	8/1	.1181	.1181	.1181	.354	78	31	109	3450	.1950	.2373	225
Raven/AW	1/0	8/1	.1327	.1327	.1327	.398	99	39	138	4250	.1547	.1884	280
Quail/AW	2/0	8/1	.1489	.1489	.1489	.447	124	50	174	5130	.1227	.1494	301
Pigeon/AW	3/0	8/1	.1672	.1672	.1672	.502	156	63	219	6300	.09747	.1188	347
Penguin/AW	4/0	8/1	.1876	.1876	.1876	.563	197	79	277	7690	.07726	.09422	402
Waxwing/AW	266.8	18/1	.1217	.1217	.1217	.609	250	33	283	8820	.06364	.07776	451
Partridge/AW	266.8	20/7	.1013	.0788	.2363	.642	251	98	349	10800	.06189	.07541	465
Ostrich/AW	300.0	28/7	.1074	.0835	.2508	.68	283	110	393	12100	.05489	.06712	500
Merlin/AW	336.4	18/1	.1367	.1367	.1367	.684	315	42	357	8540	.05044	.06175	522
Linnet/AW	336.4	28/7	.1137	.0885	.2654	.72	317	123	440	13500	.04897	.05989	537
Oriole/AW	336.4	30/7	.1059	.1059	.3177	.741	318	177	494	16700	.04795	.05881	547
Chickadee/AW	397.5	18/1	.1496	.1486	.1486	.743	373	50	422	9780	.04268	.05230	582
Brant/AW	397.5	24/7	.1287	.0958	.2574	.772	374	118	490	14100	.04185	.05124	590
Lbia/AW	397.5	28/7	.1236	.0962	.2885	.783	374	146	520	15800	.04144	.05072	597
Lark/AW	397.5	30/7	.1151	.1151	.3453	.806	375	209	584	19600	.04059	.04965	608
Pelican/AW	477	18/1	.1628	.1628	.1628	.814	447	59	507	11500	.03556	.04344	651
Flicker/AW	477	24/7	.141	.094	.2819	.846	448	139	589	16700	.03487	.04273	663
Hawk/AW	477.0	28/7	.1354	.1053	.316	.858	448	175	624	18900	.03453	.04231	669
Hen/AW	477.0	30/7	.1281	.1281	.3783	.883	450	251	701	23400	.03382	.04139	682
Osprey/AW	556.5	18/1	.1758	.1758	.1758	.879	522	69	591	13200	.03050	.03749	715
Parakeet/AW	556.5	24/7	.1523	.1015	.3045	.914	524	163	687	19300	.02989	.03667	731
Dove/AW	556.5	28/7	.1463	.1138	.3413	.927	524	204	728	21900	.02958	.03627	737
Eagle/AW	556.5	30/7	.1362	.1362	.4086	.953	525	293	818	26800	.02899	.03551	751
Peacock/AW	605.0	24/7	.1588	.1058	.3175	.953	570	177	746	21000	.02749	.03377	770
Squab/AW	605.0	28/7	.1525	.1186	.3558	.966	570	222	792	23600	.02588	.03341	777
Teal/AW	605.0	30/19	.142	.0852	.426	.994	571	311	883	28500	.02672	.03274	791
Kingbird/AW	636.0	18/1	.188	.188	.188	.94	596	79	675	15000	.02667	.03286	778
Rook/AW	636.0	24/7	.1628	.1085	.3256	.977	599	186	785	22000	.02616	.03216	794
Grobeak/AW	636.0	28/7	.1564	.1216	.3648	.991	599	233	832	24800	.02588	.03179	801
Flamingo/AW	666.6	24/7	.1667	.1111	.3333	1.000	628	195	823	23100	.02495	.03069	818
Gannet/AW	666.6	28/7	.1601	.1245	.3736	1.014	628	245	872	26000	.02470	.03034	825
Starling/AW	715.5	28/7	.1659	.129	.3871	1.051	674	263	936	27500	.02300	.02830	863
Redwing/AW	715.5	30/19	.1544	.0927	.4633	1.081	678	368	1044	33400	.02280	.02777	878
Cuckoo/AW	795.0	24/7	.182	.1213	.364	1.092	748	232	981	27500	.02093	.02582	913
Drake/AW	795	28/7	.1749	.138	.408	1.107	748	292	1040	30500	.02070	.02549	922
Tern/AW	795	45/7	.1329	.0886	.2658	1.063	749	124	873	21500	.02135	.02638	896

Condor/AW	795	54/7	.1213	.1213	.364	1.092	749	232	981	27800	.02091	.02578	913
Mallard/AW	795	30/19	.1628	.0977	.4884	1.139	751	409	1180	37100	.02033	.02500	938
Ruddy/AW	900	45/7	.1414	.0943	.2828	1.131	848	140	988	24000	.01866	.02330	970
Canary/AW	900	54/7	.1291	.1291	.3873	1.162	848	283	1111	31000	.01849	.02286	986
Rail/AW	954	45/7	.1456	.0971	.2912	1.165	899	149	1047	25400	.01779	.02210	1003
Cardinal/AW	954	54/7	.1329	.1329	.3987	1.196	899	279	1177	32900	.01744	.02161	1022
Ortolan/AW	1033.5	45/7	.1515	.101	.3031	1.212	973	161	1134	27200	.01841	.02044	1054
Crow/AW	1033.5	54/7	.1383	.1383	.415	1.245	973	302	1275	35200	.01809	.01997	1074
Bluejay/AW	1113	45/7	.1573	.1048	.3145	1.258	1048	173	1222	29300	.01806	.01905	1103
Pheasant/AW	1272	54/19	.1535	.0921	.4604	1.381	1204	364	1568	42400	.01315	.01646	1216
Bobolink/AW	1431	45/7	.1783	.1189	.3568	1.427	1348	223	1571	37900	.01186	.01503	1283
Lapwing/AW	1590	45/7	.188	.1253	.3759	1.504	1498	248	1745	41800	.01089	.01386	1365

\*Conductor temperature of 75°C, ambient temperature 25°C, emissivity 0.5, wind 2 ft./sec., in sun.

**ACSR/AW**

Code word	Size (AWG or kcmil)	Stranding (Al/AW)	Diameter (ins.)				Weight per 1000 ft. (Lbs)			Rated strength (Lbs)	Resistance Ω /1000 ft.		Allowable ampacity* (Amps)
			Individual wire		AW core	Comp. cable	Al	AW	Total		DC at 20°C	AC at 75°C	
			Al	AW									
<b>HIGH MECHANICAL STRENGTH</b>													
Grouse/AW	80	8/1	.1000	.1670	.1670	.367	75.1	62.8	137.7	4890	.1942	.2357	227
Petrel/AW	101.8	12/7	.0921	.0921	.2783	.460	96.0	133.9	229.9	9910	.1425	.1736	281
Minorca/AW	110.8	12/7	.0961	.0961	.2883	.481	104.5	145.8	250.3	10800	.1326	.1594	297
Laghorn/AW	134.6	12/7	.1059	.1059	.3177	.530	127.0	177.0	304.0	13000	.1078	.1313	335
Guinea/AW	159.0	12/7	.1151	.1151	.3453	.576	150.0	209.1	359.1	15300	.09123	.1112	372
Dotterel/AW	176.9	12/7	.1214	.1214	.3642	.607	166.8	232.7	399.5	16900	.08201	.09688	398
Dorking/AW	190.8	12/7	.1261	.1261	.3783	.631	180.0	251.0	431.0	18300	.07801	.09281	418
Brahma/AW	203.2	16/19	.1127	.0977	.4885	.714	191.7	411.0	602.7	27100	.06570	.07994	464
Cochin/AW	211.3	12/7	.1327	.1327	.3981	.664	199.3	278.0	477.3	19800	.06863	.08364	445

\*Conductor temperature of 75°C, ambient temperature 25°C, emissivity 0.5, wind 2 ft./sec., in sun.



**1.6 ACSS  
Aluminum Conductor. Steel Supported.**

**STANDARDS**

ACSS conductor meets or exceeds the following ASTM standards:

- B-341 Aluminum-Coated Steel Core Wire for Aluminum Conductors, Steel Reinforced.
- B-500 Metallic Coated Stranded Steel Core For Aluminum Conductors, Steel Reinforced.
- B-609 Aluminum 1350 round Wire, Annealed and Intermediate Tempers, for Electrical Purposes
- B-802 Zinc-5% Aluminum-Mischmetal Alloy-Coated Steel Core Wire for Aluminum Conductors, Steel Reinforced.
- B-803 High-Strength Zinc-5% Aluminum-Mischmetal Alloy-Coated Steel Core Wire for Aluminum and Aluminum-Alloy Conductors, Steel Reinforced.
- B-856 Concentric-Lay-Stranded Aluminum Conductors, Coated Steel Supported(ACSS)

**CONSTRUCTION**

ACSS is a composite concentric-lay stranded conductor. Steel strands form the central core of the conductor with one or more layers of aluminum 1350-O wire stranded around it. The steel core carries most or all of the mechanical load of the conductor due to the "O" (fully annealed or soft) temper aluminum. Steel core wires are protected from corrosion by galvanizing, aluminizing, or mischmetal alloy coating. Corrosion protection should be selected to suit the environment to which the conductor will be exposed. High strength steel core is also available.

Code word (ACSS)	Size (kcmil)	Stranding (Al/S)	Diameter (in)				Weight per 1000 ft (lb)	Rated strength			Resistance Ω /1000ft.		Ampacity at 200°C (AMPS)
			Individual wire		Steel core	Comp. cable		Standard strength Lbs	High strength Lbs	HS285™ strength Lbs	DC at 20°C	AC at 75°C	
			Al	Steel									
Partridge	266.8	26/7	0.1013	0.0788	0.2363	0.642	396.8	8880	9730	11400	.0619	.0761	812
Juncos	266.8	30/7	0.0943	0.0943	0.2829	0.660	417.4	11700	13000	15200	.0615	.0756	822
Ootich	300.0	28/7	0.1074	0.0835	0.2508	0.680	412.4	10000	10900	12800	.0581	.0677	877
Linnet	336.4	26/7	0.1137	0.0886	0.2654	0.720	462.5	11200	12300	14400	.0491	.0604	945
Orisk	336.4	30/7	0.1059	0.1059	0.3177	0.741	528.3	14800	16300	19100	.0488	.0600	957
Brant	397.5	24/7	0.1287	0.0858	0.2574	0.772	511.4	11000	12100	14100	.0417	.0514	1047
Libe	397.5	28/7	0.1236	0.0962	0.2885	0.783	548.5	13000	14200	16500	.0416	.0512	1064

ZHENGZHOU JINYUAN WIRE AND CABLE CO.,LTD.

BARE CONDUCTOR

Lark	387.5	307	0.1151	0.1151	0.3453	0.806	821.9	17500	19300	22600	.0413	.0508	1068
Flicker	477	247	0.1410	0.0940	0.2819	0.846	813.6	13000	14200	18400	.0346	.0429	1180
Hawk	477	297	0.1354	0.1053	0.3190	0.858	855.8	15500	17100	19800	.0346	.0427	1188
Hen	477	307	0.1291	0.1291	0.3783	0.883	746.3	21000	22700	29700	.0344	.0424	1204
Parakeet	556.5	247	0.1523	0.1015	0.3045	0.914	715.9	15200	16600	19200	.0298	.0368	1306
Dove	556.5	287	0.1483	0.1138	0.3413	0.927	765.1	18200	19900	23200	.0297	.0366	1315
Eagle	556.5	307	0.1362	0.1362	0.4086	0.953	870.6	24500	26500	31100	.0295	.0363	1331
Peacock	605	247	0.1598	0.1058	0.3175	0.963	778.3	18500	18100	20800	.0274	.0339	1379
Squab	605	287	0.1525	0.1186	0.3559	0.966	831.8	19700	21300	25200	.0273	.0337	1389
Wood Duck	605	307	0.1420	0.1420	0.4290	0.994	946.5	26300	28300	33300	.0271	.0334	1407
Teal	605	3019	0.1420	0.0852	0.4290	0.994	938.6	28900	29300	34800	.0272	.0335	1406
Rook	636	247	0.1628	0.1085	0.3256	0.977	818.2	17300	19000	21900	.0281	.0322	1425
Groebek	636	287	0.1594	0.1216	0.3649	0.991	874.4	20700	22400	28000	.0280	.0321	1435
Scooter	636	307	0.1456	0.1456	0.4398	1.019	995.0	27400	29700	36000	.0258	.0316	1454
Egret	636	3019	0.1456	0.0674	0.4368	1.019	866.8	28000	30900	38600	.0258	.0319	1453
Flamingo	666.6	247	0.1667	0.1111	0.3333	1.000	857.6	18200	19900	22900	.0249	.0308	1470
Gannet	666.6	287	0.1601	0.1245	0.3736	1.014	916.4	21700	23400	27300	.0246	.0306	1480
SBR	715.5	247	0.1727	0.1151	0.3453	1.036	820.5	19500	21300	24600	.0232	.0287	1540
Starling	715.5	287	0.1659	0.1290	0.3671	1.051	863.7	22300	23900	28400	.0231	.0286	1550
Redwing	715.5	3019	0.1544	0.0927	0.4633	1.061	1110.1	30800	34000	36800	.0230	.0284	1570
Cuckoo	795	247	0.1820	0.1213	0.3640	1.092	1022.7	21700	23300	26900	.0209	.0259	1650
Drake	795	287	0.1749	0.1360	0.4080	1.107	1063.0	25900	28000	32300	.0209	.0257	1662
Macew	795	427	0.1379	0.0794	0.2293	1.055	857.5	11900	12800	14300	.0211	.0262	1621
Tim	795	457	0.1329	0.0886	0.2658	1.063	894.9	14200	15200	17400	.0210	.0263	1618
Condor	795	547	0.1213	0.1213	0.3640	1.092	1022.7	21700	23300	26900	.0209	.0256	1618
Mallard	795	3019	0.1628	0.0977	0.4884	1.139	1233.4	34300	37300	44300	.0207	.0255	1663
Ruddy	900	457	0.1414	0.0943	0.2828	1.131	1013.1	15800	17000	19200	.0186	.0233	1755
Canary	900	547	0.1291	0.1291	0.3873	1.162	1157.8	24500	26400	30500	.0184	.0236	1756
Redbird	954	247	0.1994	0.1329	0.3967	1.196	1227.3	26300	28000	32300	.0174	.0217	1859
Rail	954	457	0.1456	0.0971	0.2912	1.185	1073.9	18700	18000	20400	.0175	.0220	1824
Towhee	954	487	0.1410	0.1097	0.3290	1.175	1122.3	19700	21300	24300	.0175	.0218	1842
Cardinal	954	547	0.1329	0.1329	0.3967	1.196	1227.3	26300	28000	32300	.0174	.0223	1825
Carvesback	954	3019	0.1783	0.1070	0.5350	1.246	1480.1	41100	45400	53100	.0172	.0214	1897
Snowbird	1033.5	427	0.1589	0.0871	0.2614	1.203	1114.7	15400	16500	18500	.0162	.0204	1924
Oriban	1033.5	457	0.1515	0.1010	0.3031	1.212	1163.4	16100	16900	22000	.0162	.0204	1921
Crow	1033.5	547	0.1383	0.1383	0.4190	1.246	1329.6	28200	30300	36000	.0161	.0206	1924
Bluejay	1113	457	0.1573	0.1048	0.3145	1.258	1252.8	19500	21100	23800	.0150	.0190	2017
Finch	1113	5419	0.1436	0.0961	0.4307	1.282	1428.9	30400	33200	38700	.0150	.0193	2015
Burrito	1192.6	457	0.1628	0.1085	0.3256	1.302	1342.4	21400	23500	25400	.0140	.0178	2110
Blitem	1272	457	0.1681	0.1121	0.3362	1.345	1431.9	22300	24000	27200	.0131	.0167	2200
Phoeasant	1272	5419	0.1535	0.0921	0.4694	1.381	1633.0	34100	37300	43000	.0131	.0169	2200
Dipper	1351	457	0.1733	0.1155	0.3465	1.386	1620.8	23700	25500	28800	.0124	.0158	2289

ZHENGZHOU JINYUAN WIRE AND CABLE CO.,LTD.

BARE CONDUCTOR

Martin	1351	5419	0.1582	0.0949	0.4745	1.424	1734.5	36200	39600	45800	.0123	.0160	2288
Bobolink	1431	457	0.1783	0.1189	0.3569	1.427	1610.8	25100	27000	30500	.0117	.0150	2375
Plover	1431	5419	0.1628	0.0977	0.4884	1.465	1837.2	38400	41900	48300	.0117	.0151	2375
Nuthatch	1510	457	0.1832	0.1221	0.3964	1.465	1699.8	28500	28100	31800	.0111	.0143	2459
Parrot	1510	5419	0.1672	0.1003	0.5017	1.505	1938.6	40400	44200	51000	.0110	.0144	2460
Rattle	1590	427	0.1946	0.1081	0.3243	1.462	1715.0	23400	25000	27900	.0105	.0136	2543
Lapwing	1590	457	0.1880	0.1253	0.3759	1.504	1786.8	27900	29600	33500	.0105	.0136	2543
Falcon	1590	5419	0.1716	0.1030	0.5148	1.544	2041.4	42800	46600	53700	.0105	.0137	2545
Chukar	1780	8419	0.1456	0.0873	0.4387	1.601	2070.8	35400	38200	43900	.0094	.0122	2751
Mockingbird	2034.5	727	0.1681	0.1121	0.3362	1.681	2159.3	27200	28900	32000	.0083	.0110	2960
Roadrunner	2057	7619	0.1645	0.0768	0.3839	1.700	2245.2	31700	33900	38300	.0082	.0106	2962
Bluebird	2156	8419	0.1602	0.0961	0.4806	1.782	2508.2	42100	45500	51700	.0078	.0103	3106
Kiwi	2167	727	0.1735	0.1157	0.3470	1.735	2299.9	29000	30800	34100	.0078	.0104	3080
Thrasher	2312	7619	0.1744	0.0814	0.4070	1.802	2523.5	35800	38100	43000	.0073	.0098	3218
Jones	2515	7619	0.1819	0.0849	0.4245	1.880	2746.1	38700	41400	46800	.0067	.0092	3390

Notes:

- (1) Data based on a nominal cable manufactured in accordance with ASTM B 856.
- (2) Resistance and ampacity based on an aluminum conductivity of 62% IACS at 20°C, and a steel conductivity of 6% IACS at 20°C.
- (3) Ampacity based on 200°C cond. temperature, 25°C ambient temperature, 2 ft/sec. wind, in sun, with an emissivity of 0.5 and a coefficient of solar absorption of 0.5, at sea level.
- (4) Rated strength for standard strength core based on Class A Galvan coated steel core wire in accordance with ASTM B 802.
- (5) Rated strength for high strength core based on Class A Galvan coated high strength steel core wire in accordance with B 803.

\* Designated by "HS" (e.g. Drake/ACSS/HS)  
 \*\* Designated by "HS285" (e.g. Drake/ACSS/HS285)



1.7 ACSS/AW  
 Aluminum Conductor. Aluminum-Clad Steel Reinforce.

STANDARDS

ACSS/AW conductor meets or exceeds the following ASTM standards:

- B-609 Aluminum 1350 Round Wire, Annealed and Intermediate Tempers, for Electrical Purposes.
- B-502 Aluminum-Clad Steel Core Wire for Aluminum conductors, Aluminum-Clad Steel Reinforced.
- B-856 Concentric-Lay-Stranded Aluminum Conductors Coated Steel Supported (ACSS).  
 The stranding available are identical to those listed in ASTM specification B-232.



**CONSTRUCTION**

ACSS/AW is a composite concentric-lay-stranded conductor. Steel strands form the central core of the conductor with one or more layers of aluminum 1350-O wire stranded around it. The steel core carries most or all of the mechanical load of the conductor due to the "O" (fully annealed or soft) temper aluminum. Steel core wires are protected from corrosion by an aluminum coating.

Code word	Size (cmil)	Strand- ing (AWG)	Diameter (ins.)				Weight per 1000 ft.			Rated strength (Lbs)	Resistance $\Omega$ / 1000 ft.		Ampacity at 200°C (AMPS)
			Individual wire		Steel core	Comp. cable	AI	Steel	Total		DC at 20°C	AC at 75°C	
			AI	Steel									
Junco/ACSS/AW	266.8	30/7	.0943	.0943	.2829	.66	252	140	392	11200	.0589	.0723	841
Ostrich/ACSS/AW	300	28/7	.1074	.0835	.2508	.68	283	110	393	9360	.0534	.0656	891
Linnet/ACSS/AW	336.4	26/7	.1137	.0885	.2854	.72	317	123	440	10500	.0476	.0585	960
Oriole/ACSS/AW	336.4	30/7	.1059	.1059	.3177	.741	318	177	494	14200	.0467	.0573	979
Brannt/ACSS/AW	387.5	24/7	.1287	.0858	.2574	.772	374	116	490	10400	.0407	.0501	1061
Ibis/ACSS/AW	397.5	26/7	.1236	.0902	.2885	.783	374	146	520	12400	.0403	.0496	1071
Lark/ACSS/AW	397.5	30/7	.1151	.1151	.3453	.806	375	209	584	16700	.0395	.0486	1092
Flicker/ACSS/AW	477	24/7	.141	.094	.2819	.846	449	139	589	12500	.0339	.0418	1195
Hawk/ACSS/AW	477	26/7	.1354	.1053	.316	.858	449	175	624	14900	.0336	.0413	1207
Hen/ACSS/AW	477	30/7	.1281	.1281	.3783	.883	450	251	701	20100	.0329	.0405	1231
Parakeet/ACSS/AW	556.5	24/7	.1523	.1015	.3045	.914	524	163	687	14600	.0291	.0359	1323
Dove/ACSS/AW	556.5	26/7	.1463	.1138	.3413	.927	524	204	728	17500	.0288	.0355	1336
Eagle/ACSS/AW	556.5	30/7	.1362	.1362	.4086	.953	525	293	818	22900	.0282	.0348	1362
Peacock/ACSS/AW	605	24/7	.1588	.1058	.3175	.953	570	177	748	15900	.0267	.033	1397
Squab/ACSS/AW	605	26/7	.1525	.1186	.3559	.966	570	222	792	19000	.0265	.0327	1411
Wood duck/ACSS/AW	605	30/7	.1420	.1420	.4260	.994	571	318	889	24400	.0260	.0320	1439
Teal/ACSS/AW	605	30/19	.142	.0852	.428	.994	571	311	883	25000	.028	.032	1438
Rock/ACSS/AW	636	24/7	.1628	.1085	.3256	.977	599	188	785	16700	.0255	.0314	1444
Grobeak/ACSS/AW	636	26/7	.1564	.1216	.3649	.991	599	233	832	19900	.0252	.0311	1458
Scoter/ACSS/AW	636	30/7	.1456	.1456	.4368	1.019	600	334	935	25100	.0247	.0305	1487
Egret/ACSS/AW	636	30/19	.1456	.0874	.4368	1.019	600	327	928	26300	.0247	.0305	1486
Flamingo/ACSS/AW	666.6	24/7	.1667	.1111	.3333	1.000	628	195	823	17500	.0243	.0300	1489
Gannet/ACSS/AW	666.6	26/7	.1601	.1245	.3736	1.014	628	245	872	20900	.024	.0297	1504
Sill/ACSS/AW	715.5	24/7	.1727	.1151	.3453	1.036	674	209	883	18800	.0226	.028	1559
Starling/ACSS/AW	715.5	26/7	.1659	.129	.3871	1.051	674	263	936	22000	.0224	.0277	1578
Redwing/ACSS/AW	715.5	30/19	.1544	.0927	.4633	1.081	676	368	1044	29500	.022	.0272	1605
Cuckoo/ACSS/AW	795	24/7	.182	.1213	.384	1.092	749	232	981	20900	.0204	.0252	1671
Drake/ACSS/AW	795	26/7	.1749	.136	.408	1.107	749	292	1040	24400	.0202	.025	1688
Macaw/ACSS/AW	795	42/7	.1378	.0784	.2293	1.055	749	92	841	11400	.0209	.026	1630
Turn/ACSS/AW	795	45/7	.1329	.0886	.2658	1.063	749	124	873	13500	.0208	.026	1620
Condor/ACSS/AW	795	54/7	.1213	.1213	.384	1.092	749	232	981	15900	.0204	.026	1639
Mallard/ACSS/AW	795	30/19	.1628	.0977	.4884	1.139	751	409	1160	32900	.0198	.0245	1721
Ruddy/ACSS/AW	900	45/7	.1414	.0943	.2828	1.131	848	140	988	19300	.0183	.023	1767

Canary/ACSS/AW	900	54/7	.1291	.1291	.3873	1.162	848	263	1111	23200	.018	.023	1779
Rail/ACSS/AW	954	45/7	.1456	.0971	.2912	1.165	869	149	1047	16200	.0173	.0218	1836
Towhee/ACSS/AW	954	48/7	.141	.1087	.329	1.175	899	190	1088	19000	.0172	.0214	1858
Cardinal/ACSS/AW	954	54/7	.1329	.1329	.3987	1.198	899	279	1177	24600	.017	.0217	1848
Canvasback/ACSS/AW	954	30/19	.1783	.107	.535	1.248	901	491	1392	39400	.0185	.0205	1939
Snowbird/ACSS/AW	1033.5	42/7	.1569	.0871	.2814	1.203	973	120	1093	14800	.0161	.0202	1934
Curlew/ACSS/AW	1033.5	54/7	.1383	.1383	.415	1.245	973	302	1275	26100	.0157	.0201	1948
Bluejay/ACSS/AW	1113	45/7	.1573	.1048	.3145	1.258	1048	173	1222	18900	.0148	.0188	2031
Finch/ACSS/AW	1113	54/19	.1436	.0861	.4307	1.292	1053	318	1372	28900	.0146	.0188	2040
Bunting/ACSS/AW	1192.5	45/7	.1628	.1085	.3256	1.302	1123	186	1306	20300	.0138	.0176	2124
Grackle/ACSS/AW	1192.5	54/19	.1486	.0862	.4458	1.337	1129	341	1470	30800	.0137	.0176	2135
Blitern/ACSS/AW	1272	45/7	.1681	.1121	.3362	1.345	1198	198	1396	21600	.013	.0165	2215
Phasian/ACSS/AW	1272	54/19	.1535	.0921	.4604	1.381	1204	364	1568	32800	.0128	.0165	2227
Dipper/ACSS/AW	1351	45/7	.1733	.1155	.3465	1.386	1272	210	1483	23000	.0122	.0156	2304
Martin/ACSS/AW	1351	54/19	.1562	.0949	.4745	1.424	1279	386	1665	34900	.012	.0156	2307
Bobolink/ACSS/AW	1431	45/7	.1783	.1189	.3686	1.427	1348	223	1571	24300	.0115	.0148	2391
Plover/ACSS/AW	1431	54/19	.1628	.0977	.4884	1.465	1354	409	1784	36900	.0114	.0148	2405
Nuthatch/ACSS/AW	1510	45/7	.1832	.1221	.3664	1.485	1422	235	1857	25700	.0109	.0141	2478
Parrot/ACSS/AW	1510	54/19	.1672	.1003	.5017	1.505	1429	432	1861	38900	.0108	.0141	2491
Lapwing/ACSS/AW	1590	45/7	.168	.1253	.3759	1.504	1498	248	1745	27000	.0104	.0134	2590
Falcon/ACSS/AW	1590	54/19	.1716	.103	.5148	1.544	1505	455	1960	41100	.0102	.0134	2578
Chukar/ACSS/AW	1780	84/19	.1456	.0873	.4367	1.601	1685	327	2012	33600	.0093	.012	2772
Mockingbird/ACSS/AW	2034.5	72/7	.1681	.1121	.3362	1.681	1928	198	2124	28900	.0082	.0109	2972
Roadrunner/ACSS/AW	2057	76/19	.1645	.0788	.3839	1.7	1947	253	2200	30300	.0081	.0108	3007
Bluebird/ACSS/AW	2166	84/19	.1602	.0961	.4806	1.762	2041	396	2437	40700	.0077	.0102	3130
Kill/ACSS/AW	2167	72/7	.1735	.1157	.347	1.735	2051	211	2262	28200	.0077	.0104	3092
Thresher/ACSS/AW	2312	76/19	.1744	.0814	.407	1.802	2188	284	2472	34100	.0072	.0087	3235
Joree/ACSS/AW	2515	76/19	.1819	.0849	.4245	1.88	2380	309	2889	37100	.0066	.0091	3407

Notes:

- (1) Data based on a nominal cable manufactured in accordance with ASTM B556.
- (2) Resistance and ampacity based on an aluminum conductivity of 63% IACS at 20°C, and an aluminum-clad steel conductivity of 20.3% IACS at 20°C.
- (3) Ampacity based on 200°C cond. temperature, 25°C ambient temperature, 20/10sec. wind in sun, with emissivity of 0.5 and a coefficient of solar absorption of 0.5, at sea level.
- (4) Rated strength based on aluminum-clad steel core in accordance with ASTM B502.



1.8 Copper-Clad Steel Stranded Conductor to ASTM B 228

No./size of strands	Structure No./mm	Cross-section mm <sup>2</sup>	Rated strength kN			DC Resistance Ω/km		Approx. weight kg/km	
			Grade 40 HS	Grade 30 HS	Grade 30 EHS	Grade 40	Grade 30	Grade 30	Grade 40
3 No. 5	3/4.62	50.32	37.30	41.20	52.80	0.881	1.174	413.41	417.73
3 No. 6	3/4.11	39.80	30.90	34.00	43.40	1.111	1.481	327.84	331.26
3 No. 7	3/3.67	31.65	25.50	28.00	35.30	1.401	1.867	259.39	262.66
3 No. 8	3/3.28	25.10	21.10	23.00	27.95	1.766	2.354	206.11	208.34
3 No. 9	3/2.91	19.90	17.13	18.90	22.80	2.227	2.969	163.55	165.19
3 No. 10	3/2.59	15.78	14.35	15.80	18.50	2.808	3.744	129.62	130.99
3 No. 12	3/2.05	9.90	7.65	...	...	4.465	...	81.551	82.414
7 No. 4	7/6.19	148.10	99.30	110.30	130.90	0.300	0.400	1218.7	1231.5
7 No. 5	7/4.62	117.40	82.40	91.10	109.70	0.378	0.504	966.41	976.53
7 No. 6	7/4.11	93.10	68.20	75.20	91.00	0.477	0.636	798.25	774.29
7 No. 7	7/3.67	73.87	56.40	61.90	75.20	0.601	0.802	608.06	614.40
7 No. 8	7/3.28	58.56	46.60	50.80	61.80	0.759	1.011	482.02	487.07
7 No. 9	7/2.91	46.44	38.40	41.20	50.20	0.956	1.275	382.16	386.18
7 No. 10	7/2.59	36.63	30.90	34.00	40.90	1.206	1.60	303.14	306.26
19 No. 5	19/4.62	318.70	223.50	247.20	297.60	0.140	0.187	2834	2860.8
19 No. 6	19/4.11	252.70	185.10	203.90	247.00	0.176	0.236	2087.9	2110.2
19 No. 7	19/3.67	200.40	153.00	167.90	204.00	0.222	0.297	1656.3	1674.2
19 No. 8	19/3.28	158.90	126.30	138.10	167.70	0.281	0.374	1313.6	1327.2
19 No. 9	19/2.91	126.10	104.10	113.50	136.20	0.354	0.471	1041.7	1052.6

1.9 Aluminum-Clad Steel Wire to ASTM B 415

Nominal diameter		Cross-section mm <sup>2</sup>	Min. tensile strength MPa	Calculated breaking load kN	Min. coating thickness mm	Max. DC resistance at 20°C Ω/km	Approx. weight kg/km
mm	AWG						
2.052	12	3.307	1340	4.5	0.103	25.64	21.80
2.304	11	4.169	1340	5.6	0.116	20.34	27.49
2.589	10	5.260	1340	7.1	0.130	16.12	34.66
2.904	9	6.633	1340	8.9	0.145	12.78	43.65
3.264	8	8.367	1340	11.2	0.163	10.14	55.14
3.477	7	9.495	1310	12.4	0.174	8.93	62.67
3.965	7	10.55	1280	13.5	0.183	8.04	69.48
3.934	6	12.16	1240	15.1	0.197	6.93	80.13
4.115	6	13.30	1210	16.0	0.206	6.38	87.62
4.362	5	15.15	1170	17.7	0.220	5.60	98.84
4.620	5	16.78	1140	19.1	0.231	5.06	110.50
4.775	4	17.91	1100	19.7	0.239	4.73	118.0
5.189	4	21.15	1070	22.6	0.259	4.01	139.34



1.10 Aluminum-Clad Steel Stranded Conductor to ASTM B 416

No./size of strands	Cross-section mm <sup>2</sup>	No. of wires	Diameter		Approx. weight kg/km	Rated strength kN	Max. DC resistance at 20°C Ω/km
			Wire mm	Conductor mm			
3 No. 5	50.32	3	4.62	9.96	334.1	54.42	1.6990
3 No. 6	39.80	3	4.11	8.87	285.0	45.74	2.1420
3 No. 7	31.65	3	3.67	7.90	210.1	38.36	2.7010
3 No. 8	25.10	3	3.28	7.03	166.7	32.06	3.4060
3 No. 9	19.90	3	2.91	6.26	132.2	25.43	4.2940
3 No. 10	15.78	3	2.59	5.58	104.8	20.16	5.4150
7 No. 5	117.40	7	4.62	13.90	781.1	120.27	0.7428
7 No. 6	93.10	7	4.11	12.40	619.5	101.14	0.9196
7 No. 7	73.87	7	3.67	11.00	491.1	84.81	1.1600
7 No. 8	58.56	7	3.28	9.78	389.6	70.88	1.4630
7 No. 9	46.44	7	2.91	8.71	308.9	56.20	1.8440
7 No. 10	36.63	7	2.59	7.76	245.1	44.58	2.3250
7 No. 11	29.21	7	2.30	6.91	194.4	35.35	2.9320
7 No. 12	23.16	7	2.05	6.16	154.2	28.03	3.6970
19 No. 5	318.70	19	4.62	23.10	2129.0	326.39	0.2696
19 No. 6	252.70	19	4.11	20.60	1688.0	274.55	0.3402
19 No. 7	200.40	19	3.67	18.30	1338.0	230.18	0.4290
19 No. 8	158.90	19	3.28	16.30	1062.0	192.41	0.5409
19 No. 9	126.10	19	2.91	14.50	842.0	152.58	0.6821
19 No. 10	99.96	19	2.59	12.90	667.7	121.00	0.8601
37 No. 5	620.60	37	4.62	32.30	4170.0	635.43	0.1394
37 No. 6	492.20	37	4.11	28.80	3307.0	534.85	0.1757
37 No. 7	390.30	37	3.67	25.70	2623.0	448.09	0.2216
37 No. 8	306.50	37	3.28	22.90	2080.0	374.67	0.2794
37 No. 9	245.50	37	2.91	20.30	1649.0	279.11	0.3523
37 No. 10	194.70	37	2.59	17.90	1308.0	235.61	0.4443



1.11 Galvanized Steel Wire Strand to ASTM A 475

Number of wires/ Nominal dia.	Approx. strand dia.		Utilities grade	Common grade	Siemens-martin grade	High-strength grade	Extra high-strength grade	Approx. weight
	Inch	mm						
3/2.64	7/32	5.56	-	6.228	10.409	15.569	21.796	131
3/3.05	1/4	6.35	14.012	8.274	13.523	21.040	29.991	174
3/3.05	1/4	6.35	20.017	-	-	-	-	174
3/3.30	9/32	7.14	-	9.252	15.035	23.398	33.362	204
3/3.68	5/16	7.94	28.913	11.076	18.193	28.246	40.479	255
3/4.19	3/8	9.52	37.810	14.813	24.732	37.187	52.489	328
7/1.04	1/8	3.18	-	2.402	4.048	5.916	8.140	48
7/1.32	5/32	3.97	-	3.870	6.539	9.519	13.078	76
7/1.57	3/16	4.78	-	5.115	8.452	12.677	17.748	109
7/1.65	3/16	4.78	10.678	-	-	-	-	119
7/1.83	7/32	5.56	-	6.850	11.387	17.126	24.020	146
7/2.03	1/4	6.35	-	8.452	14.012	21.329	29.581	180
7/2.36	9/32	7.14	20.462	11.432	18.905	28.469	39.812	244
7/2.64	5/16	7.94	-	14.234	23.798	35.586	49.820	305
7/2.77	5/16	7.94	28.989	-	-	-	-	335
7/3.05	3/8	9.52	51.155	18.905	30.915	48.040	68.503	407
7/3.68	7/16	11.11	80.088	25.355	41.591	64.499	92.523	595
7/4.19	1/2	12.70	111.206	32.917	53.823	83.827	119.657	770
7/4.78	9/16	14.29	-	42.703	69.837	108.981	155.688	1000
7/5.26	5/8	15.88	-	51.599	84.961	131.887	188.605	1211
19/2.54	1/2	12.70	-	33.895	56.462	84.961	118.768	751
19/2.87	9/16	12.49	-	42.881	71.616	107.202	149.905	949
19/3.18	5/8	15.88	-	48.930	80.513	124.995	178.819	1186
19/3.81	3/4	19.05	-	71.172	116.543	181.487	259.331	1721
19/4.50	7/8	22.22	-	97.416	159.891	248.211	354.523	2356
19/5.08	1	25.40	-	127.864	209.066	325.610	464.839	3089
37/3.63	1	25.40	-	125.885	205.508	319.827	456.832	3065
37/4.09	1 1/8	28.58	-	180.136	282.000	407.457	581.827	4010
37/4.55	1 1/4	31.75	-	198.391	324.720	505.318	721.502	4840

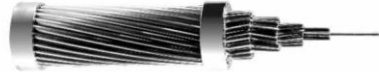
PART 2 BARE CONDUCTOR AS PER BS STANDARDS



2.1 AAC

All Aluminum Conductor to BS 215-1

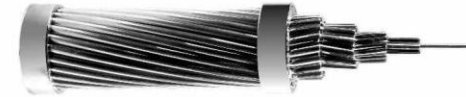
Code name	Nominal aluminum area	Stranding and wire diameter	Sectional area	Overall diameter	Linear mass	Max. DC resistance at 20°C	Rated strength	Final modulus of elasticity	Coefficient of linear expansion
	mm <sup>2</sup>								
Midge	22	7/2.06	23.33	6.16	63.8	1.227	399	5900	23.0x10 <sup>-6</sup>
Aphis	25	3/3.35	26.40	7.2	73	1.081	411	5900	23.0x10 <sup>-6</sup>
Gnat	25	7/2.21	26.8	6.8	73	1.066	459	5900	23.0x10 <sup>-6</sup>
Weevil	30	3/3.66	31.6	7.9	86	0.962	486	5900	23.0x10 <sup>-6</sup>
Mosquito	35	7/2.59	37.0	7.8	101	0.7762	603	5900	23.0x10 <sup>-6</sup>
Ladybird	40	7/2.79	42.8	8.4	117	0.6689	687	5900	23.0x10 <sup>-6</sup>
Ant	50	7/3.10	52.83	9.30	145	0.5419	828	5900	23.0x10 <sup>-6</sup>
Fly	60	7/3.40	63.55	10.20	174	0.4505	990	5900	23.0x10 <sup>-6</sup>
Bluebottle	70	7/3.66	73.7	11.0	202	0.3881	1134	5900	23.0x10 <sup>-6</sup>
Earwig	75	7/3.78	78.5	11.4	215	0.3644	1194	5900	23.0x10 <sup>-6</sup>
Grasshopper	80	7/3.91	84.1	11.7	230	0.3406	1278	5900	23.0x10 <sup>-6</sup>
Clegg	90	7/4.17	95.6	12.5	262	0.2994	1453	5900	23.0x10 <sup>-6</sup>
Wasp	100	7/4.39	106.0	13.17	290	0.2702	1600	5900	23.0x10 <sup>-6</sup>
Beetle	100	19/2.67	106.0	13.4	293	0.2704	1742	5900	23.0x10 <sup>-6</sup>
Bee	125	7/4.90	132.0	14.7	361	0.2189	1944	5900	23.0x10 <sup>-6</sup>
Cricket	150	7/5.36	157.9	16.1	432	0.1818	2385	5900	23.0x10 <sup>-6</sup>
Hornet	150	19/3.25	157.9	16.25	434	0.1825	2570	5900	23.0x10 <sup>-6</sup>
Caterpillar	175	19/3.53	186	17.7	512	0.1547	2863	5900	23.0x10 <sup>-6</sup>
Chaffer	200	19/3.78	213.2	18.9	587	0.1349	3240	5900	23.0x10 <sup>-6</sup>
Spider	225	19/3.99	239.9	20.0	652	0.1211	3601	5900	23.0x10 <sup>-6</sup>
Cockroach	250	19/4.22	265.7	21.10	731	0.1083	4040	5900	23.0x10 <sup>-6</sup>
Butterfly	300	19/4.65	322.7	23.25	888	0.08916	4875	5900	23.0x10 <sup>-6</sup>
Moth	350	19/5.00	373.2	25.0	1027	0.07711	5637	5900	23.0x10 <sup>-6</sup>
Drone	350	37/3.58	373.3	25.1	1029	0.07741	5745	5900	23.0x10 <sup>-6</sup>
Locust	400	19/5.38	428.5	26.8	1179	0.06710	6473	5900	23.0x10 <sup>-6</sup>
Centipede	400	37/3.78	415.2	26.46	1145	0.06944	6310	5900	23.0x10 <sup>-6</sup>
Maybug	450	37/4.09	486.9	28.6	1342	0.05931	7401	5900	23.0x10 <sup>-6</sup>
Scorpion	500	37/4.27	529.5	29.9	1460	0.05441	7998	5900	23.0x10 <sup>-6</sup>
Cicada	600	37/4.65	628.6	32.6	1733	0.04588	9495	5900	23.0x10 <sup>-6</sup>
Termitula	750	37/5.23	794.6	36.6	2191	0.03627	12010	5900	23.0x10 <sup>-6</sup>



2.2 ACSR

Aluminum Conductor Steel Reinforced to BS 215-2

Code name	Area				Stranding			Approx. overall diameter	Weight			Rated strength	Max. DC resistance at 20 °C
	Nominal	Alumi.	Steel	Total	Alumi.	Steel	Alumi.		Steel	Total			
	mm <sup>2</sup>										mm <sup>2</sup>		
Mole	10	10.62	1.77	12.39	0/1.50	1/1.50	4.50	29	14	43	4.14	2.078	
Squirrel	20	20.94	3.49	24.43	0/2.11	1/2.11	6.33	58	27	85	7.88	1.368	
Gopher	25	26.25	4.37	30.62	0/2.36	1/2.36	7.08	72	34	106	9.61	1.093	
Weasel	30	31.61	5.27	36.88	0/2.59	1/2.59	7.77	87	41	128	11.45	0.9077	
Fox	35	36.66	6.11	42.77	0/2.79	1/2.79	8.37	101	48	149	13.20	0.7822	
Ferret	40	42.41	7.07	49.48	0/3.00	1/3.00	9.00	117	55	172	15.20	0.6766	
Rabbit	50	52.88	8.82	61.70	0/3.35	1/3.35	10.05	145	69	214	18.35	0.5426	
Mink	60	63.18	10.53	73.71	0/3.66	1/3.66	10.98	173	82	255	21.80	0.4545	
Skunk	60	63.27	36.93	100.30	1/2.59	7/2.59	12.95	175	290	465	53.00	0.4567	
Beaver	70	74.82	12.47	87.29	0/3.99	1/3.99	11.97	205	97	302	25.70	0.3825	
Horse	70	73.37	42.80	116.17	1/2.79	7/2.79	13.95	203	335	538	61.20	0.3936	
Raccoon	75	79.20	13.20	92.40	0/4.10	1/4.10	12.30	217	103	320	27.20	0.3622	
Otter	80	83.88	13.98	97.86	0/4.22	1/4.22	12.66	230	109	339	28.80	0.3419	
Cat	90	95.40	15.90	111.30	0/4.50	1/4.50	13.50	262	124	386	32.70	0.3007	
Hare	100	105.00	17.50	122.50	0/4.72	1/4.72	14.16	288	137	425	36.00	0.2733	
Dog	100	105.00	13.60	118.50	0/4.72	7/1.57	14.15	288	106	394	32.70	0.2733	
Hyena	100	105.80	20.44	126.20	7/4.39	7/1.93	14.57	290	160	450	40.90	0.2712	
Leopard	125	131.30	16.80	148.10	0/5.28	7/1.75	15.81	360	132	492	40.70	0.2184	
Coyote	125	132.10	20.10	152.20	26/0.54	7/1.91	15.89	365	157	522	46.40	0.2187	
Cougar	125	130.30	7.25	137.50	18/0.05	1/0.05	15.25	362	57	419	29.80	0.2189	
Tiger	125	131.10	30.60	161.70	30/2.36	7/2.36	16.52	392	240	602	58.00	0.2202	
Wolf	150	158.00	36.90	194.90	30/2.59	7/2.59	18.13	437	289	728	69.20	0.1828	
Dingo	150	158.70	8.80	167.50	18/3.35	1/3.35	16.75	437	69	506	35.70	0.1815	
Lynx	175	183.40	42.80	226.20	30/2.79	7/2.79	19.53	507	335	842	79.80	0.1576	
Caracal	175	184.20	10.30	194.50	18/3.81	1/3.81	18.05	507	80	587	41.10	0.1563	
Panther	200	212.00	49.50	261.50	30/3.00	7/3.00	21.00	596	388	974	92.25	0.1363	
Lion	225	238.50	55.80	294.20	30/3.18	7/3.18	22.26	659	436	1095	109.60	0.1212	
Bear	250	264.00	61.60	325.60	30/3.35	7/3.35	23.45	730	483	1213	111.10	0.1093	
Goat	300	324.30	75.70	400.00	30/3.71	7/3.71	25.97	896	593	1469	135.70	0.0891	
Sheep	350	374.10	87.30	461.40	30/3.96	7/3.96	27.93	1034	684	1718	155.90	0.07704	
Antelope	350	373.10	48.40	421.50	54/2.97	7/2.97	26.73	1032	379	1411	118.20	0.07727	
Bison	350	381.80	49.50	431.30	54/3.00	7/3.00	27.00	1058	388	1444	120.90	0.07573	
Jaguar	200	210.60	11.70	222.30	18/3.86	1/3.86	18.30	580	91	671	46.55	0.13670	
Deer	400	429.30	100.20	529.50	30/4.27	7/4.27	29.89	1196	785	1971	178.50	0.06728	
Zebra	400	428.90	55.60	484.50	54/3.18	7/3.18	28.82	1196	435	1621	131.90	0.06740	
Elk	450	477.00	111.30	588.30	30/4.50	7/4.50	31.50	1318	872	2190	198.20	0.06056	
Camel	450	475.20	61.60	536.80	54/3.35	7/3.35	30.15	1314	483	1787	145.70	0.06073	
Moose	500	528.70	66.50	595.20	54/3.53	7/3.53	31.77	1462	537	1999	161.10	0.05470	



2.3 AAAC

All Aluminum Alloy Conductor to BS 3242

Code name	Nominal area	Stranding	Sectional area	Diameter of conductor	Linear mass	Rated strength	Max. DC resistance at 20 °C
	mm <sup>2</sup>	No./mm	mm <sup>2</sup>	mm	kg/km	kgf	Ω/km
Box	15	7/1.85	18.82	5.55	51	537	1.7465
Acacia	20	7/2.08	23.79	6.24	65	680	1.3840
Almond	25	7/2.34	30.10	7.02	82	861	1.0934
Cedar	30	7/2.54	35.47	7.62	97	1014	0.9281
-	35	7/2.77	42.18	8.31	115	1205	0.7804
Fir	40	7/2.95	47.87	8.85	131	1367	0.6880
Hazel	50	7/3.30	59.87	9.9	164	1711	0.5498
Pine	60	7/3.61	71.65	10.83	196	2048	0.4594
-	70	7/3.91	84.05	11.73	230	2402	0.3917
Willow	75	7/4.04	89.73	12.12	245	2565	0.3699
-	80	7/4.19	96.52	12.57	264	2758	0.3441
-	90	7/4.44	108.00	13.32	298	3112	0.3023
Oak	100	7/4.65	118.90	13.95	325	3398	0.2769
-	100	19/2.62	118.70	14.1	326	3393	0.2787
Mulberry	125	19/3.18	150.90	15.9	415	4312	0.2192
Ash	150	19/3.48	180.70	17.4	497	5164	0.1831
Elm	175	19/3.76	211.00	18.8	580	6030	0.1568
Poplar	200	37/2.87	239.40	20.09	659	6841	0.1385
-	225	37/3.05	270.30	21.35	744	7724	0.1227
Sycamore	250	37/3.22	303.20	22.54	835	8664	0.1093
Upas	300	37/3.53	362.10	24.71	967	10350	0.09156
Walnut	350	37/3.81	421.80	26.87	1162	12053	0.07860
Yew	400	37/4.06	479.00	28.42	1319	13685	0.06921
Totara	425	37/4.14	498.10	28.98	1372	14233	0.06656
Rubus	500	61/3.50	586.90	31.5	1620	16771	0.05662
Araucaria	700	61/4.14	821.10	37.26	2298	23450	0.04047



2.4 Galvanized Steel Wire Strand to BS 183

No. of wires / Nominal dia.	Approx. strand dia. mm	Rated strength							Approx. weight kg/km
		Grade 350 kN	Grade 480 kN	Grade 700 kN	Grade 850 kN	Grade 1000 kN	Grade 1150 kN	Grade 1300 kN	
3/1.80	3.9	2.65	3.68	-	-	-	-	-	80
3/2.65	5.7	5.90	7.95	-	-	-	-	-	130
3/3.25	7.0	8.70	11.95	-	-	-	-	-	195
3/4.00	8.6	13.20	18.10	-	-	-	-	-	285
4/1.80	4.4	3.55	4.90	-	-	-	-	-	80
4/2.65	6.4	7.70	10.60	-	-	-	-	-	172
4/3.25	7.9	11.60	15.90	-	-	-	-	-	260
4/4.00	9.7	17.80	24.10	35.20	-	-	-	-	390
5/1.50	4.1	3.10	4.24	6.18	-	-	-	-	69
5/1.80	4.9	4.45	6.10	8.90	-	-	-	-	95
5/2.65	7.2	9.65	13.25	19.30	-	-	-	-	220
5/3.25	8.8	14.50	19.90	29.00	-	-	-	-	320
5/4.00	10.8	22.00	30.15	43.95	-	-	-	-	490
7/0.56	1.7	0.60	0.83	1.20	-	1.70	1.98	2.24	14
7/0.71	2.1	0.97	1.33	1.94	-	2.75	3.19	3.60	28
7/0.85	2.6	1.39	1.90	2.80	-	3.95	4.57	5.15	31
7/0.90	2.7	1.55	2.14	3.1	-	4.45	5.12	5.80	35
7/1.00	3.0	1.92	2.64	3.85	-	5.50	6.32	7.15	43
7/1.25	3.8	3.01	4.10	6.00	-	8.55	9.88	11.15	67
7/1.40	4.2	3.75	5.17	7.54	9.16	10.75	12.35	14.00	84
7/RS	4.3	3.85	5.28	7.70	9.35	11.00	12.65	14.30	86
7/1.60	4.8	4.90	6.75	9.85	11.95	14.10	16.20	18.30	110
7/1.80	5.4	6.23	8.55	12.45	-	17.80	20.50	23.20	140
7/2.00	6.0	7.70	10.55	15.40	-	22.0	25.30	28.60	170
7/2.38	7.1	10.70	14.70	21.40	-	30.60	35.20	39.80	240
7/2.65	8.0	13.50	18.50	27.00	-	38.60	44.40	50.20	300
7/3.00	9.0	17.30	23.75	34.65	-	49.50	56.90	64.30	392
7/3.15	9.5	19.10	26.20	38.20	-	54.56	62.75	70.90	430
7/3.25	9.8	20.30	27.85	40.65	-	58.05	66.80	75.50	460
7/3.65	11.0	25.60	35.15	51.25	-	73.25	84.20	95.20	570
7/4.00	12.0	30.90	42.20	61.80	-	88.00	101.0	114.00	690
7/4.25	12.8	34.75	47.65	69.50	-	99.30	114.0	129.00	780
7/4.75	14.0	43.40	59.45	86.80	-	124.0	142.7	161.3	970
19/1.00	5.0	5.22	7.16	10.45	-	14.92	17.16	19.40	120
19/1.25	6.3	8.16	11.19	16.32	-	23.32	26.81	30.31	180
19/1.40	7.0	10.24	14.04	20.47	-	29.25	33.64	38.02	230
19/1.60	8.0	13.37	18.35	26.75	-	38.20	43.93	49.66	300
19/2.00	10.0	20.90	28.65	41.78	50.74	59.69	68.64	77.80	470
19/2.50	12.5	32.85	44.80	65.29	79.28	93.27	107.3	121.3	730
19/3.00	15.0	47.90	64.90	94.90	114.1	134.3	154.5	174.6	1050
19/3.55	17.8	65.80	90.27	131.9	159.9	188.0	216.3	244.5	1470
19/4.00	20.0	83.55	114.6	167.1	203.0	238.7	274.6	310.4	1870
19/4.75	23.8	117.85	161.6	235.7	286.0	336.7	387.2	437.7	2630

\*Construction of this strand consists of six wires of 1.40 mm diameter on a centre wire of 1.50 mm diameter. The diameter of the centre wire shall not be less than 0.08 mm nor more than 0.12 mm greater than the diameter of the outer wire.

PART 3 BARE CONDUCTOR AS PER DIN STANDARDS



3.1 AAC

All Aluminum Conductor to DIN 48201

Size	Calculated area	Stranding and wire diameter	Overall diameter	Linear mass	Rated strength	Max. DC resistance at 20°C
mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	kg/km	daN	D/km
16	15.89	7/1.70	5.1	44	290	1.8018
25	24.25	7/2.10	6.3	67	425	1.1808
35	34.36	7/2.50	7.5	94	585	0.8332
50	49.48	7/3.00	9.0	135	810	0.5786
50	48.38	19/1.80	9.0	133	860	0.5960
70	65.82	19/2.10	10.5	181	1150	0.4371
95	93.27	19/2.50	12.5	256	1595	0.3084
120	117.00	19/2.90	14.0	322	1910	0.2469
150	147.10	37/2.25	15.2	406	2570	0.1900
185	181.60	37/2.50	17.5	501	3105	0.1587
240	242.54	61/2.25	20.2	670	4015	0.1191
300	296.43	61/2.50	22.5	827	4850	0.09650
400	400.14	61/2.89	26.0	1105	6190	0.07221
500	499.83	61/3.23	29.1	1381	7690	0.05781
625	628.20	91/2.96	32.6	1733	9690	0.04625
800	802.10	91/3.35	36.8	2219	12055	0.03611
1000	999.71	91/3.74	41.1	2766	14845	0.02897



3.2 AAAC

All Aluminum Alloy Conductor to DIN 48201

Code number	Calculated area mm <sup>2</sup>	Number of wires	Diameter of wire mm	Overall diameter of conductor mm	Linear mass kg/km	Rated tensile strength daN	Max. DC resistance at 20°C Ω/km
25	24.25	7	2.10	6.3	66	677	1.3703
35	34.36	7	2.50	7.5	94	960	0.9669
50	49.48	7	3.00	8.0	135	1382	0.6714
50	48.35	19	1.80	9.0	133	1350	0.8905
70	65.81	19	2.10	10.5	161	1638	0.5073
95	93.27	19	2.50	12.5	256	2095	0.3579
120	116.99	19	2.80	14.0	322	3268	0.2854
150	147.11	37	2.25	15.8	406	4109	0.2274
185	181.62	37	2.50	17.5	500	5073	0.1842
240	242.54	61	2.25	20.3	670	6774	0.1383
300	299.43	61	2.50	22.5	827	8363	0.1120
400	400.14	61	2.89	26.0	1104	11176	0.0838
500	499.63	61	3.23	29.1	1379	13960	0.06709
625	628.20	91	2.96	32.6	1732	17490	0.0540
800	802.09	91	3.35	36.9	2218	22402	0.0418
1000	999.71	91	3.74	41.1	2767	27922	0.0335



3.3 ACSR

Aluminum Conductor Steel Reinforced to DIN 48204

Code number	Calculated area			Stranding and wire diameter		Overall diameter	Linear mass			Rated strength	Max. DC resistance at 20°C
	Al/ST	Al	Steel	Total	Al		Steel	Al	Steel		
mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	mm	kg/km	kg/km	kg/km	daN	Ω/km
16/2.5	15.3	2.5	17.8	6/1.80	1/1.80	5.4	42	20	62	595	1.8790
25/4	23.8	4.0	27.8	6/2.25	1/2.25	6.8	65	32	97	920	1.2002
35/6	34.3	5.7	40.0	6/2.70	1/2.70	8.1	94	46	140	1265	0.8352
44/32	44.0	31.7	75.7	14/2.00	7/2.40	11.2	122	250	372	4500	0.6573
50/8	48.3	8.0	56.3	6/3.20	1/3.20	9.6	132	64	196	1710	0.5946
50/30	51.2	29.8	81.0	12/2.33	7/2.33	11.7	141	237	378	4380	0.5643
70/12	69.9	11.4	81.3	26/1.85	7/1.44	11.7	193	91	284	2890	0.4130
95/15	94.4	15.3	109.7	26/2.15	7/1.67	13.6	260	123	383	3575	0.3058
95/56	96.5	56.3	152.8	12/3.20	7/3.20	16.0	266	446	712	7935	0.2992
105/75	105.7	75.5	181.5	14/3.10	6/2.25	17.5	292	599	891	10645	0.2735
120/20	121.06	19.8	141.4	26/2.44	7/1.90	15.5	336	158	494	4565	0.2374
120/70	122.0	71.3	193.3	12/3.6	7/3.60	18.0	337	564	901	10000	0.2394
125/30	127.9	29.8	157.7	30/2.33	7/2.33	16.3	353	238	591	5760	0.2259
150/25	148.9	24.2	173.1	26/2.70	7/2.10	17.1	411	194	605	5525	0.1939
170/40	171.8	40.1	211.9	30/2.70	7/2.70	18.9	475	319	794	7875	0.1682
185/30	183.8	29.8	213.6	26/3.00	7/2.33	19.0	507	239	746	6620	0.1571
210/35	209.1	34.1	243.2	26/3.20	7/2.49	20.3	577	273	850	7490	0.1380
210/50	212.1	49.5	261.6	30/3.00	7/3.00	21.0	587	394	981	9390	0.1362
230/30	230.9	29.8	260.7	24/3.60	7/2.33	21.0	638	239	877	7310	0.1249
240/40	243.0	39.5	282.5	26/3.45	7/2.68	21.9	671	316	987	8640	0.1188
265/35	263.7	34.1	297.8	24/3.74	7/2.49	22.4	728	274	1002	8305	0.1094
300/50	304.3	49.5	353.7	26/3.88	7/3.00	24.5	840	396	1236	10700	0.09487
305/40	304.6	39.5	344.1	54/2.68	7/2.68	24.1	843	317	1160	9940	0.09490
340/30	339.3	29.8	369.1	48/3.00	7/2.33	25.0	938	242	1180	9290	0.08509
380/50	382.0	49.5	431.5	54/3.00	7/3.00	27.0	1056	397	1453	12310	0.08509
385/35	386.0	34.1	420.1	48/3.20	7/2.49	26.7	1067	277	1344	10480	0.07573
435/55	434.03	59.3	490.6	54/3.20	7/3.20	28.8	1203	450	1653	13645	0.07478
450/40	448.7	39.5	488.2	48/3.45	7/2.68	28.7	1241	320	1561	12075	0.06956
490/65	490.3	63.6	553.9	54/3.40	7/3.40	30.6	1356	510	1866	15310	0.06434
495/35	494.1	34.1	528.2	45/3.74	7/2.49	29.9	1383	283	1666	12180	0.05846
510/45	510.2	45.3	555.5	48/3.68	7/2.67	30.7	1413	365	1778	13665	0.05655
550/70	550.0	71.3	621.3	54/3.60	7/3.60	32.4	1520	572	2092	17060	0.05259
560/50	561.7	49.5	611.2	48/3.88	7/3.00	32.2	1553	401	1954	14895	0.05140
570/40	565.5	39.5	610.3	45/4.02	7/2.68	32.2	1563	325	1888	13900	0.05108
650/45	656.8	45.3	653.49	45/4.30	7/2.67	34.4	1791	372	2163	15562	0.0442
880/85	678.8	86.0	764.8	54/4.00	19/2.40	36.0	1868	702	2570	21040	0.04280
1045/45	1045.58	45.3	1090.9	72/4.30	7/2.67	43.0	2879	370	3249	21787	0.0277