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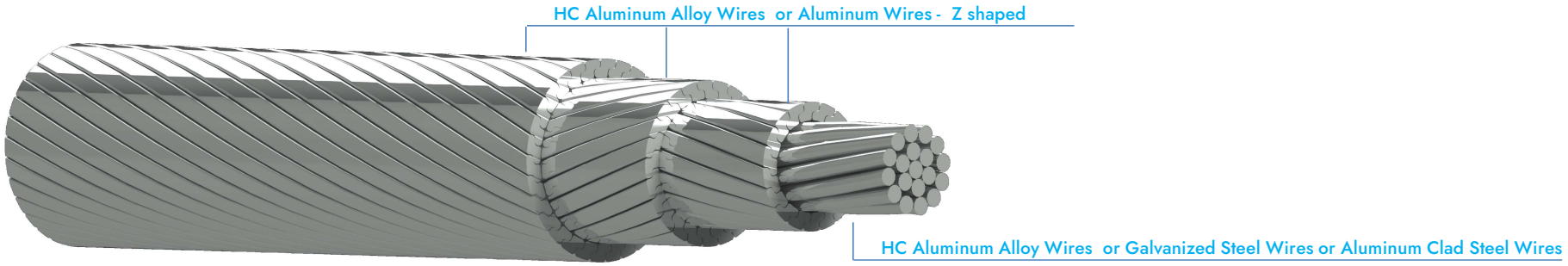
APAR "POWER-ZAD" Conductor

APAR "POWER-ZAD" Conductor : is a concentrically stranded conductor composed of one or more layers of High Conductivity Aluminum alloy wire or Aluminum Wires of Round or Z-shaped stranded over a central core of round shaped HC Aluminum Alloy Wires or Galvanized Steel Wires or Aluminum Clad Steel Wires. The external surface is smoother than that of round wires, can reduce the load against climatic influences and significantly reduce aerodynamic drag and the dance of wires.

Construction

Aluminum or Aluminum Alloy Wires of Round / Z- shaped, concentrically stranded over a central core of Round Wires



Features:

- Reduced drag coefficient (Aerodynamic Drag).
- Greater useful cross section
- Improved shock absorption & Self-damping
- Superior behavior in ice and snow climates
- The central core is filled with Superior quality grease (Optional)

Available with Non-Specular (Dull) Surface Finish and Color Coated as per customized requirements.

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ALL ALUMINUM ALLOY CONDUCTOR - Type AAAC-Z as per NBN C 34-100

Code	Total Sectional Area of Conductor	Sectional Area of Round Wires	Sectional Area of Z-shaped Wires	Round Wires		Z-Shaped Wires			Overall Diameter	Mass	Mass of Grease		Rated Strength	DC Resistance @ 20°C	Current Capacity	
				Nos.	Dia.	No. of Layers	No. of Wires	Eq. Round Dia			Min	Max			@ 75°C	@ 85°C
	mm²	mm²	mm²		mm			mm	mm	kg/km	kg/km	kg/km	kN	Ω/Km	(Ampere)	(Ampere)
177-1Z	179.27	59.87	119.4	7	3.30	1	12	3.56	16.50	495.0	10.5	15.8	57.07	0.1858	315	387
242-2Z	246.02	40.08	205.94	7	2.70	2	30	2.96	18.90	681.0	7	10.5	79.96	0.1359	376	465
261-2Z	265.7	43.1	222.6	7	2.80	2	30	3.07	19.60	736.0	7.5	11.3	86.35	0.1258	393	487
301-2Z	306.29	49.48	256.81	7	3.00	2	30	3.30	21.00	848.0	8.6	12.9	99.54	0.1092	426	530
346-2Z	351.44	56.3	295.14	7	3.20	2	30	3.54	22.40	973.0	9.8	14.7	111.27	0.0951	460	576
366-2Z	372.26	59.87	312.38	7	3.30	2	30	3.64	23.10	1031.0	10.5	15.8	117.86	0.0898	475	596
255-2Z	461.73	125.5	336.23	19	2.90	2	42	3.19	26.10	1275.0	24.1	36.2	150.06	0.0722	538	680
504-2Z	511.25	138.82	372.44	19	3.05	2	42	3.36	27.45	1412.0	26.7	40.1	166.16	0.0652	569	722
538-2Z	545.83	148.07	397.76	19	3.15	2	42	3.47	28.35	1508.0	28.2	42.3	177.39	0.0611	590	750
635-1Z	640.7	355.98	284.72	37	3.50	1	24	3.89	31.50	1770.0	70.3	105.5	205.38	0.0521	645	827
648-2Z	657.8	177.62	480.18	19	3.45	2	42	3.82	31.05	1817.0	34.2	51.3	208.98	0.0507	653	836
666-2Z	675.58	182.8	492.78	19	3.50	2	42	3.87	31.50	1866.0	35.2	52.8	214.64	0.0494	662	849
705-2Z	715.2	193.4	521.81	19	3.60	2	48	3.72	32.40	1976.0	37.2	55.8	225.29	0.0466	683	877
707-2Z	717.03	193.4	523.63	19	3.60	2	42	3.98	32.40	1981.0	37.2	55.8	225.86	0.0465	684	878
928-3Z	943.67	167.47	776.2	19	3.35	3	72	3.70	36.85	2607.0	32.2	48.3	298.93	0.0353	788	1025

NOTE :

Current capacity based on referenced 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

Customized conductor sizes based on customer's requirement can also be designed.

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ALUMINUM CONDUCTOR STEEL REINFORCED - Type ACSR-Z

Nominal Area	Steel Wire		Round Aluminum Wires		Z-Shaped Wires			Sectional Area of Steel	Sectional Area of Round Al. Wires	Sectional Area of Z-shaped Al. Wires	Total Sectional Area of Conductor	Overall Diameter	Mass	Rated Strength	DC Resistance @ 20°C	Current Capacity	
	Nos.	Dia.	Nos.	Dia.	No. of Layers	No. of Wires	Eq. Round Dia									@ 75°C	@ 85°C
		mm		mm			mm	mm²	mm²	mm²	mm²	mm	kg/km	kN	Ω/Km	(Ampere)	(Ampere)
117	7	3.30	-	-	1	12	3.56	59.87	-	119.45	179.32	16.50	797.1	107.72	0.2414	255	313
202	7	2.70	-	-	2	30	2.96	40.08	-	206.44	246.52	18.90	882.3	95.81	0.1396	367	454
218	7	2.80	-	-	2	30	3.07	43.10	-	222.07	265.17	19.60	949.0	101.94	0.1298	383	474
251	7	3.00	-	-	2	30	3.30	49.48	-	256.59	306.07	21.00	1094.0	117.30	0.1124	416	517
290	7	3.20	-	-	2	30	3.54	56.30	-	295.27	351.57	22.40	1254.0	130.56	0.0976	450	562
306	7	3.30	-	-	2	30	3.64	59.87	-	312.19	372.06	23.10	1328.5	138.56	0.0923	465	581
407	7	2.90	12	2.90	2	42	3.19	46.24	79.26	335.68	461.18	26.10	1505.3	138.51	0.0695	537	677
449	19	3.50	18	3.50	1	24	3.89	182.80	173.18	285.23	641.22	31.50	2697.0	343.89	0.0629	586	749
451	7	3.05	12	3.05	2	42	3.36	51.14	87.67	372.41	511.23	27.45	1668.1	151.61	0.0627	568	719
481	7	3.15	12	3.15	2	42	3.47	54.55	93.52	397.19	545.26	28.35	1779.2	161.70	0.0588	589	747
582	7	3.45	12	3.45	2	42	3.82	65.44	112.18	481.36	658.97	31.05	2147.7	191.81	0.0486	653	835
598	7	3.50	12	3.50	2	42	3.87	67.35	115.45	494.04	676.84	31.50	2206.6	197.19	0.0473	663	849
631	7	3.60	12	3.60	2	48	3.72	71.25	122.15	521.70	715.09	32.40	2331.8	206.33	0.0448	683	876
632	7	3.60	12	3.60	2	42	3.98	71.25	122.15	522.52	715.92	32.40	2334.1	206.46	0.0447	684	877
862	7	3.35	12	3.35	3	72	3.70	61.70	105.77	774.15	941.62	36.85	2920.0	232.10	0.0328	812	1054

NOTE :

Current capacity based on referenced 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

Customized conductor sizes based on customer's requirement can also be designed.

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ALUMINUM CONDUCTOR, ALUMINUM CLAD STEEL REINFORCED - Type ACSR/AW-Z

Nominal Area	Steel Wire		Round Aluminum Wires		Z-Shaped Wires			Sectional Area of Steel	Sectional Area of Round Al. Wires	Sectional Area of Z-shaped Al. Wires	Total Sectional Area of Conductor	Overall Diameter	Mass	Rated Strength	DC Resistance @ 20°C	Current Capacity	
	Nos.	Dia.	Nos.	Dia.	No. of Layers	No. of Wires	Eq. Round Dia									@ 75°C	@ 85°C
		mm		mm			mm	mm²	mm²	mm²	mm²	mm	kg/km	kN	Ω/Km	(Ampere)	(Ampere)
137	7	3.30	-	-	1	12	3.56	59.87	-	119.45	179.32	16.50	725.6	98.74	0.2068	276	339
215	7	2.70	-	-	2	30	2.96	40.08	-	206.44	246.52	18.90	834.4	89.60	0.1312	379	468
232	7	2.80	-	-	2	30	3.07	43.10	-	222.07	265.17	19.60	897.5	95.26	0.1219	395	489
268	7	3.00	-	-	2	30	3.30	49.48	-	256.59	306.07	21.00	1034.9	109.63	0.1056	429	533
308	7	3.20	-	-	2	30	3.54	56.30	-	295.27	351.57	22.40	1186.7	122.12	0.0918	464	579
326	7	3.30	-	-	2	30	3.64	59.87	-	312.19	372.06	23.10	1257.0	129.58	0.0868	479	599
422	7	2.90	12	2.90	2	42	3.19	46.24	79.26	335.68	461.18	26.10	1450.0	131.35	0.067	546	689
468	7	3.05	12	3.05	2	42	3.36	51.14	87.67	372.41	511.23	27.45	1607.0	143.93	0.0604	580	734
498	7	3.15	12	3.15	2	42	3.47	54.55	93.52	397.19	545.26	28.35	1714.0	153.52	0.0567	599	761
509	19	3.50	18	3.50	1	24	3.89	182.80	173.18	285.23	641.22	31.50	2477.8	316.47	0.0555	622	795
603	7	3.45	12	3.45	2	42	3.82	65.44	112.18	481.36	658.97	31.05	2069.5	182.00	0.0469	665	850
620	7	3.50	12	3.50	2	42	3.87	67.35	115.45	494.04	676.84	31.50	2126.1	187.09	0.0456	675	864
654	7	3.60	12	3.60	2	48	3.72	71.25	122.15	521.70	715.09	32.40	2246.7	195.64	0.0432	695	892
656	7	3.60	12	3.60	2	42	3.98	71.25	122.15	522.52	715.92	32.40	2249.0	195.77	0.0431	696	893
883	7	3.35	12	3.35	3	72	3.70	61.70	105.77	774.15	941.62	36.85	2846.2	222.85	0.032	822	1067

NOTE :

Current capacity based on referenced 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

Customized conductor sizes based on customer's requirement can also be designed.

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ALUMINUM ALLOY CONDUCTOR STEEL REINFORCED - Type AACSR-Z

Nominal Area	Steel Wire		Round Aluminum Wires		Z-Shaped Wires			Sectional Area of Steel	Sectional Area of Round Al. Wires	Sectional Area of Z-shaped Al. Wires	Total Sectional Area of Conductor	Overall Diameter	Mass	Rated Strength	DC Resistance @ 20°C	Current Capacity	
	Nos.	Dia.	Nos.	Dia.	No. of Layers	No. of Wires	Eq. Round Dia									@ 75°C	@ 85°C
		mm		mm			mm	mm²	mm²	mm²	mm²	mm	kg/km	kN	Ω/Km	(Ampere)	(Ampere)
102	7	3.30	-	-	1	12	3.56	59.87	-	119.45	179.32	16.50	797.1	123.85	0.2778	241	296
176	7	2.70	-	-	2	30	2.96	40.08	-	206.44	246.52	18.90	882.3	121.62	0.1607	346	428
189	7	2.80	-	-	2	30	3.07	43.10	-	222.07	265.17	19.60	949.0	130.81	0.1494	360	447
219	7	3.00	-	-	2	30	3.30	49.48	-	256.59	306.07	21.00	1094.0	150.66	0.1293	391	487
251	7	3.20	-	-	2	30	3.54	56.30	-	295.27	351.57	22.40	1254.0	170.42	0.1124	424	530
266	7	3.30	-	-	2	30	3.64	59.87	-	312.19	372.06	23.10	1328.5	180.70	0.1063	437	548
353	7	2.90	12	2.90	2	42	3.19	46.24	79.26	335.68	461.18	26.10	1505.3	192.46	0.08	505	638
390	19	3.50	18	3.50	1	24	3.89	182.80	173.18	285.23	641.22	31.50	2697.0	405.78	0.0724	552	707
392	7	3.05	12	3.05	2	42	3.36	51.14	87.67	372.41	511.23	27.45	1668.1	211.42	0.0721	535	679
418	7	3.15	12	3.15	2	42	3.47	54.55	93.52	397.19	545.26	28.35	1779.2	225.50	0.0676	555	705
506	7	3.45	12	3.45	2	42	3.82	65.44	112.18	481.36	658.97	31.05	2147.7	271.94	0.0559	616	788
520	7	3.50	12	3.50	2	42	3.87	67.35	115.45	494.04	676.84	31.50	2206.6	279.48	0.0544	625	801
549	7	3.60	12	3.60	2	48	3.72	71.25	122.15	521.70	715.09	32.40	2331.8	293.25	0.0515	644	828
549	7	3.60	12	3.60	2	42	3.98	71.25	122.15	522.52	715.92	32.40	2334.1	293.49	0.0515	644	828
750	7	3.35	12	3.35	3	72	3.70	61.70	105.77	774.15	941.62	36.85	2920.0	350.89	0.0377	768	998

NOTE :

Current capacity based on referenced 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

Customized conductor sizes based on customer's requirement can also be designed.