Aluminium Conductor Composite Core (ACCC)

ACCC (ASTM B857)																					
Conductor Type	Nominal Equivalent Aluminium Area (mm^2)	Equivalent Copper Area (mm^2)	Strands / Wire Diameter (mm)		Overal Diameter (mm)	Total Area (mm^2)			Weight (kg/km)			Rated Strength (kN)	Coefficient of Linear Expansion		Modulus of Elasticity (kg/mm^2)		DC Resistance at 20 ℃ (Ω/km)	Max. Allowable Continuous Operating at 175 ℃		Max. Allowable Continuous Operating at 120 ℃	
			Al.	Core		Al.	Core	Total	Al.	Core	Total		Above Thermal Knee Point $*10^{-6}$ (1/ ℃)	Below Thermal Knee point $*10^{-6}$ (1/ ℃)	Above Linear Knee Point	Below Linear Knee Point		Current (Amp)	Resistance (Ω/km)	Current (Amp)	Resistance (Ω/km)
Helsinki	159.38	102.80	"8/3.09 12/3.17"	1/5.97	15.65	154.51	27.99	182.50	427.00	54.00	481.00	69.09	1.61	17.90	12093.83	7729.45	0.1839	762	0.0299	644	0.2582
Bern	165.27	106.60	"7/3.28 12/3.28"	1/4.82	15.50	160.22	18.25	178.47	443.00	34.00	477.00	50.81	1.61	19.50	12093.83	7464.32	0.1773	773	0.2883	654	0.2490
Copenha-gen	227.61	146.80	"8/3.62 12/3.83"	1/5.97	18.29	220.66	27.99	248.65	610.00	54.00	664.00	72.81	1.61	19.10	12093.83	7515.31	0.1287	956	0.2094	806	0.1809
Glasgow	244.97	158.00	"8/3.85 12/3.91"	1/7.75	19.53	237.25	47.17	284.42	656.00	87.00	743.00	115.15	1.61	17.50	12093.83	7790.63	0.1199	1012	0.1950	852	0.1684
Casa-blanca	278.82	179.80	"8/4.03 12/4.22"	1/7.11	20.50	270.03	39.7	309.73	747.00	76.00	823.00	100.99	1.61	18.60	12093.83	7596.88	0.1053	1096	0.1714	922	0.1481
Lisbon	319.32	206.00	"6/4.95 10/4.97"	1/7.11	21.78	309.56	39.7	349.26	855.00	76.00	931.00	103.21	1.61	19.10	12093.83	7525.50	0.0918	1197	0.1494	1006	0.1292
Oslo	320.54	206.70	"8/4.39 12/4.48"	1/8.76	22.40	310.44	60.27	370.71	859.00	113.00	972.00	147.56	1.61	17.60	12093.83	7770.24	0.0916	1210	0.1491	1016	0.1288
Amester-dam	376.61	242.90	"7/4.98 11/5.14"	1/7.75	23.55	365.11	47.17	412.28	1009.00	87.00	1096.00	122.34	1.61	19.10	12093.83	7525.50	0.0778	1333	0.1268	1119	0.1096
Brussels	430.97	278.00	"7/5.32 12/5.28"	1/8.13	25.14	417.81	51.91	469.72	1154.00	98.00	1252.00	135.6	1.61	19.20	12093.83	7505.11	0.068	1457	0.1109	1220	0.0959
Stock-holm	472.32	304.60	"8/5.22 14/5.1"	1/8.76	26.40	457.89	60.27	518.16	1265.00	113.00	1378.00	155.86	1.61	19.00	12093.83	7535.70	0.062	1549	0.1013	1296	0.0876
Warsaw	529.05	341.20	"8/4.21 11/4.44 14/4.57"	1/8.76	27.72	510.64	60.27	570.91	1417.00	113.00	1530.00	158.83	1.61	19.40	12093.83	7474.52	0.0559	1658	0.0914	1386	0.0791
Dublin	534.3	344.60	"8/5.57 14/5.42"	1/9.53	28.15	517.97	71.33	589.3	1431.00	132.00	1563.00	182.94	1.61	18.90	12093.83	7556.10	0.0548	1682	0.0897	1405	0.0776
Hamburg	561.79	362.40	"8/4.31 12/4.38 14/4.72"	1/8.76	28.62	542.24	60.27	602.51	1505.00	113.00	1618.00	160.6	1.61	19.50	12093.83	7454.12	0.0526	1726	0.0861	1441	0.0745
Milan	582.76	375.90	"8/4.38 12/4.46 16/4.5"	1/8.76	29.10	562.48	60.27	622.75	1561.00	113.00	1674.00	161.74	1.61	19.60	12093.83	7433.73	0.0507	1767	0.0831	1475	0.0719
Rome	605.11	390.30	"9/4.25 12/4.54 16/4.56"	1/9.53	29.84	584.05	71.33	655.38	1621.00	132.00	1753.00	186.66	1.61	19.20	12093.83	7494.91	0.0489	1816	0.0800	1514	0.0693
Vienna	641.75	413.90	"8/4.56 12/4.68 16/4.74"	1/8.76	30.41	619.42	60.27	679.69	1719.00	113.00	1832.00	164.95	1.61	19.90	12093.83	7392.94	0.0461	1880	0.0756	1567	0.0655
Budapest	682.16	440.00	"8/4.74 12/4.83 16/4.87"	1/9.53	31.50	658.42	71.33	729.75	1827.00	132.00	1959.00	190.8	1.61	19.60	12093.83	7433.73	0.0433	1960	0.0712	1633	0.0617
Prague	705.75	455.20	"8/4.74 12/4.91 16/4.99"	1/8.76	31.77	681.19	60.27	741.46	1891.00	113.00	2004.00	168.4	1.61	20.10	12093.83	7352.15	0.0419	1998	0.0689	1664	0.0597
Munich	747.91	482.40	"8/4.92 12/5.05 16/5.12"	1/9.53	32.85	721.88	71.33	793.21	2003.00	132.00	2135.00	194.4	1.61	19.90	12093.83	7403.14	0.0395	2079	0.0651	1729	0.0565
London	771.83	497.80	"8/5.01 12/5.13 16/5.19"	1/9.78	33.40	744.96	75.12	820.08	2068.00	142.00	2210.00	204.0	1.61	19.80	12093.83	7403.14	0.0383	2123	0.0631	1765	0.0548
Paris	825.51	532.50	"8/5.06 12/5.31 18/5.12"	1/8.76	34.17	796.78	60.27	857.05	2211.00	113.00	2324.00	174.9	1.61	20.50	12093.83	7301.17	0.0358	2209	0.0592	1835	0.0514
Antwerp	960.82	619.73	"9/4.29 12/4.57 16/4.58 20/4.59"	1/9.78	36.85	921.99	75.12	997.11	2574.00	142.00	2716.00	214.0	1.61	20.30	12093.83	7321.56	0.0311	2425	0.0517	2009	0.0450
Madrid	1037.94	669.47	"8/4.69 12/4.74 16/4.77 20/4.78"	1/9.78	38.20	995.99	75.12	1071.11	2780.00	142.00	2922.00	218.1	1.61	20.50	12093.83	7290.97	0.0288	2546	0.0481	2106	0.0419

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Aluminium Conductor Composite Core (ACCC)

ACCC (ASTM B857)																				
Conductor Type	Nominal Equivalent Aluminium Area (mm^2)	Equivalent Copper Area (mm^2)	Strands / Wire Diameter (mm)		Overal Diameter (mm)	Total Area (mm^2)			Weight (kg/km)			Rated Strength (kN)	Coefficient of Linear Expansion		Modulus of Elasticity (kg/mm^2)		DC Resistance at 20 ℃ (Ω/km)	Max. Allowable Continuous Operating at 175 ℃		Max. Allowable Continuous Operating at 120 ℃	
			Al.	Core		Al.	Core	Total	Al.	Core	Total		Above Thermal Knee Point $*10^{-6}$ (1/ ℃)	Below Thermal Knee point $*10^{-6}$ (1/ ℃)	Above Thermal Knee Point	Below Thermal Knee Point		Current (Amp)	Resistance (Ω/km)	Current (Amp)	Resistance (Ω/km)
150	160	103.2	"8/3.09 12/3.17"	1/5.97	15.65	154.51	27.99	182.50	427.00	54.00	481.00	69.30	1.61	17.90	12093.83	7729.45	0.1839	783	0.0299	660	0.2582
160	170	109.7	"7/3.28 12/3.28"	1/4.82	15.50	160.22	18.25	178.47	443.00	34.00	477.00	51.03	1.61	19.50	12093.83	7464.32	0.1773	795	0.2883	670	0.2490
220	230	148.4	"8/3.62 12/3.83"	1/5.97	18.29	220.66	27.99	248.65	610.00	54.00	664.00	73.11	1.61	19.10	12093.83	7515.31	0.1287	984	0.2094	827	0.1809
235	250	161.3	"8/3.85 12/3.91"	1/7.75	19.53	237.25	47.17	284.42	656.00	87.00	743.00	115.47	1.61	17.50	12093.83	7790.63	0.1199	1043	0.1950	875	0.1684
285	280	180.6	"8/4.03 12/4.22"	1/7.11	20.50	270.03	39.70	309.73	747.00	76.00	823.00	101.35	1.61	18.60	12093.83	7596.88	0.1053	1130	0.1714	947	0.1481
310	320	206.4	"6/4.95 10/4.97"	1/7.11	21.78	309.56	39.70	349.26	855.00	76.00	931.00	103.63	1.61	19.10	12093.83	7525.50	0.0918	1235	0.1494	1034	0.1292
310	320	206.4	"8/4.39 12/4.48"	1/8.76	22.40	310.44	60.27	370.71	859.00	113.00	972.00	147.98	1.61	17.60	12093.83	7770.24	0.0916	1248	0.1491	1044	0.1288
360	380	245.1	"7/4.98 11/5.14"	1/7.75	23.55	365.11	47.17	412.28	1009.00	87.00	1096.00	122.83	1.61	19.10	12093.83	7525.50	0.0778	1376	0.1268	1150	0.1096
415	430	277.4	"7/5.32 12/5.28"	1/8.13	25.14	417.81	51.91	469.72	1154.00	98.00	1252.00	136.17	1.61	19.20	12093.83	7505.11	0.068	1505	0.1109	1256	0.0959
460	470	303.2	"8/5.22 14/5.1"	1/8.76	26.40	457.89	60.27	518.16	1265.00	113.00	1378.00	156.47	1.61	19.00	12093.83	7535.70	0.062	1601	0.1013	1335	0.0876
510	530	341.9	"8/4.21 11/4.44 14/4.57"	1/8.76	27.72	510.64	60.27	570.91	1417.00	113.00	1530.00	159.51	1.61	19.40	12093.83	7474.52	0.0559	1714	0.0914	1427	0.0791
520	540	348.3	"8/5.57 14/5.42"	1/9.53	28.15	517.97	71.33	589.30	1431.00	132.00	1563.00	183.64	1.61	18.90	12093.83	7556.10	0.0548	1740	0.0897	1448	0.0776
540	560	361.2	"8/4.31 12/4.38 14/4.72"	1/8.76	28.62	542.24	60.27	602.51	1505.00	113.00	1618.00	161.33	1.61	19.50	12093.83	7454.12	0.0526	1785	0.0861	1485	0.0745
560	580	374.1	"8/4.38 12/4.46 16/4.5"	1/8.76	29.10	562.48	60.27	622.75	1561.00	113.00	1674.00	162.50	1.61	19.60	12093.83	7433.73	0.0507	1828	0.0831	1520	0.0719
580	605.11	390.3	"9/4.25 12/4.54 16/4.56"	1/9.53	29.84	584.05	71.33	655.38	1621.00	132.00	1753.00	187.44	1.61	19.20	12093.83	7494.91	0.0489	1879	0.0800	1561	0.0693
620	640	412.8	"8/4.56 12/4.68 16/4.74"	1/8.76	30.41	619.42	60.27	679.69	1719.00	113.00	1832.00	165.78	1.61	19.90	12093.83	7392.94	0.0461	1946	0.0756	1616	0.0655
650	680	438.6	"8/4.74 12/4.83 16/4.87"	1/9.53	31.50	658.42	71.33	729.75	1827.00	132.00	1959.00	191.73	1.61	19.60	12093.83	7433.73	0.0433	2030	0.0712	1684	0.0617
680	710	458.0	"8/4.74 12/4.91 16/4.99"	1/8.76	31.77	681.19	60.27	741.46	1891.00	113.00	2004.00	169.34	1.61	20.10	12093.83	7352.15	0.0419	2069	0.0689	1716	0.0597
720	750	483.8	"8/4.92 12/5.05 16/5.12"	1/9.53	32.85	721.88	71.33	793.21	2003.00	132.00	2135.00	195.38	1.61	19.90	12093.83	7403.14	0.0395	2154	0.0651	1785	0.0565
740	770	496.7	"8/5.01 12/5.13 16/5.19"	1/9.78	33.40	744.96	75.12	820.08	2068.00	142.00	2210.00	205.01	1.61	19.80	12093.83	7403.14	0.0383	2200	0.0631	1822	0.0548
795	830	535.4	"8/5.06 12/5.31 18/5.12"	1/8.76	34.17	796.78	60.27	857.05	2211.00	113.00	2324.00	175.99	1.61	20.50	12093.83	7301.17	0.0358	2289	0.0592	1894	0.0514
920	960	619.2	"9/4.29 12/4.57 16/4.58 20/4.59"	1/9.78	36.85	921.99	75.12	997.11	2574.00	142.00	2716.00	215.21	1.61	20.30	12093.83	7321.56	0.0311	2515	0.0517	2076	0.0450
1000	1040	670.8	"8/4.69 12/4.74 16/4.77 20/4.78"	1/9.78	38.20	995.99	75.12	1071.11	2780.00	142.00	2922.00	218.74	1.61	20.50	12093.83	7290.97	0.0288	2642	0.0481	2177	0.0419

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