



AAAC (All Aluminum Alloy Conductor)

ASTM CONDUCTOR SIZES - METRIC UNITS													
Code Word	Nominal Size (KCM)	Diameter (mm)				Weight ¹ (kg/km)	Rated Strength ² (kg)	Resistance ³ Ohms/km		Current Rating ⁴ (Amps)	Size (mm ²)	ACSR With Equiv. Diam Stranding (Al/Stl)	Approx EC Cond. With Equivalent Resistance
		Nominal Size (mm ²)	Strand	Indiv. Wires	Compl. Cable			DC@ 20 °C	AC@ 75 °C				
Akron	30-58	15.50	7	1.679	5.04	42.7	503	2.16	2.57	107	13.30	6/1	13.30
Alton	48.69	24.67	7	2.118	6.36	68.0	798	1.36	1.62	143	21.15	6/1	21.15
Ames	77.47	39.25	7	2.672	8.02	108.2	1270	.853	1.02	191	33.63	6/1	33.63
Azusa	123.3	62.48	7	3.371	10.11	172.2	2023	.536	.639	256	53.31	6/1	53.51
Anaheim	155.4	78.74	7	3.785	11.35	217.1	2445	.425	.509	296	67.44	6/1	67.44
Amherst	195.7	99.16	7	4.247	12.74	273.3	3080	.338	.403	342	85.03	6/1	85.03
Alliance	246.9	125.1	7	4.770	14.31	344.9	3883	.268	.319	395	107.22	6/1	107.2
Butte	312.8	158.5	19	3.259	16.29	436.9	4989	.211	.252	460	135.19	26/7	135.2
Canton	394.5	199.9	19	3.660	18.30	551.1	6033	.168	.200	532	170.46	26/7	170.5
Cairo	465.4	235.8	19	3.975	19.88	650.0	7076	.142	.170	590	201.42	26/7	201.4
Darien	559.5	283.5	19	4.359	21.79	781.5	8527	.118	.142	663	241.70	26/7	241.7
Elgin	652.4	330.6	19	4.707	23.53	911.3	9934	.101	.122	729	281.98	26/7	282.0
Flint	740.8	375.4	37	3.594	25.16	1035.0	11068	.0892	.107	790	322.27	26/7	322.3
Greely	927.2	469.8	37	4.021	28.15	1295.0	13834	.0713	.0863	908	402.83	26/7	402.8

ASTM CONDUCTOR SIZES													
Code Word	Size (KCM)	Diameter (inches)			Cross sectional Area (Sq In)	Weight Per 1000 ft (Lbs)	Rated Strength (Lbs)	Resistance ¹ Ohms/1000ft		Current Rating ² (Amps)	Size	ACSR with Equiv. Diam. Stranding (Al/Stl)	Approx EC Cond. With Equivalent Resistance
		Strand	Indiv. Wires	Complete Cable				DC@ 20 °C	AC@ 75 °C				
Akron	30.58	7	.0661	.198	.0240	28.7	1,110	.659	.785	107	6	6/1	6
Alton	48.69	7	.0834	.250	.0382	45.7	1,760	.414	.493	143	4	6/1	4
Ames	77.47	7	.1052	.316	.0608	72.7	2,800	.260	.310	191	2	6/1	2
Azusa	123.3	7	.1327	.398	.0968	115.7	4,460	.163	.195	256	1/0	6/1	1/0
Anaheim	155.4	7	.1490	.447	.1221	145.9	5,390	.130	.154	296	2/0	6/1	2/0
Amherst	195.7	7	.1672	.502	.1537	183.7	6,790	.103	.123	342	3/0	6/1	3/0
Alliance	246.9	7	.1878	.563	.1939	231.8	8,560	.0816	.0973	395	4/0	6/1	4/0
Butte	312.8	19	.1283	.642	.2456	293.6	11,000	.0644	.0769	460	266.8	26/7	266.8
Canton	394.5	19	.1441	.721	.3098	370.3	13,300	.0511	.0610	532	336.4	26/7	336.4
Cairo	465.4	19	.1565	.783	.3655	436.9	15,600	.0433	.0518	590	397.5	26/7	397.5
Darien	559.5	19	.1716	.858	.4394	525.2	18,800	.0360	.0431	663	477.0	26/7	477.0
Elgin	652.4	19	.1853	.927	.5124	612.4	21,900	.0309	.0371	729	556.5	26/7	556.5
Flint	740.8	37	.1415	.991	.5818	695.5	24,400	.0272	.0327	790	636.0	26/7	636.0
Greely	927.2	37	.1583	1.108	.7282	870.4	30,500	.0217	.0263	908	795.0	26/7	795.0

- Resistance is calculated using ASTM standard increments of stranding, and metal conductivity of 52.5% IACS. AC resistance at 60 Hz.
- Current ratings are based on 75oC conductor temperature, 250C ambient, 2 ft/s wind, 96/watts/sq.foot sun, 0.5 coefficients of emissivity and absorption.

AAAC



FRENCH CONDUCTOR SIZES										
Code Name	Area mm ²	Number of Wires	Diameter of Wire mm	Overall Diameter of Conductor mm	Tensile Strength of Wire hbar	Rated Strength of Conductor daN	Maximum Resistance DC at 20°C ? /km	Linear Weight Kg/km	Elasticity Modulus * hbar	Coefficient of Linear Expansion * /°C
ASTER 22	21.99	7	2.00	6.00	32.4	710	1.50	60.2	6200	23.10 ⁻⁶
ASTER 34.4	34.36	7	2.50	7.50	32.4	1105	0.958	94.1	6200	23.10 ⁻⁶
ASTER 54.6	54.55	7	3.15	9.45	32.4	1755	0.603	149.0	6200	23.10 ⁻⁶
ASTER 75.5	75.54	19	2.25	11.25	32.4	2430	0.438	208.0	6000	23.10 ⁻⁶
ASTER 117	116.98	19	2.80	14.00	32.4	3765	0.283	322.0	6000	23.10 ⁻⁶
ASTER148	148.01	19	3.15	15.75	32.4	4765	0.224	407.0	6000	23.10 ⁻⁶
ASTER 181.6	181.62	37	2.50	17.50	32.4	5845	0.183	500.0	5700	23.10 ⁻⁶
ASTER 228	227.83	37	2.80	19.60	32.4	7340	0.146	627.0	5700	23.10 ⁻⁶
ASTER 288	288.34	37	3.15	22.05	32.4	9280	0.115	794.0	5700	23.10 ⁻⁶
ASTER 366	366.22	37	3.55	24.85	32.4	11785	0.0905	1009.0	5700	23.10 ⁻⁶
ASTER 570	570.22	61	3.45	31.05	32.4	18360	0.0583	1574.0	5400	23.10 ⁻⁶
ASTER851	850.66	91	3.45	37.95	32.4	27390	0.0391	2354.0	5250	23.10 ⁻⁶
ASTER1144	1143.51	91	4.00	44.00	31.9	36260	0.0292	3164.0	5250	23.10 ⁻⁶
ASTER 1600	1595.93	127	4.00	52.00	31.9	50640	0.0206	4425.0	5050	23.10 ⁻⁶

* These values are given for information only

GERMAN CONDUCTOR SIZES							
Conductor Size mm ²	Alloy Area mm ²	Number of Wires	Diameter mm	Overall Diameter of Conductor mm	Linear Weight Kg/km	Rated Strength daN	Maximum Resistance Strength DC at 20°C ? /km
16	15.89	7	1.70	5.1	43	444	2.0910
25	24.26	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	9.0	135	1382	0.6714
50	48.35	19	1.80	9.0	133	1350	0.6905
70	65.81	19	2.10	10.5	181	1838	0.5073
95	93.27	19	2.50	12.5	256	2605	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	0.08380
500	499.83	61	3.23	29.1	1379	13960	0.06709
625	626.20	91	2.96	32.6	1732	17490	0.05400
800	802.09	91	3.35	36.9	2218	22402	0.04180
1000	999.71	91	3.74	41.1	2767	27922	0.03350



British Sizes BS EN 50182: 2001 (Old Standard BS 3242-1970)

New Code	Old Code	Stranding & Wire Diameter	Overall Diameter	Sectional Area	Approximate Weight	Breaking Load	DC Resistance	Current Rating Capacity
		mm	mm	mm ²	kg/km	kN	ohm/km	A
19-AL3	BOX	7/1.85	5.55	18.8	51.4	5.55	1.7480	96
24-AL3	Acacia	7/2.08	6.24	23.9	64.9	7.02	1.3828	110
30-AL3	Almond	7/2.34	7.02	30.1	82.2	8.88	1.0926	128
35-AL3	Cedar	7/2.54	7.62	35.5	96.8	10.46	0.9273	132
42-AL3	Deodar	7/2.77	8.31	42.2	115.2	12.44	0.7797	148
48-AL3	Fir	7/2.95	8.85	47.8	130.6	14.11	0.6875	161
60-AL3	Hazel	7/3.30	9.90	59.9	163.4	17.66	0.5494	184
72-AL3	Pine	7/3.61	10.80	71.6	195.6	21.14	0.4591	204
84-AL3	Holly	7/3.91	11.70	84.1	229.5	24.79	0.3913	222
90-AL3	Willow	7/4.04	12.10	89.7	245.0	26.47	0.3665	233
119-AL3	Oak	7/4.65	13.95	118.9	324.5	35.07	0.2767	272
151-AL3	Mulberry	19/3.18	15.90	150.9	414.3	44.52	0.2192	319
181-AL3	Ash	19/3.48	17.40	180.7	496.1	53.31	0.1830	354
211-AL3	Elm	19/3.76	18.80	211.0	579.2	62.24	0.1568	385
239-AL3	Poplar	37/2.87	20.10	239.4	659.4	70.61	0.1387	414
303-AL3	Sycamor	37/3.23	22.60	303.2	835.2	89.40	0.1095	487
362-AL3	Upas	37/3.53	24.70	362.1	997.5	106.82	0.0917	527
479-AL3	Yew	37/4.06	28.40	479.0	1319.6	141.31	0.0693	629
498-AL3	Totara	37/4.14	29.42	498.1	1372.1	146.93	0.0666	640
587-AL3	Rubus	61/3.50	31.50	586.9	1622.0	173.13	0.0567	716
659-AL3	Sorbus	61/3.71	33.40	659.4	1822.5	194.53	0.0505	760
821-AL3	Araucaria	61/4.14	37.30	821.1	2269.5	242.24	0.0406	842
996-AL3	Redwood	61/4.56	41.00	996.2	2753.2	293.88	0.0334	920

IEC Sizes IEC 61089: 1991

Code Word	Stranding & Wire Diameter	Overall Diameter	Sectional Area	Approximate Weight	Breaking Load	DC Resistance
	mm	mm	mm ²	kg/km	kN	ohm/km
16	7/2.56	7.69	36.2	216.4	39.04	17.896
25	7/3.21	9.62	56.5	338.2	61.00	11.454
40	7/4.05	12.2	90.4	541.4	97.61	0.7159
40	19/2.46	12.3	90.4	543.7	97.61	0.7193
63	19/3.09	15.4	142	856.4	153.73	0.4567
100	37/2.79	19.5	226	1362.6	244.02	0.2884
125	37/3.12	21.8	282	1703.2	305.02	0.2307
160	37/3.53	24.7	362	2180.1	390.43	0.1803
200	37/3.94	27.6	452	2725.1	488.03	0.1442
200	61/3.07	27.6	452	2729.1	488.03	0.1444