ttcables
ELECTRIC CABLE WORKS

U-1000 R2V

Power cables with XLPE insulation and PVC sheath

APPLICATION

These cables for energy distribution are suitable for all types of low voltage industrial-type connection, in urban grids, building installations, etc. Particularly suited in cases of high operating temperature and when high resistance to solar radiation and atmospheric agents is required. Good resistance to low temperature and chemical agents. Can be used without additional mechanical protection in the open air, fixed to walls or in raceways, inside walkways, and in empty in Cable Constructions in general. Can be laid underground with mechanical protection constructed from slabs, tiles, or bricks. They are not recommend to lay this cable in ground flooded for more than two months per year. With appropriate mechanical protection it can be use in areas subject to risk of explosion, but in this case the permitted current load is reduced by 15%. It can be used in ambient temperature down to-25°.

CORE IDENTIFICATION

According to HD 308 S2

Insulation Color:

Single-core: Green/Yellow OR Black
2-core: Brown Blue
3-core (a): Green/Yellow Brown Blue
3-core (b): Black Brown Grey
4-core (a): Green/Yellow Brown Black Grey
4-core (b): Blue Brown Black Grey
5-core: Green/Yellow Blue Brown Black Grey

Outer Sheath Colour:

Black

Other colours available on request

TECHNICAL CHARACTERISTICS

Voltage rating (Uo/U): 0,6/1 kV
Testing voltage: 4 kV
Min. temp. for cable laying: -5°C
Max. working temperature: 90°C
Max. short-circuit temperature: 250°C
Min. bending radius: multi-core- 12D
Single-core – 15D
CPR class: Eca

STANDARD

NF C32-321; IEC 60502-1

CONSTRUCTION

Conductors: Cu conductors, class 1 or 2 according to EN 60228
Insulation: XLPE compound
Bedding: Extruded elastomere or plastomere compound or plastic tape
Sheath: PVC compound

CERTIFICATION

CE RoHS compliant IEC International Electrotechnical Commission CPR REACH NF

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NOMINAL CROSS-SECTION	MAX. RESISTANCE AT 20°C	OUTER DIAM. (MAX..)	CU WEIGHT	CABLE WEIGHT (APPROX.)
mm²	Ω/km	mm	kg/km	kg/km
1x4	4,61	6,8	38,4	81
1x6	3,08	7,0	57,6	102
1x10	1,830	7,8	96,0	148
1x16	1,150	8,7	153,6	213
1x25	0,727	10,2	240,0	316
1x35	0,524	11,3	336,0	423
1x50	0,387	12,8	480,0	583
1x70	0,268	14,4	672,0	793
1x95	0,193	16,2	912,0	1057
1x120	0,153	17,8	1152,0	1317
1x150	0,124	19,8	1440,0	1642
1x185	0,0991	21,7	1776,0	2009
1x240	0,0754	24,3	2304,0	2584
1x300	0,0601	26,7	2880,0	3207
1x400	0,0470	30,4	3840,0	4244
1x500	0,0366	33,6	4800,0	5280
1x630	0,0283	37,5	6048,0	6636
1x800	0,0221	41,7	7680,0	8377

NOMINAL CROSS-SECTION	MAX. RESISTANCE AT 20°C	OUTER DIAM. (MAX..)	CU WEIGHT	CABLE WEIGHT (APPROX.)
mm²	Ω/km	mm	kg/km	kg/km
2x1,5	12,1	11,0	28,8	151
2x2,5	7,41	11,8	48,0	184
2x4	4,61	13,0	76,8	241
2x6	3,08	14,0	115,2	306
2x10	1,830	16,0	192,0	434
2x16	1,150	18,5	307,2	605
2x25	0,727	22,0	480,0	889
2x35	0,524	26,0	672,0	1168

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NOMINAL CROSS-SECTION	MAX. RESISTANCE AT 20°C	OUTER DIAM. (MAX..)	CU WEIGHT	CABLE WEIGHT (APPROX.)
mm²	Ω/km	mm	kg/km	kg/km
3x1,5	12,1	11,5	43,2	170
3x2,5	7,41	12,3	72,0	211
3x4	4,61	13,0	115,2	285
3x6	3,08	15,0	172,8	369
3x10	1,830	17,0	288,0	529
3x16	1,150	19,5	460,8	755
3x25	0,727	23,5	720,0	1122
3x35	0,524	26,0	1008,0	1490
3x50	0,387	29,5	1440,0	2049
3x70	0,268	34,0	2016,0	2808
3x95	0,193	38,5	2736,0	3704
3x120	0,153	42,5	3456,0	4627
3x150	0,124	47,5	4320,0	5770
3x185	0,0991	53,0	5328,0	7080
3x240	0,0754	59,5	6912,0	9080
3x300	0,0601	66,0	8640,0	11233

NOMINAL CROSS-SECTION	MAX. RESISTANCE AT 20°C	OUTER DIAM. (MAX..)	CU WEIGHT	CABLE WEIGHT (APPROX.)
mm²	Ω/km	mm	kg/km	kg/km
3x35+25	0,524	27,2	1196	1680
3x50+35	0,387	31,1	1702	2225
3x70+50	0,268	36,2	2392	3120
3x95+50	0,193	40,6	3082	3910
3x120+70	0,153	45,4	3956	5090
3x150+70	0,124	49,5	4784	6055
3x185+70	0,0991	54,4	5750	7400
3x240+95	0,0754	61,5	7498	9590

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NOMINAL CROSS-SECTION	MAX. RESISTANCE AT 20°C	OUTER DIAM. (MAX..)	CU WEIGHT	CABLE WEIGHT (APPROX.)
mm²	Ω/km	mm	kg/km	kg/km
4x1,5	12,1	12,2	57,6	192
4x2,5	7,41	13,1	96	241
4x4	4,61	14,0	153,6	333
4x6	3,08	16,0	230,4	436
4x10	1,830	18,5	384	636
4x16	1,150	21,0	614,4	921
4x25	0,727	25,5	960	1380
4x35	0,524	28,5	1344	1846
4x50	0,387	32,5	1920	2560
4x70	0,268	37,5	2688	3542
4x95	0,193	42,5	3648	4679
4x120	0,153	47,5	4608	5872
4x150	0,124	52,5	5760	7301
4x185	0,0991	59,0	7104	8988
4x240	0,0754	66,5	9216	11538
4x300	0,0601	73,5	11520	14288

NOMINAL CROSS-SECTION	MAX. RESISTANCE AT 20°C	OUTER DIAM. (MAX..)	CU WEIGHT	CABLE WEIGHT (APPROX.)
mm²	Ω/km	mm	kg/km	kg/km
5x1,5	12,1	13,0	72	220
5x2,5	7,41	14,0	120	231
5x4	4,61	15,5	192	331
5x6	3,08	17,5	288	444
5x10	1,830	20,0	480	758
5x16	1,150	23,0	768	1107
5x25	0,727	27,0	1200	1665
5x35	0,524	30,5	1680	2236
5x50	0,387	34,0	2400	3116
5x70	0,268	36,4	3360	4287
5x95	0,193	40,6	4560	5661

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Current capacities

All current capacities are according to standard NF C15-100-1

- Reference method B1- single-core cables or conductors in pipes on the wall
- Reference method B2- multi-core cables in pipes on the wall

CROSS – SECTION	REFERENCE METHOD B1 (A)		REFERENCE METHOD B2 (A)	
mm²	XLPE 2	XLPE 3	XLPE 2	XLPE 3
1,5	23	20	22	20
2,5	31	28	30	26
4	42	37	40	35
6	54	48	51	44
10	75	6	69	60
16	100	88	91	80
25	133	117	119	105
35	164	144	146	128
50	198	175	175	154
70	253	222	221	194
95	306	269	265	233
120	354	312	305	268
150	393	342	334	300
185	449	384	384	340
240	528	450	459	398
300	603	514	532	455
400	745	-	645	-
500	859	-	743	-
630	995	-	861	-

- XLPE 2 indicates a single-phase or two-phase circuit)
- XLPE 3 indicates a three-phase circuit

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Current capacities

All current capacities are according to standard NF C15-100-1

- Reference method D1- single-core or multi-core cables in underground duct
- Reference method D2- single-core or multi-core cables directly in the ground

CROSS – SECTION	REFERENCE METHOD B1 (A)				REFERENCE METHOD B2 (A)			
	SOIL RESISTIVITY - 2,5 K.m/W		SOIL RESISTIVITY - 1 K.m/W		SOIL RESISTIVITY - 2,5 K.m/W		SOIL RESISTIVITY - 1 K.m/W	
mm²	XLPE 2	XLPE 3	XLPE 2	XLPE 3	XLPE 2	XLPE 3	XLPE 2	XLPE 3
1,5	25	21	30	25	27	23	41	35
2,5	33	28	39	33	35	30	53	45
4	43	36	51	42	46	39	69	59
6	53	44	63	52	58	49	87	74
10	71	58	84	68	77	65	116	98
16	91	75	107	89	100	84	150	126
25	116	96	137	113	129	107	194	161
35	139	115	164	136	155	129	233	194
50	164	135	194	159	183	153	275	230
70	203	167	240	197	225	188	338	282
95	239	197	282	232	270	226	405	339
120	271	223	320	263	306	257	459	386
150	306	251	361	296	343	287	515	431
185	343	281	405	332	387	324	581	486
240	395	324	466	382	448	375	672	563
300	446	365	526	431	502	419	753	629

- XLPE 2 indicates a single-phase or two-phase circuit
- XLPE 3 indicates a three-phase circuit

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