

ACSR Conductor Cables

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ACSR – Aluminum Conductor Steel Reinforced Cables ASTM B 232/B 232M

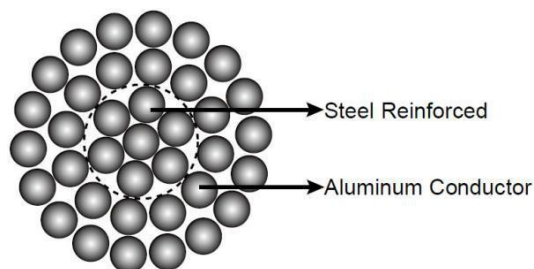
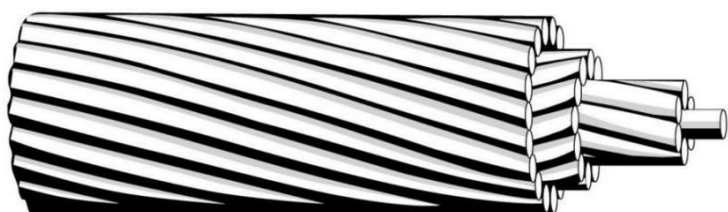
Application

ACSR conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

Standard

Basic design to ASTM B 232/B 232M standard

Construction



ACSR conductors are formed by several wires of aluminium and galvanized steel, stranded in concentric layers. The wire or wires which form the core, are made of galvanized steel and the external layer or layers, are of aluminium. Galvanized steel core consist normally of 1, 7 or 19 wires. The diameters of steel and aluminium wires can be the same, or different.

By varying the relative proportions of aluminium and steel, the required characteristics for any particular **application** can be reached. A higher U. T. S. Can be obtained, by increasing steel content, and a higher current carrying capacity by increasing aluminium content.

Electrical Properties

Density@20oC	Aluminium: 2.703 kg/dm
	Galvanised Steel: 7.80 kg/dm
Temperature Coefficient@20°C	Aluminium: 0.00403 (°C)
Resistivity@20°C	Aluminium: Should not exceed 0.028264
Linear Expansivity	Aluminium: 23 x10 (°C)
	Galvanised Steel: 11.5 x10 (1/°C)

Service Conditions

Ambient Temperature	-5°C - 50°C
Wind Pressure	80 – 130kg/m ²
Seismic Acceleration	0.12 - 0.05g
Isokeraunic Level	10 – 18

Relative Humidity	5 – 100%
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Construction Parameters

Code	Stranding		Stranding			Overall Diameter	Weight	Breakign Load	Electrical Resistance @20o	Current Rating*
	AL	Steel	AL	Steel	Total					
	No.×mm	No.×mm	mm^2	mm^2	mm^2	mm	Kg/Km	KN	Ω/Km	A
Turkey	13.3	2.22	6/1.68	1/1.68	5.04	15.52	53.6	4.98	2.1499	76
Swan	21.18	3.53	6/2.12	1/2.12	6.36	24.71	85.3	7.83	1.3501	101
Swanate	21.12	5.35	7/1.96	1/2.61	6.53	26.47	99.6	9.79	1.3539	102
Sparrow	33.59	5.6	6/2.67	1/2.67	8.01	39.19	135.7	11.92	0.8512	135
Sparate	33.54	8.55	7/2.47	1/3.30	8.24	42.09	158.7	15.08	0.8525	135
Robin	42.41	7.07	6/3.00	1/3.00	9	49.48	171.1	14.86	0.6742	156
Raven	53.52	8.92	6/3.37	1/3.37	10.11	62.44	216.1	18.33	0.5343	180
Quail	67.33	11.22	6/3.78	1/3.78	11.34	78.55	272	22.46	0.4247	207
Pigeon	85.12	14.19	6/4.25	1/4.25	12.75	99.31	343	28.02	0.3359	239
Penguin	107.22	17.87	6/4.77	1/4.77	14.31	125.09	432.7	35.36	0.2667	275
Waxwing	134.98	7.5	18/3.09	1/3.09	15.45	142.48	430.2	29.8	0.2129	313
Partridge	134.87	21.99	26/2.57	7/2.00	16.28	156.86	545.9	47.15	0.2141	316
Ostrich	152.19	24.71	26/2.73	7/2.12	17.28	176.9	613.4	53.38	0.1897	341
Merlin	170.22	9.46	18/3.47	1/3.47	17.35	179.68	542.8	37.36	0.1688	361
Linnet	170.55	27.83	26/2.89	7/2.25	18.31	198.38	687.5	59.16	0.1693	365
Oriole	170.5	39.78	30/2.69	7/2.69	18.83	210.28	783.3	72.06	0.1698	367
Chickadee	200.93	11.16	18/3.77	1/3.77	18.85	212.09	641.3	43.15	0.143	400
Brant	201.56	26.13	24/3.27	7/2.18	19.62	227.69	761	61.83	0.1433	403
Ibis	201.34	32.73	26/3.14	7/2.44	19.88	234.07	812.4	68.05	0.1434	404

Lark	200.9	46.88	30/2.92	7/2.92	20.44	247.78	925.2	84.07	0.1441	406
Pelican	242.31	13.46	18/4.14	1/4.14	20.7	255.77	769.7	51.15	0.1186	448
Flicker	241.58	31.4	24/3.58	7/2.39	21.49	272.98	913.5	72.06	0.1195	450
Hawk	241.65	39.19	26/3.44	7/2.67	21.77	280.84	975.1	81.84	0.1195	451
Hen	241.27	56.3	30/3.20	7/3.20	22.4	297.57	1110.6	98.3	0.12	453
Osprey	282.47	15.69	18/4.47	1/4.47	22.35	298.16	897.7	59.6	0.1017	492
Parakeet	282.31	36.6	24/3.87	7/2.58	23.22	318.91	1065.6	83.18	0.1023	495
Dove	282.59	45.92	26/3.72	7/2.89	23.55	328.51	1138.6	94.3	0.1022	497
Eagle	282.07	65.82	30/3.46	7/3.46	24.22	347.89	1295.6	114.76	0.1026	499
Peacock	306.13	39.78	24/4.03	7/2.69	24.19	345.91	1158.9	90.74	0.0943	520
Squab	305.83	49.81	26/3.87	7/3.01	24.51	355.64	1237	101.41	0.0944	521
Wood Duck	307.06	71.65	30/3.61	7/3.61	25.27	378.71	1408.4	121.43	0.0943	525
Teal*	307.06	69.62	30/3.61	19/2.16	25.24	376.68	1396.6	124.54	0.0943	525
Kingbird	323.01	17.95	18/4.78	1/4.78	23.9	340.96	1026.6	68.05	0.089	533
Swift	323.02	8.97	36/3.38	1 /3.38	23.66	331.99	956.5	60.05	0.089	532
Rook	323.07	41.88	24/4.14	7/2.76	24.84	364.95	1217.5	95.19	0.0894	537
Grosbeak	321.84	52.49	26/3.97	7/3.09	25.15	374.33	1300.8	104.97	0.0897	537
Scoter	322.56	75.26	30/3.70	7/3.70	25.9	397.82	1480.7	127.66	0.0897	541
Egret*	322.56	73.54	30/3.70	19/2.22	25.9	396.1	1469	130.77	0.0897	541
Flamingo	337.27	43.72	24/4.23	7/2.82	25.38	380.99	1276.6	99.64	0.0856	551
Gannet	338.26	54.9	26/4.07	7/3.16	25.76	393.16	1363.3	110.31	0.0854	553
Stilt	363.27	46.88	24/4.39	7/2.92	26.32	410.15	1370.4	107.2	0.0795	576
Starling	361.93	59.15	26/4.21	7/3.28	26.68	421.08	1463.7	118.32	0.0798	577
Redwing*	362.06	82.41	30/3.92	19/2.35	27.43	444.47	1650.6	143.23	0.0799	580
Coot	401.86	11.16	36/3.77	1/3.77	26.39	413.02	1195.8	73.39	0.0715	607
Tern	403.77	27.83	45/3.38	7/2.25	27.03	431.6	1331.8	94.3	0.0715	610
Condor	402.33	52.15	54/3.08	7/3.08	27.72	454.48	1520.7	118.32	0.0718	612
Cuckoo	402.33	52.15	24/4.62	7/3.08	27.72	454.48	1522.2	117.43	0.0718	612
Drake	402.56	65.44	26/4.44	7/3.45	28.11	468	1626.4	131.66	0.0717	615

Mallard*	403.84	91.78	26/4.44	7/3.45	28.96	495.62	1836	159.24	0.0717	619
Ruddy	455.5	31.67	45/3.59	7/2.40	28.74	487.17	1507.3	104.53	0.0634	656
Canary	456.28	59.15	54/3.28	7/3.28	29.52	515.43	1723.1	134.33	0.0633	660
Catbird	484.61	13.46	36/4.14	1/4.14	28.98	498.07	1434.4	86.74	0.0593	679
Rail	483.84	33.54	45/3.70	7/2.47	29.61	517.38	1598.1	110.76	0.0597	680
Cardinal	484.53	62.81	54/3.38	7/3.38	30.42	547.34	1825.9	142.34	0.0596	685
Cardinal	484.53	62.81	54/3.38	7/3.38	30.42	547.34	1825.9	142.34	0.0596	685
Tanager	522.79	14.52	36/4.30	1/4.30	30.1	537.31	1553.5	93.85	0.055	710
Orotlan	523.87	36.31	45/3.85	7/2.57	30.81	560.18	1730.5	118.32	0.0551	713
Curlew	522.51	67.73	54/3.51	7/3.51	31.59	590.24	1977.6	153.9	0.0553	716
Bluejay	565.49	38.9	45/4.00	7/2.66	31.98	604.39	1866	127.66	0.0511	745
Finch*	565.03	71.57	54/3.65	19/2.19	32.85	636.6	2127.8	164.58	0.0514	748
Bunting	605.76	41.88	45/4.14	7/2.76	33.12	647.64	1996.9	136.55	0.0477	776
Grackle*	602.79	76.89	54/3.77	19/2.27	33.97	679.68	2278.1	176.59	0.0481	777
Skylark	646.02	17.95	36/4.78	1/4.78	33.46	663.97	1913.6	115.65	0.0445	804
Bittern	644.4	44.66	45/4.27	7/2.85	34.17	689.06	2130.8	145.89	0.0448	805
Pheasant*	645.08	81.71	54/3.90	19/2.34	35.1	726.79	2431.4	183.26	0.045	808
Dipper	684.24	47.2	45/4.40	7/2.93	35.19	731.44	2263.2	154.79	0.0422	834
Martin*	685.39	86.67	54/4.02	19/2.41	36.17	772.06	2581.7	194.82	0.0423	838
Bobolink	725.27	50.14	45/4.53	7/3.02	36.24	775.41	2397.2	164.13	0.0398	862
Plover*	726.92	91.78	54/4.14	19/2.48	37.24	818.7	2734.9	206.39	0.0399	866
Nuthatch	764.2	52.83	45/4.65	7/3.10	37.2	817.03	2529.6	171.25	0.0378	888
Parrot*	766.06	97.03	54/4.25	19/2.55	38.25	863.09	2883.7	217.51	0.0379	892
Lapwing	807.53	55.6	45/4.78	7/3.18	38.22	863.13	2663.5	180.14	0.0358	916
Falcon*	806.23	102.43	54/4.36	19/2.62	39.26	908.66	3038.5	229.52	0.036	919
Chukar*	903.18	73.54	84/3.70	19/2.22	40.7	976.72	3083.1	217.51	0.0321	976
Bluebird*	1092.84	88.84	84/4.07	19/2.44	44.76	1181.68	3731.9	256.65	0.0266	1083
Kiwi*	1099.76	47.52	72/4.41	7/2.94	44.1	1147.28	3423.9	215.28	0.0264	1083
Thrasher*	1171.42	63.94	76/4.43	19/2.07	45.79	1235.36	3754.2	243.75	0.0248	1122

Grouse**	40.54	14.12	8/2.54	1/4.24	9.32	54.66	221.4	21.75	0.7089	153
Petrel**	51.61	30.1	12/2.34	7/2.34	11.7	81.71	377.7	42.08	0.5595	181
Minorca**	56.11	32.73	12/2.44	7/2.44	12.2	88.84	411.1	45.81	0.5146	191
Leghorn**	68.2	39.78	12/2.69	7/2.69	13.45	107.98	499.2	55.16	0.4234	215
Guinea**	80.36	46.88	12/2.92	7/2.92	14.6	127.24	589.7	64.94	0.3593	238
Dotterel**	89.41	52.15	12/3.08	7/3.08	15.4	141.56	656.1	70.28	0.323	254
Dorking**	96.51	56.3	12/3.20	7/3.20	16	152.81	707.8	75.62	0.2992	267
Cochin**	107.04	62.44	12/3.37	7/3.37	16.85	169.48	783.9	84.07	0.2698	284
Brahma*&**	102.79	91.78	12/3.37	7/3.37	18.12	194.57	1003.8	114.76	0.2809	283

* The items, marked with “**” are not in our current product range and the details are for information only.

The items, marked with “*” are ACSR Cables with high strength stranding.

(*) Note: The values of current rating mentioned in above Table are based on wind velocity of 0.6 metre/second, solar heat radiation of 1200 watt/metre², ambient temperature of 50° C & conductor temperature of 80°C.

Technical Data

Numbers of Wires		Final Modules of Elasticity		Coefficient of linear Expansion	
AL	Steel	Kg/mm ²	lb/in ²	1/Co	1/Fo
6	1	81	11.5 x10 ⁶	19.1 x10 ⁻⁶	10.6 x10 ⁻⁶
6	7	77	11.0 x10 ⁶	19.8 x10 ⁻⁶	11.0 x10 ⁻⁶
12	7	107	15.2 x10 ⁶	15.3 x10 ⁻⁶	8.5 x10 ⁻⁶
18	1	67	9.5 x10 ⁶	21.2 x10 ⁻⁶	11.8 x10 ⁻⁶
24	7	74	10.5 x10 ⁶	19.6 x10 ⁻⁶	10.9 x10 ⁻⁶
26	7	77	10.9 x10 ⁶	18.9 x10 ⁻⁶	10.5 x10 ⁻⁶
28	7	79	11.2 x10 ⁶	18.4 x10 ⁻⁶	10.2 x10 ⁻⁶
30	7	82	11.6 x10 ⁶	17.8 x10 ⁻⁶	9.9 x10 ⁻⁶
30	19	80	11.4 x10 ⁶	18.0 x10 ⁻⁶	10.0 x10 ⁻⁶
32	19	82	11.7 x10 ⁶	17.5 x10 ⁻⁶	9.7 x10 ⁻⁶
54	7	70	9.9 x10 ⁶	19.3 x10 ⁻⁶	10.7 x10 ⁻⁶
54	19	68	9.7 x10 ⁶	19.4 x10 ⁻⁶	10.8 x10 ⁻⁶

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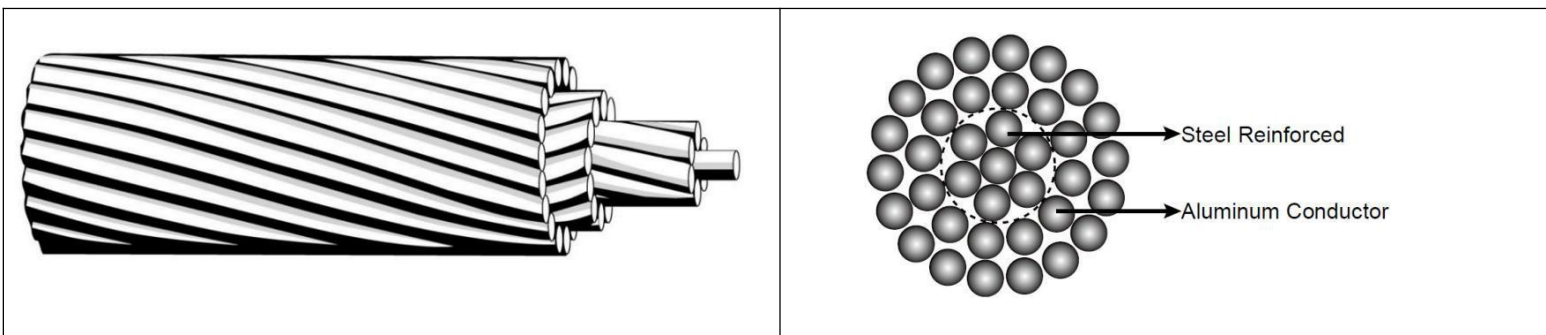
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Wind Pressure	80 – 130kg/m^2
Seismic Acceleration	0.12 - 0.05g
Isokeraunic Level	10 – 18
Relative Humidity	5 – 100%

Construction Parameters

Code	Nominal Area			Stranding		Overall Diameter	Weight	Breakign Load	Electrical Resistance @20o	Current Rating*
	AL	Steel	Total	AL	Steel					
	mm^2	mm^2	mm^2	No.×mm	No.×mm	mm	Kg/Km	KN	Ω/Km	A
16	16	2.67	18.7	6/1.84	1/1.84	5.52	64.6	6.08	1.7934	85
25	25	4.17	29.2	6/2.30	1/2.30	6.9	100.9	9.13	1.1478	112
40	40	6.67	46.7	6/2.91	1/2.91	8.73	161.5	14.4	0.7174	150
63	63	10.5	73.5	6/3.66	1/3.66	10.98	254.4	21.63	0.4555	198
100	100	16.7	117	6/4.61	1/4.61	13.83	403.8	34.33	0.2869	263
125	125	6.94	132	18/2.97	1/2.97	14.85	397.9	29.17	0.2304	299
125	125	20.4	145	26/2.47	7/1.92	15.64	503.9	45.69	0.231	302
160	160	8.89	169	18/3.36	1/3.36	16.8	509.3	36.18	0.18	347
160	160	26.1	186	26/2.80	7/2.18	17.74	644.9	57.69	0.1805	351
200	200	11.1	211	18/3.76	1/3.76	18.8	636.7	44.22	0.144	398
200	200	32.6	233	26/3.13	7/2.43	19.81	806.2	70.13	0.1444	402
250	250	24.6	275	22/3.80	7/2.11	21.53	880.6	68.72	0.1154	458
250	250	40.7	291	26/3.50	7/2.72	22.16	1007.7	87.67	0.1155	461
315	315	21.8	337	45/2.99	7/1.99	23.91	1039.6	79.03	0.0917	526
315	315	51.3	366	26/3.93	7/3.05	24.87	1269.7	106.83	0.0917	530
400	400	27.7	428	45/3.36	7/2.24	26.88	1320.1	98.36	0.0722	607
400	400	51.9	452	54/3.07	7/3.07	27.63	1510.3	123.04	0.0723	610
450	450	31.1	481	45/3.57	7/2.38	28.56	1485.2	107.47	0.0642	651
450	450	58.3	508	54/3.26	7/3.26	29.34	1699.1	138.42	0.0643	655
500	500	34.6	535	45/3.76	7/2.51	30.09	1650.2	119.41	0.0578	693
500	500	64.8	565	54/3.43	7/3.43	30.87	1887.9	153.8	0.0578	697
560	560	38.7	599	45/3.98	7/2.65	31.83	1848.2	133.74	0.0516	741
560*	560	70.9	631	54/3.63	19/2.18	32.68	2103.4	172.59	0.0516	745

630	630	43.6	674	45/4.22	7/2.81	33.75	2079.2	150.45	0.0459	794
630*	630	79.8	710	54/3.85	19/2.31	34.65	2366.3	191.77	0.0459	798
710	710	49.1	759	45/4.48	7/2.99	35.85	2343.2	169.56	0.0407	851
710*	710	89.9	800	54/4.09	19/2.45	36.79	2666.8	216.12	0.0407	856
800*	800	34.6	835	72/3.76	7/2.51	37.61	2480.2	167.41	0.0361	910
800*	800	66.7	867	84/3.48	7/3.48	38.28	2732.7	205.33	0.0362	912
800*	800	101	901	54/4.34	19/2.61	39.09	3004.9	243.52	0.0362	916
900*	900	38.9	939	72/3.99	7/2.66	39.9	2790.2	188.33	0.0321	972
900*	900	75	975	84/3.69	7/3.69	40.59	3074.2	226.5	0.0322	974
1000*	1000	43.2	1043	72/4.21	7/2.80	42.08	3100.3	209.26	0.0289	1031
1120*	1120	47.3	1167	72/4.45	19/1.78	44.5	3464.9	234.53	0.0258	1096
1120*	1120	91.2	1211	84/4.12	19/2.47	45.31	3811.5	283.17	0.0258	1100
1250*	1250	102	1352	84/4.35	19/2.61	47.85	4253.9	316.04	0.0232	1165
1250*	1250	52.8	1303	72/4.70	19/1.88	47	3867.1	261.75	0.0231	1163

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Technical Data

Numbers of Wires		Final Modules of Elasticity		Coefficient of linear Expansion	
AL	Steel	Kg/mm ²	lb/in ²	1/Co	1/Fo
6	1	81	11.5 x10 ⁶	19.1 x10 ⁻⁶	10.6 x10 ⁻⁶
6	7	77	11.0 x10 ⁶	19.8 x10 ⁻⁶	11.0 x10 ⁻⁶
12	7	107	15.2 x10 ⁶	15.3 x10 ⁻⁶	8.5 x10 ⁻⁶
18	1	67	9.5 x10 ⁶	21.2 x10 ⁻⁶	11.8 x10 ⁻⁶
24	7	74	10.5 x10 ⁶	19.6 x10 ⁻⁶	10.9 x10 ⁻⁶
26	7	77	10.9 x10 ⁶	18.9 x10 ⁻⁶	10.5 x10 ⁻⁶
28	7	79	11.2 x10 ⁶	18.4 x10 ⁻⁶	10.2 x10 ⁻⁶
30	7	82	11.6 x10 ⁶	17.8 x10 ⁻⁶	9.9 x10 ⁻⁶
30	19	80	11.4 x10 ⁶	18.0 x10 ⁻⁶	10.0 x10 ⁻⁶

32	19	82	11.7 x106	17.5 x10-6	9.7 x10-6
54	7	70	9.9 x106	19.3 x10-6	10.7 x10-6
54	19	68	9.7 x106	19.4 x10-6	10.8 x10-6

ACSR – Aluminum Conductor Steel Reinforced Cables DIN 48204

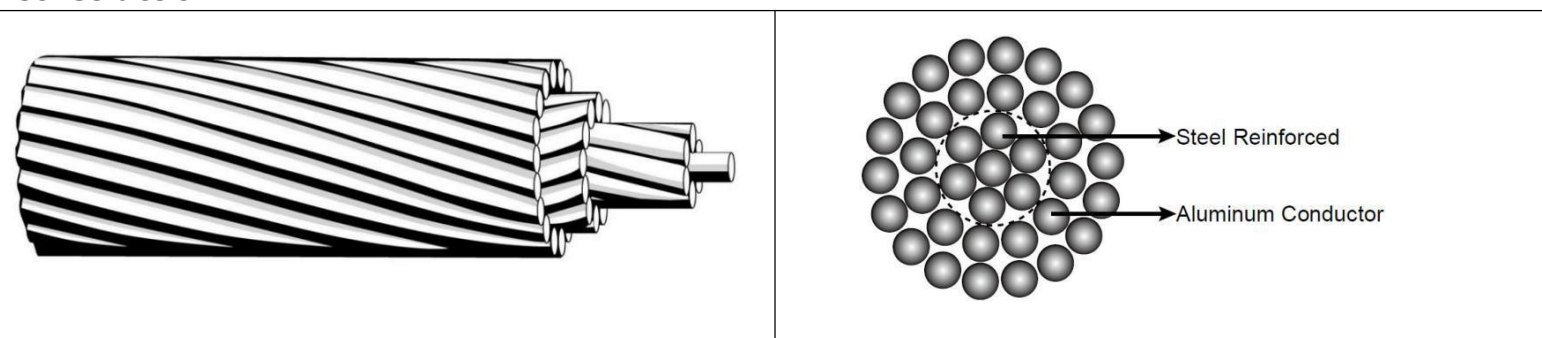
Application

ACSR conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

Standard

Basic design to DIN 48204 standard

Construction



ACSR conductors are formed by several wires of aluminium and galvanized steel, stranded in concentric layers. The wire or wires which form the core, are made of galvanized steel and the external layer or layers, are of aluminium. Galvanized steel core consist normally of 1, 7 or 19 wires. The diameters of steel and aluminium wires can be the same, or different.

By varying the relative proportions of aluminium and steel, the required characteristics for any particular **application** can be reached. A higher U. T. S. Can be obtained, by increasing steel content, and a higher current carrying capacity by increasing aluminium content.

Electrical Properties

Density@20oC	Aluminium: 2.703 kg/dm
	Galvanised Steel: 7.80 kg/dm
Temperature Coefficient@20°C	Aluminium: 0.00403 (°C)
Resistivity@20°C	Aluminium: Should not exceed 0.028264
Linear Expansivity	Aluminium: 23 x10 (°C)
	Galvanised Steel: 11.5 x10 (1/°C)

Service Conditions

Ambient Temperature	-5°C - 50°C
Wind Pressure	80 – 130kg/m^2
Seismic Acceleration	0.12 - 0.05g

Isokeraunic Level	10 – 18
Relative Humidity	5 – 100%

Construction Parameters

Nominal Sectional Area		Sectional Area			Stranding		Overall Diameter	Weight	Breakign Load	Electrical Resistance @20o	Current Rating*
AL	Steel	AL	Steel	Total	AL	Steel					
mm ²	mm ²	mm ²	mm ²	mm ²	No.×mm	No.×mm	mm	Kg/Km	KN	Ω/Km	A
16	2.5	15.27	2.54	17.8	6/1.80	1/1.80	5.4	62	5.81	1.8793	83
25	4	23.86	3.98	27.8	6/2.25	1/2.25	6.8	97	9.02	1.2028	109
35	6	34.35	5.73	40.1	6/2.70	1/2.70	8.1	140	12.7	0.8353	136
44	32	43.98	31.67	75.7	14/2.00	7/2.40	11.2	373	45.46	0.6573	166
50	8	48.25	8.04	56.3	6/3.20	1/3.20	9.6	196	17.18	0.5946	168
50	30	51.17	29.85	81	12/2.33	7/2.33	11.7	378	44.28	0.5644	181
70	12	69.89	11.4	81.3	26/1.85	7/1.44	11.7	284	26.31	0.413	211
95	15	94.39	15.33	109.7	26/2.15	7/1.67	13.6	383	35.17	0.3058	254
95	55	96.51	56.3	152.8	12/3.20	7/3.20	16	714	80.2	0.2992	267
105*	75	105.67	75.55	181.2	14/3.10	19/2.25	17.5	899	106.69	0.2736	284
120	20	121.57	19.85	141.4	26/2.44	7/1.90	15.5	494	44.94	0.2374	297
120	70	122.15	71.25	193.4	12/3.60	7/3.60	18	904	98.16	0.2364	308
125	30	127.92	29.85	157.8	30/2.33	7/2.33	16.3	590	57.86	0.2259	308
150	25	148.86	24.25	173.1	26/2.70	7/2.10	17.1	604	54.37	0.1939	336
170	40	171.77	40.08	211.9	30/2.70	7/2.70	18.9	794	77.01	0.1682	369
185	30	183.78	29.85	213.6	26/3.00	7/2.33	19	744	66.28	0.1571	382
210	35	209.1	34.09	243.2	26/3.20	7/2.49	20.3	848	74.94	0.138	414
210	50	212.06	49.48	261.5	30/3.00	7/3.00	21	979	92.25	0.1363	420

230	30	230.91	29.85	260.8	24/3.50	7/2.33	21	874	73.09	0.1249	438
240	40	243.05	39.49	282.5	26/3.45	7/2.68	21.8	985	86.46	0.1188	453
265	35	263.66	34.09	297.8	24/3.74	7/2.49	22.4	998	82.94	0.1094	475
300	50	304.26	49.48	353.7	26/3.86	7/3.00	24.5	1233	105.09	0.0949	520
305	40	304.62	39.49	344.1	54/2.68	7/2.68	24.1	1155	99.3	0.0949	518
340	30	339.29	29.85	369.1	48/3.00	7/2.33	25	1174	92.56	0.0851	551
380	50	381.7	49.48	431.2	54/3.00	7/3.00	27	1448	120.91	0.0757	593
385	35	386.04	34.09	420.1	48/3.20	7/2.49	26.7	1336	104.31	0.0748	595
435	55	434.29	56.3	490.6	54/3.20	7/3.20	28.8	1647	136.27	0.0666	641
450	40	448.71	39.49	488.2	48/3.45	7/2.68	28.7	1553	120.19	0.0644	651
490	65	490.28	63.55	553.8	54/3.40	7/3.40	30.6	1860	152.85	0.059	689
550	70	549.65	71.25	620.9	54/3.60	7/3.60	32.4	2085	167.42	0.0526	737
560	50	561.7	49.48	611.2	48/3.86	7/3.00	32.2	1943	146.28	0.0514	744
680*	85	678.58	85.95	764.5	54/4.00	19/2.40	36	2564	209.99	0.0426	834

* The items marked with "*" are not in our current product range and the details are for information only.

(*) Note: The values of current rating mentioned in above Table are based on wind velocity of 0.6 metre/second, solar heat radiation of 1200 watt/metre², ambient temperature of 50° C & conductor temperature of 80°C.

Technical Data

Numbers of Wires		Final Modules of Elasticity		Coefficient of linear Expansion	
AL	Steel	Kg/mm ²	lb/in ²	1/Co	1/Fo
6	1	81	11.5 x106	19.1 x10-6	10.6 x10-6
6	7	77	11.0 x106	19.8 x10-6	11.0 x10-6
12	7	107	15.2 x106	15.3 x10-6	8.5 x10-6
18	1	67	9.5 x106	21.2 x10-6	11.8 x10-6
24	7	74	10.5 x106	19.6 x10-6	10.9 x10-6
26	7	77	10.9 x106	18.9 x10-6	10.5 x10-6
28	7	79	11.2 x106	18.4 x10-6	10.2 x10-6
30	7	82	11.6 x106	17.8 x10-6	9.9 x10-6
30	19	80	11.4 x106	18.0 x10-6	10.0 x10-6
32	19	82	11.7 x106	17.5 x10-6	9.7 x10-6

54	7	70	9.9 x106	19.3 x10-6	10.7 x10-6
54	19	68	9.7 x106	19.4 x10-6	10.8 x10-6

ACSR – Aluminum Conductor Steel reinforced Cables BS 215-2

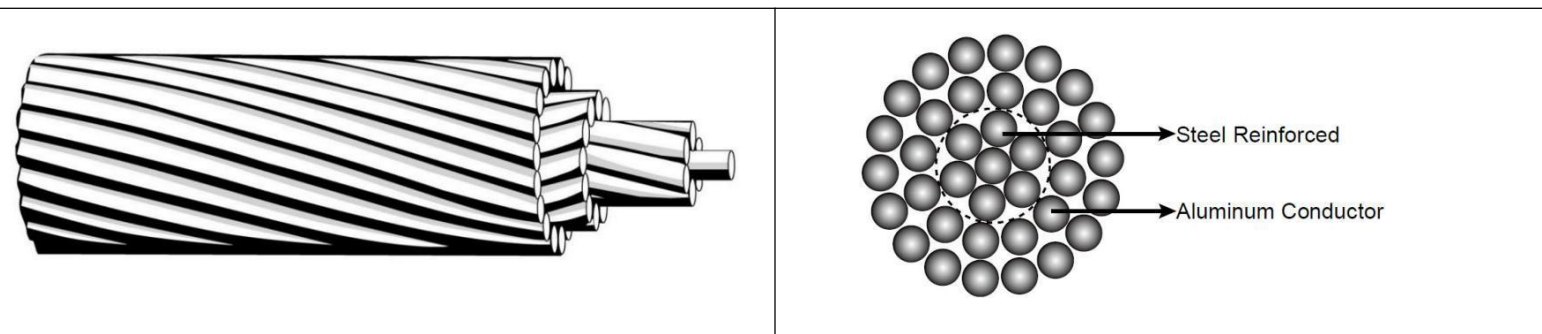
Application

ACSR conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

Standard

Basic design to BS 215-2 standard

Construction



ACSR conductors are formed by several wires of aluminium and galvanized steel, stranded in concentric layers. The wire or wires which form the core, are made of galvanized steel and the external layer or layers, are of aluminium. Galvanized steel core consist normally of 1, 7 or 19 wires. The diameters of steel and aluminium wires can be the same, or different.

By varying the relative proportions of aluminium and steel, the required characteristics for any particular **application** can be reached. A higher U. T. S. Can be obtained, by increasing steel content, and a higher current carrying capacity by increasing aluminium content.

Electrical Properties

Density@20oC	Aluminium: 2.703 kg/dm
	Galvanised Steel: 7.80 kg/dm
Temperature Coefficient@20°C	Aluminium: 0.00403 (°C)
Resistivity@20°C	Aluminium: Should not exceed 0.028264
Linear Expansivity	Aluminium: 23 x10 (°C)
	Galvanised Steel: 11.5 x10 (1/°C)

Service Conditions

Ambient Temperature	-5°C - 50°C
Wind Pressure	80 – 130kg/m^2
Seismic Acceleration	0.12 - 0.05g
Isokeraunic Level	10 – 18

Relative Humidity	5 – 100%
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Construction Parameters

Code	Nominal Area				Stranding		Overall Diameter		Weight(CU)			Rated Strength	Electrical Resistance @20o
	AL		Steel	Total	AL	Steel	Core	Total	AL	Steel	Total		
	Nominal	Teorical											
	mm^2	mm^2	mm^2	mm^2	No.×mm	No.×mm	mm	mm	Kg/Km	Kg/Km	Kg/Km	KN	Ω/Km
Mole	10	10.62	1.77	12.39	6/1.50	1/1.50	1.50	4.5	29	14	43	4.14	2.706
Squirrel	20	20.94	3.49	24.43	6/2.11	1/2.11	2.11	6.33	57	28	85	7.88	1.368
Gopher	25	26.24	4.38	30.62	6/2.36	1/2.36	2.36	7.08	71	35	106	9.61	1.093
Weasel	30	31.61	5.27	36.88	6/2.59	1/2.59	2.59	7.77	87	41	128	11.45	0.9077
Fox	35	36.66	6.11	42.77	6/2.79	1/2.79	2.79	8.37	101	48	149	13.2	0.7822
Ferret	40	42.41	7.07	49.48	6/3.00	1/3.00	3.0	9.0	117	55	172	15.2	0.6766
Rabbit	50	52.88	8.82	61.7	6/3.35	1/3.35	3.35	10.05	145	69	214	18.35	0.5426
Mink	60	63.18	10.53	73.71	6/3.66	1/3.66	3.66	10.98	171	84	255	2.18	0.4545
Shunk	60	63.27	37.03	100.3	12/2.59	7/2.59	7.77	12.95	178	287	465	5.3	0.4567
Beaver	70	74.82	12.47	87.29	6/3.99	1/3.99	3.99	11.97	203	99	302	2.57	0.3825
Horse	70	73.37	42.63	116.2	12/2.79	7/2.79	8.37	13.95	203	335	538	61.2	0.3936
Racoon	75	79.2	13.2	92.4	6/4.1	1/4.1	4.1	12.3	216	104	320	27.2	0.3622
Otter	80	83.88	13.98	97.86	6/4.22	1/4.22	4.22	13.98	226	113	339	28.8	0.3419
Cat	90	95.44	15.86	111.3	6/4.5	1/4.5	4.5	15.9	258	128	386	32.7	0.3007
Hare	100	105	17.5	122.5	6/4.72	1/4.72	4.72	17.5	284	141	425	36.0	0.2733
Dog	100	105	13.5	118.5	6/4.72	7/1.57	4.71	14.15	288	106	394	32.7	0.2733
Hyena	100	105.8	20.4	126.2	7/4.39	7/1.93	5.79	14.57	250	200	450	40.9	0.2712
Leoperd	125	131.3	16.8	148.1	8/5.28	7/1.75	5.25	15.81	310	182	492	40.7	0.2184
Coyotte	125	132.1	20.1	152.2	26/2.54	7/1.91	5.73	15.89	410	112	522	46.4	0.2187
Congar	125	130.3	7.2	137.5	18/3.05	1/3.05	3.05	15.25	361	58	419	29.8	0.2189
Tiger	125	131.1	30.6	161.7	30/2.36	7/2.36	7.08	16.52	365	237	602	58	0.2202
Wolf	150	158.1	36.8	194.9	30/2.59	7/2.59	7.77	18.13	441	285	726	69.2	0.1828
Dingo	150	158.7	8.8	167.5	18/3.35	1/3.35	3.35	16.75	437	69	506	35.7	0.1815

Lynx	175	183.4	42.8	226.2	30/2.79	7/2.79	8.37	19.53	507	335	842	79.8	0.1576
Caracal	175	184.3	10.2	194.5	18/3.61	1/3.61	3.61	18.05	507	80	587	41.1	0.1563
Panther	200	212.1	49.4	261.5	30/3.00	7/3.00	9.0	21.0	586	388	974	92.25	0.1363
Jaguar	200	210.6	11.7	222.3	18/3.86	1/3.86	3.86	19.3	580	91	671	46.55	0.1367
Lion	225	238.5	55.7	294.2	30/3.18	7/3.18	9.54	22.26	657	438	1095	100.6	0.1212
Bear	250	264	61.6	325.6	30/3.35	7/3.35	10.05	23.45	728	485	1213	111.1	0.1090
Goat	300	324.3	75.7	400	30/3.71	7/3.71	11.13	25.79	894	595	1489	135.7	0.0891
Sheep	350	374.1	87.3	461.4	30/3.99	7/3.99	11.97	27.93	1031	687	1718	155.9	0.0770
Antilope	350	373.1	48.4	421.5	54/2.97	7/2.97	8.91	26.73	1040	371	1411	118.2	0.0772
Bizon	350	381.8	49.5	431.3	54/3.00	7/3.00	9.0	27.0	1064	380	1444	120.9	0.7573
Zebra	400	428.9	55.6	484.5	54/3.18	7/3.18	9.54	28.62	1185	436	1621	131.9	0.0674

Technical Data

Numbers of Wires		Final Modules of Elasticity		Coefficient of linear Expansion	
AL	Steel	Kg/mm ²	lb/in ²	1/Co	1/Fo
6	1	81	11.5 x106	19.1 x10-6	10.6 x10-6
6	7	77	11.0 x106	19.8 x10-6	11.0 x10-6
12	7	107	15.2 x106	15.3 x10-6	8.5 x10-6
18	1	67	9.5 x106	21.2 x10-6	11.8 x10-6
24	7	74	10.5 x106	19.6 x10-6	10.9 x10-6
26	7	77	10.9 x106	18.9 x10-6	10.5 x10-6
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30	19	80	11.4 x106	18.0 x10-6	10.0 x10-6
32	19	82	11.7 x106	17.5 x10-6	9.7 x10-6
54	7	70	9.9 x106	19.3 x10-6	10.7 x10-6
54	19	68	9.7 x106	19.4 x10-6	10.8 x10-6

ACSR – Aluminum Conductor Steel Reinforced Cables BS EN 50182

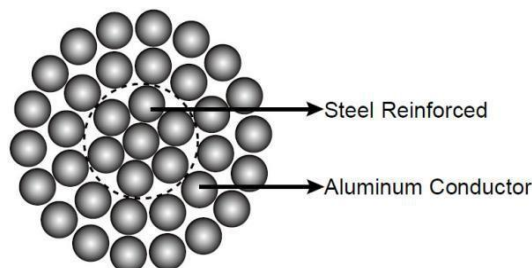
Application

ACSR conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

Standard

Basic design to BS EN 50182 standard

Construction



ACSR conductors are formed by several wires of aluminium and galvanized steel, stranded in concentric layers. The wire or wires which form the core, are made of galvanized steel and the external layer or layers, are of aluminium. Galvanized steel core consist normally of 1, 7 or 19 wires. The diameters of steel and aluminium wires can be the same, or different.

By varying the relative proportions of aluminium and steel, the required characteristics for any particular **application** can be reached. A higher U. T. S. Can be obtained, by increasing steel content, and a higher current carrying capacity by increasing aluminium content.

Electrical Properties

Density@20oC	Aluminium: 2.703 kg/dm
	Galvanised Steel: 7.80 kg/dm
Temperature Coefficient@20°C	Aluminium: 0.00403 (°C)
Resistivity@20°C	Aluminium: Should not exceed 0.028264
Linear Expansivity	Aluminium: 23 x10 (°C)
	Galvanised Steel: 11.5 x10 (1/°C)

Service Conditions

Ambient Temperature	-5°C - 50°C
Wind Pressure	80 – 130kg/m ²
Seismic Acceleration	0.12 - 0.05g
Isokeraunic Level	10 – 18
Relative Humidity	5 – 100%

Construction Parameters

Code	Stranding		Sectional Area			Overall Diameter	Weight	Breakign Load	Electrical Resistance @20o	Current Rating*
	AL	Steel	AL	Steel	Total					

	No.×mm	No.×mm	mm ²	mm ²	mm ²	mm	Kg/Km	KN	Ω/Km	A
Mole	6/1.50	1/1.50	10.6	1.77	12.4	4.5	42.8	4.14	2.7027	66
Squirrel	6/2.11	1/2.11	21	3.5	24.5	6.33	84.7	7.87	1.3659	101
Fox	6/2.79	1/2.79	36.7	6.11	42.8	8.37	148.1	13.21	0.7812	142
Mink	6/3.66	1/3.66	63.1	10.5	73.6	10.98	254.9	21.67	0.454	199
Skunk	12/2.59	7/2.59	63.2	36.9	100.1	12.95	463	52.79	0.4568	206
Beaver	6/3.99	1/3.99	75	12.5	87.5	11.97	302.9	25.76	0.382	221
Raccoon	6/4.09	1/4.09	78.8	13.1	91.9	12.27	318.3	27.06	0.3635	228
Otter	6/4.22	1/4.22	83.9	14	97.9	12.66	338.8	28.81	0.3415	237
Cat	6/4.50	1/4.50	95.4	15.9	111.3	13.5	385.3	32.76	0.3003	256
Hare	6/4.72	1/4.72	105	17.5	122.5	14.16	423.8	36.04	0.273	271
Coyote	26/2.54	7/1.91	131.7	20.1	151.8	15.89	520.7	45.86	0.2192	311
Cougar	18/3.05	1/3.05	131.5	7.31	138.8	15.25	418.8	29.74	0.2188	308
Tiger	30/2.36	7/2.36	131.2	30.6	161.8	16.52	602.2	57.87	0.2202	313
Lion	30/3.18	7/3.18	238.3	55.6	293.9	22.26	1093.4	100.47	0.1213	450
Bear	30/3.35	7/3.35	264.4	61.7	326.1	23.45	1213.4	111.5	0.1093	480
Goat	30/3.71	7/3.71	324.3	75.7	400	25.97	1488.2	135.13	0.0891	543
Sheep	30/3.99	7/3.99	375.1	87.5	462.6	27.93	1721.3	156.3	0.0771	592
Antelope	54/2.97	7/2.97	374.1	48.5	422.6	26.73	1413.8	118.88	0.0773	586
Bison	54/3.00	7/3.00	381.7	49.5	431.2	27	1442.5	121.3	0.0758	593
Deer	30/4.27	7/4.27	429.6	100.2	529.8	29.89	1971.4	179	0.0673	643
Elk	30/4.50	7/4.50	477.1	111.3	588.4	31.5	2189.5	198.8	0.0606	684
Camel	54/3.35	7/3.35	476	61.7	537.7	30.15	1798.8	146.4	0.0608	677
Moose	54/3.53	7/3.53	528.5	68.5	597	31.77	1997.3	159.92	0.0547	720

Note: *The values of current rating mentioned in above Table are based on wind velocity of 0.6 metre/second, solar heat radiation of 1200 watt/metre², ambient temperature of 50° C & conductor temperature of 80°C.

Technical Data

Numbers of Wires		Final Modules of Elasticity		Coefficient of linear Expansion	
AL	Steel	Kg/mm ²	lb/in ²	1/Co	1/Fo
6	1	81	11.5 x10 ⁶	19.1 x10 ⁻⁶	10.6 x10 ⁻⁶

6	7	77	11.0 x106	19.8 x10-6	11.0 x10-6
12	7	107	15.2 x106	15.3 x10-6	8.5 x10-6
18	1	67	9.5 x106	21.2 x10-6	11.8 x10-6
24	7	74	10.5 x106	19.6 x10-6	10.9 x10-6
26	7	77	10.9 x106	18.9 x10-6	10.5 x10-6
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30	7	82	11.6 x106	17.8 x10-6	9.9 x10-6
30	19	80	11.4 x106	18.0 x10-6	10.0 x10-6
32	19	82	11.7 x106	17.5 x10-6	9.7 x10-6
54	7	70	9.9 x106	19.3 x10-6	10.7 x10-6
54	19	68	9.7 x106	19.4 x10-6	10.8 x10-6

ACSR – Aluminium Conductors Steel Reinforced GOST 839-80

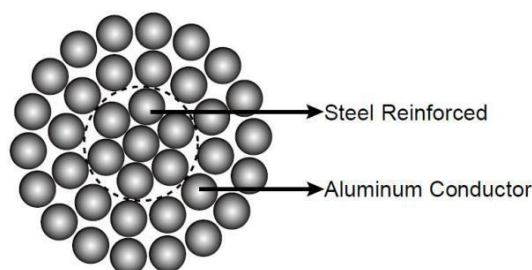
Application

ACSR conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

Standard

Basic design to GOST 839-80 standard

Construction



ACSR conductors are formed by several wires of aluminium and galvanized steel, stranded in concentric layers. The wire or wires which form the core, are made of galvanized steel and the external layer or layers, are of aluminium. Galvanized steel core consist normally of 1, 7 or 19 wires. The diameters of steel and aluminium wires can be the same, or different.

By varying the relative proportions of aluminium and steel, the required characteristics for any particular **application** can be reached. A higher U. T. S. Can be obtained, by increasing steel content, and a higher current carrying capacity by increasing aluminium content.

Electrical Properties

Density@20oC	Aluminium: 2.703 kg/dm
	Galvanised Steel: 7.80 kg/dm

Temperature Coefficient@20°C	Aluminium: 0.00403 (°C)
Resistivity@20°C	Aluminium: Should not exceed 0.028264
Linear Expansivity	Aluminium: 23 x10 (°C)
	Galvanised Steel: 11.5 x10 (1/°C)

Service Conditions

Ambient Temperature	-5°C - 50°C
Wind Pressure	80 – 130kg/m ²
Seismic Acceleration	0.12 - 0.05g
Isokeraunic Level	10 – 18
Relative Humidity	5 – 100%

Construction Parameters

Type AC GOST 839-80

Nominal Corss-section	Number of Wires	Wire Diameter	Calculated Cross-section	Overall Diameter	D.C. Resistance at 20	Min. Breaking Load	Conductor Weight	Grease Weight
mm ²		mm	mm ²	mm	Ω/km		kg/km	kg/km
10	7	1,35	10,0	4,05	2,8631	1950	27,4	–
16	7	1,70	15,9	5,10	1,8007	3021	43,0	0,5
25	7	2,13	24,9	6,40	1,1498	4500	68,0	0,5
35	7	2,50	34,3	7,50	0,8347	5913	94,0	0,5
40	7	2,70	40,0	8,09	0,7157	6800	109,4	–
50	7	3,00	49,5	9,00	0,5784	8198	135,0	0,5
63	7	3,39	63,0	10,16	0,4544	10390	172,3	–

70	7	3,55	69,3	10,70	0,4131	11288	189,0	1,0
95	7	4,10	92,4	12,30	0,3114	14784	252,0	1,0
100	19	2,59	100,0	12,94	0,2877	17000	274,9	–
120	19	2,80	117,0	14,00	0,2459	19890	321,0	16
125	19	2,89	125,0	14,47	0,2301	21250	343,6	–
150	19	3,15	148,0	15,80	0,1944	24420	406,0	20
160	19	3,27	160,0	16,37	0,1798	26400	439,8	–
185	19	3,50	182,8	17,50	0,1574	29832	502,0	25
200	19	3,66	200,0	18,30	0,1438	32000	549,7	–
240	19	4,00	238,7	20,00	0,1205	38192	655,0	33
250	19	4,09	250,0	20,47	0,1150	40000	687,1	–
300	37	3,15	288,3	22,10	0,1000	47569	794,0	54
315	37	3,29	315,0	23,05	0,0915	51970	867,5	–
350	37	3,45	345,8	24,20	0,0833	57057	952,0	65
400	37	3,66	389,2	25,60	0,0740	63420	1072,0	73
450	37	3,90	449,1	27,30	0,0642	71856	1206,0	84
500	37	4,15	500,4	29,10	0,0576	80000	1378,0	94
550	61	3,37	544,0	30,30	0,0529	89760	1500,0	117
560	37	4,39	560,0	30,73	0,0531	89600	1542,2	–
600	61	3,50	586,8	31,50	0,0491	95632	1618,0	126
630	61	3,63	630,0	32,64	0,0458	100800	1738,4	–
650	61	3,66	641,7	32,90	0,0450	104575	1771,0	138
700	61	3,80	691,7	34,20	0,0417	112725	1902,0	149

710	61	3,85	710,0	34,65	0,0406	113600	1959,2	–
750	61	3,95	747,4	35,60	0,0386	119584	2062,0	161

Type Ackp Asx GOST 839-80

Aluminum Section/Steel Core Section	Number of Aluminum Wires	Aluminum Wire Diameter	Number of Steel Wires	Steel Wire Diameter	Calculated Cross-section	Overall Diameter	DC Resistance at 20	Min. Breaking Load	Conductor Weight	Grease Weight
mm ²		mm		mm	mm ²	mm	Ω/km		kg/km	kg/km
(10/1,8)	6	1,50	1	1,50	10,6/1,77	4,5	2,7064	4089	42,7	1,0
(16/2,7)	6	1,85	1	1,85	16/2,69	5,6	1,7818	6220	64,9	1,0
(25/4,2)	6	2,30	1	2,30	24,9/4,15	6,9	1,1521	9296	100,3	1,5
(35/6,2)	6	2,80	1	2,80	36,9/6,15	8,4	0,7774	13524	148,0	2,5
40/6,7	6	2,91	1	2,91	40/6,7	8,74	0,7172	14400	161,3	
(50/8,0)	6	3,20	1	3,20	48,2/8,04	9,6	0,5951	17112	195,0	3,0
63/10,5	6	3,66	1	3,66	63/10,5	10,97	0,4553	21630	254,0	
(70/11)	6	3,80	1	3,80	68/11,3	11,4	0,4218	24130	276,0	4,5
(70/72)	18	2,20	19	2,20	68,4/72,2	15,4	0,4194	96826	755,0	38,0
(95/16)	6	4,50	1	4,50	95,4/15,9	13,5	0,3007	33369	385,0	6,0
(95/141)	24	2,20	37	2,20	91,2/141	19,8	0,3146	180775	1357,0	69,0
100/16,7	6	4,61	1	4,61	100/16,7	13,82	0,2868	34333	403,2	
(120/19)	26	2,40	7	1,85	118/18,8	15,2	0,2440	41521	471,0	11,0
(120/27)	30	2,20	7	2,20	114/26,6	15,4	0,2531	49465	528,0	14,0
125/6,9	18	2,97	1	2,97	125/6,9	14,67	0,2304	29167	397,9	
125/20,4	26	2,47	7	1,92	125/20,4	15,67	0,2308	45694	503,5	

(150/19)	24	2,80	7	1,85	148/18,8	16,8	0,2046	46307	554,0	12
(150/24)	26	2,70	7	2,10	149/24,2	17,1	0,2039	52279	599	14
(150/34)	30	2,50	7	2,50	147/34,3	17,5	0,2061	62643	675	18
160/8,9	18	3,36	1	3,36	160/8,9	16,82	0,1800	36178	509,4	
160/26,1	26	2,80	7	2,18	160/26,1	17,73	0,1803	57689	644,5	
(185/24)	24	3,15	7	2,10	187/24,2	18,9	0,1540	58075	705	14
(185/29)	26	2,98	7	2,30	181/29	18,8	0,1591	62055	728	16
(185/43)	30	2,80	7	2,80	185/43,1	19,6	0,1559	77767	846	23
(185/128)	54	2,10	37	2,10	187/128	23,1	0,1543	183816	1525	63
200/11,1	18	3,76	1	3,76	200/11,1	18,81	0,1440	44222	636,7	
200/32,6	26	3,13	7	2,43	200/32,6	19,82	0,1442	70134	805,6	
(205/27)	24	3,30	7	2,20	205/26,6	19,8	0,1407	63740	774	15
(240/32)	24	3,60	7	2,40	244/31,7	21,6	0,1182	75050	921	17
(240/39)	26	3,40	7	2,65	236/38,6	21,6	0,1222	80895	952	22
(240/56)	30	3,20	7	3,20	241/56,3	22,4	0,1197	98253	1106	30
(300/39)	24	4,00	7	2,65	301/38,6	24,0	0,0958	90574	1132	22
(300/48)	26	3,80	7	2,95	295/47,8	24,1	0,0978	100623	1186	27
(300/66)	30	3,50	19	2,10	288,5/65,8	24,5	0,1000	117520	1313	37
(300/67)	30	3,50	7	3,50	288,5/67,3	24,5	0,1000	126270	1323	37
(300/204)	54	2,65	37	2,65	298/204	29,2	0,0968	284579	2428	102
315/21,8	45	2,99	7	1,99	315/21,8	23,83	0,0917	79030	1039,2	
315/51,3	26	3,93	7	3,05	315/51,3	24,87	0,0916	106834	1268,9	
(330/30)	48	2,98	7	2,30	335/29,1	24,8	0,0861	88848	1152	16

(330/43)	54	2,80	7	2,80	332/43,1	25,2	0,0869	103784	1255	23
400/27,7	45	3,36	7	2,24	400/27,7	26,91	0,0722	98356	1319,7	
400/51,9	54	3,07	7	3,07	400/51,9	27,64	0,0722	123037	1509,7	
(400/18)	42	3,40	7	1,85	381/18,8	26,0	0,0758	85600	1199	12
(400/22)	76	2,57	7	2,00	394/22	26,6	0,0733	95115	1261	12
(400/51)	54	3,05	7	3,05	394/51,1	27,5	0,0733	120481	1490	28
(400/64)	26	4,37	7	3,40	390/63,5	27,7	0,0741	129183	1572	35
(400/93)	30	4,15	19	2,50	406/93,2	29,1	0,0711	173715	1851	53
450/31,1	45	3,57	7	2,38	450/31,1	28,55	0,0646	107467	1484,6	
450/58,3	54	3,26	7	3,26	450/58,3	29,32	0,0642	138417	1698,4	
(450/56)	54	3,20	7	3,20	434/56,3	28,8	0,0666	131370	1640	30
500/34,6	45	3,76	7	2,51	500/34,6	30,09	0,0577	119407	1649,6	
500/64,8	54	3,43	7	3,43	500/64,8	30,90	0,0578	153796	1887,1	
(500/26)	42	3,90	7	2,20	502/26,6	30,00	0,0575	112548	1592,0	15
(500/27)	76	2,84	7	2,20	481/26,6	29,40	0,0600	112188	1537,0	15
(500/64)	54	3,40	7	3,40	490/63,5	30,60	0,0588	148257	1852,0	33
(500/204)	90	2,65	37	2,65	496/204	34,50	0,0580	319609	2979,0	105
(500/336)	54	3,40	61	2,65	490/336	37,50	0,0588	466649	4005,0	168
(550/71)	54	3,60	7	3,60	549/71,2	32,40	0,0526	166164	2076,0	38
560/38,7	45	3,98	7	2,65	560/38,7	31,84	0,0515	133736	1847,5	
560/70,9	54	3,63	19	2,18	560/70,9	32,70	0,0516	172592	2102,2	
(600/72)	54	3,70	19	2,20	580/72,2	33,20	0,0498	183835	2170,0	39
630/43,6	45	4,22	7	2,81	630/43,6	33,79	0,0458	150453	2078,5	

630/79,8	54	3,85	19	2,31	630/79,8	34,69	0,0459	191772	2365,0	
(650/79)	96	2,90	19	2,30	634/78,9	34,70	0,0456	200451	2372,0	42
(700/86)	96	3,02	19	2,40	687/85,9	36,20	0,0420	217775	2575,0	46
710/49,1	45	4,48	7	2,99	710/49,1	35,86	0,0406	169559	2342,4	
710/89,9	54	4,09	19	2,45	710/89,9	36,82	0,0407	216124	2665,3	
(750/93)	96	3,15	19	2,50	748/93,2	37,70	0,0386	234450	2800,0	49
800/34,6	72	3,76	7	2,51	800/34,6	37,61	0,0361	167407	2479,6	
800/66,7	84	3,48	7	3,48	800/66,7	38,30	0,0361	205433	2732,3	
800/101,3	54	4,34	19	2,61	800/101,3	39,09	0,0361	243520	3003,2	
(800/105)	96	3,30	19	2,65	821/105	39,70	0,0352	260073	3092,0	57
900/38,9	72	3,99	7	2,66	900/38,9	39,89	0,0321	188333	2789,5	
900/75	84	3,69	7	3,69	900/75	40,63	0,0321	226500	3073,9	
1000/43,2	72	4,21	7	2,80	1000/43,2	42,05	0,0289	209259	3099,4	
(1000/56)	76	4,10	7	3,20	1003,2/56,3	42,40	0,0288	224047	3210,0	30
1120/47,3	72	4,45	19	1,78	1120/47,3	44,50	0,0258	23428	3463,9	
1120/91,2	84	4,12	19	2,47	1120/91,2	45,32	0,0253	283168	3810,7	
1250/52,8	72	4,70	19	1,88	1250/52,8	47,02	0,0231	261750	3865,9	
1250/101,8	84	4,35	19	2,61	1250/101,8	47,88				

Technical Data

Numbers of Wires		Final Modules of Elasticity		Coefficient of linear Expansion	
AL	Steel	Kg/mm ²	lb/in ²	1/Co	1/Fo
6	1	81	11.5 x10 ⁶	19.1 x10 ⁻⁶	10.6 x10 ⁻⁶
6	7	77	11.0 x10 ⁶	19.8 x10 ⁻⁶	11.0 x10 ⁻⁶
12	7	107	15.2 x10 ⁶	15.3 x10 ⁻⁶	8.5 x10 ⁻⁶
18	1	67	9.5 x10 ⁶	21.2 x10 ⁻⁶	11.8 x10 ⁻⁶

24	7	74	10.5 x106	19.6 x10-6	10.9 x10-6
26	7	77	10.9 x106	18.9 x10-6	10.5 x10-6
28	7	79	11.2 x106	18.4 x10-6	10.2 x10-6
30	7	82	11.6 x106	17.8 x10-6	9.9 x10-6
30	19	80	11.4 x106	18.0 x10-6	10.0 x10-6
32	19	82	11.7 x106	17.5 x10-6	9.7 x10-6
54	7	70	9.9 x106	19.3 x10-6	10.7 x10-6
54	19	68	9.7 x106	19.4 x10-6	10.8 x10-6

ACSR – Aluminum Conductor Steel Reinforced Cables JiS C 311

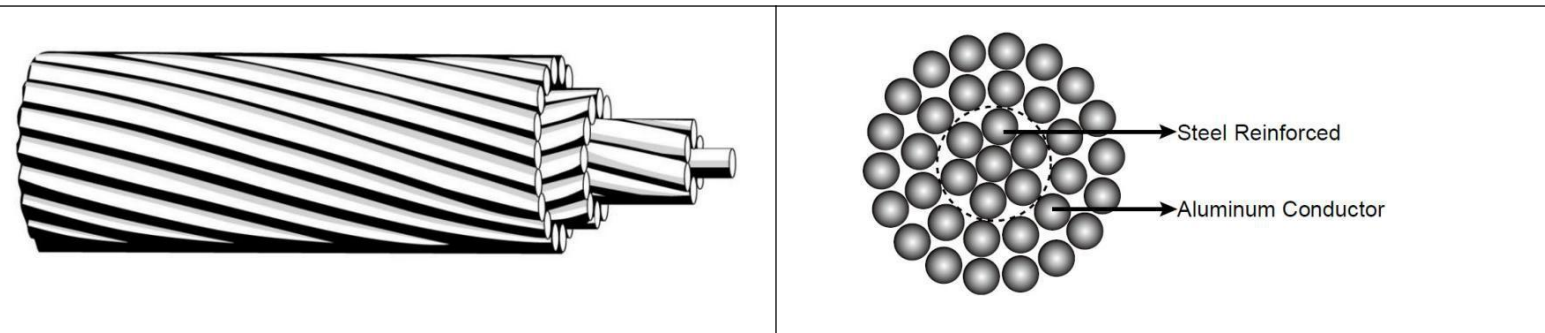
Application

ACSR conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

Standard

Basic design to JiS C 3110 standard

Construction



ACSR conductors are formed by several wires of aluminium and galvanized steel, stranded in concentric layers. The wire or wires which form the core, are made of galvanized steel and the external layer or layers, are of aluminium. Galvanized steel core consist normally of 1, 7 or 19 wires. The diameters of steel and aluminium wires can be the same, or different.

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	Galvanised Steel: 7.80 kg/dm
Temperature Coefficient@20°C	Aluminium: 0.00403 (°C)
Resistivity@20°C	Aluminium: Should not exceed 0.028264
Linear Expansivity	Aluminium: 23 x10 (°C)

Galvanised Steel: 11.5 x10 (1/°C)

Service Conditions

Ambient Temperature	-5°C - 50°C
Wind Pressure	80 – 130kg/m ²
Seismic Acceleration	0.12 - 0.05g
Isokeraunic Level	10 – 18
Relative Humidity	5 – 100%

Construction Parameters

Nominal Sectional Area	Sectional Area			Stranding		Overall Diameter	Weight	Breakign Load	Electrical Resistance @20o
	AL	Steel	Total	AL	Steel				
mm ²	mm ²	mm ²	mm ²	No.×mm	No.×mm	mm	Kg/Km	KN	Ω/Km
25	24.9	4.2	29.1	6/2.30	1/2.30	6.9	101	8.89	1.15
32	31.9	5.3	37.2	6/2.60	1/2.60	7.8	129	11.17	0.899
58	57.7	9.6	67.3	6/3.50	1/3.50	10.5	233	19.40	0.497
95	95.4	15.9	111.3	6/4.50	1/4.50	13.5	385	31.16	0.301
120	124.7	29.1	153.8	30/2.3	7/2.3	16.1	574	54.29	0.233
160	159.3	37.2	196.5	30/2.6	7/2.6	18.2	733	68.40	0.182
200	198.2	46.2	244.4	30/2.9	7/2.9	20.3	912	84.67	0.147
240	241.2	59.3	300.5	30/3.2	7/3.2	22.4	1110	100.06	0.120
330	326.8	52.8	379.6	26/4.0	7/3.1	25.3	1320	107.31	0.0888
410	413.4	67.3	480.7	26/4.5	7/3.5	28.5	1673	136.32	0.0702

520	519.5	67.3	586.8	54/3.5	7/3.5	31.2	1969	152.88	0.0559
610	612.4	79.4	691.8	54/3.8	7/3.8	34.2	2320	179.83	0.0474
810	814.5	56.3	870.8	45/3.8	7/3.2	38.4	2700	181.10	0.0356

Technical Data

Numbers of Wires		Final Modules of Elasticity		Coefficient of linear Expansion	
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26	7	77	10.9 x10 ⁶	18.9 x10 ⁻⁶	10.5 x10 ⁻⁶
28	7	79	11.2 x10 ⁶	18.4 x10 ⁻⁶	10.2 x10 ⁻⁶
30	7	82	11.6 x10 ⁶	17.8 x10 ⁻⁶	9.9 x10 ⁻⁶
30	19	80	11.4 x10 ⁶	18.0 x10 ⁻⁶	10.0 x10 ⁻⁶
32	19	82	11.7 x10 ⁶	17.5 x10 ⁻⁶	9.7 x10 ⁻⁶
54	7	70	9.9 x10 ⁶	19.3 x10 ⁻⁶	10.7 x10 ⁻⁶
54	19	68	9.7 x10 ⁶	19.4 x10 ⁻⁶	10.8 x10 ⁻⁶

ACSR/AC – Aluminium Conductors, Aluminium Clad Steel Reinforced AS/NZS 3607

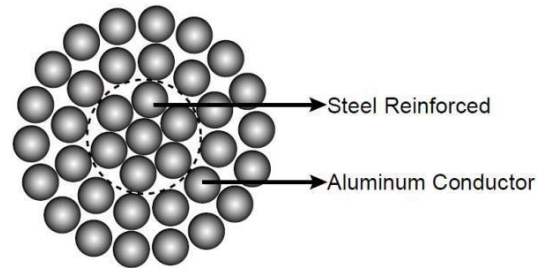
Application

ACSR/AC – Aluminium conductors, aluminium clad steel reinforced conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

Standard

Basic design to AS/NZS 3607 standard

Construction



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Linear Expansivity	Aluminium: 23 x10 (°C)
	Galvanised Steel: 11.5 x10 (1/°C)

Service Conditions

Ambient Temperature	-5°C - 50°C
Wind Pressure	80 – 130kg/m^2
Seismic Acceleration	0.12 - 0.05g
Isokeraunic Level	10 – 18
Relative Humidity	5 – 100%

Construction Parameters

Product code	Strand/wire		Cross sectional area			Nominal O.D. mm	Approximate mass	Calculated minimum breaking load	Calculated final modulus of	Coefficient of linear expansion
	Alum No/mm	Steel No/mm	Alum mm2	Steel mm2	Total mm2					

							kg/km	kN	elasticity GPa	/°C x 10 ⁻⁶
SKATING	3/1.75	4/1.75	7.2	9.6	16.8	5.3	83	12.3	119	15.3
SOCCER	3/2.50	4/2.50	14.7	19.6	34.3	7.5	171	24.9	119	15.3
SWIMMING	4/3.00	3/3.00	28.3	21.2	49.5	9	218	28.9	106	16.5
TENNIS	4/3.75	3/3.75	44.2	33.1	77.3	11.3	340	42.6	106	16.5
ANGLING	6/2.50	1/2.50	29.5	4.9	34.4	7.5	113	10.6	79	20.1
ARCHERY	6/3.00	1/3.00	42.4	7.1	49.5	9	163	15.1	79	20.1
BASEBALL	6/3.75	1/3.75	66.3	11	77.3	11.3	254	22.3	79	20.1
BOWLS	6/4.75	7/1.60	106	14.1	120	14.3	385	32.7	76	20.6
CRICKET	30/2.50	7/2.50	147	34.4	182	17.5	636	64.4	82	19.4
DARTS	30/3.00	7/3.00	212	49.5	262	21	913	91.6	82	19.4
DICE	30/3.25	7/3.25	249	58.1	307	22.8	1070	106	82	19.4
DIVING	30/3.50	7/3.50	289	67.3	356	24.5	1240	122	82	19.4
GOLF	54/3.00	7/3.00	382	49.5	431	27	1380	120	75	20.6
GYMNASTICS	54/3.25	7/3.25	448	58.1	506	29.3	1620	139	75	20.6
HURDLES	54/3.50	7/3.50	519	67.3	587	31.5	1880	159	75	20.6
LACROSSE	54/3.75	19/2.25	596	75.5	672	33.8	2150	180	74	20.7
RUGBY	54/4.75	19/2.85	957	121	1078	42.8	3450	288	74	20.7

Technical Data

Numbers of Wires		Final Modules of Elasticity		Coefficient of linear Expansion	
AL	Steel	Kg/mm ²	lb/in ²	1/Co	1/Fo
6	1	81	11.5 x10 ⁶	19.1 x10 ⁻⁶	10.6 x10 ⁻⁶
6	7	77	11.0 x10 ⁶	19.8 x10 ⁻⁶	11.0 x10 ⁻⁶
12	7	107	15.2 x10 ⁶	15.3 x10 ⁻⁶	8.5 x10 ⁻⁶
18	1	67	9.5 x10 ⁶	21.2 x10 ⁻⁶	11.8 x10 ⁻⁶
24	7	74	10.5 x10 ⁶	19.6 x10 ⁻⁶	10.9 x10 ⁻⁶
26	7	77	10.9 x10 ⁶	18.9 x10 ⁻⁶	10.5 x10 ⁻⁶
28	7	79	11.2 x10 ⁶	18.4 x10 ⁻⁶	10.2 x10 ⁻⁶
30	7	82	11.6 x10 ⁶	17.8 x10 ⁻⁶	9.9 x10 ⁻⁶
30	19	80	11.4 x10 ⁶	18.0 x10 ⁻⁶	10.0 x10 ⁻⁶
32	19	82	11.7 x10 ⁶	17.5 x10 ⁻⁶	9.7 x10 ⁻⁶

54	7	70	9.9 x106	19.3 x10-6	10.7 x10-6
54	19	68	9.7 x106	19.4 x10-6	10.8 x10-6

ACSR/GZ – Aluminium Conductors, Galvanised Steel Reinforced AS/NZS 3607

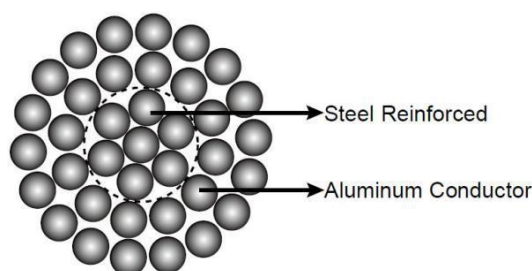
Application

ACSR/GZ – Aluminium conductors, galvanised steel reinforced conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

Standard

Basic design to AS/NZS 3607 standard

Construction



ACSR conductors are formed by several wires of aluminium and galvanized steel, stranded in concentric layers. The wire or wires which form the core, are made of galvanized steel and the external layer or layers, are of aluminium. Galvanized steel core consist normally of 1, 7 or 19 wires. The diameters of steel and aluminium wires can be the same, or different.

By varying the relative proportions of aluminium and steel, the required characteristics for any particular **application** can be reached. A higher U. T. S. Can be obtained, by increasing steel content, and a higher current carrying capacity by increasing aluminium content.

Electrical Properties

Density@20oC	Aluminium: 2.703 kg/dm
	Galvanised Steel: 7.80 kg/dm
Temperature Coefficient@20°C	Aluminium: 0.00403 (°C)
Resistivity@20°C	Aluminium: Should not exceed 0.028264
Linear Expansivity	Aluminium: 23 x10 (°C)
	Galvanised Steel: 11.5 x10 (1/°C)

Service Conditions

Ambient Temperature	-5°C - 50°C
Wind Pressure	80 – 130kg/m^2
Seismic Acceleration	0.12 - 0.05g
Isokeraunic Level	10 – 18
Relative Humidity	5 – 100%

Construction Parameters

Product code	Strand/wire		Cross sectional area			Nominal O.D. mm	Approximate mass kg/km	Calculated minimum breaking load kN	Calculated final modulus of elasticity GPa	Coefficient of linear expansion /°C x 10-6
	Alum No/mm	Steel No/mm	Alum mm2	Steel mm2	Total mm2					
QUINCE	3/1.75	4/1.75	7.2	9.6	16.8	5.3	96	12.7	136	13.9
RAISIN	3/2.50	4/2.50	14.7	19.6	34.3	7.5	193	24.4	136	13.9
SUPER SULTANA	3/3.00	4/3.00	21.2	28.3	49.5	9	280	35	136	13.9
SULTANA	4/3.00	3/3.00	28.3	21.2	49.5	9	242	28.3	119	15.2
WALNUT	4/3.75	3/3.75	44.2	33.1	77.3	11.3	379	43.9	119	15.2
ALMOND	6/2.50	1/2.50	29.2	4.9	34.4	7.5	119	10.5	83	19.3
APRICOT	6/2.75	1/2.75	35.6	5.9	41.5	8.3	144	12.6	83	19.3
APPLE	6/3.00	1/3.00	42.4	7.1	49.5	9	171	14.9	83	19.3
BANANA	6/3.75	1/3.75	66.3	11	77.3	11.3	268	22.8	83	19.3
CHERRY	6/4.75	7/1.60	106	14.1	120	14.3	404	33.2	80	19.9
GRAPE	30/2.50	7/2.50	147	34.4	182	17.5	677	63.5	88	18.4
LEMON	30/3.00	7/3.00	212	49.5	262	21	973	90.4	88	18.4
LYCHEE	30/3.25	7/3.25	249	58.1	307	22.8	1140	105	88	18.4
LIME	30/3.50	7/3.50	289	67.3	356	24.5	1320	122	88	18.4
MANGO	54/3.00	7/3.00	382	49.5	431	27	1440	119	78	19.9
ORANGE	54/3.25	7/3.25	448	58.1	506	29.3	1690	137	78	19.9
OLIVE	54/3.50	7/3.50	519	67.3	587	31.5	1960	159	78	19.9
PAW PAW	54/3.75	19/2.25	596	75.5	672	33.8	2240	178	77	20
PEACH	54/4.75	19/2.85	957	121	1078	42.8	3600	284	77	20

Technical Data

Numbers of Wires		Final Modules of Elasticity		Coefficient of linear Expansion	
AL	Steel	Kg/mm^2	lb/in^2	1/Co	1/Fo
6	1	81	11.5 x106	19.1 x10-6	10.6 x10-6

6	7	77	11.0 x106	19.8 x10-6	11.0 x10-6
12	7	107	15.2 x106	15.3 x10-6	8.5 x10-6
18	1	67	9.5 x106	21.2 x10-6	11.8 x10-6
24	7	74	10.5 x106	19.6 x10-6	10.9 x10-6
26	7	77	10.9 x106	18.9 x10-6	10.5 x10-6
28	7	79	11.2 x106	18.4 x10-6	10.2 x10-6
30	7	82	11.6 x106	17.8 x10-6	9.9 x10-6
30	19	80	11.4 x106	18.0 x10-6	10.0 x10-6
32	19	82	11.7 x106	17.5 x10-6	9.7 x10-6
54	7	70	9.9 x106	19.3 x10-6	10.7 x10-6
54	19	68	9.7 x106	19.4 x10-6	10.8 x10-6

ACSR/AS or ACSR/AW – Aluminium Conductors, Aluminium Clad Steel Reinforced ASTM B-549

Application

Aluminium Conductors, Aluminium Clad Steel Reinforced (ACSR/AS or ACSR/AW) are concentrically stranded conductors with one or more layers of hard drawn 1350-H19 aluminium wires on Aluminium Clad steel wire core. The core can be single wire or stranded depending on the size.

Primarily used as the phase conductor for overhead transmission and distribution. It is preferred over conventional ACSR because of its higher corrosion resistance, lighter weight, longer service life, and reduced power loss.

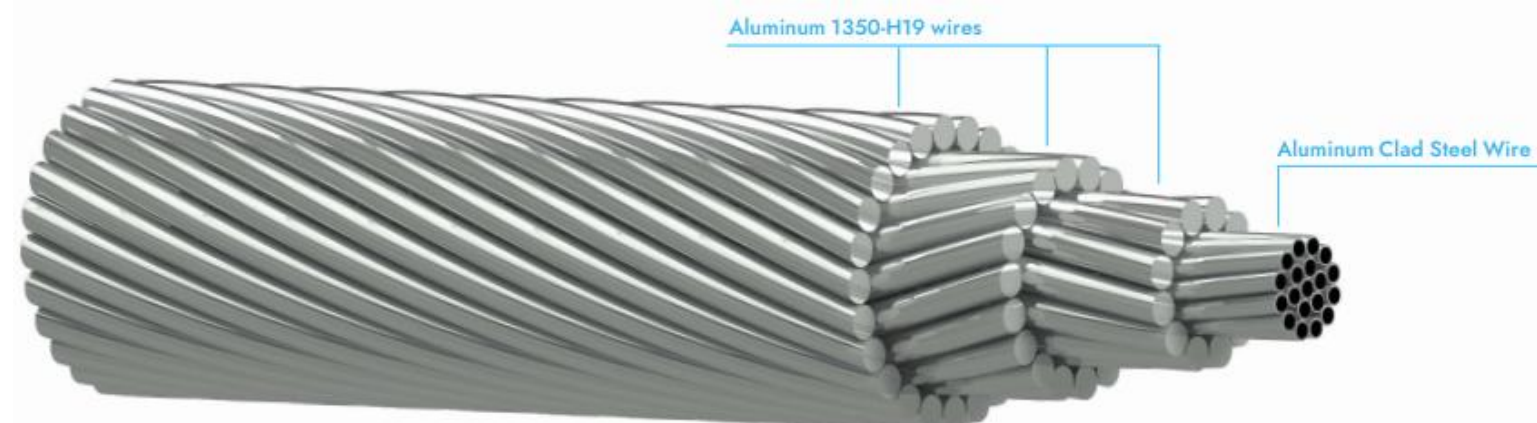
The mechanical properties of ACSR/AS conductors are similar to ACSR conductors but offers improved ampacity and resistance to corrosion because of the presence of aluminium clad steel wires in the core. These conductors are better replacement for ACSR conductors where corrosive conditions are severe.

Standard

Basic design to ASTM B-549 standard

Construction

Aluminum 1350-H19 Wires, concentrically stranded over a central wire/core of Aluminum clad steel.



Construction Parameters

Code Word	Size (AWG or kcmil)	Strandin g (Al/Aw)	Diameter (ins.)			Weight Per 1000 ft (lbs.)			Rated Strengt h (lbs.)	Resistance OHMS/1000ft		Allow able Ampa city+ (Amp s)
			Individual Wires		Comple te Cable							
			AL	AW		Al	AW	Total		DC @20° c	AC @75° C	
Swan/AW	4	6/1	.083 4	.0834	.250	39	16	55	1780	.3917	.4770	145
Swanate/AW	4	7/1	.077 2	.1029	.257	39	24	63	2280	.3814	.4642	148
Sparrow/AW	2	6/1	.105 2	.1052	.316	62	25	87	2760	.2462	.2997	194
Sparate/AW	2	7/1	.097 4	.1299	.325	62	38	100	3510	.2396	.2917	198
Robin/AW	1	6/1	.118 2	.1182	.355	78	31	109	3450	.1950	.2373	225
Raven/AW	1/0	6/1	.132 7	.1327	.398	99	39	138	4250	.1547	.1884	260
Quail/AW	2/0	6/1	.149 0	.1490	.447	124	50	174	5130	.1227	.1494	301
Pigeon/AW	3/0	6/1	.167 2	.1672	.502	156	63	219	6300	.0974 7	.1188	347
Penguin/AW	4/0	6/1	.187 8	.1878	.563	197	79	277	7690	.0772 6	.0942 2	402
Waxwing/AW	266.8	18/1	.121 7	.1217	.609	250	33	283	6820	.0636 4	.0777 6	451
Partridge/AW	266.8	26/7	.101 3	.0788	.642	251	98	349	10800	.0616 9	.0754 1	465
Ostrich/AW	300	26/7	.107 4	.0835	.680	283	110	393	12100	.0548 9	.0671 2	500

Merlin/AW	336.4	18/1	.136 7	.1367	.684	315	42	357	8540	.0504 4	.0617 5	522
Linnet/AW	336.4	26/7	.113 8	.0885	.721	317	123	440	13500	.0489 7	.0598 9	537
Oriole/AW	336.4	30/7	.105 9	.1059	.741	318	177	494	16700	.0479 5	.0586 1	547
Chickadee/A W	397.5	18/1	.148 6	.1486	.743	373	50	422	9780	.0426 8	.0523 0	580
Brant/AW	397.5	24/7	.128 7	.0858	.772	374	116	490	14100	.0418 5	.0512 4	592
Ibis/AW	397.5	26/7	.123 6	.0961	.783	374	146	520	15800	.0414 4	.0507 2	597
Lark/AW	397.5	30/7	.115 1	.1151	.806	375	209	584	19600	.0405 9	.0496 5	608
Pelican/AW	477	18/1	.162 8	.1628	.814	447	59	507	11500	.0355 6	.04344	651
Flicker/AW	477	24/7	.141 0	.0940	.846	449	139	589	16700	.0348 7	.0427 3	663
Hawk/AW	477	26/7	.135 5	.1054	.858	449	175	624	18900	.0345 3	.0423 1	669
Hen/AW	477	30/7	.126 1	.1261	.883	450	251	701	23400	.0338 2	.0413 9	682
Osprey/AW	556.5	18/1	.175 8	.1758	.879	522	69	591	13200	.0305 0	.0374 9	715
Parakeet/AW	556.5	24/7	.152 3	.1015	.914	524	163	687	19300	.0298 9	.0366 7	731
Dove/AW	556.5	26/7	.146 3	.1138	.927	524	204	728	21900	.0295 8	.0362 7	737
Eagle/AW	556.5	30/7	.136 2	.1362	.953	525	293	818	26800	.0289 9	.0355 1	751
Peacock/AW	605	24/7	.158	.1059	.953	570	177	746	21000	.0274	.0337	770

			8							9	7	
Squab/AW	605	26/7	.152 5	.1186	.966	570	222	792	23600	.0258 8	.0334 1	777
Teal/AW	605	30/19	.142 0	.0852	.994	571	311	883	28500	.0267 2	.0327 4	791
Kingbird/AW	636	18/1	.188 0	.1880	.940	596	79	675	15000	.0266 7	.0328 6	778
Rook/AW	636	24/7	.162 8	.1085	.977	599	186	785	22000	.0261 6	.0321 6	794
Grosbeak/A W	636	26/7	.156 4	.1216	.990	599	233	832	24800	.0258 8	.0317 9	801
Egret/AW	636	30/19	.145 6	.0874	1.019	601. 4	327. 5	928. 9	29930	—	—	—
Flamingo/AW	666.6	24/7	.166 7	.1111	1.000	628	195	823	23100	.0249 5	.0306 9	818
Gannet/AW	666.6	26/7	.160 1	.1245	1.014	628	245	872	26000	.0247 0	.0303 4	825
Starling/AW	715.5	26/7	.165 9	.1290	1.051	674	263	939	27500	.0230 0	.0283 0	863
Redwing/AW	715.5	30/19	.154 4	.0926	1.081	676	368	1044	33400	.0226 0	.0277 7	878
Tern/AW	795	45/7	.132 9	.0886	1.063	749	124	873	21500	.0213 5	.0263 8	896
Cuckoo/AW	795	24/7	.182 0	.1213	1.092	749	232	981	27500	.0209 3	.0258 2	913
Drake/AW	795	26/7	.174 9	.1360	1.108	749	292	1040	30500	.0207 0	.0254 9	922
Condor/AW	795	54/7	.121 3	.1214	1.093	749	232	981	27800	.0209 1	.0257 8	913
Mallard/AW	795	30/19	.162 8	.0977	1.140	751	409	1160	37100	.0203 3	.0250 0	938

Ruddy/AW	900	45/7	.141 4	.0943	1.131	848	140	988	24000	.0188 6	.0233 0	970
Canary/AW	900	54/7	.129 1	.1291	1.162	848	263	1111	31000	.0184 9	.0228 6	986
Catbird/AW	954	36/1	.162 8	.1628	1.140	938	6.2	955	19460	—	—	—
Rail/AW	954	45/7	.145 6	.0971	1.165	899	149	1047	25400	.0177 9	.0221 0	1003
Cardinal/AW	954	54/7	.132 9	.1329	1.196	899	279	1177	32900	.0174 4	.0216 1	1022
Ortolan/AW	1033.5	45/7	.151 5	.1010	1.212	973	161	1134	27200	.0164 1	.0204 4	1054
Curlew/AW	1033.5	54/7	.138 3	.1383	1.244	973	302	1275	35200	.0160 9	.0199 7	1074
Bluejay/AW	1113	45/7	.157 3	.1049	1.259	1048	173	1222	29300	.0160 6	.0190 5	1103
Finch/AW	1113	54/19	.143 6	.0862	1.293	1055	319	1374	37500	—	—	—
Bunting/AW	1192.5	45/7	.162 8	.1085	1.302	1125	186	1311	31300	—	—	—
Bittern/AW	1272	45/7	.168 1	.1121	1.345	1200	198	1398	33400	—	—	—
Pheasant/AW	1272	54/19	.153 5	.0921	1.382	1204	364	1568	42400	.0131 5	.0164 6	1216
Bobolink/AW	1431	45/7	.178 3	.1189	1.427	1348	223	1571	37600	.0118 6	.0150 3	1283
Lapwing/AW	1590	45/7	.188 0	.1253	1.504	1498	248	1745	41800	.0106 9	.0136 6	1365

High Strength Conductor ASTM B-549											
Code Word	Size	Strandin	Diameter (ins.)			Weight Per 1000 ft			Rated	Resistance	Allowa

	(AWG or kcmil)	g (Al/AW)	Individual Wires		Complete Cable	(lbs.)			Strength (lbs.)	OHMS/1000ft		Ampacity+ (Amps)
			AL	AW		Al	AW	Total		DC @20°C	AC @75°C	
Grouse/AW	80.0	8/1	.1000	.1670	.367	75.1	62.6	137.7	4,890	.1942	.2357	227
Petrel/AW	101.8	12/7	.0921	.0921	.460	96.0	133.9	229.9	9,910	.1425	.1736	281
Minorca/AW	110.8	12/7	.0961	.0961	.481	104.5	145.8	250.3	10,800	.1326	.1594	297
Leghorn/AW	134.6	12/7	.1059	.1059	.530	127.0	177.0	304.0	13,000	.1078	.1313	335
Guinea/AW	159.0	12/7	.1151	.1151	.576	150.0	209.1	359.1	15,300	.09123	.1112	372
Dotterel/AW	176.9	12/7	.1261	.1261	.631	180.0	251.0	399.5	16,900	.08201	.09988	398
Dorking/AW	190.8	12/7	.1261	.1261	.631	180.0	251.0	431.0	18,300	.07601	.09261	418
Brahma/AW	203.2	16/19	.1127	.0977	.714	191.7	411.0	602.7	21,100	.06570	.07994	464
Cochin/AW	211.3	12/7	.1327	.1327	.664	199.3	278.0	477.3	19800	.06863	.8364	445

ACSR/AS or ACSR/AW – Aluminium Conductors, Aluminium Clad Steel Reinforced ASTM B 524

Application

Aluminium Conductors, Aluminium Clad Steel Reinforced (ACSR/AS or ACSR/AW) are concentrically stranded conductors with one or more layers of hard drawn 1350-H19 aluminium wires on Aluminium Clad steel wire core. The core can be single wire or stranded depending on the size.

Primarily used as the phase conductor for overhead transmission and distribution. It is preferred over conventional ACSR because of its higher corrosion resistance, lighter weight, longer service life, and reduced power loss.

The mechanical properties of ACSR/AS conductors are similar to ACSR conductors but offers improved ampacity and resistance to corrosion because of the presence of aluminium clad steel wires in the core. These conductors are better replacement for ACSR conductors where

corrosive conditions are severe.

Standard

Basic design to ASTM B 524 standard

Construction

Aluminum 1350-H19 Wires, concentrically stranded over a central wire/core of Aluminum clad steel.



Construction Parameters

Code Word	Conductor size	Sectional Area	Stranding					Diameter of Complete Conductor	Rated Strength	Weight
				No. of Wires Aluminum	No. of Wires Aluminum Clad Steel	Wire diameter Aluminum	Wire diameter Aluminum Clad Steel			
	(cmil)	(mm ²)	Classes	(No.)	(No.)	(mm)	(mm)	(mm)	(KN)	(Kg/Km)
Thrasher/AW	2324300	1178	AA	76	19	4.43	2.07	45.79	246	3679
Kiwi/AW	2176100	1103	AA	72	7	4.41	2.94	44.1	218	3366
Bluebird/AW	2173100	1101	AA	84	19	4.07	2.44	44.76	262	3627
Chukar/AW	1795200	910	AA	84	19	3.7	2.22	40.7	220	2996
Falcon/AW	1609800	816	AA	54	19	4.36	2.62	39.26	236	2917
Lapwing/AW	1601200	811	AA	45	7	4.78	3.18	38.22	186	2598

Parrot/AW	1528200	774	AA	54	19	4.25	2.55	38.25	224	2768
Nuthatch/AW	1520500	770	AA	45	7	4.65	3.1	37.2	177	2467
Plover/AW	1448900	734	AA	54	19	4.14	2.48	37.24	212	2625
Bobolink/AW	1440200	730	AA	45	7	4.53	3.02	36.24	167	2336
Martin/AW	1367700	693	AA	54	19	4.02	2.41	36.17	201	2478
Dipper/AW	1360100	689	AA	45	7	4.4	2.93	35.19	158	2207
Pheasant/AW	1287700	652	AA	45	19	3.9	2.34	35.1	189	2333
Bittern/AW	1280600	649	AA	45	7	4.27	2.85	34.17	149	2078
Skylark/AW	1275400	646	AA	36	1	4.78	4.78	33.46	114	1893
Grackle/AW	1206700	611	AA	54	19	3.77	2.27	33.97	179	2188
Bunting/AW	1201000	609	AA	45	7	4.14	2.76	33.12	139	1948
Finch/AW	1127800	571	AA	54	19	3.65	2.19	32.85	167	2043
Bluejay/AW	1120500	568	AA	45	7	4	2.66	31.98	130	1819
Curlew/AW	1046100	530	AA	54	7	3.51	3.51	31.59	158	1896
Ortolan/AW	1040000	527	AA	45	7	3.85	2.57	30.81	121	1688
Tanager/AW	1035800	525	AA	36	1	4.3	4.3	30.1	94	1537
Cardinal/AW	966100	490	AA	54	7	3.38	3.38	30.42	146	1752
Rail/AW	960400	487	AA	45	7	3.7	2.47	29.61	113	1558
Catbird/AW	956600	485	AA	36	1	4.14	4.14	28.98	87	1420
Canary/AW	911400	462	AA	54	7	3.28	3.28	29.52	138	1653
Ruddy/AW	906100	459	AA	45	7	3.59	2.4	28.74	107	1470

Mallary/AW	812700	412	AA	30	19	4.14	2.48	28.96	165	1726
Condor/AW	805000	408	AA	54	7	3.08	3.08	27.72	124	1458
Tern/AW	800400	406	AA	45	7	3.38	2.25	27.03	96	1298
Drake/AW	807600	409	AA	26	7	4.44	3.45	28.11	136	1549
Cuckoo/AW	805000	408	AA	24	7	4.62	3.08	27.72	122	1460
Coot/AW	797200	404	AA	36	1	3.77	3.77	26.39	74	1183
Redwing/A W	730900	370	AA	30	19	3.92	2.35	27.43	149	1552
Starling/AW	727400	369	AA	26	7	4.21	3.28	26.68	122	1393
Stilt/AW	725000	367	AA	24	7	4.39	2.92	26.32	110	1314
Gannet/AW	676600	343	AA	26	7	4.07	3.16	25.76	116	1298
Flamingo/A W	675400	342	AA	24	7	4.23	2.82	25.38	103	1225
Egret/AW	650200	329	AA	30	19	3.7	2.22	25.9	133	1381
Sooter/AW	650500	330	AA	30	7	3.7	3.7	25.9	130	1391
Grosbeak/A W	646100	327	AA	26	7	3.97	3.09	25.15	110	1238
Rook/AW	644000	326	AA	24	7	4.14	2.76	24.84	98	1168
Swift/AW	637700	323	AA	36	1	3.38	3.38	23.66	61	946
Kingbird/AW	639400	324	AA	18	1	4.78	4.78	23.9	67	1006
Teal/AW	618400	313	AA	30	19	3.61	2.16	25.24	127	1314
Wood Duck/AW	618800	314	AA	30	7	3.61	3.61	25.27	126	1323
Squab/AW	614600	311	AA	26	7	3.87	3.01	24.51	105	1177
Peacock/A W	612700	310	AA	24	7	4.03	2.69	24.19	93	1112

Eagle/AW	569700	289	AA	30	7	3.46	3.46	24.22	119	1217
Dove/AW	564800	286	AA	26	7	3.72	2.89	23.55	97	1083
Parakeet/AW	564000	286	AA	24	7	3.87	2.58	23.22	86	1022
Ospray/AW	559000	283	AA	18	1	4.47	4.47	22.35	59	880
Hen/AW	487900	247	AA	30	7	3.2	3.2	22.4	104	1043
Hawk/AW	484600	246	AA	26	7	3.44	2.68	21.8	84	929
Flicker/AW	483000	245	AA	24	7	3.58	2.39	21.49	74	877
Pelican/AW	479600	243	AA	18	1	4.14	4.14	20.7	51	755
Lark/AW	406000	206	AA	30	7	2.92	2.92	20.44	87	869
Ibbs/AW	403300	204	AA	26	7	3.14	2.44	19.88	70	774
Brant/AW	403000	204	AA	24	7	3.27	2.18	19.62	63	731
Chickadee/AW	399200	202	AA	18	1	3.77	3.77	18.85	44	628
Oriole/AW	343700	174	AA	30	7	2.69	2.69	18.83	74	737
Linnet/AW	341300	173	AA	26	7	2.89	2.25	18.31	60	655
Merlin/AW	337800	171	AA	18	1	3.47	3.47	17.35	38	531
Ostrich/AW	304800	154	AA	26	7	2.73	2.12	17.28	54	583
Partridge/AW	271200	137	AA	26	7	2.57	2	16.28	48	519
Waxwing/AW	268400	136	AA	18	1	3.09	3.09	15.45	30	421
4/0 Penguin/AW	215400	109	AA,A	6	1	4.77	4.77	14.31	34	412
Cochin/AW	223000	113	AA(+)	12	7	3.37	3.37	16.85	88	710

Brahma/AW	220700	112	AA(+)	16	19	2.86	2.48	18.12	121	894
Dorking/AW	201900	102	AA(+)	12	7	3.2	3.2	16	81	641
Dotterel/AW	187100	95	AA(+)	12	7	3.08	3.08	15.4	75	594
3/0 Pigeon/ AW	170700	87	AA,A	6	1	4.25	4.25	12.75	28	326
Guinea/AW	168000	85	AA(+)	12	7	2.92	2.92	14.6	68	534
3/0 (5/2)AWAC	159000	81	AA(+)	5	2	4.44	4.44	13.32	43	418
3/0 (12/7)AWAC	151300	77	AA(+)	4	3	4.78	4.78	14.34	63	555
Leghorn/AW	142700	72	AA(+)	12	7	2.69	2.69	13.45	58	452
2/0 Quail/AW	135200	69	AA,A	6	1	3.78	3.78	11.34	23	259
2/0 (5/2) AWAC	125700	64	AA(+)	5	2	3.95	3.95	11.85	36	332
2/0 (4/3)AWAC	120200	61	AA(+)	4	3	4.25	4.25	12.75	53	441
Minorca/AW	117300	59	AA(+)	12	7	2.44	2.44	12.2	48	372
Raven/AW	107700	55	AA,A	6	1	3.37	3.37	10.11	19	205
Petrel/AW	107800	55	AA(+)	12	7	2.34	2.34	11.7	44	342
2/0 (3/4)AWAC	113000	57	AA(+)	3	4	4.63	4.63	13.89	73	588
1/0 (5/2)AWAC	99700	51	AA(+)	5	2	3.52	3.52	10.56	29	263

1/0 (4/3)AWAC	95500	48	AA(+)	4	3	3.79	3.79	11.37	43	348
1 Robin/AW	85400	43	AA,A	6	1	3	3	9	15	162
Grouse/AW	82700	42	AA(+)	8	1	2.54	4.24	9.32	22	205
1/0 (3/4)AWAC	89300	45	AA(+)	3	4	4.13	4.13	12.39	61	466
1 (5/2)AWAC	79000	40	AA(+)	5	2	3.13	3.13	9.39	24	208
1 (4/3)AWAC	75200	38	AA(+)	4	3	3.37	3.37	10.11	36	277
2 Sparate/AW	67600	34	AA,A	7	1	2.47	3.3	8.24	16	149
2 Sparrow/A W	67100	34	AA,A	6	1	2.67	2.67	8.01	12	129
1/0 (2/5) AWAC	80800	41	AA(+)	2	5	4.58	4.58	13.74	87	640
1 (3/4) AWAC	71200	36	AA(+)	3	4	3.67	3.67	11.01	50	369
2 (5/2) AWAC	62400	32	AA(+)	5	2	2.79	2.79	8.37	19	165
2 (4/3) AWAC	60100	31	AA(+)	4	3	3	3	9	29	219
3 Swallow/AW	53900	27.3	A	6	1	2.38	2.38	7.14	10	103
1 (2/5) AWAC	64600	32.7	AA(+)	2	5	4.08	4.08	12.24	73	507
2 (3/4)AWAC	56500	28.6	AA(+)	3	4	3.27	3.27	9.81	43	293
3	49900	25.3	AA(+)	5	2	2.48	2.48	7.44	16	131

(5/2)AWAC			)							
3 (4/3)AWAC	47200	23.9	AA(+)	4	3	2.68	2.68	8.04	23	174
4 Swanate/ AW	43000	21.8	AA,A	7	1	1.96	2.61	6.53	10	93
4 Swan/AW	42700	21.6	AA,A	6	1	2.12	2.12	6.36	8	81
2 (2/5) AWAC	51000	25.8	AA(+)	2	5	3.63	3.63	10.89	60	402
3 (3/4) AWAC	44100	22.3	AA(+)	3	4	2.91	2.91	8.73	34	232
4 (5/2) AWAC	39500	20	AA(+)	5	2	2.21	2.21	6.63	12	104
4 (4/3) AWAC	37600	19.1	AA(+)	4	3	2.38	2.38	7.14	19	138
3 (2/5) AWAC	39900	20.2	AA(+)	2	5	3.23	3.23	9.69	50	320
4 (3/4) AWAC	35100	17.8	AA(+)	3	4	2.6	2.6	7.8	27	185
4 (2/5) AWAC	32300	16.4	AA(+)	2	5	2.88	2.88	8.64	40	253

ACSR/AS or ACSR/AW – Aluminium Conductors, Aluminium Clad Steel Reinforced BS 215

Application

Aluminium Conductors, Aluminium Clad Steel Reinforced (ACSR/AS or ACSR/AW) are concentrically stranded conductors with one or more layers of hard drawn 1350-H19 aluminium wires on Aluminium Clad steel wire core. The core can be single wire or stranded depending on the size.

Primarily used as the phase conductor for overhead transmission and distribution. It is preferred over conventional ACSR because of its higher corrosion resistance, lighter weight, longer service life, and reduced power loss.

The mechanical properties of ACSR/AS conductors are similar to ACSR conductors but offers improved ampacity and resistance to corrosion because of the presence of aluminium clad steel wires in the core. These conductors are better replacement for ACSR conductors where corrosive conditions are severe.

Standard

Basic design to BS-215 standard

Construction

Aluminum 1350–H19 Wires, concentrically stranded over a central wire/core of Aluminum clad steel.



Construction Parameters

Nominal Aluminum Area	Name Code	Stranding and wire diameter		Sectional Area of Aluminum	Total Sectional Area	Appro. Overall Diameter	Appro. Mass	Calculated DC. resistance @ 20°C	Calculated Breaking load
		Aluminum	AS						
mm ²		mm	mm	mm ²	mm ²	mm	kg/km	Ω/km	kN
25	GOPHER	6/2.36	1/2.36	26.25	30.62	7.08	100.8	1.0349	9.89
30	WEASEL	6/2.59	1/2.59	31.61	36.88	7.77	121.5	0.8592	11.79
40	FERRET	6/3.00	1/3.00	42.41	49.48	9.00	163.0	0.6405	15.66
50	RABBIT	6/3.35	1/3.35	52.88	61.70	10.05	203.2	0.5136	19.06
70	HORSE	12/2.79	7/2.79	73.37	116.2	13.95	243.1	0.3286	63.95
100	DOG	6/4.72	7/1.57	105.0	118.5	14.15	300.9	0.2619	33.01
150	WOLF	30/2.59	7/2.59	158.1	194.9	18.13	471.6	0.1694	71.64
150	DINGO	18/3.35	1/3.35	158.7	167.5	16.75	495.0	0.1781	36.46
175	LYNX	30/2.79	7/2.79	183.4	226.2	19.53	547.3	0.1460	82.49
175	CARACAL	18/3.61	1/3.61	184.3	194.5	18.05	574.9	0.1534	41.52
200	PANTHER	30/3.00	7/3.00	212.1	261.5	21.00	632.8	0.1263	95.34
200	JAGUAR	18/3.86	1/3.86	210.6	222.3	19.30	657.2	0.1342	46.50
400	ZEBRA	54/3.18	7/3.18	428.9	484.5	28.62	1238	0.06456	137.76

ACSR/AS or ACSR/AW – Aluminium Conductors, Aluminium Clad Steel Reinforced IEC 61089

Application

Aluminium Conductors, Aluminium Clad Steel Reinforced (ACSR/AS or ACSR/AW) are concentrically stranded conductors with one or more layers of hard drawn 1350-H19 aluminium wires on Aluminium Clad steel wire core. The core can be single wire or stranded depending on the size.

Primarily used as the phase conductor for overhead transmission and distribution. It is preferred over conventional ACSR because of its higher corrosion resistance, lighter weight, longer service life, and reduced power loss.

The mechanical properties of ACSR/AS conductors are similar to ACSR conductors but offers improved ampacity and resistance to corrosion because of the presence of aluminium clad steel wires in the core. These conductors are better replacement for ACSR conductors where corrosive conditions are severe.

Standard

Basic design to IEC 61089 standard

Construction

Aluminum 1350–H19 Wires, concentrically stranded over a central wire/core of Aluminum clad steel.



Construction Parameters

Code Number	Ratio	Areas			Number of Wires	Wire Diameter	Diameter				Linear Mass	Rated Strength	DC Resistance @20°C
		A1	SA1A	Total			Al	SA1A	Core	Cond.			
		mm ²	mm ²	mm ²	A1	SA1A	mm	mm	mm	mm	kg/km	kN	ohm/km
16	16.7	15	2.56	17.6	6	1	1.81	1.81	1.81	5.43	59	5.91	1.7923
25	16.7	24	4	28	6	1	2.26	2.26	2.26	6.78	92.1	9	1.1471
40	16.7	38	6.4	44.4	6	1	2.85	2.85	2.85	8.55	147.4	14.21	0.7169
63	16.7	60	10.1	70.1	6	1	3.58	3.58	3.58	10.7	232.2	21.17	0.4552
100	16.7	96	16	112	6	1	4.51	4.51	4.51	13.5	368.6	31.84	0.2868
125	5.6	123	6.85	130	18	1	2.95	2.95	2.95	14.8	384.3	29.18	0.2304
125	16.3	120	19.6	140	26	7	2.43	1.89	5.66	15.4	460.8	44.49	0.2308
160	5.6	158	8.77	167	18	1	3.34	3.34	3.34	16.7	492	36.38	0.18
160	16.3	154	25	179	26	7	2.74	2.13	6.4	17.4	589.8	56.18	0.1803
200	5.6	197	11	208	18	1	3.74	3.74	3.74	18.7	614.9	43.62	0.144

200	16.3	192	31.3	223	26	7	3.07	2.39	7.16	19.4	737.2	69.27	0.1443
250	9.8	244	24	268	22	7	3.76	2.09	6.26	21.3	830.9	67.8	0.1153
250	16.3	240	39.1	279	26	7	3.43	2.67	8	21.7	921.5	86.58	0.1154
315	6.9	310	21.4	331	45	7	2.96	1.97	5.92	23.7	996.4	78.33	0.0917
315	16.3	303	49.3	352	26	7	3.85	2.99	8.98	24.4	1161.1	107.6	0.0916
400	6.9	393	27.2	420	45	7	3.34	2.22	6.67	26.7	1265.2	97.5	0.0722
400	13	387	50.2	437	54	7	3.02	3.02	9.07	27.2	1402.9	124.2	0.0723
450	6.9	442	30.6	473	45	7	3.54	2.36	7.08	28.3	1423.4	107.5	0.0642
450	13	436	56.5	492	54	7	3.21	3.21	9.62	28.9	1578.2	139.7	0.0642
500	6.9	492	34	526	45	7	3.73	2.49	7.46	29.8	1581.6	119.4	0.0578
500	13	484	62.8	547	54	7	3.38	3.38	10.14	30.4	1753.6	154	0.0578
560	6.9	550	38.1	588	45	7	3.95	2.63	7.89	31.6	1771.3	133.8	0.0516
560	12.7	543	68.8	612	54	19	3.58	2.15	10.73	32.2	1956.3	169.4	0.0516
630	6.9	619	42.8	662	45	7	4.19	2.79	8.37	33.5	1992.8	150.5	0.0458
630	12.7	611	77.4	688	54	19	3.79	2.28	11.38	34.1	2200.9	190.5	0.0459
710	6.9	698	48.3	746	45	7	4.44	2.96	8.89	35.5	2245.8	169.6	0.0407
710	12.7	688	87.2	775	54	19	4.03	2.42	12.08	36.3	2480.3	214.7	0.0407
800	4.3	791	34.2	825	72	7	3.74	2.49	7.48	37.4	2412.8	167.7	0.0361
800	8.3	784	65.3	849	84	7	3.45	3.45	10.34	37.9	2598.9	206.4	0.0362
800	12.7	775	98.2	873	54	19	4.28	2.57	12.83	38.5	2794.8	241.9	0.0361
900	4.3	890	38.5	929	72	7	3.97	2.65	7.94	39.7	2714.4	188.6	0.0321
900	8.3	882	73.5	956	84	7	3.66	3.66	10.97	40.3	2923.8	221.9	0.0321
1000	4.3	989	42.7	1032	72	7	4.18	2.79	8.37	41.8	3016	209.6	0.0289
1120	4.2	1108	46.8	1155	72	19	4.43	1.77	8.85	44.3	3372.6	233.5	0.0258
1120	8.1	1098	89.4	1187	84	19	4.08	2.45	12.24	44.9	3628.3	282.9	0.0258
1250	4.2	1237	52.2	1289	72	19	4.68	1.87	9.35	46.8	3764.1	260.6	0.0231
1250	8.1	1225	99.8	1325	84	19	4.31	2.59	12.93	47.4	4049.5	315.7	0.0231

ACSR/TW – Trapezoidal Shaped Aluminum Strands, Aluminum Conductor Steel Reinforced ASTM B779

Application

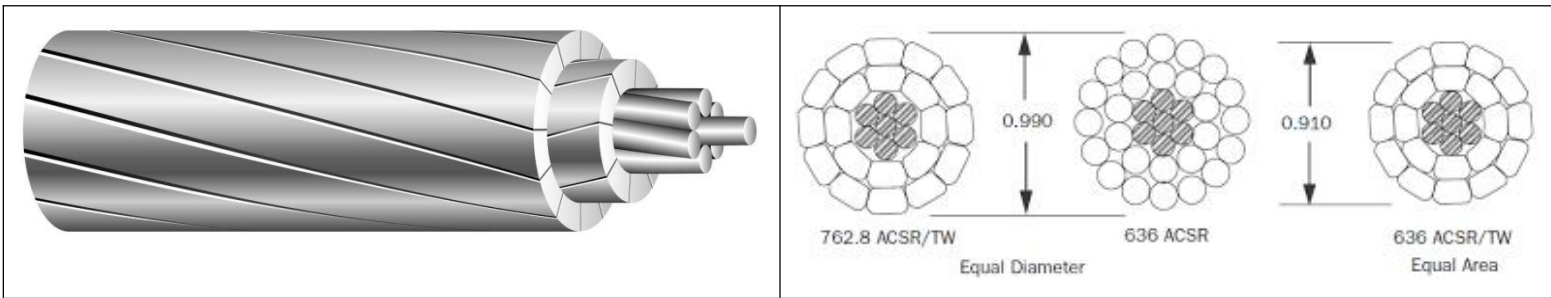
Shaped Wire Compact Concentric-Lay-Stranded Aluminum Conductor, Steel-Reinforced(ACSR/TW) is designed for use as a bare overhead conductor. There are two designs of ACSR/TW. One design gives an equal area of aluminum when compared to the standard ACSR conductor sizes. The other design gives an overall outside diameter equal to standard ACSR conductor sizes. Use of this conductor in the equal area design allows equal ampacity in a smaller diameter

conductor when compared with standard ACSR conductor. Use of this conductor in the equal diameter design allows more ampacity in an equal diameter conductor when compared with standard ACSR conductor

Standard

Basic design to ASTM B779 standard

Construction



Aluminum 1350-H19 trapezoidal-shaped wires, concentrically stranded about a steel core. Standard core wire coating for ACSR is Class A galvanized (GA2).

Also available in zinc-5% aluminum-mischmetal alloy coating or aluminum-clad (AW)

Additional corrosion protection is available through the **application** of grease to the core or complete conductor.

Also available in non-specular

Construction Parameters

ACSR/TW Area Equal to Standard ACSR Sizes

Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Reinforced (ACSR/TW) Area Equal to Standard ACSR Sizes												
Code Word	Size (kcmil)	Type No.	Cross Sectional Area (in ²)		Stranding			Diameter (in)		Weight (lb/1000 ft)		
			Alum.	Total	No of Layers of Alum.	No. of Alum. Wires	No. & No. & Diameter Individual Steel Wire Diameter	Steel Core	Complete Conductor	Alum.	Steel	Total
Partridge/TW	266.8	16	0.2094	0.2435	2	14	7 x 0.0788	0.2364	0.595	250	116	366
Linnet/TW	336.4	16	0.2642	0.3073	2	16	7 x 0.0885	0.2655	0.667	316	146	462
Oriole/TW	336.4	23	0.2642	0.3259	2	16	7 x 0.1059	0.3177	0.693	317	209	526
Merlin/TW	336.4	6	0.2642	0.2788	2	14	1 x 0.1367	0.1367	0.63	315	50	365
Flicker/TW	477	13	0.3747	0.4233	2	18	7 x 0.0940	0.282	0.776	448	165	613
Hawk/TW	477	16	0.3746	0.4356	2	18	7 x 0.1053	0.3159	0.789	449	206	655
Hen/TW	477	23	0.3745	0.4619	2	20	7 x 0.1261	0.3783	0.82	450	296	746
Parakeet/TW	556.5	13	0.4371	0.4937	2	18	7 x 0.1015	0.3045	0.835	523	192	715
Dove/TW	556.5	16	0.4371	0.508	2	20	7 x 0.1138	0.3414	0.852	524	241	765

				3								
Swift/TW	636	3	0.4995	0.513 3	3	27	1 x 0.1329	0.1329	0.85	599	47	646
Rook/TW	636	13	0.4995	0.564 3	2	20	7 x 0.1085	0.3255	0.89	597	219	816
Scoter/TW	636	23	0.4994	0.615 9	2	22	7 x 0.1456	0.4368	0.942	600	395	995
Grosbeak/T W	636	16	0.4995	0.580 8	2	20	7 x 0.1216	0.3648	0.908	599	275	873
Tern/TW	795	7	0.6244	0.667 5	2	17	7 x 0.0886	0.2658	0.96	746	146	892
Puffin/TW	795	10	0.6244	0.691 9	2	18	7 x 0.1108	0.3324	0.98	747	228	975
Condor/TW	795	13	0.6244	0.705 3	2	20	7 x 0.1213	0.3639	0.993	747	274	102 1
Drake/TW	795	16	0.6244	0.726 1	2	20	7 x 0.1360	0.408	1.01	748	344	109 2
Phoenix/TW	954	5	0.7493	0.787 6	3	30	7 x 0.0837	0.2511	1.044	898	131	102 9
Rail/TW	954	7	0.7493	0.801 1	3	32	7 x 0.0971	0.2913	1.061	900	175	107 5
Cardinal/TW	954	13	0.7493	0.846 4	2	20	7 x 0.1329	0.3987	1.084	897	329	122 6
Snowbird/T W	1033.5	5	0.8117	0.853 4	3	30	7 x 0.0871	0.2613	1.089	974	141	111 5
Ortolan/TW	1033.5	7	0.8117	0.867 8	3	32	7 x 0.1010	0.303	1.102	975	190	116 5
Curlew/TW	1033.5	13	0.8117	0.916 9	2	22	7 x 0.1383	0.4149	1.129	971	356	132 7
Avocet/TW	1113	5	0.8742	0.919 1	3	30	7 x 0.0904	0.2712	1.129	1049	152	120 1
Bluejay/TW	1113	7	0.8742	0.934 7	3	33	7 x 0.1049	0.3147	1.143	1049	205	125 4
Finch/TW	1113	13	0.8742	0.985 1	3	38	19 x 0.0862	0.431	1.185	1053	376	142 9
Oxbird/TW	1192.5	5	0.9366	0.984 8	3	30	7 x 0.0936	0.2808	1.167	1123	163	128 6
Bunting/TW	1192.5	7	0.9366	1.001 3	3	34	7 x 0.1085	0.3255	1.181	1124	219	134 3
Grackel/TW	1192.5	13	0.9366	1.055 4	3	38	19 x 0.0892	0.446	1.225	1127	403	153 0
Scissortail/T W	1272	5	0.9991	1.050 5	3	30	7 x 0.0967	0.2901	1.203	1198	174	137 2
Bittern/TW	1272	7	0.999	1.068	3	38	7 x 0.1121	0.3363	1.22	1198	235	143

				1								3
Pheasant/TW	1272	13	0.999	1.125 6	3	39	19 x 0.0921	0.4605	1.264	1202	430	163 2
Dipper/TW	1351.5	7	1.0615	1.134 8	3	35	7 x 0.1155	0.3465	1.256	1274	248	152 2
Martin/TW	1351.5	13	1.0615	1.195 9	3	42	19 x 0.0949	0.4745	1.3	1278	456	173 4
Bobolink/TW	1431	7	1.1236	1.201 7	3	36	7 x 0.1189	0.3567	1.291	1350	263	161 3
Plover/TW	1431	13	1.1239	1.266 4	3	39	19 x 0.0977	0.4885	1.337	1353	483	183 6
Lapwing/TW	1590	7	1.2488	1.335 1	3	36	7 x 0.1253	0.3759	1.358	1500	292	179 2
Falcon/TW	1590	13	1.2488	1.407 1	3	42	19 x 0.1030	0.515	1.408	1503	537	204 0
Chukar/TW	1780	8	1.3986	1.512	3	38	19 x 0.0874	0.437	1.445	1676	387	206 3
Bluebird/TW	2156	8	1.0934	1.831 2	4	64	19 x 0.0961	0.4805	1.608	2047	468	251 5

ACSR/TW Diameters Equal to Standard ACSR Sizes

Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Reinforced (ACSR/TW) Diameters Equal to Standard ACSR Sizes												
Code Word	Size (kcmil)	Type No.	Cross Sectional Area (in ²)		Stranding			Diameter (in)		Weight (lb/1000 ft)		
			Alum.	Total	No of Layers of Alum.	No. of Alum. Wires	No. & No. & Diameter Individual Steel Wire Diameter	Steel Core	Complete Conductor	Alum.	Steel	Total
Monongahela/TW	405.1	6	0.3181	0.3362	2	14	1 x 0.1520	0.152	0.68	380	61	441
Mohawk/TW	571.7	13	0.449	0.5074	2	18	7 x 0.1030	0.309	0.846	537	198	735
Calumet/TW	565.3	16	0.4439	0.5165	2	20	7 x 0.1147	0.3441	0.858	531	245	776
Mystic/TW	666.6	13	0.5236	0.5914	2	20	7 x 0.1111	0.3333	0.913	626	230	856
Oswego/TW	664.8	16	0.5221	0.6072	2	20	7 x 0.1244	0.3732	0.927	625	288	913

Nechako/TW	768.9	3	0.6039	0.622	3	27	1 ^x 0.1520	0.152	0.93	724	61	785
Maumee/TW	768.2	13	0.6034	0.6819	2	20	7 ^x 0.1195	0.3585	0.977	722	266	988
Wabash/TW	762.8	16	0.5992	0.6966	2	20	7 ^x 0.1331	0.3993	0.99	717	330	1047
Kettle/TW	957.2	7	0.7518	0.8038	3	32	7 ^x 0.0973	0.2919	1.06	903	176	1079
Fraser/TW	946.7	10	0.7436	0.8168	3	35	7 ^x 0.1154	0.3462	1.077	894	248	1142
Columbia/TW	966.2	13	0.7589	0.8573	2	21	7 ^x 0.1338	0.4014	1.092	908	333	1241
Suwannee/TW	959.6	16	0.7537	0.8762	2	22	7 ^x 0.1493	0.4479	1.108	903	415	1318
Cheyenne/TW	1168.1	5	0.9175	0.9646	3	30	7 ^x 0.0926	0.2778	1.155	1100	160	1260
Genesee/TW	1158	7	0.9095	0.9733	3	34	7 ^x 0.1078	0.3234	1.165	1092	216	1308
Hudson/TW	1158.4	13	0.9098	1.0281	2	24	7 ^x 0.1467	0.4401	1.196	1089	400	1489
Catawba/TW	1272	5	0.9991	1.0505	3	30	7 ^x 0.0967	0.2901	1.203	1198	174	1372
Nelson/TW	1257.1	7	0.9874	1.0557	3	35	7 ^x 0.1115	0.3345	1.213	1186	231	1417
Yukon/TW	1233.6	13	0.9689	1.0925	3	38	19 ^x 0.0910	0.455	1.245	1167	419	1586
Truckee/TW	1372.5	5	1.078	1.1334	3	30	7 ^x 0.1004	0.3012	1.248	1293	188	1481
Mackenzie/TW	1359.7	7	1.0679	1.1418	3	36	7 ^x 0.1159	0.3477	1.259	1280	250	1530
Thames/TW	1334.6	13	1.348	1.1809	3	38	19 ^x 0.0944	0.472	1.29	1262	451	1713
St. Croix/TW	1467.8	5	1.1529	1.2124	3	33	7 ^x 0.1041	0.3123	1.292	1383	202	1585
Miramichi/TW	1455.3	7	1.143	1.2222	3	36	7 ^x 0.1200	0.36	1.302	1372	268	1640
Merrimack/TW	1433.6	13	1.125	1.2677	3	39	19 ^x 0.0978	0.489	1.34	1356	484	1840
Platte/TW	1569	5	1.2323	1.2957	3	33	7 ^x 0.1074	0.3222	1.334	1478	215	1693
Potomac/TW	1557.4	7	1.2232	1.3079	3	36	7 ^x 0.1241	0.3723	1.345	1468	287	1755
Rio Grande/TW	1533.3	13	1.2043	1.3571	3	38	19 ^x 0.1012	0.506	1.382	1449	519	1968

Schuylkill/TW	1657.4	7	1.302	1.392	3	36	7 ^x 0.1280	0.384	1.386	1563	305	1868
Pecos/TW	1622	13	1.2739	1.4429	3	39	19 ^x 0.1064	0.532	1.424	1533	574	2107
Pee Dee/TW	1758.6	7	1.381	1.477	3	38	7 ^x 0.1319	0.3957	1.427	1658	324	1982
James/TW	1730.6	13	1.359	1.5314	3	34	19 ^x 0.1075	0.5375	1.47	1636	585	2221
Athabaska/TW	1949.6	7	1.5312	1.6377	3	44	7 ^x 0.1392	0.4176	1.504	1838	361	2199
Cumberland/TW	1926.9	13	1.5134	1.7049	3	42	19 ^x 0.1133	0.5665	1.545	1821	650	2471
Powder/TW	2153.8	8	1.6912	1.829	4	64	19 ^x 0.0961	0.4805	1.602	2030	468	2498
Santee/TW	2627.3	8	2.063	2.2268	4	64	19 ^x 0.1062	0.531	1.762	2477	571	3048