



## AACSR ( Aluminum Alloy Conductor Steel Reinforced)

ASTM CONDUCTOR SIZES										
Conductor Area mm <sup>2</sup>	Alloy Area mm <sup>2</sup>	Steel Area mm <sup>2</sup>	No. of Alloy Wires	Dia of Alloy Wire mm	No. of Steel Wires	Dia of Steel Wire mm	Dia of Conductor mm	Linear Weight Kg/km	Rated Strength * daN	Maximum DC Resistance at 20 °C ?/km
163	140	23	26	2.62	7	2.04	16.6	560	7500	0.240
173	140	33	30	2.44	7	2.44	17.1	650	8740	0.240
186	160	26	26	2.80	7	2.18	17.7	645	8560	0.210
198	160	38	30	2.61	7	2.61	18.3	740	10600	0.210
209	180	29	26	2.97	7	2.31	18.8	725	9510	0.187
222	180	42	30	2.76	7	2.76	19.3	825	11200	0.187
232	200	32	26	3.13	7	2.43	19.8	800	10600	0.168
247	200	47	30	2.91	7	2.91	20.4	920	12400	0.168
260	224	36	26	3.31	7	2.57	21.0	900	11800	0.150
276	224	52	30	3.08	7	3.08	21.6	1025	13900	0.150
291	250	41	26	3.50	7	2.72	22.2	1010	12900	0.135
308	250	58	30	3.26	7	3.26	22.8	1145	15600	0.135
326	280	46	26	3.70	7	2.88	23.4	1140	14400	0.120
345	280	65	30	3.45	7	3.45	24.2	1280	17100	0.120
367	315	52	26	3.93	7	3.06	24.9	1276	16300	0.107
387	315	72	30	3.66	19	2.20	25.6	1433	19000	0.107
413	355	58	26	4.17	7	3.24	26.4	1433	18300	0.0950
436	355	81	30	3.88	19	2.33	27.2	1614	21100	0.0950
465	400	65	26	4.43	7	3.45	28.1	1612	20700	0.0842
491	400	91	30	4.12	19	2.47	28.8	1816	23700	0.0842
509	450	59	54	3.26	19	1.96	29.5	1703	21500	0.0748
563	500	63	54	3.43	19	2.06	30.9	1873	22900	0.0673
631	560	71	54	3.63	19	2.18	32.7	2101	25700	0.0601
710	630	80	54	3.85	19	2.31	34.6	2365	28600	0.0534
800	710	90	54	4.09	19	2.45	36.8	2665	32200	0.0474
901	800	101	54	4.34	19	2.60	39.0	3000	36300	0.0420
973	900	73	84	3.69	19	2.21	40.6	3062	35500	0.0374
1081	1000	81	84	3.89	19	2.33	42.8	3395	39100	0.0337
1211	1120	91	84	4.12	19	2.47	45.3	3803	43900	0.0300
1352	1250	102	84	4.35	19	2.61	47.8	4250	49000	0.0270

\* For zinc coating Class A



<b>GERMAN CONDUCTOR SIZES</b>											
Conductor Size Mm <sup>2</sup>	Alloy Area Mm <sup>2</sup>	Steel Area Mm <sup>2</sup>	No. of Alloy Wires	Diameter		Diameter		Overall Diameter of Conductor mm	Linear Weight Kg/km	Rated Strength * daN	Max DO Resistance at 20 °C ? /km
				of Alloy Wire mm	No. of Steel Wires	of Steel Wire mm	No. of Steel Wires				
<b>16/2.5</b>	15.27	2.54	6	1.80	1	1.80	5.4	62	748	2.1800	
<b>25/4</b>	23.86	3.98	6	2.25	1	2.25	6.8	97	1171	1.3952	
<b>35/6</b>	34.35	5.73	6	2.70	4	2.70	8.1	140	1685	0.9689	
<b>44/32</b>	43.98	31.67	14	2.00	7	2.40	11.2	373	5027	0.7625	
<b>50/8</b>	48.25	8.04	6	3.20	1	3.20	9.6	196	2366	0.6898	
<b>50/30</b>	51.17	29.85	12	2.33	7	2.33	11.7	378	5024	0.6547	
<b>70/12</b>	69.89	11.40	26	1.85	7	1.44	11.7	284	3399	0.4791	
<b>95/15</b>	94.39	15.33	26	2.15	7	1.67	13.6	383	4582	0.3547	
<b>95/55</b>	96.51	56.30	12	3.20	7	3.20	16.0	714	9475	0.3471	
<b>105/75</b>	105.67	75.55	14	3.10	19	2.25	17.5	899	12014	0.3174	
<b>120/20</b>	121.57	19.85	26	2.44	7	1.90	15.5	494	5914	0.2754	
<b>120/170</b>	122.15	71.25	12	3.60	7	3.60	18.0	904	11912	0.2742	
<b>125/30</b>	127.92	29.85	30	2.33	7	2.33	16.3	590	7280	0.2621	
<b>150/25</b>	148.86	24.25	26	2.70	7	2.10	17.1	604	7236	0.2249	
<b>170/40</b>	171.77	40.08	30	2.70	7	2.70	18.9	794	9775	0.1952	
<b>185/30</b>	183.78	29.85	26	3.00	7	2.33	19.0	744	8922	0.1822	
<b>210/35</b>	209.10	34.09	26	3.20	7	2.49	20.3	848	10167	0.1601	
<b>210/50</b>	212.06	49.48	30	3.00	7	3.00	21.0	979	12068	0.1581	
<b>230/30</b>	230.91	29.85	24	3.50	7	2.33	21.0	874	10308	0.1449	
<b>240/40</b>	243.05	39.49	26	3.45	7	2.68	21.8	985	11802	0.1378	
<b>265/35</b>	263.66	34.09	24	3.74	7	2.49	22.4	998	11771	0.1269	
<b>300/50</b>	304.26	49.48	26	3.86	7	3.00	24.5	1233	14779	0.1101	
<b>305/40</b>	304.62	39.49	54	2.68	7	2.68	24.1	1155	13612	0.1101	
<b>340/30</b>	339.29	29.85	48	3.00	7	2.33	25.0	1174	13494	0.0988	
<b>380/50</b>	381.70	49.48	54	3.00	7	3.00	27.0	1448	17056	0.0879	
<b>385/35</b>	386.04	34.09	48	3.20	7	2.49	26.7	1336	15369	0.0868	
<b>435/55</b>	434.29	56.30	54	3.20	7	3.20	28.8	1647	19406	0.0772	
<b>450/40</b>	448.71	39.49	48	3.45	7	2.68	28.7	1553	17848	0.0747	
<b>490/65</b>	490.28	63.55	54	3.40	7	3.40	30.6	1860	21907	0.0684	
<b>550/70</b>	549.65	71.25	54	3.60	7	3.60	32.4	2085	24560	0.0610	
<b>560/50</b>	561.70	49.48	48	3.86	7	3.00	32.2	1943	22348	0.0597	
<b>680/85</b>	678.58	85.95	54	4.00	19	2.40	36.0	2564	30084	0.0494	

\* For stahl 111 (DIN 48200)



FRENCH CONDUCTOR SIZES														
Equal steel and Aluminum wire diameter														
Code Name	Al Alloy Area mm <sup>2</sup>	Steel Wire Area mm <sup>2</sup>	No. Of Al Alloy Wires	No. Of St Wires	Dia of Wire mm	Overall Dia of Conductor mm	Tens Str of Al Alloy hbar	Tens Str of Steel hbar	Rated Str of Conductor daN	Max DC Resist at 20 °C ? /km	Linear Weight Kg/km	Elasticity Mod * hbar	Coefficient Of Linear Expansion * / °C	
PHLOX	37.7	28.27	9	3	2.00	8.3	32.4	156.8	2360	1.17	155	9300	17.0 x 10-1	
PHLOX	59.7	37.70	12	7	2.00	10.0	32.4	156.8	4560	0.880	276	10800	15.3 x 106	
PHLOX	75.5	47.71	12	7	2.25	11.25	32.4	156.8	5770	0.695	348	10800	15.3 X 10-6	
PHLOX	116.2	56.55	18	19	2.00	14.0	32.4	156.8	10815	0.580	636	12400	14.2 x 10-6	
PHLOX	147.1	71.57	18	19	2.25	15.75	32.4	156.8	13685	0.466	802	12400	14.2 X 10-6	
PASTEL	147.1	119.28	30	7	2.25	15.75	32.4	156.8	8185	0.279	547	8400	18.1 x 10-6	
PHLOX	181.6	88.36	18	19	2.50	17.5	32.4	156.8	16895	0.378	990	12400	14.2 x 10 6	
PASTEL	181.6	147.26	30	7	2.50	17.5	32.4	156.8	10120	0.227	675	8400	18.1 x 10-1	
PHLOX	228	110.83	18	19	2.80	19.6	32.4	156.8	21200	0.300	1244	12400	14.2 x 10-1	
PASTEL	228	184.72	30	7	2.80	19.6	32.4	156.8	12680	0.180	848	8400	18.1 x 101	
PHLOX	288	140.28	18	19	3.15	22.05	32.4	156.8	26800	0.237	1570	12400	14.2 x 101	
PASTEL	288	233.80	30	7	3.15	22.05	32.4	156.8	16050	0.142	1074	8400	18.0 x 101	
PASTEL	299	205.17	42	19	2.50	22.5	32.4	156.8	20875	0.162	1320	9650	16.3 x 10-1	
PHLOX	376	147.78	24	37	2.80	25.2	32.4	156.8	38960	0.225	2211	13000	13.5 x 10-1	

FRENCH CONDUCTOR SIZES														
Non-equal steel and aluminum wire diameter														
Code Name	Al Alloy Area mm <sup>2</sup>	Steel Area mm <sup>2</sup>	No. & Dia Of Al Alloy Wires	No. & Dia of Steel Wires	Overall Dia of Conductor mm	Tens Str of Al Alloy hbar	Tens Str of Steel hbar	Rated Str of Conductor daN	Max DC Resist at 20 °C ? /km	Linear Weight Kg/km	Elast Mod * hbar	Coefficient Of Linear Expansion * / °C		
PHLOX	94.1	51.95	15 x 2.10	19 x 1.68	12.8	32.4	156.8	8035	0.642	481	11200	14.7 x 10 1		
PASTEL	412	325.72	32 x 3.60	19 x 2.40	26.4	32.4	156.8	23830	0.103	1593	8200	17.8 x 10-1		
PETUNIA	612	507.80	66 x 3.13	19 x 2.65	32.1	32.4	156.8	32830	0.0657	2241	7750	18.6 x 101		
PETUNIA	865	717.33	66 x 3.72 5	19 x 3.1	38.1	32.4	156.8	46000	0.0465	3174	7750	18.5 x 101		
POLYGONUM	1185	956.66	54 x 2.80 66 x 3.47	37 x 2.80	44.7	32.4	156.8	66385	0.0349	4475	7750	18.1 x 101		

\* These values are given for information only



IEC Sizes IEC 61089 STANDARD

New Code	Stranding & Wire Diameter		Overall Diameter	Sectional Area			Approximate Weight	Breaking Load	DC Resistance
	Aluminium	Steel		Aluminium	Steel	Total			
	mm	mm		mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>			
16	6/1.98	1/1.98	5.93	18.4	3.07	21.5	74.4	9.02	1.7934
25	6/2.47	1/2.47	7.41	28.8	4.80	33.6	116.2	13.96	1.1478
40	6/3.13	1/3.13	9.38	46.0	7.67	53.7	185.9	22.02	0.7174
63	6/3.92	1/3.92	11.80	72.5	12.10	84.6	292.8	34.68	0.4555
100	18/2.85	1/2.85	14.30	115.0	6.39	121.0	266.4	41.24	0.2880
125	18/3.19	1/6.19	16.00	144.0	7.99	152.0	458.0	51.23	0.2304
125	26/2.65	7/2.06	16.80	144.0	23.40	167.0	579.9	69.86	0.2310
160	18/3.61	1/3.61	18.00	184.0	10.20	294.0	586.2	65.58	0.1800
160	26/3.00	7/2.34	19.00	184.0	30.00	214.0	742.3	88.52	11.805
200	18/4.04	1/4.04	20.20	230.0	12.80	243.0	732.8	81.97	0.1440
200	26/3.36	7/2.61	21.30	230.0	37.50	268.0	927.9	110.64	0.1444
250	22/4.08	7/2.27	23.10	288.0	28.30	316.0	1.013.5	117.09	0.1154
250	26/3.75	7/2.92	23.80	288.0	46.90	335.0	1.159.8	138.31	0.1155
315	45/3.20	7/2.14	25.60	363.0	25.10	388.0	1.196.5	136.28	0.0917
315	26/4.21	7/3.28	26.70	363.0	59.00	422.0	1.461.4	171.90	0.0917
400	45/3.61	7/2.41	28.90	460.0	31.80	492.0	1.519.4	172.10	0.0722
400	54/3.29	7/3.29	29.70	460.6	59.70	520.0	1738.3	201.46	0.0723
450	45/3.83	7/2.55	30.60	518.0	35.80	554.0	1.709.3	193.61	0.0642
450	54/3.49	7/3.49	31.50	518.0	67.10	585.0	1.955.6	226.64	0.0643
500	45/4.04	7/2.69	32.30	575.0	39.80	615.0	1.899.3	215.12	0.0578
500	54/3.68	7/3.68	33.20	575.0	74.60	650.0	2.172.9	251.82	0.0578
560	45/4.27	7/2.85	34.20	645.0	44.60	690.0	2.127.2	240.93	0.0516
560	54/3.90	19/2.34	35.10	645.0	81.60	727.0	2.420.9	283.21	0.0516
630	72/3.58	7/2.39	35.80	725.0	31.30	756.0	2.248.0	249.62	0.0459
630	54/4.13	19/2.48	47.20	725.0	91.80	817.0	2.723.5	318.61	0.0459
710	72/3.80	7/2.53	38.00	817.0	35.30	852.0	2.533.4	281.32	0.0407
710	54/4.39	19/2.63	39.50	817.0	104.00	921.0	3.069.4	359.06	0.0407
800	72/4.04	7/2.69	40.40	921.0	39.80	961.0	2.854.6	316.98	0.0361
800	84/3.74	7/3.74	41.10	921.0	76.70	998.0	3.145.1	356.03	0.0361
900	72/4.28	7/2.85	42.80	1.036.0	44.80	1.081.0	3.211.4	356.60	0.0321
900	84/3.96	7/3.96	43.60	1.036.0	86.30	1.122.0	3.538.3	400.53	0.0322
1.000	84/4.28	19/2.51	45.90	1.151.0	93.70	1.245.0	3.916.8	446.37	0.0289
1.120	84/4.42	19/2.65	48.60	1.289.0	105.00	1.394.0	4.386.8	449.93	0.0258