

# CAAI 0,6/1 kV Single Core

CAAI 0.6/1 kV 25 mm<sup>2</sup>



**Nexans Ref.:** P00015899-4  
**Country Ref.:** 10037241

## CONTACT

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## APPLICATION

For installations of urban and rural connections, with voltages up to 1000 V.

## STANDARDS

### PRODUCT

NTP-IEC 60228; NTP 370.254; IEC 60228

### TEST

IEC 60811-201; IEC 60811-401; IEC 60811-402; IEC 60811-501;  
IEC 60811-502; IEC 60811-507; IEC 60811-511

## CONSTRUCTION

1. Conductor: Aluminum 1350, class 2.
2. Insulation: Cross linked polyethylene XLPE.

## MAIN CHARACTERISTICS

Decreases energy theft, cross-linked polyethylene allows more current capacity and high insulation resistance, lower inductive reactance than with bare conductors, used in overhead distribution lines. Increased safety due to its mechanical strength and toughness of the insulation. Insulators are not necessary for installation. Resistance to abrasion, weather and sunlight.

## CROSS SECTION

16 mm<sup>2</sup> and 25 mm<sup>2</sup>.

## MARKING

INDECO BY NEXANS CAAI 0,6/1 kV - (Section) - Year - Sequential length.

## PACKING

Non returnable wooden reels.

## COLOUR

Black, see core identification.



Conductor flexibility  
Class 2 IEC 60228



Rated Voltage U<sub>0</sub>/U (Um)  
0,6/1 kV



Bending factor installed  
4 (xD)



U.V. resistance  
Yes



Maximum operating temperature  
90 °C

### PRODUCT STANDARDS

**NTP-IEC 60228:** Conductors of insulated cables.

**NTP 370.254:** Cables for overhead distribution networks self-supporting XLPE insulated of rated voltages up to and including 0.6/1 kV.

### TESTING STANDARDS

**IEC 60228:** Conductors of insulated cables.

**IEC 60811-201:** Measurement of insulation thickness.

**IEC 60811-401:** Thermal ageing methods -Ageing in an air oven.

**IEC 60811-402:** Water absorption test.

**IEC 60811-501:** Test for determining the mechanical properties of insulating and sheathing.

**IEC 60811-502:** Shrinkage test for isolations.

**IEC 60811-507:** Hot elongation test for crosslinked materials.

**IEC 60811-511:** Measurement of hot melt index of polyethylene compounds.

### CHARACTERISTICS

#### Construction characteristics

|                       |                     |
|-----------------------|---------------------|
| Conductor material    | Aluminum Alloy 1350 |
| Insulating material   | XLPE                |
| Core identification   | Rib markings        |
| Conductor flexibility | Class 2 IEC 60228   |
| Conductor shape       | Compact stranded    |

#### Dimensional characteristics

|                               |                    |
|-------------------------------|--------------------|
| Phase Conductor Cross Section | 25 mm <sup>2</sup> |
| Phase Conductor Diameter      | 5.8 mm             |
| Minimum insulation thickness  | 1.14 mm            |
| Nominal outer diameter        | 8.2 mm             |
| Approximate weight            | 93 kg/km           |
| Number of aluminium wires     | 7                  |
| Number of cores               | 1                  |

#### Electrical characteristics

|                                                           |            |
|-----------------------------------------------------------|------------|
| Max. DC resistance of the conductor at 20°C               | 1.2 Ohm/km |
| Nominal capacitance                                       | 401.0 pF/m |
| Permanent current rating, phase conductor in air a 30°C   | 114 A      |
| Rated Voltage U <sub>0</sub> /U (U <sub>m</sub> )         | 0,6/1 kV   |
| Dielectric strength                                       | 4.0 kV     |
| Time of application Dielectric strength core to screen DC | 5 min.     |

#### Usage characteristics

|                               |        |
|-------------------------------|--------|
| Bending factor when installed | 4 (xD) |
| U.V resistance                | Yes    |

### Usage characteristics

|                                          |        |
|------------------------------------------|--------|
| Maximum operating temperature            | 90 °C  |
| Overload maximum core temperature        | 130 °C |
| Short-circuit max. conductor temperature | 250 °C |

## CALCULATION OF CURRENT CONDITION OVERHEAD SECONDARY DISTRIBUTION

### CALCULATION OF CURRENT CONDITION

Maximum conductor temperature : 90°C.  
Ambient air temperature : 30°C.  
Speed of cross wind: 2 km/h.  
Bundled conductors.