Nexans U-1000 AR2V

CONTACT

Building Products Information
contact.fr@nexans.com

Nexans U-1000 AR2V

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®)

STANDARDS

Product IEC 60228; IEC 60502-1; NF C32-321

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

Conductor flexibility
Stranded class 2

Lead free
Yes

Rated Voltage Uo/U (Um)
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

Nexans U-1000 AR2V

CHARACTERISTICS

Construction characteristics	
Conductor material	Aluminum
Conductor flexibility	Stranded class 2
Insulation	XLPE (chemical)
Outer sheath	PVC
Sheath colour	Black
Lead free	Yes
Conductor shape	Circular
Electrical characteristics	
Rated Voltage Uo/U (Um)	0.6/ 1 (1.2) kV
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

PRODUCT LIST WITH GREEN/YELLOW CORE

Nexans Ref.	Nb. of cores	Cross section [mm²]	Max. outer diam. [mm]	Approx. weight [kg/km]	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm. current rating open air [A]
10240124	3	25	20.9	640	0.868	97
10057422	3	35	26.0	759	0.868	135
10177896	3	50	29.0	983	0.641	164
10175971	3	70	34.0	1286	0.443	211
10175972	3	95	38.5	1715	0.32	257
10057449	4	25	25.5	714	1.2	97
10057448	4	35	28.5	912	0.868	120
10057397	4	50	32.5	1260	0.641	146
10205655	4	70	37.5	1625	0.443	187
10204292	4	95	42.5	2125	0.32	227
10057459	4	120	47.5	2555	0.253	263
10057461	4	150	52.5	3096	0.206	304
10057332	4	185	59.0	3875	0.164	347
10057462	4	240	66.5	4917	0.125	409
10088324	5	16	23.0	622	1.91	77
10057464	5	25	28.0	834	0.868	97

Nexans U-1000 AR2V

Nexans Ref.	Nb. of cores	Cross section [mm²]	Max. outer diam. [mm]	Approx. weight [kg/km]	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm. current rating open air [A]
10204354	5	35	32.5	1098	0.868	135
10204355	5	50	37.0	1422	0.641	146
10204356	5	70	42.1	1936	0.443	187

PRODUCT LIST SINGLE CORE

Nexans Ref.	Cross section [mm²]	Max. outer diam. [mm]	Approx. weight [kg/km]	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm. current rating open air [A]
10057424	25	12.5	140	1.2	101
10044029	35	13.5	173	0.868	126
10043984	50	15.0	225	0.641	154
10043985	70	17.0	296	0.443	198
10043986	95	19.0	385	0.32	241
10043987	120	21.0	470	0.253	280
10043988	150	23.0	590	0.206	324
10043989	185	25.5	713	0.164	371
10043990	240	28.5	905	0.125	439
10043991	300	31.0	1118	0.1	508
10043992	400	34.5	1446	0.0778	663
10044013	500	38.5	1785	0.0605	770
10044014	630	43.0	2294	0.0469	899

PRODUCT LIST 2 CORES

Nexans Ref.	Cross section [mm²]	Max. outer diam. [mm]	Approx. weight [kg/km]	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm. current rating open air [A]
10057428	25	22.0	565	1.2	108
10098424	35	24.5	710	0.868	135
10057434	50	27.5	890	0.641	164

PRODUCT LIST 3 CORES

Nexans Ref.	Cross section [mm²]	Max. outer diam. [mm]	Approx. weight [kg/km]	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm. current rating open air [A]
10205980	16	19.5	438	1.91	77
10057450	25	23.5	595	1.2	97
10057451	35	26.0	759	0.868	120
10057430	50	29.0	983	0.641	146
10043993	70	34.0	1286	0.443	187
10044012	95	38.5	1715	0.32	227

Nexans U-1000 AR2V

Nexans Ref.	Cross section [mm²]	Max. outer diam. [mm]	Approx. weight [kg/km]	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm. current rating open air [A]
10057431	120	42.5	2155	0.253	263
10057425	150	47.5	2675	0.206	304
10057432	185	53.0	3265	0.164	347
10057426	240	59.5	4025	0.125	409
10057453	300	66.0	5215	0.1	471
10057396	400	73.1	6730	0.0778	600

PRODUCT LIST 5 CORES

Nexans Ref.	Cross section [mm²]	Max. outer diam. [mm]	Approx. weight [kg/km]	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm. current rating open air [A]
10057297	50	32.6	1424	0.641	146

PRODUCT LIST TWISTAL

Nexans Ref.	Name	Cross section [mm²]	Max. outer diam. [mm]	Approx. weight [kg/km]	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm. current rating open air [A]
10218382	Nexans TWISTAL® U-1000 AR2V 4x1*35 mm²	35	32.4	695	0.868	126
10218439	Nexans TWISTAL U-1000 AR2V 3x1*50 + 1*35	50	30.8	839	0.641	154
10218383	Nexans TWISTAL® U-1000 AR2V 4x1*50 mm²	50	36.0	892	0.641	154
10218414	Nexans TWISTAL® U-1000 AR2V 4x1*70 mm²	70	40.8	1189	0.443	198
10218440	Nexans TWISTAL® U-1000 AR2V 3x1*70 + 1*50 mm²	70	41.2	1115	0.443	198
10218418	Nexans TWISTAL® U-1000 AR2V 4x1*95 mm²	95	45.6	1534	0.32	241
10218441	Nexans TWISTAL® U-1000 AR2V 3x1*95 + 1*50 mm²	95	46.0	1373	0.32	241
10218435	NEXANS TWISTAL® U-1000 AR2V 4x1*120 mm²	120	50.4	1871	0.253	280
10218442	Nexans TWISTAL® U-1000 AR2V 3x1*120 + 1*70 mm²	120	50.9	1700	0.253	280
10218436	Nexans TWISTAL® U-1000 AR2V 4x1*150 mm²	150	55.2	2365	0.206	324
10218443	Nexans TWISTAL® U-1000 AR2V 3x1*150 + 1*70 mm²	150	55.7	2071	0.206	324
10218437	Nexans TWISTAL® U-1000 AR2V 4x1*185 mm²	185	61.2	2863	0.164	371
10218464	Nexans TWISTAL® U-1000 AR2V 3x1*185 + 1*95 mm²	185	61.7	2530	0.164	371
10218438	Nexans TWISTAL® U-1000 AR2V 4x1*240 mm²	240	68.4	3626	0.125	439

Nexans U-1000 AR2V

Nexans Ref.	Name	Cross section [mm²]	Max. outer diam. [mm]	Approx. weight [kg/km]	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm. current rating open air [A]
10218485	Nexans TWISTAL® U-1000 AR2V 3x1*240 + 1*95 mm²	240	69.0	3103	0.125	439
10235401	Nexans TWISTAL® U-1000 AR2V 4x1x300	300	74.4	4480	0.1	508

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 laders.

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-mentionned sometimes leads to higher values for large section of cable.