

AAAC Cable

Aluminum Conductor Series 6201

Prysmian
Group



Description

The AAAC aluminum alloys cables are built with series 6201-T81 wires twisted helically from 7 and more strands in concentric layers.

Standard Specifications

The AAAC aluminum alloy cables series 6201 are built based on the following:

- Standards: **ASTM B398 y B399.**
- Certificate: **CIDET # 03538.**

Features

- The cables AAAC are composed of aluminum alloy wires with high magnesium content allowing high mechanical resistance and low thermal expansion coefficient. The 6201 alloy delivers equivalent stress to steel's wires allowing longer spans compared to AAC cables.
- The aluminum alloy has a lower conductivity (52% IACS) requiring increased diameter to obtain equivalent gauge resistance of AAC conductors.

Applications

- The AAAC cables are designed to be installed in power distribution exposed systems. In low voltage distribution residential or industrial feed-up networks. Also used on high voltage transmission aerial lines with long spans requiring high tensile capacity.
- The aluminum alloy cables are very useful in areas where general environment conditions are demanding like high humidity, salinity, acidity and contamination where steel conductors have corrosion issues.
- The properties of "span/tensile" makes the AAAC conductor ideal in power distribution/transmission exposed systems. Applications on urban, coastal networks are widely utilized. The main advantages are:
 - The lower density allows to use lighter network supporting structures.
 - The conductors have a much higher tensile than AAC .
 - Has lower thermal expansion allowing a better overload behavior.
 - The AAAC cable weight is about 50% lower than the equivalent capacity copper conductor and 20% lower than the equivalent ACSR.



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Technical Information

Dimensions and nominal features

The conductor operating amperage is defined by the installation condition and operating temperatures identified. See Table 3 on Ampacities for Aluminum & ACSR Overhead Electrical Conductors issued by the Aluminum Association.

Code	Gauge		Wires	Diameter	Weight	Break Tension	DC Max. @ 20°C Resistance
	cmil	mm ²					
Akron	30 580	15,5	7	5,04	42,58	503	2,202
Alton	48 690	24,7	7	6,36	67,8	798	1,383
Ames	77 470	39,2	7	8,02	107,5	1271	0,872
Azusa	12 330	62,4	7	10,11	171,3	1935	0,547
Anaheim	155 400	78,6	7	11,35	215,6	2 445	0,435
Amherst	195 700	99,3	7	12,74	272,5	3 080	0,344
Alliance	246 900	125	7	14,31	343,2	3 883	0,273
Butte	312 800	159	19	16,3	435,1	4 763	0,215
Canton	394 500	200	19	18,3	548,5	6 033	0,171
Cairo	465 400	236	19	19,88	648,6	7 076	0,145
Darien	559 500	284	19	21,79	778,3	8 528	0,120
Elgin	652 400	331	19	23,53	908,3	9 934	0,103
Flint	740 800	375	37	25,16	1 028	11 068	0,091
Greeley	927 200	470	37	28,15	1 289	13 835	0,073

Note: The values given may vary according to the manufacturing tolerances



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