

## All Aluminum-Alloy Conductor

IEC 61809, Characteristics of All Aluminum-Alloy Conductor (A2 and A3)

Code Number	A2 Conductor					A3 Conductor					Max.D.C. Resistance of Conductor at 20°C
	Number of Wires	Diameter of Wires	Diameter of Conductor	Approx. Weight	Rated Strength	Number of Wires	Diameter of Wires	Diameter of Conductor	Approx. Weight	Rated Strength	
mm <sup>2</sup>	-	mm	mm	kg/km	daN	-	mm	mm	kg/km	daN	Ω/km
16	7	1.83	5.49	50.4	5.43	7	1.84	5.52	50.8	6.04	1.7896
25	7	2.29	6.87	78.7	8.49	7	2.3	6.9	79.5	9.44	1.1453
40	7	2.89	8.67	125.9	13.58	7	2.91	8.73	127.1	15.1	0.7158
63	7	3.63	10.8	198.3	21.39	7	3.65	10.95	200.2	23.06	0.4545
100	19	2.78	13.9	316.3	33.95	19	2.79	13.95	319.3	37.76	0.2877
125	19	3.1	15.5	395.4	42.44	19	3.12	15.6	399.2	47.2	0.2302
160	19	3.51	17.55	506.1	54.32	19	3.53	17.65	511	58.56	0.1798
200	19	3.93	19.65	623.7	67.91	19	3.95	19.75	638.7	73.2	0.1439
250	19	4.39	21.95	790.8	84.68	19	4.41	22.05	798.4	91.5	0.1151
315	37	3.53	24.71	998.9	106.95	37	3.55	24.85	1008.4	115.29	0.0916
400	37	3.98	27.86	1268.4	135.81	37	4	28	1280.5	146.4	0.0721
450	37	4.22	29.54	1426.9	152.79	37	4.24	29.68	1440.5	164.7	0.0641
500	37	4.45	31.15	1585.5	169.76	37	4.47	31.29	1600.6	183.0	0.0577
560	61	3.67	33.03	1778.4	190.14	61	3.69	33.21	1795.3	204.95	0.0516
630	61	3.89	35.01	2000.7	213.9	61	3.91	35.19	2019.8	230.58	0.0458
710	61	4.13	37.17	2254.8	241.07	61	4.15	37.35	2276.2	259.86	0.0407
800	61	4.38	39.42	2540.6	271.62	61	4.4	39.6	2564.8	282.8	0.0361
900	91	3.81	41.91	2861.1	305.58	91	3.83	42.13	2888.3	329.4	0.0321
1000	91	4.01	44.11	3179	339.53	91	4.03	44.33	3209.3	366	0.0289
1120	91	4.25	46.75	3560.5	380.27	91	4.27	46.97	3594.4	409.92	0.0258
1250	91	4.49	49.39	3973.7	424.41			-	-	-	-

Physical contents of aluminum alloy:

1. Resistivity - 0.0326 Ohms mm<sup>2</sup>/m at 20°C
2. Density - 2.70 kg/dm<sup>3</sup> at 20°C
3. Coefficient of Linear Expansion - 23 x 10<sup>-6</sup> / °C
4. Constant Mass Temperature Coefficient (α) - 0.00360/ °C
5. Material - Heat treated Al. Mg. Si. Alloy - Approximately 0.5% Mg & 0.5% Si