

**ALL ALUMINIUM ALLOY CONDUCTOR (AAAC)  
CHARACTERISTICS OF A2 CONDUCTORS AS PER IEC 1089/91 TYPE A2**

Code number	Area	Number of wires	Diameter		Linear mass	Rated strength	*D. C. resistance
			Wire	Cond.			
	mm <sup>2</sup>		mm	mm	kg / km	kN	Ohm/km
16	18.40	7	1.83	5.49	50.4	5.43	1.7896
25	28.8	7	2.29	6.86	78.7	8.49	1.1453
40	46.0	7	2.89	8.68	125.9	13.58	0.7158
63	72.5	7	3.63	10.90	198.3	21.39	0.4545
100	115	19	2.78	13.90	316.3	33.95	0.2877
125	144	19	3.10	15.5	395.4	42.44	0.2302
160	184	19	3.51	17.6	506.1	54.32	0.1798
200	230	19	3.93	19.6	632.7	67.91	0.1439
250	288	19	4.39	22.0	790.8	84.88	0.1151
315	363	37	3.53	24.7	998.9	106.95	0.0916
400	460	37	3.98	27.9	1268.4	135.81	0.0721
450	518	37	4.22	29.6	1426.9	152.79	0.0641
500	575	37	4.45	31.2	1585.5	169.76	0.0577
560	645	61	3.67	33.0	1778.4	190.14	0.0516
630	725	61	3.89	35.0	2000.7	213.90	0.0458
710	817	61	4.13	37.2	2254.8	241.07	0.0407
800	921	61	4.38	39.5	2540.6	271.62	0.0361
900	1036	91	3.81	41.8	2861.1	305.58	0.0321
1000	1151	91	4.01	44.1	3179.0	339.53	0.0289
1120	1289	91	4.25	46.7	3560.5	380.27	0.0258
1250	1439	91	4.49	49.4	3973.7	424.41	0.0231

\*ALUMINIUM ALLOY Resistivity at 20°C 32.530 Ohm mm<sup>2</sup>/km  
Conductivity 53% I.A.C.S.

**ALL ALUMINIUM ALLOY CONDUCTOR (AAAC)**  
**Characteristics of A3 conductors as per IEC 1089/91 TYPE A3**

Code number	Area	Number of wires	Diameter		Linear mass	Rated strength	*D. C. resistance
			Wire	Cond.			
	mm <sup>2</sup>		mm	mm	kg / km	kN	Ohm/km
16	18.6	7	1.84	5.52	50.8	6.04	1.7896
25	29.0	7	2.30	6.90	79.5	9.44	1.1453
40	46.5	7	2.91	8.72	127.1	15.10	0.7158
63	73.2	7	3.65	10.9	200.2	23.06	0.4545
100	116	19	2.79	14.0	319.3	37.76	0.2877
125	145	19	3.12	15.6	399.2	47.20	0.2302
160	186	19	3.53	17.6	511.0	58.56	0.1798
200	232	19	3.95	19.7	638.7	73.20	0.1439
250	290	19	4.41	22.1	798.4	91.50	0.1151
315	366	37	3.55	24.8	1 008.4	115.29	0.0916
400	465	37	4.00	28.0	1280.5	146.40	0.0721
450	523	37	4.24	29.7	1440.5	164.70	0.0641
500	581	37	4.47	31.3	1600.6	183.00	0.0577
560	651	61	3.69	33.2	1795.3	204.96	0.0516
630	732	61	3.91	35.2	2019.8	230.58	0.0458
710	825	61	4.15	37.3	2276.2	259.86	0.0407
800	930	61	4.40	39.6	2564.8	292.80	0.0361
900	1046	91	3.83	42.1	2888.3	329.40	0.0321
1000	1162	91	4.03	44.4	3209.3	366.00	0.0289
1120	1301	91	4.27	46.9	3594.4	409.92	0.0258

\*ALUMINIUM ALLOY Resistivity at 20°C 32.84 Ohm mm<sup>2</sup>/km  
 Conductivity 52.5% I.A.C.S.

**ALL ALUMINIUM ALLOY CONDUCTORS (AAAC)  
AS PER ASTM B 399 - 92**

Conductor Size, mm <sup>2</sup>	Required construction		Weight per km. kg	Rated Strength kN	D. C. Resistance Ohm/km
	Number of wires	Diameter mm			
886.7	61	4.30	2429	253	0.0378
760.0	61	3.98	2081	217	0.0441
633.3	61	3.63	1733	180	0.0531
506.7	37	4.18	1388	146	0.0659
456.0	37	3.96	1249	132	0.0735
405.4	37	3.73	1109	117	0.0828
380.0	37	3.62	1041	110	0.0879
354.7	37	3.49	970.6	102	0.0946
329.4	37	3.37	901.3	99.1	0.1015
304.0	37	3.23	832.0	91.5	0.1104
278.7	37	3.10	762.9	83.9	0.1199
253.4	19	4.12	693.6	74.7	0.1322
228.0	19	3.91	624.4	67.3	0.1468
202.7	19	3.69	555.1	59.8	0.1648
177.3	19	3.45	485.5	52.3	0.1886
152.0	19	3.19	416.6	46.8	0.2205
126.7	19	2.91	346.9	39.0	0.2650
107.2	7	4.42	293.7	32.7	0.3118
85.0	7	3.93	232.7	25.9	0.394
67.4	7	3.50	184.7	20.5	0.497
53.5	7	3.12	146.5	17.0	0.6259
33.6	7	2.47	92.14	10.7	0.9986
21.1	7	1.96	57.89	6.72	1.586
13.3	7	1.55	36.44	4.22	2.536

**ALUMINIUM ALLOY CONDUCTORS (AAAC)**  
**AS PER DIN SPECIFICATION - DIN 48201 - PART 6 - 1981**

Designation (nominal area) mm <sup>2</sup>	Area mm <sup>2</sup>	Number of Wires	Diam. of wire mm	Overall diam. mm	Breaking load kN	*DC resistance at 20°C Ohm/km	Weight kg/km
16	15.89	7	1.70	5.1	4.44	2.090	43
25	24.25	7	2.10	6.3	6.77	1.370	66
35	34.36	7	2.50	7.5	9.60	0.9666	94
50	49.48	7	3.00	9.0	13.82	0.6712	135
50	48.35	19	1.80	9.0	13.50	0.6903	133
70	65.81	19	2.10	10.5	18.38	0.5071	181
95	93.27	19	2.50	12.50	26.05	0.3578	256
120	116.99	19	2.80	14.0	32.68	0.2853	322
150	147.11	37	2.25	15.8	41.09	0.2274	406
185	181.62	37	2.50	17.5	50.73	0.1842	500
240	242.54	61	2.25	20.3	67.74	0.1382	670
300	299.43	61	2.50	22.5	83.63	0.1120	827
400	400.14	61	2.89	26.0	111.76	0.08378	1104
500	499.83	61	3.23	29.1	139.60	0.06707	1379
625	626.20	91	2.96	32.6	174.90	0.05365	1732
800	802.09	91	3.35	36.9	224.02	0.04189	2218
1000	999.71	91	3.74	41.1	279.22	0.03361	2767
*ALUMINIUM ALLOY Resistivity 32.79 Ohm mm <sup>2</sup> /km Conductivity 52.58% I.A.C.S.							

**ALL ALUMINIUM ALLOY CONDUCTORS (AAAC)**  
**AS PER BS - 3242 - 1970**

Nominal aluminium area (1) mm <sup>2</sup>	Stranding and wire diameter (2) mm	Sectional area (3) mm <sup>2</sup>	Approximate overall diameter (4) mm	Approximate mass per km (5) kg	Calculated d.c. resistance at 20°C per km (6) Ohm	Calculated breaking load (7) kN	Nominal aluminium area (8) mm <sup>2</sup>
25	7/2.34	30.10	7.02	82	1.091	8.44	25
30	7/2.54	35.47	7.62	97	0.928 1	9.91	30
40	7/2.95	47.81	8.85	131	0.688 0	13.40	40
50	7/3.30	59.87	9.90	161	0.549 8	16.80	50
100	7/4.65	118.9	13.05	325	0.276 9	33.30	100
150	19/3.48	180.7	17.10	497	0.1830	50.65	150
175	19/3.76	211.0	18.80	580	0.1568	59.10	175
300	37/3.53	362.1	21.71	997	0.09155	101.5	300

**ALL ALUMINIUM ALLOY CONDUCTORS (AAAC)  
AS PER FRENCH SPECIFICATION - NF C 34 - 125 - 1976**

Designation (nominal area)	Area mm <sup>2</sup>	Number of Wires	Diam. of wire mm	Overall diam. mm	Breaking load kN	*DC resistance at 20°C Ohm/km	Weight kg/km
ASTER 22	21.99	7	2.0	6	7.10	1.50	60.2
ASTER 34.4	34.36	7	2.5	7.5	11.05	0.958	94
ASTER 54.6	54.55	7	3.15	9.45	17.55	0.603	149
ASTER 75.5	75.54	19	2.25	11.25	24.30	0.438	208
ASTER 117	116.99	19	2.8	14	37.65	0.283	322
ASTER 148	148.07	19	3.15	15.75	47.65	0.224	407
ASTER 181.6	181.62	37	2.5	17.5	58.45	0.183	500
ASTER 228	227.83	37	2.8	19.6	73.40	0.146	627
ASTER 288	288.34	37	3.15	22.05	92.80	0.115	794
ASTER 366	366.22	37	3.55	24.85	117.85	0.0905	1009
ASTER 570	570.24	61	3.45	31.05	183.60	0.0583	1574
ASTER 851	850.69	61	3.45	37.95	273.90	0.0391	2354
ASTER 1144	1143.54	91	4.0	44	362.60	0.0292	3164
ASTER 1600	1595.93	127	4.0	52	506.40	0.0209	4425

\*ALUMINIUM ALLOY Resistivity 32.5 Ohm mm<sup>2</sup>/km | Conductivity 53.05% I.A.C.S.

**ALL ALUMINIUM ALLOY CONDUCTORS (AAAC)  
AS PER SWEDISH SPECIFICATION - SS 424 08 12 - 1978**

Designation (nominal area) mm <sup>2</sup>	Area mm <sup>2</sup>	Number of Wires	Diam. of wire mm	Overall diam. mm	Weight kg/km	Breaking load kN	*DC resistance at 20°C Ohm/km
31	31.14	7	2.38	7.1	85	9.80	1.06
49	49.48	7	3.00	9.0	135	15.5	0.670
62	62.44	7	3.37	10.1	170	19.6	0.531
99	99.31	7	4.25	12.8	271	30.2	0.334
157	158.6	19	3.26	16.3	436	49.8	0.210
234	241.2	19	4.02	20.1	663	73.3	0.138
329	330.0	37	3.37	23.6	910	104	0.101
454	454.5	61	3.08	27.7	1260	143	0.0739
593	593.6	61	3.52	31.7	1640	181	0.0565
774	774.2	61	4.02	36.2	2140	235	0.0434
910	910.7	61	4.36	39.2	2520	277	0.0369

\*Based on resistivity - 32.8 Ohm mm<sup>2</sup>/km  
Conductivity 52.56% I.A.C.S.

**ALL ALUMINIUM ALLOY CONDUCTORS (AAAC)**  
**AS PER IS 398 - Part 4 - 1994**

Sl. No.	Actual Area mm <sup>2</sup>	Stranding and wire dia mm	Approx overall dia mm	Approx mass kg/km	Calculated maximum resistance at 20° C Ohm/km	Approx calculated breaking load kN
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	15	3/2.50	5.39	40.15	2.304 0	4.33
2.	22	7/2.00	6.00	60.16	1.541 0	6.45
3.	34	7/2.50	7.50	94.00	0.990 0	10.11
4.	55	7/3.15	9.45	149.20	0.621 0	16.03
5.	80	7/3.81	11.43	218.26	0.425 0	23.41
6.	100	7/4.26	12.78	272.86	0.339 0	29.26
7.	125	19/2.89	14.45	342.51	0.273 5	36.64
8.	148	19/3.15	15.75	406.91	0.229 0	43.50
9.	173	19/3.40	17.00	474.02	0.196 9	50.54
10.	200	19/3.66	18.30	549.40	0.171 0	58.66
11.	232	19/3.94	19.70	636.67	0.147 1	68.05
12.	288	37/3.15	22.05	794.05	0.118 2	84.71
13.	346	37/3.45	24.15	952.56	0.098 4	101.58
14.	400	37/3.71	25.97	1 101.36	0.082 9	117.40
15.	465	37/4.00	28.00	1 280.50	0.073 4	136.38
16.	525	61/3.31	29.79	1 448.39	0.065 1	146.03
17.	570	61/3.45	31.05	1 573.71	0.059 8	158.66
18.	604	61/3.55	31.95	1 666.00	0.056 8	167.99
19.	642	61/3.66	32.94	1 771.36	0.053 4	178.43
20.	695	61/3.81	34.29	1 919.13	0.049 2	193.25
21.	767	61/4.00	36.00	2 115.54	0.044 6	213.01