BARE OVERHEAD CONDUCTOR

ACAR

Aluminium Conductor Alloy Reinforced



- EC aluminium 1350-H19
- Aluminium alloy 6201 core

ACAR is EC-grade aluminium 1350-H19 wire stranded concentrically over a core of high-strength aluminium alloy 6201 wire. With no steel in the conductor, it is lighter than ACSR and free of galvanic corrosion, while the EC outer layers give better conductivity than AAAC. The EC-to-alloy ratio can be tuned for the line's ampacity and sag needs.

APPLICATIONS

Transmission and distribution lines, coastal and industrial areas, bus bars and high-ampacity lines.

OPTIONS

Custom EC/alloy ratios and sizes, non-specular (dull) finish, and grease on request.

16–1000
Code sizes shown (mm²)

7 to 91
Wires per conductor

No steel
No galvanic corrosion

Up to 1139 A
Current rating at 85 °C

STANDARDS IEC 61089 (A1/A2) · ASTM B524 · CSA C61089 · Customer specification

Code	Total area (mm²)	Area EC / alloy (mm²)	Wires EC / alloy	Wire dia. (mm)	Overall dia. (mm)	Mass (kg/km)	RTS (kN)	DC res. 20 °C (Ω/km)	Ampacity 75/85 °C (A)
16	17.03	9.73 / 7.30	4 / 3	1.76	5.28	46.6	3.85	1.7896	82 / 97
25	26.61	15.21 / 11.40	4 / 3	2.20	6.60	72.8	5.93	1.1453	107 / 127
40	42.49	24.28 / 18.21	4 / 3	2.78	8.34	116.5	9.25	0.7158	141 / 169
63	66.96	38.27 / 28.70	4 / 3	3.49	10.47	183.5	14.38	0.4545	185 / 223
100	106.44	60.82 / 45.62	4 / 3	4.40	13.20	291.2	22.52	0.2863	243 / 296
125	131.63	83.14 / 48.50	12 / 7	2.97	14.85	362.7	27.79	0.2302	276 / 338
160	168.47	106.40 / 62.07	12 / 7	3.36	16.80	464.2	35.04	0.1798	319 / 392
200	210.97	133.24 / 77.73	12 / 7	3.76	18.80	580.3	43.13	0.1439	363 / 449
250	264.49	167.05 / 97.44	12 / 7	4.21	21.05	725.3	53.92	0.1151	412 / 513
315	324.18	262.85 / 61.33	30 / 7	3.34	23.38	829.6	60.52	0.0916	468 / 586
400	410.84	333.11 / 77.73	30 / 7	3.76	26.32	1133.5	75.19	0.0721	535 / 676
500	515.06	417.62 / 97.44	30 / 7	4.21	29.47	1416.9	93.98	0.0577	605 / 770
630	659.43	454.03 / 205.40	42 / 19	3.71	33.39	1820.0	130.25	0.0458	686 / 883
800	837.09	576.36 / 260.73	42 / 19	4.18	37.62	2311.2	165.39	0.0361	777 / 1011
1000	1032.05	816.56 / 215.48	72 / 19	3.80	41.80	2849.1	190.94	0.0289	866 / 1139

Values are nominal per IEC 61089 Type A1/A2 (EC aluminium A1 with aluminium alloy A2), all wires of equal diameter. ASTM B524 sizes in kcmil, and other EC/alloy combinations, are made to order.

Current ratings at 45 °C ambient, 0.56 m/s wind, 1045 W/m² solar radiation, emissivity 0.45, absorptivity 0.80, sea level. Final values are confirmed in the Guaranteed Technical Particulars (GTP) for each order.

Packing
Non-returnable wooden or steel drums to IS 1778 / customer specification

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