

U-1000 R2V

Structure and electrical, physical, NF C 32-321 mechanical requirements:

Low Voltage Directive:	2014/35/EU
RoHS Directive:	2011/65/EU

REACTION TO FIRE



CPR COMPLIANT
REGULATION 305/2011/EU

Standard:	EN 50575:2014+A1:2016
Class:	E _{ca}
Classification:	EN 13501-6
Flame propagation:	EN 60332-1-2
Notified Body:	0051 - IMQ
CE	2016

With R2V **POINT DE VUE**, LTC fully defines the concept by adding to the coloured stripes of the sheath: **identification of the number of cores !**



Description

- Conductor:
 - Class 1, solid, plain copper (cross-section $\leq 4\text{mm}^2$)
 - Class 2, stranded wire, plain copper (cross-section $\geq 6\text{mm}^2$)
- Insulation: XLPE (cross-linked polyethylene)
- Filler: thermoplastic
- Sheath: PVC
- Colour: black

Functional characteristics

- Rated voltage U_0/U : 0,6/1 kV
- Max. operating temperature: 90°C
- Min. operating temperature: -25°C (without mechanical shocks)
- Max. short circuit temperature: 250°C

Installation conditions

- Minimum installation temperature: -10°C
- Recommended minimum bending radius: 6 times the cable diameter
- Recommended maximum tensile stress: 50 N/mm² of the cross-section of the copper

Colours of the cores

- SINGLE-CORE ●
- TWO-CORE ● ●
- THREE-CORE ● ● ● or for cross-section 1,5-2,5mm² ● ● ● or for cross-section $\geq 4\text{mm}^2$ ● ● ●
- FOUR-CORE ● ● ● ● or ● ● ● ●
- FIVE-CORE ● ● ● ● ● or ● ● ● ● ●

The cores in multiple cables for signal and control are black, numbered, with or without GREEN/YELLOW

Marking

NF-USE U-1000 R2V 337 [form.] 0,6/1 kV [year] LOT [traceability] [metric]
U-1000 R2V 337 [form.] 0,6/1 kV [year] LOT [traceability] [metric]

Special features

Excellent resistance to UV rays.
(class AN3 according to NF C 15-100)

Use and installation method

For use on industrial sites. Particularly suited in cases of high operating temperatures and when high resistance to UV radiation and atmospheric agents is required. Good resistance to low temperatures and chemical agents. Can be used without additional mechanical protection in the open air, fixed to walls or in channels, inside gangways or in empty spaces in constructions in general. Can be laid underground with mechanical protection constructed from slabs, tiles, or bricks. It is not recommend to lay this cable in ground flooded for more than two months per year. With appropriate mechanical protection, it can be used in areas subject to the risk of explosion, but in this case the permitted current load is reduced by 15%.

Reference Construction Products Regulation 305/2011 EU and Standard EN 50575:

The cable is suitable for the supply of electricity in buildings and other civil engineering works.

U-1000 R2V - Single-core

Formation	Approx. conductor Ø	Average insulation thickness	Min. sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating A	
n° x mm ²	mm	mm	mm	mm	Ω/km	kg/km	free air at 30°C	buried at 20°C
1 x 1,5	1,4	0,7	0,92	6,6	12,1	34	24	31
1 x 2,5	1,8	0,7	0,92	7,0	7,41	45	33	41
1 x 4	2,3	0,7	0,92	7,6	4,61	61	45	53
1 x 6	3,1	0,7	0,92	8,2	3,08	85	58	66
1 x 10	4,0	0,7	0,92	9,2	1,83	126	80	87
1 x 16	4,8	0,7	0,92	10,5	1,15	180	107	113
1 x 25	6,0	0,9	0,92	12,5	0,727	279	138	144
1 x 35	7,0	0,9	0,92	13,5	0,524	371	169	174
1 x 50	8,1	1,0	0,92	15,0	0,387	504	207	206
1 x 70	9,7	1,1	0,92	17,0	0,268	714	268	254
1 x 95	11,4	1,1	1,00	19,0	0,193	970	328	301
1 x 120	13,1	1,2	1,00	21,0	0,153	1218	382	343
1 x 150	14,6	1,4	1,08	23,0	0,124	1479	441	387
1 x 185	16,5	1,6	1,08	25,5	0,0991	1878	506	434
1 x 240	18,5	1,7	1,16	28,5	0,0754	2416	599	501
1 x 300	21,0	1,8	1,24	31,0	0,0601	3026	693	565
1 x 400 *	24,0	2,0	1,32	-	0,0470	3625	779	690
1 x 500 *	26,7	2,2	2,2	-	0,0366	5040	870	780
1 x 630 *	30,0	2,4	2,0	-	0,0283	6510	995	880

* Without NF USE mark

Permissible current rating values are according to:

- three conductors charged

- a buried cable with thermal resistivity of the ground equal to 1 K·m/W and laying depth of 600 mm

If conditions are different, apply correction factors of NF C 15-100 (tables 52G - 52N - 52O - 52P - 52Q - 52R - 52S - 52T).

U-1000 R2V - Two-core and three-core

Formation	Approx. conductor Ø	Average insulation thickness	Min. sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating A	
n° x mm ²	mm	mm	mm	mm	Ω/km	kg/km	free air at 30°C	buried at 20°C
2 x 1,5	1,4	0,7	1,24	10,5	12,1	92	26	37
2 x 2,5	1,6	0,7	1,24	11,5	7,41	128	36	48
2 x 4	2,3	0,7	1,24	13,0	4,61	167	49	63
2 x 6	3,1	0,7	1,24	14,0	3,08	236	63	80
2 x 10	4,0	0,7	1,24	16,0	1,83	342	86	104
2 x 16	4,8	0,7	1,24	18,5	1,15	490	115	136
2 x 25	6,0	0,9	1,24	22,0	0,727	761	149	173
2 x 35	7,0	0,9	1,24	24,5	0,524	999	185	208
2 x 50 *	8,1	1,0	1,24	27,5	0,387	1337	225	247
3 x 1,5	1,4	0,7	1,24	11,0	12,1	107	23	31
3 x 2,5	1,8	0,7	1,24	12,5	7,41	143	31	41
3 x 4	2,3	0,7	1,24	13,5	4,61	202	42	53
3 x 6	3,1	0,7	1,24	15,0	3,08	289	54	66
3 x 10	4,0	0,7	1,24	17,0	1,83	432	75	87
3 x 16	4,8	0,7	1,24	19,5	1,15	635	100	113
3 x 25	6,0	0,9	1,24	23,5	0,727	961	127	144
3 x 35	7,0	0,9	1,24	26,0	0,524	1279	158	174
3 x 50	8,1	1,0	1,24	29,0	0,387	1714	192	206
3 x 70	9,7	1,1	1,32	34,0	0,268	2436	246	254
3 x 95	11,4	1,1	1,40	38,5	0,193	3302	298	301
3 x 120	13,1	1,2	1,48	42,5	0,153	4181	346	343
3 x 150	14,6	1,4	1,64	47,5	0,124	5123	395	387
3 x 185	16,5	1,6	1,72	53,0	0,0991	6549	450	434
3 x 240	18,4	1,7	1,88	59,5	0,0754	8433	538	501
3 x 300	21,0	1,8	2,04	66,0	0,0601	10941	621	565

* without NF USE mark

Permissible current rating values are according to:

- two conductors charged for two-core cables

- three conductors charged for three-core cables

- a buried cable with thermal resistivity of the ground equal to 1 K·m/W and laying depth of 600 mm

If conditions are different, apply correction factors of NF C 15-100 (tables 52G - 52N - 52O - 52P - 52Q - 52R - 52S - 52T).

U-1000 R2V - Four-core and five-core

Formation	Approx. conductor Ø	Average insulation thickness	Min. sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating A	
							free air at 30°C	buried at 20°C
n° x mm ²	mm	mm	mm	mm	Ω/km	kg/km		
4 x 1,5	1,4	0,7	1,24	12,0	12,1	127	23	31
4 x 2,5	1,8	0,7	1,24	13,0	7,41	174	31	41
4 x 4	2,3	0,7	1,24	14,5	4,61	247	42	53
4 x 6	3,1	0,7	1,24	16,0	3,08	358	54	66
4 x 10	4,0	0,7	1,24	18,5	1,83	539	75	87
4 x 16	4,8	0,7	1,24	21,0	1,15	794	100	113
4 x 25	6,0	0,9	1,24	25,5	0,727	1240	127	144
4 x 35	7,0	0,9	1,24	28,5	0,524	1642	158	174
4 x 50	8,1	1,0	1,32	32,5	0,387	2208	192	206
4 x 70	9,7	1,1	1,40	37,5	0,268	3112	246	254
4 x 95	11,4	1,1	1,48	42,5	0,193	4253	298	301
4 x 120	13,1	1,2	1,64	47,5	0,153	5371	346	343
4 x 150	14,6	1,4	1,72	52,5	0,124	6547	395	387
4 x 185	16,5	1,6	1,88	59,0	0,0991	8732	450	434
4 x 240	18,5	1,7	2,04	66,5	0,0754	10806	538	501
4 x 300	21,0	1,8	2,20	73,5	0,0601	14069	621	565
5 x 1,5	1,4	0,7	1,24	13,0	12,1	150	23	31
5 x 2,5	1,8	0,7	1,24	14,5	7,41	205	31	41
5 x 4	2,3	0,7	1,24	16,0	4,61	291	42	53
5 x 6	3,1	0,7	1,24	17,5	3,08	423	54	66
5 x 10	4,0	0,7	1,24	20,0	1,83	645	75	87
5 x 16	4,8	0,7	1,24	23,0	1,15	974	100	113
5 x 25	6,0	0,9	1,24	28,0	0,727	1519	127	144
5 x 35 *	7,0	0,9	1,32	/	0,524	2030	158	174
5 x 50 *	8,1	1,0	1,40	/	0,387	2760	192	206
5 x 70 *	9,7	1,1	1,4	/	0,268	3945	246	254

* without NF USE mark

Permissible current rating values are according to:

- three conductors charged

- a buried cable with thermal resistivity of the ground equal to 1 K·m/W and laying depth of 600 mm

If conditions are different, apply correction factors of NF C 15-100 (tables 52G - 52N - 52O - 52P - 52Q - 52R - 52S - 52T).

U-1000 R2V - Four-core with reduced cross-section

Formation	Approx. conductor Ø	Average insulation thickness	Min. sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating A	
							free air at 30°C	buried at 20°C
n° x mm ²	mm	mm	mm	mm	Ω/km	kg/km		
3 x 35 + 25 *	7,0/6,0	0,9/0,9	1,24	-	0,524/0,727	1530	158	174
3 x 50 + 35	8,1/7,0	1,0/0,9	1,24	31,1	0,387/0,524	2051	192	206
3 x 70 + 50	9,7/8,1	1,1/1,0	1,40	36,2	0,268/0,387	2905	246	254
3 x 95 + 50	11,4/8,1	1,1/1,0	1,48	40,6	0,193/0,387	3769	298	301
3 x 120 + 70	13,1/9,7	1,2/1,1	1,56	45,4	0,153/0,268	4851	346	343
3 x 150 + 70	14,6/9,7	1,4/1,1	1,64	49,5	0,124/0,268	5625	395	387
3 x 185 + 70	16,5/9,7	1,6/1,1	1,80	54,4	0,0991/0,268	7228	450	434
3 x 240 + 95	18,5/11,4	1,7/1,1	1,96	61,5	0,0754/0,193	9359	538	501
3 x 240 + 120 *	18,5/13,1	1,7/1,2	1,96	61,5	0,0754/0,153	9660	538	501

* without NF USE mark

Permissible current rating values are according to:

- three conductors charged

- a buried cable with thermal resistivity of the ground equal to 1 K·m/W and laying depth of 600 mm

If conditions are different, apply correction factors of NF C 15-100 (tables 52G - 52N - 52O - 52P - 52Q - 52R - 52S - 52T).

U-1000 R2V - Multi-core

Formation	Approx. conductor Ø	Average insulation thickness	Min. sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating A	
							free air at 30°C	buried at 20°C
n° x mm ²	mm	mm	mm	mm	Ω/km	kg/km		
7 x 1,5	1,4	0,7	1,24	13,5	12,1	194	15	22
8 x 1,5	1,4	0,7	1,24	14,5	12,1	220	14	20
10 x 1,5	1,4	0,7	1,24	16,5	12,1	268	13	18,5
12 x 1,5	1,4	0,7	1,24	17,0	12,1	305	12,5	18
14 x 1,5	1,4	0,7	1,24	18,0	12,1	346	12	17
19 x 1,5	1,4	0,7	1,24	19,5	12,1	441	10,5	15
24 x 1,5	1,4	0,7	1,24	22,5	12,1	552	10	14
30 x 1,5	1,4	0,7	1,24	24,0	12,1	643	9	12,5
37 x 1,5	1,4	0,7	1,24	25,5	12,1	793	8	12
7 x 2,5	1,8	0,7	1,24	15,0	7,41	272	20,5	28
8 x 2,5	1,8	0,7	1,24	16,5	7,41	304	19	27
10 x 2,5	1,8	0,7	1,24	19,0	7,41	380	18	24,5
12 x 2,5	1,8	0,7	1,24	19,5	7,41	435	17	24
14 x 2,5	1,8	0,7	1,24	20,5	7,41	494	16	22
19 x 2,5	1,8	0,7	1,24	22,5	7,41	642	14,5	19,5
24 x 2,5	1,8	0,7	1,24	25,5	7,41	805	13	18
30 x 2,5	1,8	0,7	1,24	27,5	7,41	883	12	16,5
37 x 2,5	1,8	0,7	1,24	29,5	7,41	1175	11	15,5

Permissible current rating values are according to:

- all conductors are charged (except for the green/yellow)

- a buried cable with thermal resistivity of the ground equal to 1 K·m/W and laying depth of 600 mm

If conditions are different, apply correction factors of NF C 15-100 (tables 52G - 52N - 52O - 52P - 52Q - 52R - 52S - 52T).