

**ALL-ALUMINIUM ALLOY CODUCTOR**

**BRITISH SIZES**

**Aluminium alloy conductors AAAC to BS 3242**

Code name	Nominal ALU area	Equivalent copper area	stranding & wire diameter	Approx overall $\phi$	Total area	Approx weight	Nominal breaking load	maximum resistance dc at 20°	Rating current		Code name
	mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	mm <sup>2</sup>	kg/km	kgf	ohm/km	temperate amp	tropical amp	
—	10	6.45	7/1.47	4.41	11.7	32	335	2.816	70	50	—
<b>Box</b>	16	9.68	7/1.85	5.55	18.8	51	536	1.755	95	55	<b>Box</b>
<b>Acacia</b>	20	12.9	7/2.08	6.24	23.8	66	684	1.375	110	60	<b>Acacia</b>
<b>Almond</b>	25	16.1	7/2.34	7.02	30.1	82	862	1.094	130	85	<b>Almond</b>
<b>Cedar</b>	30	19.4	7/2.54	7.62	35.5	<b>97</b>	1015	0.9281	135	85	<b>Cedar</b>
—	35	22.6	7/2.77	8.31	42.2	115	1206	0.7799	150	95	—
<b>Fir</b>	40	25.8	7/2.95	8.85	47.8	131	1366	0.6880	160	100	<b>Fir</b>
<b>Hazel</b>	50	32.3	7/3.30	9.9	59.9	164	1713	0.5498	185	115	<b>Hazel</b>
<b>Pine</b>	60	38.7	7/3.61	10.83	71.7	196	2050	0.4593	205	120	<b>Pine</b>
—	70	45.2	7/3.91	11.73	84.1	230	2404	0.3916	220	125	—
<b>Willow</b>	75	48.4	7/4.04	12.12	89.8	246	2568	0.3665	235	135	<b>Willow</b>
—	80	51.6	7/4.19	12.57	96.5	264	2759	0.341	240	140	—
—	90	58.1	7/4.45	13.35	108.8	298	3110	0.3026	260	145	—
<b>Oak</b>	100	64.5	7/4.65	13.95	118.9	325	3396	0.2769	270	150	<b>Oak</b>
—	100	64.5	19/2.82	14.1	118.8	326	3396	0.2786	275	150	—
<b>Mulberry</b>	125	80.6	19/3.18	15.9	151	415	4320	0.2192	320	165	<b>Mulberry</b>
<b>Ash</b>	150	96.8	19/3.48	17.4	180.7	497	5160	0.183	355	180	<b>Ash</b>
<b>Elm</b>	175	113	19/3.76	18.8	211	580	6027	0.1568	385	190	<b>Elm</b>
<b>Poplar</b>	200	129	37/2.87	20.09	239	658	6832	0.1387	415	195	<b>Poplar</b>
—	230	145	37/3.05	21.35	270.2	746	7740	0.1226	445	205	—
<b>Sycamore</b>	260	161	37/3.23	22.61	303	835	8668	0.1094	485	205	<b>Sycamore</b>
<b>Upas</b>	300	194	37/3.53	24.71	362.1	997	10350	0.0916	525	210	<b>Upas</b>
—	380	226	37/3.81	26.67	421.8	1162	12063	0.0786	585	215	—
<b>Yew</b>	400	258	37/4.06	28.42	479.9	1322	13715	0.0691	630	215	<b>Yew</b>

## ALL- ALUMINIUM ALLOY CONDUCTOR

### GERMAN SIZES

#### Aluminium Alloy conductors AAAC to DIN 48201

Code name	Total area of alu alloy	Equivalent copper area	Nominal area of alu alloy	stranding & wire diameter	Approx overall $\Phi$	Approx weight	Nominal breaking load	Maximum dc resistance at 20°C	Current Rating	
	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	kg / km	Kgf	ohm/km	temperate amp	Tropical amp
<b>DIN 16</b>	15.89	9	16	7/1.7	5.1	44	450	2.091	80	55
<b>DIN 25</b>	24.25	13	25	7/2.1	6.3	67	690	1.372	95	70
<b>DIN 35</b>	34.36	19	35	7/2.5	7.5	94	980	0.967	130	85
<b>DIN 50</b>	49.48	27	50	7/3.0	9	135	1410	0.6716	160	100
<b>DIN 50</b>	48.36	27	50	19/1.8	9	133	1380	0.6893	160	100
<b>DIN 70</b>	65.82	36	70	19/2.1	10.5	181	1875	0.5079	195	115
<b>DIN 95</b>	93.27	50	95	19/2.5	12.5	256	2660	0.358	240	140
<b>DIN 120</b>	117	65	120	19/2.8	14	322	3335	0.2853	275	150
<b>DIN 150</b>	147.1	80	150	37/2.25	15.7	406	4190	0.2278	315	165
<b>DIN 185</b>	181.6	100	185	37/2.5	17.5	501	5175	0.1842	355	180
<b>DIN 240</b>	242.5	130	240	61/2.25	20.2	670	6910	0.1385	420	195
<b>DIN 300</b>	299.4	160	300	61/2.5	22.5	827	8535	0.1119	480	205
<b>DIN 400</b>	400.1	220	400	61/2.89	26	1105	11400	0.08407	560	210
<b>DIN 500</b>	499.8	270	500	61/3.23	29.1	1381	14245	0.06713	645	200

**ALL- ALUMINIUM ALLOY CONDUCTOR**

**FRENCH SIZES**

**Aluminium Alloy conductors AAAC to NFC 34 -125**

code name		Equivalent copper area	stranding & wire diameter	Overall diameter	Total area	Weight	Nominal breaking load	Maximum dc resistance at 20°C	Current Rating	
		mm <sup>2</sup>	mm	mm	mm <sup>2</sup>	kg	kgf	ohm/km	temperate amp	Tropical amp
ASTER	22	12	7/2.0	6	21.99	60	722	1.497	105	60
ASTER	34.4	18.8	7/2.5	7.5	34.36	94	1129	0.958	135	85
ASTER	54.6	29.8	7/3.15	9.45	54.55	149	1792	0.6034	170	100
ASTER	75.5	41.3	19/.2.25	11.25	75.54	208	2481	0.4379	210	125
ASTER	93.3	51	19/2.5	12.5	93.27	257	3000	0.354	240	140
ASTER	117	63.9	19/2.8	14	117	322	3842	0.2827	275	150
ASTER	148	80.9	19/3.15	15.75	148.1	407	4864	0.2234	315	165
ASTER	181.6	99.2	37/2.5	17.5	181.6	500	5963	0.1825	360	180
ASTER	228	124.5	37/2.8	19.6	227.8	627	7481	0.1455	405	190
ASTER	288	157.6	37/3.15	22.05	288.3	794	9468	0.0115	475	205
ASTER	366	200.1	37/3.55	24.85	366.2	1009	12022	0.09053	525	210
ASTER	570	311.6	61/3.45	31.05	370.2	1574	18722	0.05827	660	215

## ALL-ALUMINIUM ALLOY CONDUCTOR

### AMERICAN SIZES

#### Aluminium Alloy Conductors AAAC to ASTM B 399

Code name AWG or MCM	Total area of alu alloy	Equivalent Copper area	stranding & wire diameter	Approx overall $\phi$	Approx weight	Nominal breaking load	Maximum dc resistance at 20°C	Current rating	
	mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	Kg/Km	Kgf	Ohm/km	temperate amp	Tropical amp
<b>6</b>	13.28	6.7	7/1.554	4.66	37	245	2.519	65	45
<b>4</b>	21.15	10.6	7/1.961	5.88	58	678	1.584	95	65
<b>2</b>	33.63	16.8	7/2.474	7.42	93	1078	0.9958	130	85
<b>0</b>	53.48	26.7	7/3.119	9.36	148	1714	0.6261	170	105
<b>2/0</b>	67.42	33.6	7/3.503	10.51	186	<b>2075</b>	0.4968	195	115
<b>3/0</b>	85.0	42.4	7/3.932	11.8	235	2590	0.3939	220	130
<b>4/0</b>	107.2	53.5	7/4.417	13.25	296	3297	0.3124	255	145
<b>250</b>	126.7	67.1	19/2.913	14.57	350	3850	0.2643	285	155
<b>300</b>	152.0	80.7	19/3.193	15.97	419	4620	0.2204	320	165
<b>350</b>	177.4	94.2	19/3.447	17.24	490	5165	0.1889	350	175
<b>400</b>	202.7	107.7	19/3.686	18.43	560	<b>5895</b>	0.1655	380	185
<b>450</b>	228.0	121.3	19/3.909	19.55	629	6635	0.1469	405	190
<b>500</b>	253.4	134.2	19/4.120	20.6	699	7375	0.1322	430	195
<b>550</b>	278.7	147.7	37/3.096	21.67	769	8455	0.1202	450	200
<b>600</b>	304.0	161.3	37/3.233	22.63	839	9240	0.1101	480	205
<b>650</b>	329.4	174.8	37/3.366	23.56	909	10000	0.1017	505	210
<b>700</b>	354.7	188.4	37/3.493	24.45	979	<b>10320</b>	0.09439	525	210
<b>750</b>	380.2	201.9	37/3.617	25.32	1049	11070	0.08816	550	215
<b>800</b>	405.35	214.8	37/3.734	26.14	1119	11800	0.0826	570	215
<b>900</b>	456.06	241.9	37/3.962	27.73	1258	13275	0.07341	610	220
<b>1000</b>	506.71	269.0	37/4.176	29.23	1399	14750	0.06609	650	200

## ALL-ALUMINIUM ALLOY CONDUCTOR

### ALCOA AMERICAN SIZES

#### Aluminium Alloy conductors AAAC to 6201-T81

Code name/ AWG or MCM	Total area of alu alloy	Equivalent Copper area	stranding & wire diameter	Approx overall Φ	Approx weight	Nominal breaking load	Maximum dc resistance at 20°C	Current Rating	
	mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	kg/km	kn	ohm/km	temperate amp	Tropical amp
<b>AKRON/30.58</b>	15.49	8.4	7x1.68	5.04	42.8	4.92	2.162	75	55
<b>ALTON/48.69</b>	24.69	13.4	7X2.12	6.36	68.1	7.83	1.358	110	70
<b>AMES/77.47</b>	39.25	21.3	7X2.67	8.01	108.0	12.42	0.853	135	75
<b>AZUSA/123.4</b>	62.48	33.9	7X3.37	10.11	172.2	18.88	0.536	190	105
<b>ANAHEIM/155.4</b>	78.55	42.8	7X3.78	11.34	216.6	23.75	0.425	200	115
<b>AMHERST/195.7</b>	99.16	53.9	7X4.25	12.75	273.8	30.03	0.338	240	120
<b>ALLIANCE/246.9</b>	125.1	67.9	7X4.77	14.31	344.9	37.83	0.268	280	145
<b>BUTTE/312.8</b>	158.49	86.1	19X3.26	16.3	437.3	48.67	0.211	320	170
<b>CANTON/394.5</b>	199.89	108.6	19X3.66	18.3	561.1	58.56	0.168	380	180
<b>CAIRO/465.4</b>	235.32	127.8	19X3.98	19.9	651.8	69.25	0.142	405	190
<b>DARIEN/559.5</b>	283.57	154.0	19X4.36	21.8	782.2	83.11	0.118	450	195
<b>ELGIN/652.6</b>	330.87	179.5	19X4.71	23.55	912.6	96.97	0.101	500	205
<b>FLINT/740.8</b>	375.36	203.9	37X3.59	25.13	1033.0	107.4	0.089	535	210
<b>GREELEY/927.2</b>	469.81	255.2	37X4.02	28.14	1295.0	134.6	0.071	620	210

## ALL- ALUMINIUM ALLOY CONDUCTOR CANADIAN SIZES

### Aluminium Alloy conductors AAAC to CSA C49

Code name AWG or MCM	AREA NOMINAL	Equivalent Copper area	Total area of alu alloy	stranding & wire diameter	Approx overall $\Phi$	Approx weight	Nominal breaking load	Maximum dc resistance at 20°C	Current Rating	
	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	kg / km	kgf	ohm/km	temperate amp	Tropical amp
8	8.4	5.3	9.5	7/1.32	3.96	26	295	3.42	55	40
7	10.6	6.6	12	7/1.48	4.44	33	370	2.71	70	50
6	13.3	8.4	15.2	7/1.66	4.98	41	470	2.148	80	55
5	16.8	10.6	19.1	7/1.86	5.58	52	590	1.703	95	60
4	21.2	13.3	24.1	7/1.09	6.27	66	745	1.352	110	70
3	26.7	16.8	30.4	7/2.35	7.05	83	940	1.072	125	80
2	33.6	21.2	38.3	7/2.64	7.92	105	1185	0.8494	140	90
1	42.4	26.7	48.3	7/2.96	8.88	132	1495	0.6742	160	95
1/0	53.5	33.6	61	7/3.33	9.99	166	1885	0.5344	185	110
2/0	67.4	41.4	76.8	7/3.74	11.22	210	2375	0.4238	210	125
3/0	85	53.5	97	7/4.20	12.6	265	3000	0.3355	240	140
4/0	107.2	67.4	122.5	7/4.72	14.16	334	3780	0.2666	275	150
4/0	107.2	67.4	122.1	19/2.86	14.3	335	3780	0.2678	280	155
266.8	135.2	85	154.1	19/3.21	16.05	423	4765	0.2125	320	170
300	152	95.6	173.4	19/3.41	17.05	475	5360	0.1889	345	175
336	170.5	107.2	194.4	19/3.61	18.05	533	6010	0.1684	370	180
397.5	201.4	126.7	229.7	19/3.92	19.6	629	7100	0.1423	405	190
477	241.7	152	275.7	19/4.30	21.5	756	8530	0.1187	450	195
500	253.3	159.4	288.5	37/3.15	22.05	796	8930	0.1137	465	200
556.5	282	177.3	322.5	37/3.33	23.31	885	9930	0.1026	495	205
636	322.3	202.7	368.4	37/3.56	24.92	1012	11350	0.0895	535	210
715.5	362.5	228	413.5	37/3.77	26.39	1140	12775	0.0795	575	210
750	380	239.2	433.7	37/3.86	27.02	1195	13400	0.0758	595	210
795	402.8	253.4	460.4	37/3.98	27.86	1266	14200	0.0714	615	210
814.5	443.1	278.7	503.1	37/4.16	29.12	1385	15625	0.065	650	210

**ALL-ALUMINIUM ALLOY CONDUCTOR  
IEC SIZES**

**Aluminium Alloy conductors AAAC sizes from characteristics of A2 conductors**

Code number	AREA NOMINAL	AREA ACTUAL	Equivalent copper area	stranding & wire diameter	Approx overall $\phi$	Approx weight	Nominal breaking load	maximum resistance dc at 20°	Current Rating	
	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	kg/km	KN	ohm/km	temperate amp	tropical amp
IEC	16	18.4	9.8	7/1.83	5.49	50.4	5.43	1.7896	90	60
IEC	25	28.8	15.4	7/2.29	6.86	78.7	8.49	1.1453	112	74
IEC	40	46.0	24.6	7/2.89	8.68	125.9	13.58	0.7158	150	90
IEC	63	72.5	38.7	7/3.63	10.9	198.3	21.39	0.4545	190	115
IEC	100	115	61.4	19/2.78	13.9	316.3	33.95	0.2877	250	145
IEC	125	144	76.8	19/3.10	15.5	395.4	42.44	0.2302	291	160
IEC	160	184	98.2	19/3.51	17.6	506.1	54.32	0.1798	350	180
IEC	200	230	122.8	19/3.93	19.6	632.7	67.91	0.1439	400	190
IEC	250	288	153.5	19/4.39	22	790.8	84.88	0.1151	460	205
IEC	315	363	193.4	37/3.53	24.7	998.9	106.95	0.0916	530	210
IEC	400	460	245.6	37/3.98	27.9	1268.4	135.81	0.0721	602	222
IEC	450	518	276.3	37/4.22	29.6	1426.9	152.79	0.0641	650	225
IEC	500	575	307.0	37/4.45	31.2	1585.5	169.76	0.0577	689	211
IEC	560	645	340.9	61/4.67	33	1778.4	190.14	0.0516	700	250
IEC	630	725	383.5	61/3.89	35	2000.7	213.9	0.0458	780	240
IEC	710	817	432.2	61/4.13	37.2	2245.8	241.07	0.0407	840	220
IEC	800	921	487.0	61/4.38	39.5	2540.6	271.62	0.0361	900	220

**ALL-ALUMINIUM ALLOY CONDUCTOR  
IEC SIZES**

Aluminium Alloy conductors AAAC sizes from characteristics of A3 conductors

Code number	AREA NOMINAL	AREA ACTUAL	Equivalent copper area	stranding & wire diameter	Approx overall $\phi$	Approx weight	Nominal breaking load	maximum resistance dc at 20°	Rating current	
	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	kg/km	KN	ohm/km	temperate amp	tropical amp
IEC	16	18.6	9.8	7/1.84	5.52	50.8	6.04	1.7896	90	60
IEC	25	29.0	15.4	7/2.3	6.9	79.5	9.44	1.1453	112	74
IEC	40	46.5	24.6	7/2.91	8.72	127.1	15.1	0.7158	150	90
IEC	63	73.2	38.7	7/3.65	10.9	200.2	23.06	0.4545	190	115
IEC	100	116	61.4	19/2.79	14	319.3	37.76	0.2877	250	145
IEC	125	145	76.8	19/3.12	15.6	399.2	47.2	0.2302	291	160
IEC	160	186	98.2	19/3.53	17.6	511	58.56	0.1798	350	180
IEC	200	232	122.8	19/3.95	19.7	638.7	73.2	0.1439	400	190
IEC	250	290	153.5	19/4.41	22.1	798.4	91.5	0.1151	460	205
IEC	315	366	193.4	37/3.55	24.8	1008.4	115.29	0.0916	530	210
IEC	400	465	245.6	37/4	28	1280.5	146.4	0.0721	602	222
IEC	450	523	276.3	37/4.24	29.7	1440.5	164.7	0.0641	650	225
IEC	500	581	307.0	37/4.47	31.3	1600.6	183	0.0577	689	211
IEC	560	651	340.9	61/4.69	33.2	1795.3	204.96	0.0516	700	250
IEC	630	732	383.5	61/3.91	35.2	2019.8	230.58	0.0458	780	240
IEC	710	825	432.2	61/4.15	37.3	2276.2	259.86	0.0407	840	220
IEC	800	930	487.0	61/4.4	39.6	2564.8	292.8	0.0361	900	220

The resistivity of metal A2 : 32,530 nΩm(corresponding to 53%IACS)

The resistivity of metal A3 : 32,840 nΩm(corresponding to 52,5%IACS)