Copper & Aluminum Conductor

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Construction

Conductor: Class 2 annealed stranded copper conductor or aluminum Conductor according to IEC 60228 or BS EN 50182

Technical data

Conductor resistance: Acc to IEC 60228

Design Standards

DIN 48201, IEC 60228
BS EN 50182
IEC 61089

APPLICATION

Used as earth connection, for flexible lines and connection, in distribution networks for connecting of metal parts, and for overhead electric lines.

AAC conductor is also known as aluminum stranded conductor. It is manufactured from electrolytically refined aluminum, with a minimum purity of 99.7%.

Copper Conductor

Code No.	Dimensions – number of cores x conductor cross-section	Calculated cross-sections	Construction	External diameter	Permitted stress	Conductor resistance at 20 °C	Rope weight
			nominal	approx.	max.	max.	nominal
	mm²	mm²	n x mm	mm	kN	Ω/km	kg/km
0010	10	10,02	7x1,35	4,1	4,02	1,8072	90
0016	16	15,89	7x1,70	5,1	6,37	1,1385	142
0025	25	24,25	7x2,10	6,3	09,72	0,7460	217
0035	35	34,36	7x2,50	7,5	13,77	0,5265	308
00501	50	49,48	7x3,00	9,0	19,84	0,3656	443
00502	50	48,35	19x1,80	9,0	19,38	0,3759	433
0070	70	65,81	19x2,10	10,5	26,38	0,2762	590
00951	95	93,27	19x2,50	12,5	37,39	0,1949	836
00952	95	93,11	37x1,79	12,5	37,39	0,1949	834
001201	120	116,99	19x2,80	14,0	46,90	0,1554	1048
001202	120	117,40	37x2,01	14,1	46,90	0,1554	1052
00150	150	147,11	37x2,25	15,8	58,98	0,1238	1318
00185	185	181,52	37x2,50	17,5	72,81	0,1003	1627
00240	240	242,54	61x2,25	20,3	97,23	0,0753	2173
00300	300	299,43	61x2,50	22,5	120,04	0,0610	2683
00400	400	400,14	61x2,89	26,0	160,42	0,0456	3585
00500	500	499,83	61x3,23	29,1	200,38	0,0365	4479

AAC *(Stranded All Aluminum Conductor)*

BS EN 50182

Code No	Code	Nominal Area		Stranding	Overall Diameter	Weight	Rated Strength	Electrical Resistance	Current Rating*
		Nominal	Theoretical						
		mm^2	mm^2	No.×mm	mm	kg/km	KN	Ω/Km	A
025	Gnat	25	26.9	7/2.21	6.63	73	4.83	1.0643	115
035	Mosquito	35	36.9	7/2.59	7.77	101	6.27	0.7749	140
040	Ladybird	40	42.8	7/2.79	8.37	117	7.28	0.6678	154
070	Bluebottle	70	73.6	7/3.66	10.98	201	11.78	0.388	215
075	Earwig	75	78.6	7/3.78	11.34	215	12.57	0.3638	223
080	Grasshopper	80	84.1	7/3.91	11.73	230	13.45	0.34	233
090	Clegg	90	95.6	7/4.17	12.51	261	15.3	0.2989	252
0100	Beetle	100	106.4	19/2.67	13.35	292	18.08	0.2701	269
0120	Bee	120	132	7/4.90	14.7	361	21.12	0.2165	307
0180	Caterpillar	180	185.9	19/3.53	17.65	511	29.75	0.1546	379
0220	Spider	220	237.6	19/3.99	19.95	653	38.01	0.121	440
0350	Moth	350	373.1	19/5.00	25	1025	59.69	0.077	579
03501	Drone	350	372.4	37/3.58	25.06	1027	59.59	0.0774	577
0450	Maybug	450	486.1	37/4.09	28.63	1341	77.78	0.0593	677
0500	Scorpion	500	529.8	37/4.27	29.89	1461	84.77	0.0544	713
0600	Cicada	600	628.3	37/4.65	32.55	1733	100.54	0.0459	788

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

Numbers of Wires	Final Modules of Elasticity		Coefficient of linear Expansion	
AL	Kg/mm^2	lb/in^2	1/Co	1/Fo
7	6000	8.5 x106	23.0 x10-6	112.8 x10-6
19	5700	8.1 x106	23.0 x10-6	112.8 x10-6
37	5700	8.1 x106	23.0 x10-6	112.8 x10-6
61	5500	7.8 x106	23.0 x10-6	112.8 x10-6
91	5500	7.8 x106	23.0 x10-6	112.8 x10-6