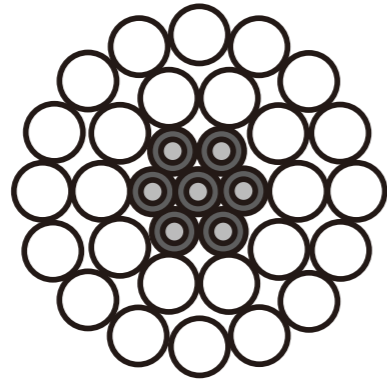


# Aluminium Alloy Conductors, Aluminium-clad Steel Reinforced (AACSR/AC-1120)



## Properties:

Aluminium conductors manufactured to AS 3607

The centre wire or wires are of aluminium-clad steel and the outer layer or layers are of aluminium alloy 1120

## Structural Parameters:

Structure		Overall diameter	Calculated area			Approx. mass of conductor	Rated strength, Min	DC resistance at 20°C	AC resistance at 50Hz, 75°C	Calculated elasticity modulus	Coefficient of linear expansion
Alloy	ACS		Alloy	ACS	Total						
No./mm	No./mm	mm	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	kg/km	kN	Ω/km	Ω/km	GPa	1/°C
6/3.00	1/3.00	9.0	42.41	7.07	49.48	163	18.4	0.662	0.8040	79	20.1E-06
6/3.75	1/3.75	11.3	66.27	11.04	77.31	254	27.6	0.424	0.5150	79	20.1E-06
6/4.75	7/1.60	14.3	106.32	14.07	120.4	385	40.0	0.267	0.3245	76	20.6E-06
18/3.50	1/3.50	17.5	173.18	9.62	182.8	540	51.5	0.169	0.2056	69	21.8E-06
30/2.50	7/2.50	17.5	147.26	34.36	181.6	636	75.2	0.188	0.2285	82	19.4E-06
30/3.00	7/3.00	21.0	212.06	49.48	261.5	913	108	0.130	0.1581	82	19.4E-06
30/3.25	7/3.25	22.8	248.87	58.07	306.9	1070	127	0.111	0.1351	82	19.4E-06
30/3.50	7/3.50	24.5	288.63	67.35	356	1240	143	0.0961	0.1170	82	19.4E-06
54/3.00	7/3.00	27.0	381.70	49.48	431.2	1380	150	0.0750	0.0916	75	20.6E-06
54/3.25	7/3.25	29.3	447.97	58.07	506.0	1620	176	0.0639	0.0782	75	20.6E-06
54/3.50	7/3.50	31.5	519.54	67.35	586.9	1880	197	0.0552	0.0678	75	20.6E-06

## Current Ratings:

Structure		*Current carrying capacity, A							
Alloy	ACS	35°C ambient temperature				40°C ambient temperature			
		50°C operation temperature	60°C operation temperature	70°C operation temperature	75°C operation temperature	50°C operation temperature	60°C operation temperature	70°C operation temperature	75°C operation temperature
6/3.00	1/3.00	130	176	209	223	96	153	191	206
6/3.75	1/3.75	171	233	278	298	124	202	254	275
6/4.75	7/1.60	226	311	372	398	161	269	339	368
18/3.50	1/3.50	296	411	494	529	206	354	450	488
30/2.50	7/2.50	280	390	469	501	196	336	426	463
30/3.00	7/3.00	349	491	592	634	238	422	538	585
30/3.25	7/3.25	384	542	655	702	259	465	595	647
30/3.50	7/3.50	418	593	718	770	279	508	652	709
54/3.00	7/3.00	481	687	833	894	316	587	756	823
54/3.25	7/3.25	528	758	922	990	342	647	836	911
54/3.50	7/3.50	574	830	1010	1085	367	707	915	999

\*Note: Current carrying capacity is based to the following conditions

- Frequency: 50Hz
- Solar absorption coefficient: 0.5
- Emissivity: 0.5
- Wind speed: 1.0m/s
- Solar radiation: 1000W/m<sup>2</sup>
- Current carrying capacity values calculated as per IEC 61597