# ACAR

## ACAR aluminium 1350 series with alloy aluminium 6201 reinforcement

## GENERAL INFORMATION

The ACAR cables are build with series 1350-H19 hard pure aluminum wires twisted helically with aluminum alloy 6201-T81 wires in concentric layers and multiple combinations.

## FEATURES

- The ACAR cables are built combining aluminum 1350 wires with alloy 6201 wires in multiple different formations to vary the current carrying capacity with the tensile capability allowing long spams. The 6201 wires deliver high tensile with limited current capacity and the 1350 wires deliver lower tensile with high current capacity.
- All cable wires are aluminum providing environmental protection with the alumina shield, the cable is high resistant humidity, salts, acids and contaminants capable.
- The ACAR cables provide higher currents than equivalent heavier ACSR cables maintaining long spams with limited thermal expansion at high operating temperatures.

## CERTIFICATIONS AND DESIGN STANDARDS

**Standards of design:** ASTM B230, ASTM B398 and ASTM B524

**Certifications:** CIDET 03539

## CABLE DESIGN

| | |
|---|---|
| Conductor material | Aluminium |

## INSTALLATION DETAILS

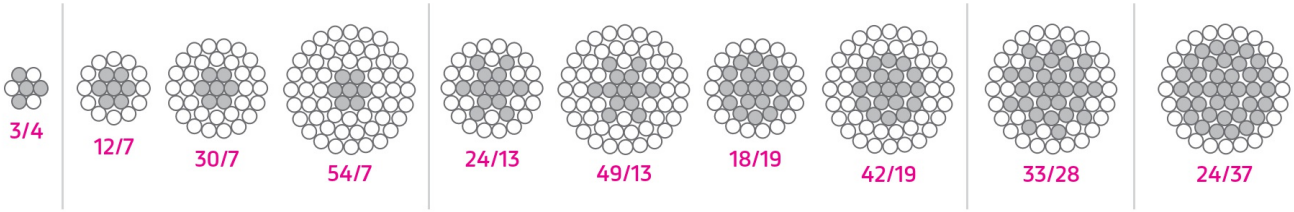
| | |
|---|---|
| Application | Power Distribution;Power Transmission |

PRYSMIAN Central America & Caribbean Kilometer 11 General Cañas Highway. Heredia, Costa Rica Customer Service Hub: + (506) 2298-4800
info.centroamerica@prysmian.com www.prysmian.com

## SPECIFIC APPLICATIONS

- The ACAR cables are designed to deliver high current capacity with equivalent tensile to ACSR to allow long spams. The conductors are ideal on distribution and transmission power system in severe environmental conditions.
- The implementation of aluminum and alloy wires deliver higher current capacity at lower weight than ACSR cables with high resistance to humidity, salts, acids and pollution.

## CABLE CONFIGURATIONS




## PRODUCT CHARACTERISTICS

| Nominal cross section conductor AWG [kcmil] | Conductor strand count | Cable weight [kg/km] | Diameter conductor [mm] | Max. tensile strength [N] | Conductor resistance at 20° C [Ohm/km] | Nominal current [A] |
|---|---|---|---|---|---|---|
| 4 | | 58 | 5.88 | 4,983 | 1.452 | 135 |
| 2 | | 92 | 7.42 | 7,789 | 0.91 | 180 |
| 1/0 | | 147 | 9.63 | 11,968 | 0.573 | 241 |
| 2/0 | | 185 | 10.81 | 14,724 | 0.454 | 278 |
| 3/0 | | 234 | 12.14 | 18,285 | 0.36 | 322 |
| 4/0 | | 294 | 13.63 | 23,053 | 0.285 | 373 |
| 250 | | 348 | 16.4 | 24,426 | 0.235 | 417 |
| 300 | | 418 | 17.96 | 28,919 | 0.196 | 467 |
| 350 | | 487 | 19.4 | 33,236 | 0.171 | 515 |
| 400 | | 557 | 20.74 | 37,513 | 0.15 | 560 |
| 500 | | 695 | 20.67 | 58,732 | 0.12 | 644 |
| 600 | | 833 | 22.64 | 70,308 | 0.097 | 723 |
| 853.7 | | 1,184 | 27.01 | 95,225 | 0.068 | 909 |
| 1024.5 | | 1,413.97 | 29.59 | 116,411 | 0.111 | 1,020 |
| 1000 | | 1,393 | 29.27 | 88,103 | 0.058 | 1,002 |

The conductor operating amperage is defined by the installation condition and operating temperatures identified. See Table 1 on Ampacities for Aluminum & ACSR Overhead Electrical Conductors issued by the Aluminum Association. Note: The values given may vary according to the manufacturing tolerances *Current capacity calculated considering sun and wind. Bare conductors outdoors, based on 25 ° C ambient temperature, conductor temperature 75 ° C, wind speed 0.6 m / s, conductor emissivity 0.5, solar radiation 1000 W/m 2 at sea level

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## WIRES

| Code | Number of wires | |
|---|---|---|
| | 1350 | 6201 |
| AFACBJ1004AB | 4 | 3 |
| AFACBJ1002AB | 4 | 3 |
| AFACBJ11_0AB | 4 | 3 |
| AFACBJ12_0AB | 4 | 3 |
| AFACBJ13_0AB | 4 | 3 |
| AFACBJ14_0AB | 4 | 3 |
| AFACBJ1250KC | 15 | 4 |
| AFACBJ1300KC | 15 | 4 |
| AFACBJ1350KC | 15 | 4 |
| AFACBJ1400KC | 15 | 4 |
| AFACBJ1500KD | 18 | 19 |
| AFACBJ1600KD | 18 | 19 |
| AFACBJ1853KD | 18 | 19 |
| AFACBJ110K0E | 54 | 7 |