

ACS Conductor Wire

ACS – Aluminum Clad Steel Wire / Alumoweld DIN 48201	2
ACS – Aluminum Clad Steel Wire / Alumoweld ASTM B416	2

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Application

The aluminum clad steel wire internationally known as Alumoweld or ACS is widely used in long-span transmission line, coastal areas and island as well as other hot and humid regions, salt fog regions and heavily polluted regions where the high corrosion resistance strand is needed. It is used as the core of ACSR/AW, overhead ground conductor, extra high voltage overhead conductor, optical fiber composite overhead ground line, self-damping conductor line, bare overhead conductor, OPGW, ground wire, messenger wire, guy wire formed wire for protecting, terminating and splicing transmission and distribution lines, fence, barber wire and hardware, etc.

Standard

Basic design to DIN 48201 standard

Construction

Aluminum clad steel wire is a kind of bimetallic wire that aluminum covers on the steel core continuously and evenly. Compared with ordinary aluminum cable steel reinforced, the conductor weight is 5% lighter, current-carrying capacity is 2-3% higher and power loss decreases 4-6%. Thus, the service life is long and it adds none erection cost.

Construction Parameters

Code Number	Area	No. of wires	Diameters(mm)		Weight	Rated Strength	DC Resistance
mm ²	mm ²		wire	conductor	kg/km	kN	ohm/km
25	24.25	7	2.1	6.3	162	31.56	3.546
35	34.36	7	2.5	7.5	229	44.72	2.499
50	49.48	7	3	9	330	64.4	1.736
70	65.81	19	2.1	10.5	441	85.65	1.313
95	93.27	19	2.5	12.5	626	121.39	0.925
120	116.99	19	2.8	14	785	152.26	0.737
150	147.11	37	2.25	15.7	990	191.46	0.587
185	181.62	37	2.5	17.5	1221	236.38	0.476
240	242.54	61	2.25	20.2	1635	299.05	0.357
300	299.43	61	2.5	22.5	2017	369.2	0.289

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Construction Parameters

Code Number	Area	No. of wires	Diameters		Weight	Rated Strength	DC Resistance
	mm ²		wire	conductor			
3 No 5 Awg.	50,32	3	4,62	9,96	334,1	54,42	1.6990
3 No 6 Awg.	39 ,00	3	4,11	8,87	265,0	45,74	2.1420
3 No 7 Awg.	31,65	3	3,67	7,90	210,1	38,36	2.7010
3 No 8 Awg.	25,10	3	3,26	7,03	166,7	32,06	3.4060
3 No 9 Awg.	19,90	3	2,91	6,26	132,2	25,43	4.2940
3 No 10 Awg.	15,78	3	2,59	5,58	104,8	20,16	5.4150
7 No 5 Awg.	117,40	7	4,62	13,90	781,1	120,27	0,7426
7 No 6 Awg.	93,10	7	4,11	12,40	619,5	101,14	0,9198
7 No 7 Awg.	73,87	7	3,67	11,00	491,1	84,81	1.1600
7 No 8 Awg.	58,56	7	3,26	9,78	389,6	70,88	1.4630
7 No 9 Awg.	46,44	7	2,91	8,71	308,9	56,20	1.8440
7 No 10 Awg.	36,83	7	2,59	7,76	245,1	44,58	2.3250
7 No 11 Awg.	29,21	7	2,30	6,91	194,4	35,35	2.9320
7 No 12 Awg.	23,16	7	2,05	6,16	154,2	28,03	3.6970
19 No 5 Awg.	318,70	19	4,62	23,10	2129,0	326,39	0,2698
19 No 6 Awg.	252,70	19	4,11	20,60	1688,0	274,55	0,3402
19 No 7 Awg.	200,40	19	3,67	18,30	1339,0	230,18	0,4290

19 No 8 Awg.	158,90	19	3,26	16,30	1062,0	192,41	0,5409
19 No 9 Awg.	126,10	19	2,91	14,50	842,0	152,58	0,6821
19 No 10 Awg.	99,96	19	2,59	12,90	667,7	121,00	0,8601
37 No 5 Awg.	620,60	37	4,62	32,30	4170,0	635,43	0,1394
37 No 6 Awg.	492,20	37	4,11	28,80	3307,0	534,85	0,1757
37 No 7 Awg.	390,30	37	3,67	25,70	2623,0	448,09	0,2216
37 No 8 Awg.	309,50	37	3,26	22,90	2080,0	374,67	0,2794
37 No 9 Awg.	245,50	37	2,91	20,30	1649,0	279,11	0,3523
37 No 10 Awg.	194,70	37	2,59	17,90	1308,0	235,61	0,4443