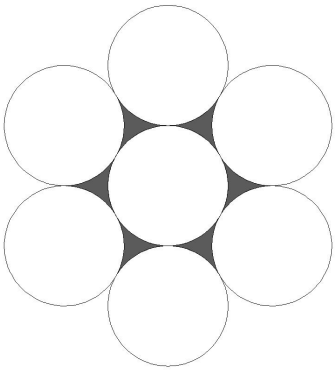
All-Aluminum Alloy Conductor(AAAC)

APPLICATION:

AAAC – All Aluminum Alloy Conductor is for stranded aluminum alloy 6201 conductors and is primarily used for overhead transmission and distribution services.



STANDARDS:

- ASTM B-399
- ASTM B-231
- BS 215/AS 1531
- IEC 61089/EN 50182

Qualification Certificate:

For more information, please visit our website:

https://www.huilicablegroup.com/aaac-all-aluminum-alloy-conductor.html

CONSTRUCTION:

- 6201 Aluminum alloy wires/1120 Aluminum alloy wires.
- AAAC is available single layer and multi-layer constructions.

TECHNICAL PARAMETERS:

ALL ALUMINUM ALLOY CONDUCTOR(AAAC) IEC61089

Code Word	Conductor Name	Sectional Area	Stranding		Outer Diameter	Weight	Rated Strength	DC Resistance @20℃	Current Capacity	
			No.of Wires	Wire Diameter					75℃	85℃
		mm²	No.	mm	mm	Kg/Km	KN	Ω/Km	A	A
13-A4-7	Fredericton	14	7	1.60	4.80	38.51	3.53	2.15400	73	87
21-A4-7	Whitehorse	22	7	2.02	6.06	61.26	5.61	1.35400	97	115
27-A4-7	-	28	7	2.27	6.81	77.23	7.07	1.07400	111	133
34-A4-7	Halifax	36	7	2.55	7.65	97.40	8.92	0.85160	128	153
42-A4-7	Regina	45	7	2.86	8.58	122.80	11.30	0.67520	147	176
54-A4-7	Montreal	57	7	3.21	9.63	155.00	14.20	0.53510	169	203
67-A4-7	Winnipeg	72	7	3.61	10.83	195.30	17.90	0.42460	194	234
85-A4-7	Toronto	90	7	4.05	12.15	246.30	22.60	0.33680	222	269
107-A4-7	Vancouver	1114	7	4.55	13.65	310.60	28.40	0.26710	254	310

NOTE :Current capacity based on conductor temperature, 0.56 m/s wind, 0 m Elevation, 0.45 Emmisivity, 0.80 absorptivity, 45°C Ambient temperature, 1045 W/m² Solar radiation.

ALL ALUMINUM ALLOY CONDUCTOR(AAAC) ASTM B 399

Code Word	Conductor size	Sectional Area	Stranding		Outer Diameter	Weight	Rated Strength	DC Resistance @20℃	Current Capacity	
			No.of Wires	Wire Diameter					75℃	85℃
	kcmil	mm²	No.	mm	mm	Kg/Km	KN	Ω/Km	A	A
-	1439.2	729	61	3.90	35.10	1999.00	207.00	0.04597	693	897
-	1348.8	685	61	3.78	34.02	1878.00	194.00	0.04893	671	865
-	1259.6	638	61	3.65	32.85	1751.00	181.00	0.05248	646	831
-	1165.1	590	61	3.51	31.59	1620.00	167.00	0.05675	620	794
-	1077.4	547	61	3.38	30.42	1502.00	156.00	0.06120	595	760
Greeley	927.2	470	37	4.02	28.14	1289.00	135.00	0.07133	547	694
Flint	740.8	375	37	3.59	25.13	1028.00	107.00	0.08944	482	607
Elgin	652.4	331	19	4.71	23.55	908.30	97.00	0.10120	449	564
Darien	559.5	284	19	4.36	21.80	778.30	83.10	0.11810	412	514
Cairo	465.4	236	19	3.98	19.90	648.60	69.20	0.14170	371	461
Canton	394.5	200	19	3.66	18.30	548.50	58.60	0.16760	337	417
Butte	312.8	159	19	3.26	16.30	435.10	46.50	0.21120	295	362
Alliance	246.9	125	7	4.77	14.31	343.20	37.80	0.26780	256	313
Amherst	195.7	99.3	7	4.25	12.75	272.50	30.00	0.33730	224	272
Anaheim	155.4	78.6	7	3.78	11.34	215.60	23.80	0.42640	195	236
Azusa	123.3	62.4	7	3.37	10.11	171.30	18.90	0.53650	170	205
Ames	77.47	39.2	7	2.67	8.01	107.50	12.40	0.85470	129	154
Alton	48.69	24.7	7	2.12	6.36	67.80	7.83	1.35600	98	116
Akron	30.58	15.5	7	1.68	5.04	42.58	4.92	2.15900	74	88

NOTE :Current capacity based on conductor temperature, 0.56 m/s wind, 0 m Elevation, 0.45 Emmisivity, 0.80 absorptivity, 45°C Ambient temperature, 1045 W/m² Solar radiation.

ALL ALUMINUM ALLOY CONDUCTOR(AAAC) ASTM B 399

AWG	Conductor size	Sectional Area	Stranding		Outer Diameter	Weight	Rated Strength	DC Resistance @20℃	Current Capacity	
			No.of Wires	Wire Diameter					75℃	85℃
	kcmil	mm²	No.	mm	mm	Kg/ Km	KN	Ω/Km	A	A
-	1750	886	61	4.30	38.70	2431.00	251.00	0.03781	767	1002
-	1500	759	61	3.98	35.82	2082.00	215.00	0.04414	708	918
-	1250	631	61	3.63	32.67	1732.00	179.00	0.05306	642	826
-	1000	508	37	4.18	29.26	1393.00	146.00	0.06597	571	727
-	900	456	37	3.96	27.72	1250.00	131.00	0.07351	538	682
-	800	404	37	3.73	26.11	1109.00	116.00	0.08285	503	636
-	750	381	37	3.62	25.34	1045.00	109.00	0.08796	487	613
-	700	354	37	3.49	24.43	971.20	101.00	0.09464	467	587
-	650	330	37	3.37	23.59	905.50	94.90	0.10150	449	563
-	600	303	37	3.23	22.61	831.90	91.00	0.11049	428	535
-	550	279	37	3.10	21.70	766.20	83.90	0.11995	408	510
-	500	253	19	4.12	20.60	695.00	74.20	0.13224	386	480
-	450	228	19	3.91	19.55	626.00	66.80	0.14683	364	451
-	400	203.0	19	3.69	18.45	557.50	59.50	0.16486	340	421
-	350	178.0	19	3.45	17.25	487.30	52.00	0.18860	315	388
-	300	152.0	19	3.19	15.95	416.70	46.60	0.22059	287	353
-	250	126.0	19	2.91	14.55	346.70	38.80	0.26509	258	316
0000	211.60	107.0	7	4.42	13.26	294.70	32.50	0.31188	234	285
000	167.80	84.9	7	3.93	11.79	233.00	25.70	0.39450	204	247
00	133.1	67.3	7	3.5	10.5	184.8	20.4	0.49738	178	215
0	105.6	53.5	7	3.12	9.36	146.8	17	0.62592	155	187
2	66.36	33.5	7	2.47	7.41	92	10.6	0.9987	118	140
4	41.74	21.1	7	1.96	5.88	57.9	6.69	1.586	89	106
6	26.24	13.2	7	1.55	4.65	36.2	4.18	2.5361	67	79

NOTE :Current capacity based on conductor temperature, 0.56 m/s wind, 0 m Elevation, 0.45 Emmisivity, 0.80 absorptivity, 45°C Ambient temperature, 1045 W/m² Solar radiation.

ALL ALUMINUM ALLOY CONDUCTOR(AAAC) EN 50182 TypeAL3

Code	Old code	Sectional Area	Stranding		Outer Diameter	Weight	Rated Strength	DC Resistance @20°C	Current Capacity	
			No.of Wires	Wire Diameter					75°C	85°C
		mm²	No.	mm	mm	Kg/Km	KN	Ω/Km	A	A
19-AL3	BOX	19	7	1.85	5.55	51.40	5.55	1.74800	84	99
24-AL3	ACACIA	24	7	2.08	6.24	64.90	7.02	1.38280	97	115
30-AL3	ALMOND	30	7	2.34	7.02	82.20	8.88	1.09260	111	133
35-AL3	CEDAR	36	7	2.54	7.62	96.80	10.46	0.92730	123	147
42-AL3	DEODAR	42	7	2.77	8.31	115.20	12.44	0.77970	136	163
48-AL3	FIR	48	7	2.95	8.85	130.60	14.11	0.68750	147	176
60-AL3	HAZEL	60	7	3.30	9.90	163.40	17.66	0.54940	167	202
72-AL3	PINE	72	7	3.61	10.80	195.60	21.14	0.45910	186	225
84-AL3	HOLLY	84	7	3.91	11.70	229.50	24.79	0.39130	205	248
90-AL3	WILLOW	90	7	4.04	12.10	245.00	26.47	0.36650	213	258
119-AL3	OAK	119	7	4.65	14.00	324.50	35.07	0.27670	251	306
151-AL3	MULBERRY	151	19	3.18	15.90	414.30	44.52	0.21920	288	354
181-AL3	ASH	181	19	3.48	17.40	496.10	53.31	0.18300	320	394
211-AL3	ELM	211.0	19	3.76	18.80	579.20	62.24	0.15680	350	433
239-AL3	POPLAR	239.4	37	2.87	20.10	659.40	70.61	0.13870	376	467
303-AL3	SYCAMORE	303.2	37	3.23	22.60	835.20	89.40	0.10950	430	538
362-AL3	UPAS	362.1	37	3.53	24.70	997.50	106.82	0.09170	475	598
479-AL3	YEW	479.0	37	4.06	28.40	1319.60	141.31	0.06930	555	706
498-AL3	TOTARA	498.1	37	4.14	29.00	1372.10	146.93	0.06660	567	722
587-AL3	RUBUS	586.9	61	3.5	31.5	1622	173.13	0.0567	620	794
659-AL3	SORBUS	659.4	61	3.71	33.4	1822.5	194.53	0.0505	659	849
821-AL3	ARAUCARIA	821.1	61	4.14	37.3	2269.4	242.24	0.0406	740	962
996-AL3	REDWOOD	996.2	61	4.56	41	2753.2	293.88	0.0334	816	1072

NOTE :Current capacity based on conductor temperature, 0.56 m/s wind, 0 m Elevation, 0.45 Emmisivity, 0.80 absorptivity, 45°C Ambient temperature, 1045 W/m² Solar radiation.

ALL ALUMINUM ALLOY CONDUCTOR(AAAC) EN 50182 TypeAL3

Code	Old code	Sectional Area	Stranding		Outer Diameter	Weight	Rated Strength	DC Resistance @20℃	Current Capacity	
			No.of Wires	Wire Diameter					75℃	85℃
		mm²	No.	mm	mm	Kg/Km	KN	Ω/Km	A	A
16-AL3	16	16	7	1.70	5.10	43.40	4.69	2.07010	76	90
25-AL3	25	25	7	2.14	6.42	68.70	7.43	1.30640	100	119
35-AL3	35	35	7	2.52	7.56	95.30	10.30	0.94210	122	145
50-AL3	50	50	7	3.02	9.06	136.90	14.79	0.66600	150	180
50-AL3	50	50	19	1.83	9.15	137.20	14.74	0.66190	150	181
70-AL3	70	70	19	2.17	10.90	192.90	20.73	0.47070	184	223
95-AL3	95	95	19	2.52	12.60	260.20	27.96	0.34900	219	267
120-AL3	120	120	19	2.84	14.20	330.40	35.51	0.27480	253	308
150-AL3	150	150	37	2.27	15.90	412.50	44.17	0.22170	286	352
185-AL3	185	185	37	2.52	17.60	508.40	54.44	0.17990	323	399
239-AL3	240	239	37	2.87	20.10	659.40	70.61	0.13870	376	467
301-AL3	300	301	37	3.22	22.50	830.00	88.88	0.11020	428	536
299-AL3	300	299	61	2.50	22.50	827.50	88.33	0.11120	426	533
403-AL3	400	402.9	61	2.90	26.10	1113.60	118.86	0.08260	504	636
497-AL3	500	496.7	61	3.22	29.00	1372.90	146.54	0.06700	566	720
551-AL3	550	550.6	61	3.39	30.50	1521.60	162.42	0.06050	598	765
548-AL3	550	548.4	91	2.77	30.50	1521.80	161.78	0.06100	596	762
600-AL3	600	600.4	61	3.54	31.90	1659.30	177.11	0.05550	627	804
601-AL3	600	601.1	91	2.90	31.90	1668.00	177.32	0.05560	626	804
802-AL3	800	802.1	91	3.35	36.9	2225.8	236.62	0.0417	730	948

NOTE :Current capacity based on conductor temperature, 0.56 m/s wind, 0 m Elevation, 0.45 Emmisivity, 0.80 absorptivity, 45°C Ambient temperature, 1045 W/m² Solar radiation.

ALL ALUMINUM ALLOY CONDUCTOR(AAAC) IEC 61089 Type A3

Code Number	Sectional Area	Stranding		Outer Diameter	Weight	Rated Strength	DC Resistance @20℃	Current Capacity	
		No.of Wires	Wire Diameter					75℃	85℃
	mm²	No.	mm	mm	Kg/Km	KN	Ω/Km	A	A
16	18.6	7	1.84	5.52	50.8	6.04	1.7896	83	98
25	29.0	7	2.30	6.90	79.5	9.44	1.1453	108	129
40	46.5	7	2.91	8.73	127.1	15.10	0.7158	143	172
63	73.2	7	3.65	10.95	200.2	23.06	0.4545	188	227
100	116	19	2.79	13.95	319.3	37.76	0.2877	246	300
125	145	19	3.12	15.60	399.2	47.20	0.2302	280	344
160	186	19	3.53	17.65	511.0	58.56	0.1798	323	399
200	232	19	3.95	19.75	638.7	73.20	0.1439	368	457
250	290	19	4.41	22.05	798.4	91.50	0.1151	418	522
315	366	37	3.55	24.85	1008.4	115.29	0.0916	476	599
400	465	37	4	28	1280.5	146.4	0.0721	544	690
450	523	37	4.24	29.68	1440.5	164.7	0.0641	580	739
500	581	37	4.47	31.29	1600.6	183	0.0577	614	786
560	651	61	3.69	33.21	1795.3	204.96	0.0516	652	840
630	732	61	3.91	35.19	2019.8	230.58	0.0458	695	899
710	825	61	4.15	37.35	2276.2	259.86	0.0407	739	961
800	930	61	4.4	39.6	2564.8	292.8	0.0361	785	1028
900	1046	91	3.83	42.13	2888.3	329.4	0.0321	833	1097
1000	1162	91	4.03	44.33	3209.3	366	0.0289	876	1161
1120	1301	91	4.27	46.97	3594.4	409.92	0.0258	923	1233

NOTE :Current capacity based on conductor temperature, 0.56 m/s wind, 0 m Elevation, 0.45 Emmisivity, 0.80 absorptivity, 45°C Ambient temperature, 1045 W/m² Solar radiation.

ALL ALUMINUM ALLOY CONDUCTOR(AAAC) AS 1531

Code Name	Sectional Area	Stranding		Outer Diameter	Weight	Rated Strength	DC Resistance @20℃	Current Capacity	
		No.of Wires	Wire Diameter					75℃	85℃
	mm²	No.	mm	mm	Kg/Km	KN	Ω/Km	A	A
Diamond	34.36	7	2.50	7.50	94.3	9.64	0.9670	120	143
Dolomite	41.58	7	2.75	8.25	113.0	11.60	0.7990	134	161
Emerald	49.48	7	3.00	9.00	135.0	13.90	0.6710	149	179
Garnet	77.31	7	3.75	11.25	211.0	21.70	0.4300	194	234
Jade	111.33	7	4.50	13.50	304.0	31.20	0.2980	240	293
Jasper	124.00	7	4.75	14.25	339.0	34.80	0.2680	256	313
Opal	157.60	19	3.25	16.25	433.0	44.20	0.2120	294	361
Patronite	182.80	19	3.50	17.50	503.0	51.30	0.1830	320	395
Pearl	209.80	19	3.75	18.75	576.0	58.80	0.1590	347	430
Ruby	261.6	37	3	21	721	73.5	0.128	393	490
Ruthenium	307	37	3.25	22.75	845	86.1	0.109	431	540
Rutile	336.7	19	4.75	23.75	924	94.4	0.0991	455	571
Sapphire	408.5	37	3.75	26.25	1120	115	0.0819	506	640
Spinel	506.1	61	3.25	29.25	1400	135	0.0662	570	726
Tantalum	586.9	61	3.5	31.5	1620	156	0.0572	617	791
Topaz	673.4	61	3.75	33.75	1860	179	0.0498	665	857

NOTE :Current capacity based on conductor temperature, 0.56 m/s wind, 0 m Elevation, 0.45 Emmisivity, 0.80 absorptivity, 45°C Ambient temperature, 1045 W/m² Solar radiation.

ALL ALUMINUM ALLOY CONDUCTOR(AAAC 1120) AS1531

Conductor Code	Stranding and Wire Diameter	Nominal Overall Diameter	Cross Sectional Area	Mass	Breaking Load	DC Resistance @20℃	Current Capacity	Modulus of Elasticity	Coefficient of Linear Expansion
	No./mm	mm	mm²	kg/km	kN	Ω/km	A	GPa	10-6/℃
Chlorine	7/2.50	7.50	34.4	94.3	8.18	0.864	238	65	23.0
Chromium	7/2.75	8.25	41.6	113	9.91	0.713	279	65	23.0
Fluorine	7/3.00	9.00	49.5	135	11.8	0.599	313	65	23.0
Helium	7/3.75	11.3	77.3	211	17.6	0.383	412	65	23.0
Hydrogen	7/4.50	13.5	111	304	24.3	0.266	509	65	23.0
Lodine	7/4.75	14.3	124	339	27.1	0.239	542	65	23.0
Krypton	19/3.25	16.3	158	433	37.4	0.189	633	65	23.0
Lutetium	19/3.50	17.5	183	503	41.7	0.163	692	65	23.0
Neon	19/3.75	18.8	210	576	47.8	0.142	751	65	23.0
Nitrogen	37/3.00	21.0	262	721	62.2	0.114	858	64	23.0
Nobelium	37/3.25	22.8	307	845	72.8	0.0973	960	64	23.0
Oxygen	19/4.75	23.8	337	924	73.6	0.0884	1038	65	23.0
Phosphorus	37/3.75	26.3	409	1120	93.1	0.0731	1158	64	23.0
Selenium	61/3.25	29.3	506	1400	114	0.0592	1350	64	23.0
Silicon	61/3.50	31.5	587	1620	127	0.0511	1511	64	23.0
Sulfur	61/3.75	33.8	673	1860	145	0.0444	1648	64	23.0

NOTE :Current capacity based on conductor temperature, 0.56 m/s wind, 0 m Elevation, 0.45 Emmisivity, 0.80 absorptivity, 45°C Ambient temperature, 1045 W/m² Solar radiation.