

Nexans U-1000 AR2V

Nexans U-1000 AR2V 4x35

Contact

Building Products Information
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Low voltage power cable for fixed application

Nexans U-1000 AR2V and Nexans TWISTAL U-1000 AR2V cables, 100% manufactured in France (plant Jeumont 59), guarantee a minimum 35% reduction in greenhouse gas emissions compared to standard cables.

This offer is built on the guaranteed use of low-carbon aluminium and recycled plastic, as well as the use of renewable or decarbonised energies in manufacturing the cables. Nexans provides all the environmental data for its products (PEP Ecopassport®)

DESCRIPTION

Application

Nexans U-1000 AR2V aluminium cables can be used in all low voltage power installations.

Our range also offers Nexans TWISTAL®, the twisted single-core version of Nexans U-1000 AR2V, specially designed to make three-phase links with neutral. Nexans TWISTAL® simplifies your life and offers many advantages :

- Each core is spotted with a color band
- The twisted core reduces the number of drums and cables pulling
- This solution can allow to reduce the section of used cables (in parallel circuits)
- Nexans TWISTAL® is more flexible and light than a multiconductor, allowing to increase comfort and saving of time

Installation

These cables can be fixed on cable trays, within conduits or fixed to walls. They also can be buried directly with extra mechanical protection.

Design

- **Conductor:** stranded circular aluminium - class 2
- **Insulation:** XLPE - cores identification by colours
- **Laying up**(for multi conductors): with non hygroscopic filler
- **Outer sheath :** Lead free black PVC

Construction according to AD8 is possible on request



FIRE PERFORMANCE CLASS

E_{ca}

STANDARDS

International IEC 60228;
IEC 60502-1

National NF C32-321



Conductor flexibility
Stranded class 2



Lead free
Yes



Rated Voltage U_o/U
(U_m)
0.6/ 1 (1.2) kV



Cable flexibility
Rigid



Mechanical
resistance to
impacts
Good



Max. conductor
temp. in service
90 °C



Operating temp.
-25 ... 60 °C



Weather resistance
AN3

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Nexans is indicative only and shall not be binding on Nexans or be treated as constituting a representation on the part of Nexans.

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CHARACTERISTICS

Construction characteristics

Conductor material	Aluminum
Conductor flexibility	Stranded class 2
With smaller neutral conductor	No
Insulation	XLPE (chemical)
With Green/Yellow core	No
Outer sheath	PVC
Sheath colour	Black
Lead free	Yes
Conductor shape	Circular
Higher heating value	- MJ/km
Lay Up	Multicores

Dimensional characteristics

Number of cores	4
Conductor cross-section	35 mm ²
Maximum outer diameter	28.5 mm
Approximate weight	912 kg/km
Neutral conductor section (when smaller)	- mm ²

Electrical characteristics

Max. DC resistance of the conductor at 20°C	0.868 Ohm/km
Permissible current rating in open air	120 A
Permissible current rating when buried	134 A
Rated Voltage U _o /U (U _m)	0.6/ 1 (1.2) kV
Voltage drop, 3 conductors	1.62 V/A.km
Voltage drop, single phase	- V/A.km

Mechanical characteristics

Cable flexibility	Rigid
Mechanical resistance to impacts	Good

Usage characteristics

Max. conductor temperature in service	90 °C
Short-circuit max. conductor temperature	250 °C
Operating temperature, range	-25 ... 60 °C
Weather resistance	AN3
Chemical resistance	Accidental
Flame retardant	C2, NF C 32-070
Water proof	Intermittent
Minimum static operating bending radius	171 mm
Packaging	Cut to length

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The Nexans logo features a stylized red 'N' followed by the word 'Nexans' in a black, sans-serif font.

MARKING

N (x ou G) S mm² U-1000 AR2V NF - USE N° Usine S.Y + Sans Pb

- N = number of cores
- S = section in mm²
- G = with Green-Yellow
- x = without Green-Yellow

Without mechanical protection, those cables can be fixed on the wall, cables trays or cable ladders.

In buildings with explosion risks, they will be installed with particular protection. In this case, step down of 15% current carrying capacities.

Pulling on cable conductors

Tensile stress per mm² of globale section shall in no case exceed 3 daN for LV aluminium cable.

The maximum pulling load must never exceed 2000 daN even rule above-mentioned sometimes leads to higher values for large section of cable.