AAAC

AAAC aluminium alloy 6201 series

GENERAL INFORMATION

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

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 spams compared to AAC cables.
- The aluminum alloy has a lower conductivity (52% IACS) requiring increased diameter to obtain equivalent gauge resistance of AAC conductors.

CERTIFICATIONS AND DESIGN STANDARDS

Standards of design: ASTM B398 and ASTM B399

Certifications: CIDET 03538

CABLE DESIGN

Conductor material	Aluminium

INSTALLATION DETAILS

Application	Power Distribution;Power Transmission

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SPECIFIC 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 spams requiring high tensile capacity.
- The aluminum alloy cables are very useful in areas were general environment conditions are demanding like high humidity, salinity, acidity and contamination where steel conductors have corrosion issues.
- The properties of “spam/tensile” makes the AAAC conductor ideal in power distribution/transmission exposed systems. Applications on urban, costal networks are widely utilized. The main advantages are:

1. The lower density allows to use lighter network supporting structures.
2. The conductors have a much higher tensile than AAC .
3. Has lower thermal expansion allowing a better overload behavior.
4. The AAAC cable weight is about 50% lower than the equivalent capacity copper conductor and 20% lower than the equivalent ACSR.

PRODUCT CHARACTERISTICS

External code	Nominal cross section conductor AWG [kcmil]	Nominal cross section conductor [mm²]	Conductor strand count	Cable weight [kg/km]	Diameter conductor [mm]	Conductor resistance at 20° C [Ohm/km]
Akron	30	15.5		42.58	5.04	2.202
Alton	48	24.7		67.8	6.36	1.383
Ames	77	39.2		107.5	8.02	0.872
Azusa	123	62.4		171.3	10.11	0.547
Anaheim	155	78.6		215.6	11.35	0.435
Amherst	195	99.3		272.5	12.74	0.344
Alliance	246	125		343.2	14.31	0.273
Butte	312	159		435.1	16.3	0.215
Canton	394	200		548.5	18.3	0.171
Cairo	465	236		648.6	19.88	0.145
Darien	559	284		778.3	21.79	0.12
Elgin	652	331		908.3	23.53	0.103
Flint	740	375		1,028	25.16	0.091
Greeley	927	470		1,289	28.15	0.073

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

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