POWER CABLES, WIRES, CORDS

[catalog]

ODESKABEL

CONTENTS

ОДЕССКАБЕЛЬ

CABLES, WIRES, CORDS

CONTROL CABLES

АКВВГ (AKVVG) Cable
with PVC insulation and PVC sheath

ОДЕСКАБЕЛЬ

APPLICATION

The cable is designed for installation, repair and maintenance of electric distribution and control equipment, for fixed connection to electric devices, fixture assemblies of electric distributors with the rated AC voltage up to 660 V and frequency up to 100 Hz, or with DC up to 1,000 V.
For installation in buildings, ducts and tunnels in conditions of corrosive medium.
Mechanical impact on the cable is not allowed.

REQUIREMENTS COMPLIANCE

TU U 05758730.013-2000

DESIGN

- conductor: single aluminium wire with cross-section from 2.5 to 10.0 mm^2
- conductor insulation: polyvinylchloride (PVC). Insulated wires are twisted into a core.
- sheath: PVC

OPTIONS

It is possible to manufacture cables in a low flammability PVC sheath (**АКВВГнг** cable type) and in a low flammability low smoke PVC sheath (**АКВВГнг-LS** cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-40 °C ... +50 °C
Installation temperature	-10 °C ... +50 °C
Minimum bending radius upon installation	6 cable diameters
Minimum service life	15 years

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
4 x 2,5	10,077	109,02
5 x 2,5	10,924	127,39
7 x 2,5	11,8	158,51
10 x2,5	14,680	217,48
14 x 2,5	15,947	276
19 x 2,5	17,670	350,74
24 x 2,5	21,030	453,74
27 x 2,5	21,888	519,20
37 x 2,5	24,770	689,50
4 x 4	11,692	147,24
5 x 4	12,733	180,50
7 x 4	13,810	219,78
10 x 4	17,4	302,44
14 x 4	19,272	407,06
19 x 4	21,390	520,15
24 x 4	25,38	667,41
27 x 4	26,338	759,43
37 x 4	29,39	982,67
4 x 6	12,776	179,25
5 x 6	13,948	221,45
7 x 6	15,160	272,02
10 x 6	19,6	393,69

ОДЕСКАБЕЛЬ

АКВВГ
with PVC insulation and PVC sheath

Cable size	Outer dimensions of the cable,mm (reference)	Cable weight, kg/km (reference)
14 x 6	21,256	508,42
19 x 6	24,040	676,76
24 x 6	28,080	838,14
27 x 6	29,106	952,35
37 x 6	32,540	1240,73
4 x 10	15,572	265,42
5 x 10	17,080	332,35
7 x 10	19,040	430,09
10 x 10	24,640	619,18
14 x 10	26,812	808,28
19 x 10	29,840	1044,07
24 x 10	35,440	1331,97
27 x 10	36,640	1507,21
37 x 10	41,060	1976,61

CONTROL CABLES

КВВГ (KVVG) Cable
with PVC insulation and PVC sheath

ОДЕСКАБЕЛЬ

APPLICATION

The cable is designed for installation, repair and maintenance of electric distribution and control equipment, for fixed connection to electric devices, fixture assemblies of electric distributors with the rated AC voltage up to 660 V and frequency up to 100 Hz, or with DC up to 1,000 V.
For installation in buildings, ducts and tunnels in conditions of corrosive medium.
Mechanical impact on the cable is not allowed.

REQUIREMENTS COMPLIANCE

TU U 05758730.013-2000

DESIGN

- conductor: single copper wire with cross-sections 0.75, 1.0, 1.5, 2.5, 4.0 or 6.0 mm^2
- conductor insulation: polyvinylchloride (PVC). Insulated wires are twisted into a core.
- sheath: PVC

OPTIONS

It is possible to manufacture cables in a low flammability PVC sheath (**КВВГнг** cable type) and in a low flammability low smoke PVC sheath (**КВВГнг-LS** cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-40 °C ... +50 °C
Installation temperature	-10 °C ... +50 °C
Minimum bending radius upon installation	6 cable diameters
Minimum service life	15 years

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
4 x 0,75	8,114	88,62
5 x 0,75	8,286	93,64
7 x 0,75	9,540	131,80
10 x 0,75	11,720	179,72
14 x 0,75	13,074	245,64
19 x 0,75	14,360	311,27
24 x 0,75	-	-
27 x 0,75	16,907	421,28
37 x 0,75	19,160	564,09
4 x 1	8,015	91,82
5 x 1	9,291	123,38
7 x 1	9,990	153,58
10 x 1	12,320	210,55
14 x 1	13,275	271,96
19 x 1	14,65	349,94
24 x 1	17,090	439,11
27 x 1	17,830	501,04
37 x 1	20,210	672,60
4 x 1,5	9,264	129,03
5 x 1,5	9,966	151,86
7 x 1,5	10,740	194,93
10 x 1,5	13,32	269,14

ОДЕСКАБЕЛЬ

КВВГ
with PVC insulation and PVC sheath

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
14 x 1,5	13,275	271,96
19 x 1,5	15,9	456,87
24 x 1,5	19,020	592,17
27 x 1,5	19,797	672,32
37 x 1,5	21,990	881,57
4 x 2,5	10,182	175,08
5 x 2,5	11,046	210,01
7 x 2,5	11,980	275,56
10 x2,5	14,96	383,34
14 x 2,5	14,378	351,98
19 x 2,5	17,970	667,17
24 x 2,5	21,390	854,18
27 x 2,5	22,227	967,88
37 x 2,5	25,190	1305,84
4 x 4	11,797	251,79
5 x 4	12,855	304,49
7 x 4	13,950	402,97
10 x 4	17,6	564,27
14 x 4	16,142	506,29
19 x 4	21,760	1024,03
24 x 4	25,840	1305,52
27 x 4	26,778	1474,68
37 x 4	29,920	1962,91
4 x 6	13,025	340,10
5 x 6	14,232	413,80
7 x 6	15,480	553,32
10 x 6	20,040	795,96
14 x 6	21,856	1076,99
19 x 6	24,710	1446,39
24 x 6	28,9	1812,79
27 x 6	29,914	2046,00
37 x 6	33,490	2738,77

CONTROL CABLES

АКВВГЭ (AKVVGE) Cable
with PVC insulation and PVC sheath, screened

ОДЕСКАБЕЛЬ

APPLICATION

The cable is designed for installation, repair and maintenance of electric distribution and control equipment, for fixed connection to electric devices, fixture assemblies of electric distributors with the rated AC voltage up to 660 V and frequency up to 100 Hz, or with DC up to 1,000 V.
For installation in buildings, ducts and tunnels in conditions of corrosive medium, if protection of circuits from the impact of external electromagnetic fields is needed.
Mechanical impact on the cable is not allowed.

REQUIREMENTS COMPLIANCE

TU U 05758730.013-2000

DESIGN

- conductor: single aluminium wire with cross-section from 2.5 to 10.0 mm^2
- conductor insulation: polyvinylchloride (PVC). Insulated wires are twisted into a core.
- belt insulation: plastic or PVC tape
- screen: aluminium foil. Copper wire Ø 0.4 mm is laid longitudinaly under the screen.
- sheath: PVC

OPTIONS

It is possible to manufacture cables in a low flammability PVC sheath (**АКВВГЭнг** cable type) and in a low flammability low smoke PVC sheath (**АКВВГЭнг-LS** cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-40 °C ... +50 °C
Installation temperature	-10 °C ... +50 °C
Minimum bending radius upon installation	6 cable diameters
Minimum service life	15 years

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
4 x 2.5	10,697	130,80
5 x 2.5	11,544	151,05
7 x 2.5	12,420	184,11
10 x 2.5	15,34	248,30
14 x 2.5	16,537	309,38
19 x 2.5	18,66	404,42
27 x 2.5	22,088	541,55
37 x 2.5	24,970	714,67
4 x 4	12,312	172,59
5 x 4	13,353	201,38
7 x 4	14,43	249,82
10 x 4	18,020	340,44
14 x 4	19,932	450,29
19 x 4	22,050	568,32
27 x 4	26,578	788,45
37 x 4	29,630	1015,28
4 x 6	13,396	207,00
5 x 6	14,568	243,12
7 x 6	15,78	305,06
10 x 6	-	-
14 x 6	21,916	556,17
19 x 6	24,7	729,67

ОДЕСКАБЕЛЬ

АКВВГЭ
with PVC insulation and PVC sheath, screened

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
27 x 6	29,346	984,52
37 x 6	32,78	1276,94
4 x 10	16,192	299,36
5 x 10	17,7	355,27
7 x 10	19,66	471,39
10 x 10	25,26	672,56
14 x 10	27,432	866,47
19 x 10	30,5	1111,23
27 x 10	36,880	1547,73
37 x 10	41,3	2022,34

CONTROL CABLES

КВВГЭ (KVVGE) Cable
with PVC insulation and PVC sheath, screened

ОДЕСКАБЕЛЬ

APPLICATION

The cable is designed for installation, repair and maintenance of electric distribution and control equipment, for fixed connection to electric devices, fixture assemblies of electric distributors with the rated AC voltage up to 660 V and frequency up to 100 Hz, or with DC up to 1,000 V.
For installation in buildings, ducts and tunnels in conditions of corrosive medium, if protection of circuits from the impact of external electromagnetic fields is needed.
Mechanical impact on the cable is not allowed.

REQUIREMENTS COMPLIANCE

TU U 05758730.013-2000

DESIGN

- conductor: single copper wire with cross-sections 0.75, 1.0, 1.5, 2.5, 4.0 or 6.0 mm^2
- conductor insulation: polyvinylchloride (PVC). Insulated wires are twisted into a core.
- belt insulation: plastic or PVC tape
- screen: aluminium foil. Copper wire Ø 0.4 mm is laid longitudinaly under the screen.
- sheath: PVC

OPTIONS

It is possible to manufacture cables in a low flammability PVC sheath (**КВВГЭнг** cable type) and in a low flammability low smoke PVC sheath (**КВВГЭнг-LS** cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-40 °C ... +50 °C
Installation temperature	-10 °C ... +50 °C
Minimum bending radius upon installation	6 cable diameters
Minimum service life	15 years

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
4 x 0,75	9,4	120
5 x 0,75	10,0	138
7 x 0,75	10,7	166
10 x 0,75	12,8	222
14 x 0,75	13,7	276
19 x 0,75	15,0	344
27 x 0,75	17,6	460
37 x 0,75	19,8	608
4 x 1	9,7	134
5 x 1	10,4	155
7 x 1	11,1	190
10 x 1	13,4	255
14 x 1	14,4	320
19 x 1	15,8	403
27 x 1	18,9	559
37 x 1	20,9	719
4 x 1,5	10,3	161
5 x 1,5	11,1	188
7 x 1,5	11,9	234
10 x 1,5	14,4	317
14 x 1,5	15,5	404
19 x 1,5	17,0	514

ОДЕСКАБЕЛЬ

КВВГЭ
with PVC insulation and PVC sheath, screened

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
27 x 1,5	20,4	716
37 x 1,5	22,6	931
4 x 2,5	11,3	212
5 x 2,5	12,2	250
7 x 2,5	13,1	314
10 x2,5	16,0	436
14 x 2,5	17,3	565
19 x 2,5	19,4	746
24 x 2,5	22,9	1019
27 x 2,5	25,8	1354
37 x 2,5	12,9	295
4 x 4	-	-
5 x 4	15,1	453
7 x 4	19,1	645
10 x 4	-	-
14 x 4	-	-
19 x 4	-	-
27 x 4	-	-
37 x 4	14,2	387
4 x 6	-	-
5 x 6	16,6	609
7 x 6	21,2	868
10 x 6	-	-
14 x 6	-	-
19 x 6	-	-
27 x 6	-	-
37 x 6	-	-

CONTROL CABLES

АКВБбШв (AKVBbShv) cable
with PVC insulation, screened,
in PVC jacket

ОДЕСКАБЕЛЬ

APPLICATION

The cable is designed for installation, repair and maintenance of electric distribution and control equipment, for fixed connection to electric devices, fixture assemblies of electric distributors with the rated AC voltage up to 660 V and frequency up to 100 Hz, or with DC up to 1,000 V.
For installation in buildings, ducts, tunnels and ground (trenches), also in conditions of corrosive medium and in places subjected to the impact of stray currents, provided the cable is not exposed to considerable tensions.

REQUIREMENTS COMPLIANCE

TU U 05758730.013-2000

DESIGN

- conductor: single aluminium wire with cross-section from 2.5 to 10.0 mm^2
- conductor insulation: polyvinylchloride (PVC). Insulated wires are twisted into a core.
- belt insulation: PVC tape
- sheath: PVC
- screen: flat steel tapes imposed spirally with overlap
- jacket: PVC

OPTIONS

It is possible to manufacture cables with belt insulation and jacket made of low flammability PVC (**АКВБбШвнг** cable type) and with belt insulation and jacket made of low flammability low smoke PVC (**АКВБбШвнг-LS** cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-40 °C ... +50 °C
Installation temperature	-10 °C ... +50 °C
Minimum bending radius upon installation	10 cable diameters
Minimum service life	15 years

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
4 x 2.5	14,877	337,33
5 x 2.5	15,724	372,18
7 x 2.5	16,6	420,34
10 x 2.5	19,550	536,69
14 x 2.5	20,747	618,51
19 x 2.5	22,470	726,76
27 x 2.5	27,088	1002,91
37 x 2.5	29,27	1232,03
4 x 4	16,492	406,96
5 x 4	17,533	460,47
7 x 4	18,61	520,70
10 x 4	22,2	673,21
14 x 4	24,072	814,24
19 x 4	26,590	993,71
27 x 4	31,539	1333,97
37 x 4	34,590	1619,48
4 x 6	17,576	460,07
5 x 6	18,748	525,06
7 x 6	19,96	599,21
10 x 6	24,4	807,25
14 x 6	26,456	979,25
19 x 6	29,240	1203,40

ОДЕССКАБЕЛЬ

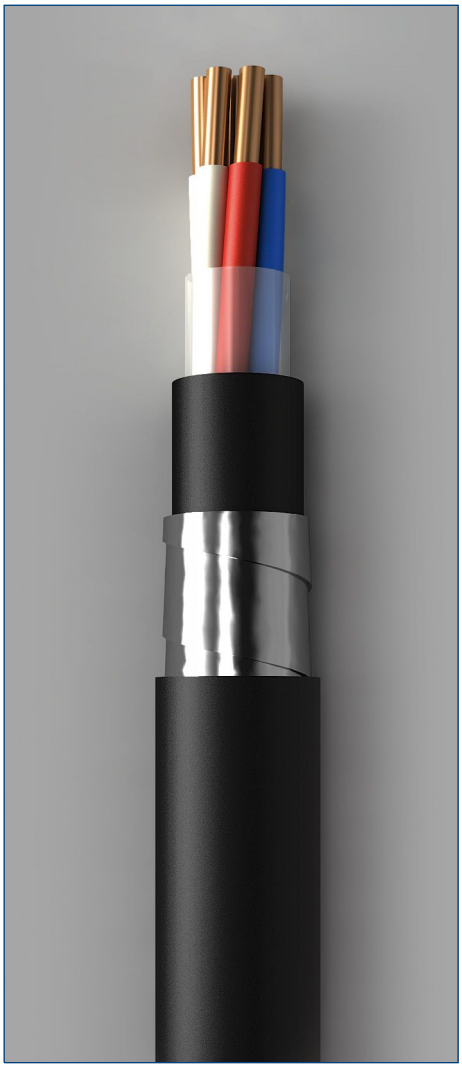
АКВБбШв
with PVC insulation, screened, in PVC jacket

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
27 x 6	34,306	1683,37
37 x 6	38,140	1978,01
4 x 10	20,372	600,62
5 x 10	21,88	696,89
7 x 10	23,840	832,76
10 x 10	29,840	1159,06
14 x 10	32,012	1392,49
19 x 10	35,040	1690,07
27 x 10	42,240	2332,08
37 x 10	47,060	2940,59

CONTROL CABLES

КВБбШв (KVBbShv) cable
with PVC insulation, screened,
in PVC jacket

ОДЕСКАБЕЛЬ



APPLICATION

The cable is designed for installation, repair and maintenance of electric distribution and control equipment, for fixed connection to electric devices, fixture assemblies of electric distributors with the rated AC voltage up to 660 V and frequency up to 100 Hz, or with DC up to 1,000 V.
For installation in buildings, ducts, tunnels and ground (trenches), also in conditions of corrosive medium and in places subjected to the impact of stray currents, provided the cable is not exposed to considerable tensions.

REQUIREMENTS COMPLIANCE

TU U 05758730.013-2000

DESIGN

- conductor: single copper wire with cross-section 0.75, 1.0, 1.5, 2.5, 4.0 or 6.0 mm^2
- conductor insulation: PVC. Insulated wires are twisted into a core.
- belt insulation: PVC
- sheath: PVC
- screen: flat steel tapes imposed spirally with overlap
- jacket: PVC

OPTIONS

It is possible to manufacture cables with belt insulation and jacket made of low flammability PVC (**КВБбШвнг** cable type) and with belt insulation and jacket made of low flammability low smoke PVC (**КВБбШвнг-LS** cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-40 °C ... +50 °C
Installation temperature	-10 °C ... +50 °C
Minimum bending radius upon installation	10 cable diameters
Minimum service life	15 years

Number of conductors	Conductor cross-section, mm^2					
	0.75	1.0	1.5	2.5	4.0	6.0
4	12,914	12,815	14,064	14,982	16,596	17,826
5	-	14,091	14,766	15,486	17,655	19,032
7	14,8	14,790	15,540	16,740	18,750	20,28
10	-	17,120	18,120	-	22,4	25,240
14	17,874	18,075	19,178	20,942	24,407	27,056
19	19,160	19,45	20,7	22,770	26,950	29,91
24	-	21,890	23,820	26,590	31,040	34,1
27	-	22,630	24,597	27,427	31,978	35,114
37	-	25,010	27,190	30,390	35,120	39,060

Estimated weight of 1 km of the КВБбШв cable, kg (reference)

Number of conductors	Conductor cross-section, mm^2					
	0.75	1.0	1.5	2.5	4.0	6.0
4	283,084	285,06	347,29	411,73	520,80	625,77
5	-	340,18	384,19	463,99	594,71	722,94
7	376,53	386,39	442,78	546,13	706,62	886,73
10	-	490,05	560,54	-	938,92	1241,97
14	540,25	562,48	663,95	852,58	1192,83	1560,05
19	631,66	667,21	798,46	1049,03	1505,13	1987,70
24	-	803,84	994,45	1327,73	1869,98	2439,61
27	-	880,16	1089,72	1458,52	2058,18	2693,50
37	-	1098,03	1367,37	1856,94	2610,54	3496,34

Estimated outer diameter of the КВБбШв cable, mm (reference)

ОДЕСКАБЕЛЬ

КГВВ
with PVC insulation and PVC sheath

APPLICATION

The cable is designed for fixed wiring of power circuits, control circuits and local lighting on machines and mechanisms with the rated AC voltage up to 660 V and frequency 50 Hz, or with DC voltage up to 1,000 V.

REQUIREMENTS COMPLIANCE

TU 16-505.665-74

DESIGN

- conductor: copper multiwire with cross-section 0.5, 0.75, 1.0, 1.5, 2.5, 4.0 or 6.0 mm^2
- conductor insulation: PVC. Insulated wires are twisted into a core.
Number of cores: 3, 4, 5, 7, 10, 14 or 19.
- belt insulation: polyamide or polyethylene terephthalate tape
- sheath: PVC

OPTIONS

It is possible to manufacture **КГВВнг** cable in a low flammability PVC sheath for installations in bunches of cables.

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-40 °C ... +50 °C
Installation temperature	-15 °C ... +50 °C
Admissible continuous temperature on cable core	+ 70 °C
Minimum bending radius upon installation	7 cable diameters
Minimum bending radius during operation	15 cable diameters
Number of bends, not more	100
Minimum service life	8 years

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
3 x 0,5	-	-
4 x 0,5	-	-
5 x 0,5	-	-
7 x 0,5	-	-
10 x 0,5	-	-
14 x 0,5	-	-
19 x 0,5	16,9	-
3 x 0,75	7,406	69,88
4 x 0,75	-	-
5 x 0,75	9,277	115,70
7 x 0,75	-	-
10 x 0,75	12,280	193,04
14 x 0,75	-	-
19 x 0,75	17,440	-
3 x 1	7,6	80,83
4 x 1	8,224	98,18
5 x 1	-	-
7 x 1	10,240	162,89
10 x 1	-	-
14 x 1	-	-
19 x 1	15,070	362,69
3 x 1,5	9,635	121,18

CONTROL CABLES

КГВВ (KGVV) cable
with PVC insulation and PVC sheath

ОДЕСКАБЕЛЬ

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
4 x 1,5	10,433	148,46
5 x 1,5	11,323	181,39
7 x 1,5	12,243	226,30
10 x 1,5	14,640	292,09
14 x 1,5	16,598	410,02
19 x 1,5	14,640	306,26
3 x 2,5	10,606	160,3
4 x 2,5	11,234	202,93
5 x 2,5	-	-
7 x 2,5	13,270	314,26
10 x2,5	-	-
14 x 2,5	-	-
19 x 2,5	20,470	767,07
3 x 4	-	-
4 x 4	13,282	288,47
5 x 4	-	-
7 x 4	-	-
10 x 4	-	-
14 x 4	-	-
19 x 4	-	-
3 x 16	-	-
4 x 16	20,870	886,05
5 x 16	-	-
7 x 16	-	-
10 x 16	-	-
14 x 16	-	-
19 x 16	-	-

ОДЕСКАБЕЛЬ

АВВГ
with PVC insulation and PVC sheath

APPLICATION

The cable is designed for power transmission and distribution in fixed plants with the rated AC voltage 0.6 or 1 kV, frequency 50 Hz.

REQUIREMENTS COMPLIANCE

TU У 31.3-05758730-024-2002, GOST 16442-80, IEC 502

DESIGN

- conductor: aluminium single- or multiwire with cross-section 2.5 ... 240.0 mm^2
- conductor insulation: PVC
- sheath: PVC

OPTIONS

It is possible to manufacture cables in a low flammability PVC sheath (**АВВГнг** cable type) and in a low flammability low smoke PVC sheath (**АВВГнг-LS** cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-50 °C ... +50 °C
Minimum installation temperature without prior heating	15 °C
Admissible continuous heating temperature of cores	+70 °C
Minimum bending radius upon installation:	
- single-core cable	10 cable diameters
- multi-core cable	7.5 cable diameters
Minimum service life	30 years

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
	АВВГ cable type with circular cores			
1x2,5 (swc)	5,38	5,78	35,35	40,19
1x4 (swc)	6,65	6,65	54,26	53,90
1x6 (swc)	6,56	7,160	55,35	64,23
1x10 (swc)	7,77	7,97	79,51	82,89
1x16 (swc)	9,31	9,51	116,45	120,50
1x25	11,305	11,505	169,0	174,03
1x35	11,940	12,140	200,84	206,16
1x50	13,383	13,583	255,37	261,31
1x70	-	15,53	-	354,777
1x95	-	17,206	-	445,30
1x120	-	18,787	-	532,90
1x150	-	20,458	-	643,04
1x185	-	23,806	-	897,04
1x240	-	25,779	-	1044,40
2x2,5 (swc)	8,36	9,76	64,38	86,90
2 x 4 (swc)	10,3	11,5	98,65	116,81
2 x 6 (swc)	11,32	12,520	119,48	138,94
2 x 10 (swc)	13,74	14,140	171,32	181,13
2 x 16 (swc)	15,62	16,020	223,65	231,79

POWER CABLES

АВВГ (AVVG) cable
with PVC insulation and PVC sheath

ОДЕСКАБЕЛЬ

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
		АВВГ cable type with circular cores		
2 x 25	20,011	20,411	347,15	357,63
2 x 35	21,28	21,68	412,38	423,41
2 x 50	24,555	24,955	546,42	559,29
2 x 70	-	28,859	-	752,38
2 x 95	-	32,212	-	942,58
2 x 120	-	34,974	-	1120,75
2 x 150	-	38,317	-	1348,42
2 x 185	-	44,611	-	1867,47
2 x 240	-	48,559	-	2171,14
3 x 2.5 (swc)	9,407	10,267	94,94	105,84
3 x 4 (swc)	10,848	12,137	121,91	145,71
3 x 6 (swc)	11,944	13,234	150,24	175,98
3 x 10 (swc)	14,546	14,976	221,04	230,90
3 x 16 (swc)	16,566	16,996	294,12	305,18
3 x 25	21,257	21,687	460,10	474,51
3 x 35	22,621	22,087	553,80	494,25
3 x 50	26,123	26,553	736,19	753,74
3 x 4 + 1 x 2.5 (swc)	11,797	13,242	141,15	168,70
3 x 6 + 1 x 4 (swc)	13,026	14,472	177,12	208,49
3 x 10 + 1 x 6 (swc)	15,942	16,424	257,02	275,82
3 x 16 + 1 x 10 (swc)	18,607	19,089	366,09	380,25
3 x 25 + 1 x 10	23,816	24,298	542,22	559,78
3 x 25 + 1 x 16	23,816	24,298	562,02	579,99
3 x 35 + 1 x 16	25,345	25,827	658,37	677,17
3 x 35 + 1 x 25	25,345	25,827	697,70	71,49
3 x 50 + 1 x 16	28,822	29,304	823,39	844,10
3 x 50 + 1 x 25	28,822	29,304	862,71	884,41
3 x 50 + 1 x 35	28,822	29,304	890,46	912,14
4 x 2.5	10,182	11,146	109,99	127,30
4 x 4	11,797	13,242	147,90	177,77
4 x 6	13,026	14,472	184,09	216,55
4 x 10	15,942	16,424	274,75	290,20
4 x 16	18,607	19,089	385,89	400,46
4 x 25	23,816	24,296	601,35	620,30
4 x 35	23,345	25,827	725,45	745,52
4 x 50	28,822	29,304	935,54	958,16
5 x 2,5	11,046	12,126	133,44	155,43
5 x 4	12,855	14,475	181,67	219,80
5 x 6	14,232	15,852	227,90	269,09
5 x 10	17,499	18,439	344,80	376,90
5 x 16	20,437	20,977	502,34	504,15
5 x 25	26,225	26,765	761,84	787,53
5 x 35	27,938	28,478	921,14	939,78
5 x 50	-	32,373	1194,82	1165,30
		АВВГ cable type with sector-shaped cores		
3 x 70	-	29,533	-	1041,68
3 x 95	-	33,405	-	1348,04
3 x 120	-	36,437	-	1617,84
3 x 150	-	39,814	-	1943,83
3 x 185	-	45,953	-	2510,80
3 x 240	-	51,745	-	3199,40
3 x 70 + 1 x 25	-	32,611	-	1172,61
3 x 70 + 1 x 35	-	32,611	-	1200,64
3 x 70 + 1 x 50	-	32,611	-	1246,35
3 x 95 + 1 x 35	-	37,390	-	1543,46
3 x 95 + 1 x 50	-	38,896	-	1597,44

ОДЕСКАБЕЛЬ

АВВГ
with PVC insulation and PVC sheath

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
		АВВГ cable type with sector-shaped cores		
3 x 95 + 1 x 70	-	37,39	-	1668,05
3 x 120 + 1 x 35	-	40,356	-	1785,35
3 x120 + 1 x 50	-	40,356	-	1831,07
3 x 120 + 1 x 70	-	40,356	-	1909,94
3 x 120 + 1 x 95	-	40,356	-	1991,67
3 x 150 + 1 x 50	-	44,167	-	2159,75
3 x 150 + 1 x 70	-	44,167	-	2238,63
3 x 150 + 1 x 95	-	44,167	-	2320,36
3 x 150 + 1 x 120	-	44,167	-	2383,65
3 x 185 + 1 x 50	-	52,068	-	2758,98
3 x 185 + 1 x 95	-	52,067	-	2837,86
3 x 185 + 1 x 95	-	52,068	-	2919,58
3 x 185 + 1 x 120	-	52,068	-	2982,87
3 x 240 + 1 x 120	-	56,681	-	3669,81
3 x 240 + 1 x 150	-	56,681	-	3767,82
3 x 240 + 1 x 70	-	56,681	-	3526,78
3 x 240 + 1 x 95	-	56,681	-	3606,52
4 x 70	-	32,611	-	1322,37
4 x 95	-	37,390	-	1754,15
4 x 120	-	40,356	-	2066,20
4 x 150	-	44,167	-	2490,99
4 x 185	-	52,068	-	3247,89
4 x 240	-	56,681	-	4130,69
5 x 70	-	36,275	-	1644,95
5 x 95	-	41,324	-	2145,06
5 x 120	-	45,131	-	2573,45
5 x 150	-	49,493	-	3105,72
5 x 185	-	58,264	-	4040,41
5 x 240		66,961	-	5322,99
		АВВГ-П cable type		
2 x 2.5 (swc)	-	-	61,08	70,76
2 x 4 (swc)	-	-	81,77	86,50
2 x 6 (swc)	-	-	101,36	119,59
2 x 10 (swc)	-	-	150,85	157,90
2 x 16 (swc)	-	-	219,51	227,91
3 x 2.5 (swc)	-	-	86,81	101,33
3 x 4 (swc)	-	-	117,88	143,14
3 x 6 (swc)	-	-	147,37	174,94
3 x 10 (swc)	-	-	222,19	232,91
3 x 16 (swc)	-	-	322,57	335,32

«П» - insulated conductors are arranged parallel
(swc) – single-wire conductors

POWER CABLES

ВВГ (VVG) cable
with PVC insulation and PVC sheath

ОДЕСКАБЕЛЬ

APPLICATION

The cable is designed for power transmission and distribution in fixed plants with the rated AC voltage 0.6 or 1 kV, frequency 50 Hz.

REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-024-2002, GOST 16442-80, IEC 502

DESIGN

- conductor: copper single- or multiwire with cross-section 1.5 ... 240.0 mm^2
- conductor insulation: PVC
- sheath: PVC

OPTIONS

It is possible to manufacture cables in a low flammability PVC sheath (**ВВГнг** cable type) and in a low flammability low smoke PVC sheath (**ВВГнг-LS** cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-50 °C ... +50 °C
Minimum installation temperature without prior heating	-15 °C
Admissible continuous heating temperature of cores	+70 °C
Minimum bending radius upon installation:	
- single-core cable	10 cable diameters
- multi-core cable	7.5 cable diameters
Minimum service life	30 years

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
	ВВГ cable type with circular cores			
ВВГ 1 x 1,5 (swc)	4,98	-	38,75	-
ВВГ 1x 2,5 (swc)	5,38	6,010	50,75	58,75
ВВГ 1 x 4 (swc)	6,050	6,65	70,28	78,52
ВВГ 1 x 6 (swc)	6,56	7,160	92,38	101,26
ВВГ 1 x 10 (swc)	7,77	7,97	141,14	144,86
ВВГ 1 x 16	9,65	-	220,50	-
ВВГ 1 x 25	11,305	11,505	327,10	335,15
ВВГ 1 x 35	11,997	12,197	421,15	427,65
ВВГ 1 x 50	13,448	13,648	549,13	556,63
ВВГ 1 x 70	-	15,346	-	777,35
ВВГ 1 x 95	-	17,206	-	1038,59
ВВГ 1 x 120	-	19,042	-	1303,42
ВВГ 1 x 150	-	20,630	-	1583,56
ВВГ 1 x 185	-	22,425	-	1935,47
ВВГ 1 x 240	-	25,562	-	2544,74
ВВГ 1 x 300	-	30,909	-	3293,97
ВВГ 1 x 400	-	34,837	-	4325,87
ВВГ 1 x 500	-	38,023	-	5262,42
ВВГ 1 x 630	-	42,757	-	6569,06

ОДЕСКАБЕЛЬ

ВВГ
with PVC insulation and PVC sheath

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
	ВВГ cable type with circular cores			
ВВГ 2 x 1,5 (swc)	7,56	8,36	71,26	81,42
ВВГ 2 x 2,5 (swc)	8,36	9,76	95,40	117,92
ВВГ 2 x 4 (swc)	10,3	11,5	148,21	168,33
ВВГ 2 x 6 (swc)	11,32	12,520	194,07	215,68
ВВГ 2 x 10 (swc)	13,740	14,140	295,44	305,92
ВВГ 2 x 16	-	-	-	-
ВВГ 2 x 25	20,011	20,411	665,56	682,34
ВВГ 2 x 35	-	21,794	-	874,05
ВВГ 2 x 50	24,697	25,097	1145,27	1160,04
ВВГ 2 x 70	-	28,492	-	1607,47
ВВГ 2 x 95	-	32,212	-	2144,95
ВВГ 2 x 120	-	35,485	-	2674,87
ВВГ 2 x 150	-	38,661	-	3253,22
ВВГ 2 x 185	-	42,250	-	3958,25
ВВГ 2 x 240	-	48,123	-	5192,06
ВВГ 3 x 1,5 (swc)	-	35,485	-	-
ВВГ 3 x 2,5 (swc)	9,407	10,267	138,47	154,08
ВВГ 3 x 4 (swc)	10,848	12,137	196,27	224,14
ВВГ 3 x 6 (swc)	11,944	13,234	262,12	290,15
ВВГ 3 x 10 (swc)	14,546	14,976	407,22	420,72
ВВГ 3 x 16	17,298	17,728	606,44	623,70
ВВГ 3 x 25	21,257	21,687	937,72	959,79
ВВГ 3 x 35	22,743	23,173	1223,77	1242,73
ВВГ 3 x 50	26,254	26,694	1629,54	1651,91
ВВГ 3 x 2,5 + 1 x 1,5 (swc)	10,182	11,146	162,14	180,98
ВВГ 3 x 4 + 1 x 2,5 (swc)	11,797	13,242	231,01	260,85
ВВГ 3 x 6 + 1 x 4 (swc)	13,026	14,472	313,78	348,13
ВВГ 3 x 10 + 1 x 6 (swc)	15,942	16,424	480,49	500,29
ВВГ 3 x 16 + 1 x 10	19,427	19,909	741,80	763,37
ВВГ 3 x 25 + 1 x 10 (swc)	23,816	-	1081,89	-
ВВГ 3 x 25 + 1 x 16	23,816	24,298	1142,10	1169,85
ВВГ 3 x 35 + 1 x 16	25,483	25,965	1432,31	1455,75
ВВГ 3 x 35 + 1 x 25	25,483	25,965	1528,28	1552,88
ВВГ 3 x 50 + 1 x 16	28,981	-	1820,03	-
ВВГ 3 x 50 + 1 x 25	28,981	29,463	1916,09	1943,70
ВВГ 3 x 50 + 1 x 35	28,981	29,463	2034,11	2006,09
ВВГ 4 x 1,5 (swc)	9,218	10,182	125,90	143,54
ВВГ 4 x 2,5 (swc)	10,182	11,146	172,04	191,23
ВВГ 4 x 4 (swc)	11,797	13,242	247,03	279,20
ВВГ 4 x 6 (swc)	13,026	14,472	333,26	368,28
ВВГ 4 x 10 (swc)	15,942	16,424	522,99	539,78
ВВГ 4 x 16	19,427	19,909	802,01	824,64
ВВГ 4 x 25	23,816	24,298	1238,17	1266,97
ВВГ 4 x 35	25,483	25,965	1618,28	1643,29
ВВГ 4 x 50	28,981	29,463	2126,23	2154,10
ВВГ 5 x 1,5 (swc)	9,966	11,046	152,90	175,12
ВВГ 5 x 2,5 (swc)	11,046	12,126	210,99	235,06
ВВГ 5x 4 (swc)	12,855	14,475	305,37	346,90
ВВГ 5 x 6 (swc)	14,232	15,852	414,36	459,17
ВВГ 5 x 10 (swc)	17,499	18,439	655,51	692,58
ВВГ 5 x 16	21,355	21,895	1006,77	1035,53
ВВГ 5 x 25	26,225	26,765	1557,88	1595,10
ВВГ 5 x 35	28,092	28,632	2024,34	2070,36
ВВГ 5 x 50	32,011	32,551	2681,53	2718,47
ВВГ-П 2 x 1,5 (swc)	-	-	61,98	75,52
ВВГ-П 2 x 2,5 (swc)	-	-	91,88	100,03
ВВГ-П 2 x 4 (swc)	-	-	131,00	145,84

POWER CABLES

ВВГ (VVG) cable
with PVC insulation and PVC sheath

ОДЕСКАБЕЛЬ

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
		ВВГ cable type with circular cores		
ВВГ-П 2 x 6 (swc)	-	-	175,43	193,65
ВВГ-П 2 x 10 (swc)	-	-	274,11	281,82
ВВГ-П 2 x 16	-	-	428,12	438,58
ВВГ-П 3 x 1,5 (swc)	-	-	97,22	110,53
ВВГ-П 3 x 2,5 (swc)	-	-	133,02	147,54
ВВГ-П 3 x 4 (swc)	-	-	191,71	216,98
ВВГ-П 3 x 6 (swc)	-	-	258,47	286,04
ВВГ-П 3 x 10 (swc)	-	-	434,97	418,79
ВВГ-П 4 x 1,5 (swc)	-	-	126,45	-
ВВГ-П 4 x 2,5 (swc)	-	-	174,15	-
		ВВГ cable type with sector-shaped cores		
ВВГ 3 x 70	-	29,130	-	2294,28
ВВГ 3 x 70 + 1 x 25	-	31,727	-	2576,87
ВВГ 3 x 70 + 1 x 35	-	31,727	-	2667,27
ВВГ 3 x 70 + 1 x 50	-	31,727	-	2787,27
ВВГ 3 x 95	-	32,825	-	3122,06
ВВГ 3 x 95 + 1 x 35	-	35,741	-	3517,21
ВВГ 3 x 95 + 1 x 50	-	35,741	-	3637,21
ВВГ 3 x 95 + 1 x 70	-	35,741	-	3844,01
ВВГ 3 x 120	-	36,007	-	3857,67
ВВГ 3 x 120 + 1 x 35	-	39,325	-	4235,24
ВВГ 3 x 150 + 1 x 50	-	39,325	-	4355,24
ВВГ 3 x 120 + 1 x 70	-	39,325	-	4562,04
ВВГ 3 x 120 + 1 x 95	-	39,325	-	4816,34
ВВГ 3 x 150	-	39,904	-	4750,72
ВВГ 3 x 150 + 1 x 50	-	42,911	-	5211,29
ВВГ 3 x 150 + 1 x 70	-	42,911	-	5418,10
ВВГ 3 x 150 + 1 x 95	-	42,911	-	5672,39
ВВГ 3 x 150 + 1 x 120	-	42,911	-	5908,32
ВВГ 3 x 185	-	45,953	-	5992,35
ВВГ 3 x 185 + 1 x 50	-	52,068	-	6537,30
ВВГ 3 x 185 + 1 x 70	-	52,068	-	6744,11
ВВГ 3 x 185 +1 x 95	-	52,068	-	6988,40
ВВГ 3 x 185 + 1 x 120	-	52,068	-	7234,33
ВВГ 3 x 240	-	51,745	-	7786,69
ВВГ 3 x 240 + 1 x 70	-	56,681	-	8534,87
ВВГ 3 x 240 + 1 x 95	-	56,681	-	8789,16
ВВГ 3 x 240 + 1 x 120	-	56,681	-	9025,09
ВВГ 3 x 240 + 1 x 150	-	56,681	-	9298,80
ВВГ 4 x 50	-	26,391	-	2128,98
ВВГ 4 x 70	-	31,727	-	2983,85
ВВГ 4 x 95	-	35,741	-	4094,75
ВВГ 4 x 120	-	39,325	-	5039,47
ВВГ 4 x 150	-	42,911	-	6168,22
ВВГ 4 x 185	-	52,068	-	7889,73
ВВГ 4 x 240	-	56,681	-	10244,29
ВВГ 5 x 70	-	34,969	-	3714,57
ВВГ 5 x 95	-	39,678	-	5079,52
ВВГ 5 x 120	-	43,644	-	6253,48
ВВГ 5 x 150	-	48,510	-	7751,24
ВВГ 5 x 185	-	58,264	-	9842,92
ВВГ 5 x 240	-	66,961	-	12968,46

«П» - insulated conductors are arranged parallel
(swc) – single-wire conductors

ОДЕСКАБЕЛЬ

ВВГз
with PVC insulation, filling and PVC sheath

APPLICATION

The cable is designed for power transmission and distribution in fixed plants with the rated AC voltage 0.6 or 1 kV, frequency 50 Hz.
For installations in dry and damp working areas, on special cable bridges, in blocks, and out-of-doors.
For power supply of electricity generating plants which require sealing of the cables upon lead-in.

REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-024-2002, GOST 16442-80, IEC 502

DESIGN

- conductor: copper single- or multiwire with cross-section 1.5 ... 240.0 mm^2
- conductor insulation: PVC
- filling: PVC or unvulcanized rubber compound
- sheath: PVC

OPTIONS

It is possible to manufacture cables in a low flammability PVC sheath (**ВВГзнг** cable type) and in a low flammability low smoke PVC sheath (**ВВГзнг-LS** cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-50 °C ... +50 °C
Minimum installation temperature without prior heating	-15°C
Admissible continuous heating temperature of cores	+70°C
Minimum bending radius upon installation:	
- single-core cable	10 cable diameters
- multi-core cable	7.5 cable diameters
Minimum service life	30 years

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
	ВВГз cable type with circular cores			
ВВГз 2 x 1,5 (swc)	7,56	8,36	86,59	100,76
ВВГз 2 x 2,5 (swc)	-	-	-	-
ВВГз 2 x 4 (swc)	-	-	-	-
ВВГз 2 x 6 (swc)	-	-	-	-
ВВГз 2 x 10 (swc)	-	-	-	-
ВВГз 2 x 16	-	16,7	-	552,16
ВВГз 2 x 25	-	20,411	-	845,99
ВВГз 2 x 35	-	21,794	-	1065,80
ВВГз 2 x 50	-	25,097	-	1415,46
ВВГз 3 x 1,5 (swc)	7,947	-	104,15	-
ВВГз 3 x 2,5 (swc)	9,407	-	159,47	-
ВВГз 3 x 4 (swc)	10,848	-	221,02	-
ВВГз 3 x 6 (swc)	11,944	13,234	294,28	329,20
ВВГз 3 x 10 (swc)	-	14,976	-	495,62
ВВГз 3 x 16	-	17,728	-	706,16
ВВГз 3 x 25	-	21,687	-	1087,37
ВВГз 3 x 35	-	23,173	-	1392,32
ВВГз 3 x 50	-	26,694	-	1856,51
ВВГз 3 x 2,5 + 1 x 1,5 (swc)	-	11,146	-	199,49

POWER CABLES

ВВГз (VVGz) cable
with PVC insulation, filling and PVC sheath

ОДЕСКАБЕЛЬ

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
		ВВГз cable type with circular cores		
ВВГз 3 x 4 + 1 x 2,5 (swc)	-	13,242	-	290,79
ВВГз 3 x 6 + 1 x 4 (swc)	-	-	-	-
ВВГз 3 x 10 + 1 x 6 (swc)	-	-	-	-
ВВГз 3 x 16 + 1 x 10	-	-	-	-
ВВГз 3 x 25 + 1 x 10 (swc)	-	-	-	-
ВВГз 3 x 25 + 1 x 16	-	23,816	-	1294,56
ВВГз 3 x 35 + 1 x 16	25,483	25,965	1603,69	1600,73
ВВГз 3 x 35 + 1 x 25	-	25,965	-	1697,86
ВВГз 3 x 50 + 1 x 16	-	-	-	-
ВВГз 3 x 50 + 1 x 25	-	-	-	-
ВВГз 3 x 50 + 1 x 35	-	29,463	-	2233,17
ВВГз 4 x 1,5 (swc)	-	10,182	-	157,50
ВВГз 4 x 2,5 (swc)	-	11,146	-	209,73
ВВГз 4 x 4 (swc)	-	13,242	-	309,14
ВВГз 4 x 6 (swc)	-	14,472	-	406,16
ВВГз 4 x 10 (swc)	-	16,424	-	592,23
ВВГз 4 x 16	-	19,909	-	904,35
ВВГз 4 x 25	-	24,298	-	1438,23
ВВГз 4 x 35	-	25,965	-	1788,27
ВВГз 4 x 50	-	29,463	-	2353,17
ВВГз 5 x 1,5 (swc)	9,966	-	165,26	-
ВВГз 5 x 2,5 (swc)	11,046	-	227,48	-
ВВГз 5x 4 (swc)	12,855	-	330,35	-
ВВГз 5 x 6 (swc)	14,232	-	446,81	-
ВВГз 5 x 10 (swc)	-	-	-	-
ВВГз 5 x 16	-	-	-	-
ВВГз 5 x 25	-	-	-	-
ВВГз 5 x 35	-	-	-	-
ВВГз 5 x 50	-	-	-	-
ВВГз 5 x 95	-	45,517	-	5220,79
ВВГз 5 x 120	-	46,834	-	6898,67
ВВГз 5 x 150	-	51,122	-	8456,29

ОДЕСКАБЕЛЬ

АВБбШв
with PVC insulation and PVC jacket, screened

APPLICATION

The cable is designed for power transmission and distribution in fixed plants with the rated AC voltage 0.6 or 1 kV, frequency 50 Hz.

REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-024-2002, GOST 16442-80, IEC 502

DESIGN

- conductor: aluminium single- or multiwire with cross-section 2.5 ... 240.0 mm^2
- conductor insulation: PVC
- belt insulation: PVC
- screen: flat steel tapes imposed spirally with overlap
- jacket: PVC

OPTIONS

It is possible to manufacture cables in a low flammability PVC sheath (АВБбШвнг cable type) and in a low flammability low smoke PVC sheath (АВБбШвнг-LS cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-50 °C ... +50 °C
Minimum installation temperature without prior heating	-15°C
Admissible continuous heating temperature of cores	+ 70°C
Minimum bending radius upon installation:	
- single-core cable	10 cable diameters
- multi-core cable	7.5 cable diameters
Minimum service life	30 years

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
	АВБбШв cable type with circular cores			
1 x 16 (swc)	14,110	14,310	331,05	341,61
1 x 25	16,105	16,305	422,54	434,61
1 x 35	16,74	16,940	466,78	479,28
1 x 50	18,183	18,383	549,46	554,67
1 x 70	-	20,330	-	683,53
1 x 95	-	22,006	-	808,20
1 x 120	-	23,187	-	901,71
1 x 150	-	25,258	-	1066,32
2 x 2.5	13,760	14,56	283,85	312,95
2 x 4 (swc)	15,1	16,3	332,56	377,28
2 x 6	16,120	17,32	373,31	419,59
2 x 10 (swc)	18,540	18,940	467,70	482,72
2 x 16 (swc)	20,420	20,820	556,11	571,93
2 x 25	24,411	24,811	738,35	756,14
2 x 35	26,080	26,480	851,48	870,21
2 x 50	28,965	29,365	1019,28	1039,28
2 x 70	-	33,259	-	1303,80
2 x 95	-	37,012	-	1590,61
2 x 120	-	39,374	-	1783,01

POWER CABLES

АВБбШв (AVBbShv) cable

with PVC insulation and PVC jacket, screened

ОДЕСКАБЕЛЬ

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
		АВБбШв cable type with circular cores		
2 x 150	-	42,717	-	2072,17
3 x 2.5 (swc)	14,207	15,067	308,42	341,92
3 x 4 (swc)	15,547	16,938	366,52	418,79
3 x 6	16,744	18,034	416,25	462,65
3 x 10 (swc)	19,346	19,776	532,88	551
3 x 16 (swc)	21,367	21,797	644,76	664,07
3 x 25	26,057	26,487	898,75	921,43
3 x 35	27,421	27,851	1018,71	1042,24
3 x 50	20,523	30,953	1237,41	1262,85
3 x 4 + 1 x 2.5	16,596	18,043	404,28	455,53
3 x 6 + 1 x 4	17,826	19,272	459,79	519,36
3 x 10 + 1 x 6	20,742	21,224	595,66	620,80
3 x 16 + 1 x 10 (swc)	23,007	23,489	731,61	754,59
3 x 25 + 1 x 10	28,216	-	1001,13	-
3 x 25 + 1 x 16	28,216	28,698	1020,93	1047,74
3 x 35 + 1 x 16	29,745	30,227	1145,34	1172,98
3 x 35 + 1 x 25	29,745	30,227	1184,66	1213,29
3 x 50 + 1 x 16	33,222	33,704	1374,13	1403,69
3 x 50 + 1 x 25	33,222	33,704	1413,46	1444,00
3 x 50 + 1 x 35	33,222	33,704	1441,21	1472,03
4 x 2,5 (swc)	14,982	15,946	341,61	380,56
4 x 4 (swc)	16,596	18,043	411,03	464,60
4 x 6 (swc)	17,826	19,272	466,76	526,98
4 x 10 (swc)	20,742	21,224	613,39	635,18
4 x 16 (swc)	23,007	23,489	751,42	774,80
4 x 25	28,216	28,698	1060,26	1088,05
4 x 35	29,745	30,227	1212,41	1241,32
4 x 50	33,222	33,704	1486,29	1517,74
5 x 2,5 (swc)	15,846	-	381,92	-
5 x 4 (swc)	17,655	-	456,45	-
5 x 6 (swc)	19,032	-	533,72	-
5 x 10 (swc)	22,299	-	713,33	-
5 x 16 (swc)	25,237	-	907,85	-
5 x 25	30,625	-	1264,93	-
5 x 35	32,338	-	1455,66	-
5 x 50	36,633	-	1835,54	-
		АВБбШв cable type with sector-shaped cores		
3 x 70	-	33,933	-	1605,45
3 x 70 + 1 x 25	-	37,011	-	1792,86
3 x 70 + 1 x 35	-	37,011	-	1820,89
3 x 70 + 1 x 50	-	37,011	-	1866,60
3 x 95	-	38,205	-	2019,10
3 x 95 + 1 x 35	-	41,790	-	2250,16
3 x 95 + 1 x 50	-	41,790	-	2295,87
3 x 95 + 1 x 70	-	41,790	-	2374,75
3 x 120	-	40,837	-	2307,00
3 x 120 + 1 x 35	-	44,356	-	2504,11
3 x 120 + 1 x 50	-	44,356	-	2549,83
3 x 120 + 1 x 70	-	44,356	-	2628,70
3 x 150	-	44,214	-	2695,11
3 x 150 + 1 x 50	-	48,967	-	3037,64
3 x150 + 1 x 70	-	48,967	-	3116,52
3 x 150 + 1 x 95	-	48,967	-	3198,24
3 x 185	-	-	-	-
3 x 185 + 1 x 50	-	-	-	-
3 x 185 + 1 x 70	-	-	-	-

ОДЕСКАБЕЛЬ

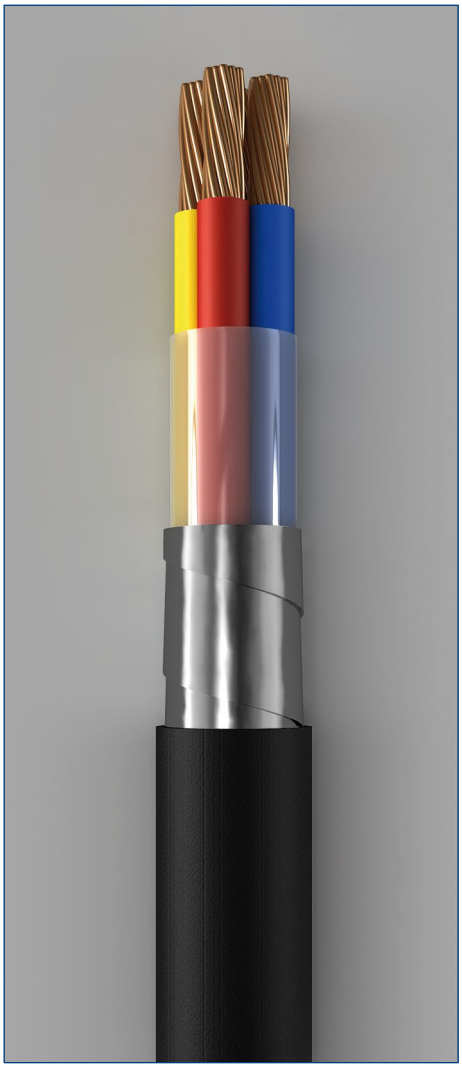
АВБбШв
with PVC insulation and PVC jacket, screened

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
	АВБбШв cable type with sector-shaped cores			
3 x 185 + 1 x 95	-	-	-	-
3 x 240	-	-	-	-
3 x 240 + 1 x 70	-	-	-	-
3 x 240 + 1 x 95	-	-	-	-
3 x 240 + 1 x 120	-	-	-	-
4 x 70	-	37,011	-	1975,47
4 x 95	-	41,790	-	2460,85
4 x 120	-	44,756	-	2827,46
4 x 150	-	48,967	-	3368,88
4 x 185	-	-	-	-
4 x 240	-	-	-	-
5 x 70	-	40,675	-	2331,14
5 x 95	-	45724	-	2924,12
5 x 120	-	49,531	-	3421,74
5 x 150	-	53,893	-	4034,37
5 x 185	-	-	-	-
5 x 240	-	-	-	-

POWER CABLES

ВБбШв (VBbShv) cable
with PVC insulation and PVC jacket, screened

ОДЕСКАБЕЛЬ



APPLICATION

The cable is designed for power transmission and distribution in fixed plants with the rated AC voltage 0.6 or 1 kV, frequency 50 Hz.

REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-024-2002, GOST 16442-80, IEC 502

DESIGN

- conductor: copper single- or multiwire with cross-section 1.5 ... 240.0 mm^2
- conductor insulation: PVC
- belt insulation: PVC
- screen: flat steel tapes imposed spirally with overlap
- jacket: PVC

OPTIONS

It is possible to manufacture cables in a low flammability PVC sheath (**ВБбШвнг** cable type) and in a low flammability low smoke PVC sheath (**ВБбШвнг-LS** cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-50 °C ... +50 °C
Minimum installation temperature without prior heating	-15 °C
Admissible continuous heating temperature of cores	+ 70 °C
Minimum bending radius upon installation:	
- single-core cable	10 cable diameters
- multi-core cable	7.5 cable diameters
Minimum service life	30 years

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
	ВБбШв cable type with circular cores	
1 x 16 -1	14,65	453,39
1 x 25 -1	16,305	593,78
1 x 35 -1	16,997	701,91
1 x 50 -1	18,448	851,26
1 x 70 -1	20,146	1104,56
1 x 95 -1	22,006	1401,49
1 x 120 -1	23,442	1673,07
1 x 150 -1	25,430	2010,16
2 x 2,5 (swc) -1	14,56	347,73
2 x 6 (swc) -1	17,320	499,19
2 x 10 (swc) -1	18,940	613,27
2 x 16 -1	21,5	803,44
2 x 25 -1	25,211	1108,99
2 x 35 -1	26,594	1327,65
2 x 50 -1	29,497	1647,09
2 x 70 -1	32,892	2157,51
2 x 95 -1	37,012	2799,11
2 x 120 -1	39,885	3352,33
2 x 150 -1	43,061	3989,68
3 x 1,5 (swc) -1	14,207	335,91

ОДЕСКАБЕЛЬ

ВБбШв
with PVC insulation and PVC jacket, screened

Cable size	Outer dimensions of the cable, mm (reference)	Cable weight, kg/km (reference)
	ВБбШв cable type with circular cores	
3 x 2,5 (swc) -1	15,067	392,45
3 x 4 (swc) -1	16,938	497,98
3 x 4 + 1 x 2,5 (swc) -1	18,043	550,74
3 x 6 (swc) -1	18,034	579,87
3 x 6 + 1 x 4 (swc) -1	19,272	661,93
3 x 10 (swc) -1	19,776	744,32
3 x 6 + 1 x 4 (swc) - 1	21,4	725
3 x 10 + 1 x 6 (swc) - 1	21,224	852,07
3 x 16 -1	22,528	1000,84
3 x 16,0 + 1 x 10,0 - 1	24,309	1156,87
3 x 25 -1	26,487	1411,30
3 x 25 + 1 x 10 -1	28,698	1580,80
3 x 25 + 1 x 16 - 1	28,698	1642,08
3 x 35 -1	27,973	1723,20
3 x 35 + 1 x 16 - 1	30,365	1958,90
3 x 35 +1 x 25 -1	30,365	2056,03
3 x 50 -1	31,094	2168,59
3 x 50 + 1 x 25 -1	33,863	2511,74
4 x 1,5 (swc) -1	14,982	380,20
4 x 2,5 (swc) -1	15,946	447,20
4 x 4 (swc) - 1	18,043	569,08
4 x 6 (swc) - 1	19,272	682,06
4 x 10 (swc) - 1	21,224	891,55
4 x 16 - 1	24,709	1233,32
4 x 25 - 1	28,698	1739,20
4 x 35 - 1	30,365	2146,43
4 x 50 -1	33,863	2722,15
5 x 2,5 (swc) -1	16,926	510,68
5 x 4 (swc) -1	19,275	660,76
5 x 6 (swc) -1	20,652	799,82
5 x 10 (swc) -1	22,839	1058,85
5 x 16 -1	26,695	1482
5 x 25 - 1	31,165	2113,09
5 x 35 -1	33,032	2622,98
5 x 50 -1	33,951	3072,08
	ВБбШв cable type with sector-shaped cores	
3 x 70 -1	33,53	2850,68
3 x 70 + 1 x 25 -1	36,527	3215,54
3 x 70 + 1 x 35 -1	36,527	3305,95
3 x 95 -1	37,625	3781,93
3 x 95 + 1 x 35 -1	40,941	4463,86
3 x 95 + 1 x 50 -1	40,141	4313,57
3 x 120 -1	40,407	4554,08
3 x 120 + 1 x 70 -1	43,725	5321,02
3 x 150 -1	44,304	5520,59
3 x 150 + 1 x 70 -1	47,711	6289,97
3 x 185 + 1 x 95 -1	53,812	8351,47
4 x 70 -1	36,527	3622,53
4 x 95 -1	40,141	4771,12
4 x 120 -1	43,725	5798,45
4 x 150 - 1	47,711	7040,10
4 x 240 -1	61,081	11305,39
5 x 70 -1	39,369	4376,73
5 x 95 -1	44,078	5828,32
5 x 120 -1	48,444	7139,87
5 x 150 -1	52,910	8682,52

(swc) – single-wire conductors
«1» – rated AC voltage up to 1 kV
«0.66» – rated AC voltage up to 0.66 kV

POWER CABLES

АПвВГ (APvVGP) cable
with PE insulation and PVC sheath

ОДЕСКАБЕЛЬ

APPLICATION

The cable is designed for power transmission and distribution in fixed plants with the rated AC voltage 0.6 or 1 kV, frequency 50 Hz.

REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-024-2002, GOST 16442-80, IEC 502

DESIGN

- conductor: aluminium single- or multiwire with cross-section 2.5 ... 240.0 mm^2
- conductor insulation: vulcanized polyethylene
- sheath: PVC

OPTIONS

It is possible to manufacture cables in a low flammability PVC sheath (**АПвВГнг** cable type) and in a low flammability low smoke PVC sheath (**АПвВГнг-LS** cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	- 50 °C ... + 70 °C
Minimum installation temperature without prior heating	- 15 °C
Admissible continuous heating temperature of cores	+ 90 °C
Minimum bending radius upon installation:	
- single-core cable	10 cable diameters
- multi-core cable	7.5 cable diameters
Minimum service life	30 years

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
	АПвВГ cable type with circular cores			
1 x 2,5 (swc)	5,52	5,52	34,56	34,56
1 x 4 (swc)	5,99	5,99	41,95	41,95
1 x 6 (swc)	6,44	6,44	49,91	49,91
1 x 10 (swc)	7,2	7,2	65,30	65,30
1 x 16 (swc)	8,120	8,120	87,21	87,21
1 x 25	10,905	10,905	152,25	152,25
1 x 35	11,54	11,540	182,91	182,91
1 x 50	12,783	12,783	228,39	228,39
1 x 70	-	14,93	-	319,56
1 x 95	-	16,406	-	400,80
1 x 120	-	17,787	-	474,31
1 x 150	-	20,058	-	390,971
2 x 2,5 (swc)	9,24	9,24	74,88	74,88
2 x 4 (swc)	10,180	10,180	91,0	91,0
2 x 6 (swc)	11,080	11,080	108,21	108,21
2 x 10 (swc)	12,6	12,6	141,20	41,20
2 x 16 (swc)	14,440	14,440	187,74	187,74
2 x 25	19,211	19,211	312,74	312,74
2 x 35	20,480	20,480	375,58	375,58

ОДЕССКАБЕЛЬ

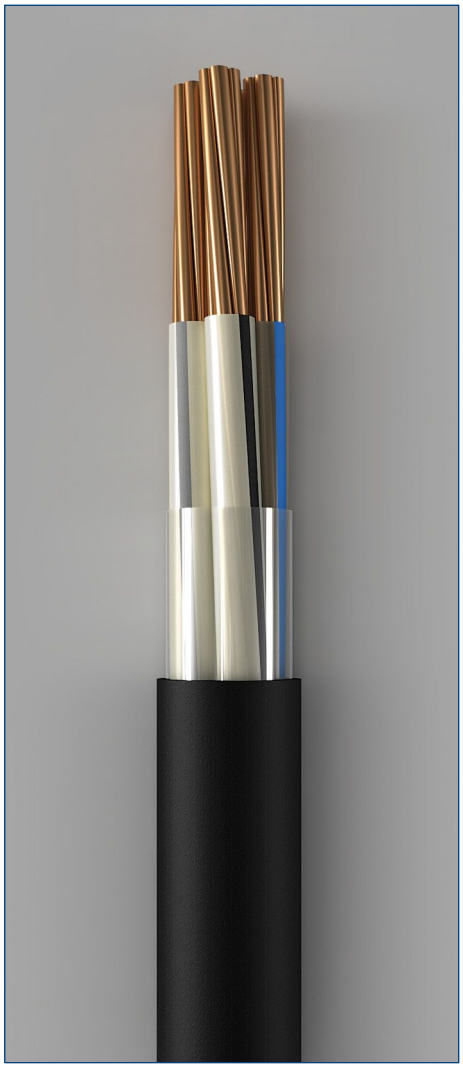
АПвВГ
with PE insulation and PVC sheath

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
		АПвВГ cable type with circular cores		
2 x 50	22,965	22,965	469,30	469,30
3 x 2,5 (swc)	9,708	9,708	89,30	89,30
3 x 4 (swc)	10,718	10,718	110,79	110,79
3 x 4 + 1 x 2,5 (swc)	11,652	11,652	128,37	128,37
3 x 6 (ож)	11,686	11,686	134,02	134,02
3 x 6 + 1 x 4 (swc)	12,736	12,736	157,27	157,27
3 x 10 (swc)	13,32	13,32	179,14	179,14
3 x10 + 1 x 6 (swc)	14,568	14,568	209,29	209,29
3 x 16 (ож)	15,298	15,298	243,66	243,66
3 x 16 + 1 x 10 (swc)	16,785	16,785	286,78	286,78
3 x 25	20,397	20,397	411,09	411,09
3 x 25 + 1 x 16	22,452	22,452	476,95	476,95
3 x 35	21,761	21,761	501,21	501,21
3 x 35 + 1 x 16	-	24,381	-	590,15
3 x 35 + 1 x 25	24,381	24,381	629,30	629,30
3 x 50	24,833	24,833	655,91	655,91
3 x 50 + 1 x 25	27,376	27,376	766,95	766,95
3 x 50 + 1 x 35	27,376	27,376	793,51	793,51
4 x 2,5 (swc)	10,519	10,519	106,05	106,05
4 x 4 (swc)	11,652	11,652	133,25	133,25
4 x 6 (swc)	12,736	12,736	162,83	162,83
4 x 10 (swc)	14,568	14,568	220,65	220,65
4 x 16 (swc)	16,785	16,785	303,83	303,83
4 x 25	22,452	22,452	516,10	516,10
4 x 35	24,381	24,381	655,85	655,85
4 x 50	27,376	27,376	830,84	830,84
5 x 2,5 (swc)	11,424	11,424	128,44	128,44
5 x 4 (swc)	12,693	12,693	163,13	163,13
5 x 6 (swc)	13,908	13,908	201,14	201,14
5 x 10 (swc)	15,96	15,960	275,01	275,01
5 x 16 (swc)	18,844	18,844	398,80	398,80
5 x 25	25,145	25,145	678,21	678,21
5 x 35	26,858	26,858	831,88	831,88
5 x 50	30,213	-	1058,83	-
		АПвВГ cable type with sector-shaped cores		
3 x 70	-	28,237	-	920,67
3 x 70 + 1 x 25	-	31,261	-	1028,71
3 x 70 + 1 x 35	-	31,261	-	1055,27
3 x 95	-	31,677	-	1183,30
3 x 95 + 1 x 50	-	35,590	-	1398,14
3 x 120	-	35,141	-	1448,22
3 x 120 + 1 x 70	-	39,006	-	1724,49
3 x 150	-	38,950	-	1785,27
3 x 150 + 1 x 70	-	43,267	-	2054,31
4 x 70	-	31,261	-	1158,66
4 x 95	-	35,590	-	1542,72
4 x 120	-	39,006	-	1862,87
4 x 150	-	43,267	-	2287,59
4 x 185	-	56,064	-	3125,96
4 x 240	-	-	-	-
5 x 70	-	34,865	-	1451,99
5 x 95	-	39,444	-	1883,09
5 x 120	-	43,321	-	2279,87
5 x 150	-	48,553	-	2850,39
5 x 240	-	-	-	-

POWER CABLES

ПвВГ (PvVG) cable
in PE insulation and PVC sheath

ОДЕСКАБЕЛЬ



APPLICATION

The cable is designed for power transmission and distribution in fixed plants with the rated AC voltage 0.6 or 1 kV, frequency 50 Hz.

REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-024-2002, GOST 16442-80, IEC 502

DESIGN

- conductor: copper single- or multiwire with cross-section 2.5 ... 630.0 mm^2
- conductor insulation: vulcanized polyethylene
- sheath: PVC

OPTIONS

It is possible to manufacture cables in a low flammability PVC sheath (**ПвВГнг** cable type) and in a low flammability low smoke PVC sheath (**ПвВГнг-LS** cable type).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	- 50 °C ... + 70 °C
Minimum installation temperature without prior heating	- 15 °C
Admissible continuous heating temperature of cores	+ 90 °C
Minimum bending radius upon installation:	
- single-core cable	10 cable diameters
- multi-core cable	7.5 cable diameters
Minimum service life	30 years

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
	ПвВГ cable type with circular cores			
1 x 2,5 (swc)	5,58	5,58	50,85	50,85
1 x 4 (swc)	6,050	6,050	67,58	67,58
1 x 6 (swc)	6,560	6,560	89,21	89,21
1 x 10 (swc)	7,37	7,37	131,04	131,04
1 x 16	9,250	9,250	206,40	206,40
1 x 25	10,905	10,905	308,10	307,00
1 x 35	11,597	11,597	400,64	399,44
1 x 50	12,848	12,848	518,62	517,08
1 x 70	-	14,476	-	736,73
1 x 95	-	16,406	-	984,51
1 x 120	-	18,442	-	1244,17
1 x 150	-	21,950	-	1539,86
1 x 240	-	25,162	-	2477,07
1 x 630	-	40,757	-	6260,66
2 x 2,5 (swc)	9,36	9,36	107,85	107,85
2 x 4 (swc)	10,3	10,3	142,77	142,77
2 x 6 (swc)	11,320	11,320	187,68	187,68
2 x 10 (swc)	12,940	12,940	274,05	274,05
2 x 16	15,5	15,5	404,80	406,17

ОДЕССКАБЕЛЬ

ПвВГ
in PE insulation and PVC sheath

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
		ПвВГ cable type with circular cores		
2 x 25	19,211	19,211	626,62	628,28
2 x 35	20,594	20,594	814,19	815,94
2 x 50	23,097	23,097	1053,94	1055,57
2 x 70	-	27,292	-	1527,15
2 x 95	-	30,612	-	2032,84
2 x 120	-	34,285	-	2560,83
2 x 150	-	41,3	-	3159,83
3 x 2,5 (swc)	9,837	9,837	138,42	138,42
3 x 2,5 + 1 x 1,5 (swc)	10,664	10,664	161,66	161,66
3 x 4 (swc)	10,848	10,848	188,09	188,09
3 x 4 + 1 x 2,5 (swc)	11,797	11,797	221,86	221,86
3 x 6 (swc)	11,944	11,944	252,53	252,53
3 x 6 + 1 x 4 (swc)	13,026	13,026	301,47	301,47
3 x 10 (swc)	13,685	13,685	377,43	377,43
3 x 10 + 1 x 6 (swc)	14,978	14,978	446,80	446,80
3 x 16	16,438	16,438	566,20	567,07
3 x 16 + 1 x 10 (swc)	18,463	18,463	692,00	693,66
3 x 25	20,397	20,397	881,91	882,73
3 x 25 + 1 x 16	22,452	22,452	1052,72	1053,31
3 x 35	22,283	21,883	1178,67	1159,58
3 x 35 + 1 x 16	24,519	24,519	1352,88	1354,14
3 x 35 + 1 x 25	24,519	24,519	1444,02	1444,86
3 x 50	24,974	24,974	1532,56	1533,62
3 x 50 + 1 x 25	-	27,535	-	1801,28
3 x 50 + 1 x 35	27,535	27,535	1889,18	1889,65
4 x 1,5 (swc)	9,7	9,7	126,02	126,02
4 x 2,5 (swc)	10,664	10,664	171,36	171,36
4 x 4 (swc)	11,797	11,797	236,14	236,14
4 x 6 (swc)	13,026	13,026	320,48	320,48
4 x 10 (swc)	14,978	14,978	484,51	484,51
4 x 16	18,463	18,463	748,72	749,70
4 x 25	22,452	22,452	1143,86	1144,03
4 x 35	24,519	24,519	1532,50	1533,24
4 x 50	27,535	27,535	1999,47	1999,60
5 x 1,5 (swc)	10,506	10,506	153,19	153,19
5 x 2,5 (swc)	11,586	11,586	210,28	210,28
5 x 4 (swc)	12,855	12,855	291,75	291,75
5 x 6 (swc)	14,232	14,232	393,38	393,38
5 x 10 (swc)	16,419	16,419	605,64	605,64
5 x 16	20,275	20,275	938,65	939,35
5 x 25	25,145	25,145	1462,32	1462,54
5 x 35		27,012		1927,68
		ПвВГ cable type with sector-shaped cores		
3 x 50 + 1 x 25	-	-	-	-
3 x 70	-	27,834	-	2175,33
3 x 70 + 1 x 35	-	30,377	-	2527,74
3 x 95	-	31,097	-	2943,91
3 x 95 + 1 x 50	-	33,541	-	3401,37
3 x 120	-	34,711	-	3681,89
3 x 120 + 1 x 70	-	37,795	-	4359,67
3 x 150	-	39,040	-	4569,03
3 x 150 + 1 x 70	-	42,011	-	5235,38
3 x 185 + 1 x 95	-	-	-	-
3 x 240 + 1 x 120	-	-	-	-
4 x 50	-	-	-	-

ПвВГ (PvVG) cable
in PE insulation and PVC sheath

ОДЕСКАБЕЛЬ

Cable size	Outer dimensions of the cable, mm (reference)		Cable weight, kg/km (reference)	
	0.66 kV	1 kV	0.66 kV	1 kV
		ПвВГ cable type with sector-shaped cores		
4 x 70	-	30,377	-	-
4 x 95	-	33,541	-	2834,60
4 x 120	-	37,975	-	3842,64
4 x 150	-	42,011	-	4818,30
4 x 185	-	56,618	-	5971,67
4 x 240	-	55,781	-	7633,32
5 x 50	-	-	-	9898,09
5 x 70	-	-	-	-
5 x 95	-	-	-	-
5 x 120	-	-	-	-
5 x 150	-	-	-	-
5 x 185	-	-	-	-
5 x 240	-	-	-	-

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

ОДЕСКАБЕЛЬ

АПвП, ПвП for 10 kV voltage

Single-core power cables with copper and aluminium conductors, with cross-linked PE insulation and PE sheath

APPLICATION

The cables are designed for power transmission and distribution in fixed plants with 10 kV rated AC voltage, frequency 50 Hz, for networks with earthed and insulated neutral.
For installation in ground (trenches), provided the cable is protected from mechanical impacts, regardless of the degree of the ground corrosive activity.
Aerial installation of these cables is allowed, including laying in cable structures, with additional fire protection, for example application of flame-retardant coats.
For installation on routes with unlimited difference of elevation.

REQUIREMENTS COMPLIANCE

TU 16.K71-335-2004

DESIGN

1. Conductor: compacted circular copper or aluminium multiwire with cross-section 50 ... 630.0 mm^2.
2. Semiconducting screen: cross-linked polyethylene compound along the conductor.
3. Insulation: cross-linked polyethylene.
4. Semiconducting screen: cross-linked polyethylene compound along the insulation.
5. A layer of a semiconducting tape.
6. Screen: copper wires fastened with a copper tape.
7. Sheath: polyethylene compound.

OPTIONS

It is possible to manufacture cables with sealing elements **(АПвПг, ПвПг),** with an additional alumopolymer tape over the sealed screen **(АПвП2г, ПвП2г),** with additional sealing of conductors with waterblocking yarns **(АПвП2гж, ПвП2гж)**.

MAIN OPERATIONAL CHARACTERISTICS

Environment temperature during operation	+ 50 °C ... - 60 °C
Admissible continuous heating temperature of cores	+ 90 °C
Admissible maximum heating temperature of cores during faults	+ 250 °C
Admissible maximum heating temperature of the copper screen during faults	+ 350 °C
Admissible maximum heating temperature of cores during faults (not exceeding 5 seconds) for the cables' flame-resistance	+ 400 °C
Admissible heating temperature of cores in emergency operation	+130 °C
Emergency operation time should not exceed 8 hours per day and 1,000 hours during the cables' service life period	
Installation of the cable without prior heating should be carried out at a temperature not less than	- 15 °C
Minimum bending radius upon installation	20 cable diameters
Warranty lifetime	5 years from the date of installation, but not more than 8 years from the production date

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

АПвП, ПвП (APvP, PvP) cables for 10 kV voltage

Single-core power cables with copper and aluminium conductors,
with cross-linked PE insulation and PE sheath

ОДЕСКАБЕЛЬ

OUTER DIAMETER AND ESTIMATED WEIGHT OF THE CABLES

Nominal cross-section of conductor/screen	Outer diameter, mm	Weight of 1 km of the cable, kg	
		Aluminium conductor	Copper conductor
50/16	25,3	659	968
70/16	26,8	748	1181
70/25	-	-	-
70/35	-	-	-
95/16	28,4	853	1441
95/25	-	-	-
95/35	-	-	-
120/16	30,2	957	1699
120/25	-	-	-
120/35	-	-	-
120/50	-	-	-
150/25	31,8	1153	2081
150/35	-	-	-
150/50	-	-	-
185/25	33,6	1286	2431
185/35	-	-	-
185/50	-	-	-
240/25	35,8	1486	2972
240/35	-	-	-
240/50	-	-	-
300/25	38,3	1701	3558
300/35	-	-	-
300/50	-	-	-
300/70	-	-	-
400/35	41,9	2136	4612
400/50	-	-	-
400/70	-	-	-
400/95	-	-	-
500/35	44,7	2471	5566
500/50	-	-	-
500/70	-	-	-
500/95	-	-	-
630/35	-	-	-
630/50	-	-	-
630/70	-	-	-
630/95	-	-	-

ALLOWABLE CURRENT LOAD, A

Nominal conductor cross-section	Ground installation				Aerial installation			
	Aluminium conductor		Copper conductor		Aluminium conductor		Copper conductor	
	triangle	in-plane	triangle	in-plane	triangle	in-plane	triangle	in-plane
50	170	195	225	250	185	225	240	290
70	210	240	275	310	230	280	300	360
95	253	263	326	336	300	349	387	448
120	288	298	370	380	346	403	445	515
150	322	329	413	416	392	452	503	574
185	364	371	466	466	450	518	577	654
240	422	426	537	531	531	607	677	762
300	476	477	604	590	609	693	776	865
400	541	525	677	633	710	787	891	959
500	614	587	759	697	822	900	1025	1081
630	695	653	848	762	954	1026	1166	1213

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

ОДЕСКАБЕЛЬ

АПвПу, ПвПу for 10 kV voltage

Single-core power cables with copper and aluminium conductors, with cross-linked PE insulation and reinforced PE sheath

APPLICATION

The cables are designed for power transmission and distribution in fixed plants with 10 kV rated AC voltage, frequency 50 Hz, for networks with earthed and insulated neutral.
For installation in ground (trenches), provided the cable is protected from mechanical impacts, regardless of the degree of the ground corrosive activity.
For installation along routes with complicated configuration.
Aerial installation of these cables is allowed, including laying in cable structures, with additional fire protection, for example application of flame-retardant coats.
For installation on routes with unlimited difference of elevation.

REQUIREMENTS COMPLIANCE

TU 16.K71-335-2004

DESIGN

1. Conductor: compacted circular copper or aluminium multiwire with cross-section 50 ... 630.0 mm^2.
2. Semiconducting screen: cross-linked polyethylene compound along the conductor.
3. Insulation: cross-linked polyethylene.
4. Semiconducting screen: cross-linked polyethylene compound along the insulation.
5. A layer of a semiconducting tape.
6. Screen: copper wires fastened with a copper tape.
7. Sheath: polyethylene compound.

OPTIONS

It is possible to manufacture cables with sealing elements (**АПвПуг, ПвПуг**), with an additional alumopolymer tape over the sealed screen (**АПвПу2г, ПвПу2г**), with additional sealing of conductors with waterblocking yarns (**АПвПу2гж, ПвПу2гж**).

MAIN OPERATIONAL CHARACTERISTICS

Environment temperature during operation	+ 50 °C ... - 60 °C
Admissible continuous heating temperature of cores	+ 90 °C
Admissible maximum heating temperature of cores during faults	+ 250 °C
Admissible maximum heating temperature of the copper screen during faults	+ 350 °C
Admissible maximum heating temperature of cores during faults (not exceeding 5 seconds) for the cables' flame-resistance	+ 400 °C
Admissible heating temperature of cores in emergency operation	+130 °C
Emergency operation time should not exceed 8 hours per day and 1,000 hours during the cables' service life period	
Installation of the cable without prior heating should be carried out at a temperature not less than	- 15 °C
Minimum bending radius upon installation	20 cable diameters
Warranty lifetime	5 years from the date of installation, but not more than 8 years from the production date

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

АПвПу, ПвПу (APvPu, PvPu) cables for 10 kV voltage

Single-core power cables with copper and aluminium conductors,
with cross-linked PE insulation and reinforced PE sheath

ОДЕСКАБЕЛЬ

OUTER DIAMETER AND ESTIMATED WEIGHT OF THE CABLES

Nominal cross-section of conductor/screen	Outer diameter, mm	Weight of 1 km of the cable, kg	
		Aluminium conductor	Copper conductor
50/16	26,3	697	1007
70/16	27,8	789	1222
70/25	-	-	-
70/35	-	-	-
95/16	29,4	896	1485
95/25	-	-	-
95/35	-	-	-
120/16	31,2	1003	1746
120/25	-	-	-
120/35	-	-	-
120/50	-	-	-
150/25	32,8	1201	2130
150/35	-	-	-
150/50	-	-	-
185/25	34,6	1337	2482
185/35	-	-	-
185/50	-	-	-
240/25	36,8	1541	3026
240/35	-	-	-
240/50	-	-	-
300/25	39,3	1759	3616
300/35	-	-	-
300/50	-	-	-
300/70	-	-	-
400/35	42,9	2200	4676
400/50	-	-	-
400/70	-	-	-
400/95	-	-	-
500/35	45,7	2539	5634
500/50	-	-	-
500/70	-	-	-
500/95	-	-	-
630/35	49,3	2999	6898
630/50	-	-	-
630/70	-	-	-
630/95	-	-	-

ALLOWABLE CURRENT LOAD, A

Nominal conductor cross-section	Ground installation				Aerial installation			
	Aluminium conductor		Copper conductor		Aluminium conductor		Copper conductor	
	triangle	in-plane	triangle	in-plane	triangle	in-plane	triangle	in-plane
50	170	195	225	250	185	225	240	290
70	210	240	275	310	230	280	300	360
95	253	263	326	336	300	349	387	448
120	288	298	370	380	346	403	445	515
150	322	329	413	416	392	452	503	574
185	364	371	466	466	450	518	577	654
240	422	426	537	531	531	607	677	762
300	476	477	604	590	609	693	776	865
400	541	525	677	633	710	787	891	959
500	614	587	759	697	822	900	1025	1081
630	695	653	848	762	954	1026	1166	1213

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

ОДЕСКАБЕЛЬ

АПвВ, ПвВ for 10 kV voltage

Single-core power cables with copper and aluminium conductors, with cross-linked PE insulation and PVC sheath

APPLICATION

The cables are designed for power transmission and distribution in fixed plants with 10 kV rated AC voltage, frequency 50 Hz, for networks with earthed and insulated neutral.
For single installation in cable structures and working areas.
It is also possible to install these cables in dry grounds (sand, argillo-arenaceous and normal soils with humidity not less than 14%).
For installation on routes with unlimited difference of elevation.

REQUIREMENTS COMPLIANCE

TU 16.K71-335-2004

DESIGN

1. Conductor: compacted circular copper or aluminium multiwire with cross-section 50 ... 630.0 mm^2.
2. Semiconducting screen: cross-linked polyethylene compound along the conductor.
3. Insulation: cross-linked polyethylene.
4. Semiconducting screen: cross-linked polyethylene compound along the insulation.
5. A layer of a semiconducting tape.
6. Screen: copper wires fastened with a copper tape.
7. Sheath: PVC.

MAIN OPERATIONAL CHARACTERISTICS

Environment temperature during operation	+ 50 °C ... - 60 °C
Admissible continuous heating temperature of cores	+ 90 °C
Admissible maximum heating temperature of cores during faults	+ 250 °C
Admissible maximum heating temperature of the copper screen during faults	+ 350 °C
Admissible maximum heating temperature of cores during faults (not exceeding 5 seconds) for the cables' flame-resistance	+ 400 °C
Admissible heating temperature of cores in emergency operation	+130 °C
Emergency operation time should not exceed 8 hours per day and 1,000 hours during the cables' service life period	
Installation of the cable without prior heating should be carried out at a temperature not less than	- 15 °C
Minimum bending radius upon installation	20 cable diameters
Warranty lifetime	5 years from the date of installation, but not more than 8 years from the production date

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

АПвВ, ПвВ (APvV, PvV) cables for 10 kV voltage

Single-core power cables with copper and aluminium conductors,
with cross-linked PE insulation and PVC sheath

ОДЕСКАБЕЛЬ

OUTER DIAMETER AND ESTIMATED WEIGHT OF THE CABLES

Nominal cross-section of conductor/screen	Outer diameter, mm	Weight of 1 km of the cable, kg	
		Aluminium conductor	Copper conductor
50/16	25,3	787	1096
70/16	26,8	885	1318
70/25	-	-	-
70/35	-	-	-
95/16	28,4	999	1587
95/25	-	-	-
95/35	-	-	-
120/16	30,2	1113	1856
120/25	-	-	-
120/35	-	-	-
120/50	-	-	-
150/25	31,8	1318	2246
150/35	-	-	-
150/50	-	-	-
185/25	33,6	1461	2606
185/35	-	-	-
185/50	-	-	-
240/25	35,8	1674	3159
240/35	-	-	-
240/50	-	-	-
300/25	38,3	1903	3760
300/35	-	-	-
300/50	-	-	-
300/70	-	-	-
400/35	41,9	2358	4834
400/50	-	-	-
400/70	-	-	-
400/95	-	-	-
500/35	44,7	2708	5803
500/50	-	-	-
500/70	-	-	-
500/95	-	-	-
630/35	48,3	3203	7102
630/50	-	-	-
630/70	-	-	-
630/95	-	-	-

ALLOWABLE CURRENT LOAD, A

Nominal conductor cross-section	Ground installation				Aerial installation			
	Aluminium conductor		Copper conductor		Aluminium conductor		Copper conductor	
	triangle	in-plane	triangle	in-plane	triangle	in-plane	triangle	in-plane
50	170	195	225	250	185	225	240	290
70	210	240	275	310	230	280	300	360
95	253	263	326	336	300	349	387	448
120	288	298	370	380	346	403	445	515
150	322	329	413	416	392	452	503	574
185	364	371	466	466	450	518	577	654
240	422	426	537	531	531	607	677	762
300	476	477	604	590	609	693	776	865
400	541	525	677	633	710	787	891	959
500	614	587	759	697	822	900	1025	1081
630	695	653	848	762	954	1026	1166	1213

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

ОДЕСКАБЕЛЬ

АПвВнг-LS, ПвВнг-LS for 10 kV voltage

Single-core power cables with copper and aluminium conductors, with cross-linked PE insulation and flame-retardant PVC sheath

APPLICATION

The cables are designed for power transmission and distribution in fixed plants with 10 kV rated AC voltage, frequency 50 Hz, for networks with earthed and insulated neutral.
For group installation of cable lines in cable structures and working areas.
These cable can also be installed in explosive zones of **B-I, B-Ia (ПвВнг-LS), B-Iб, B-Iг, B-II, B-IIa (АПвВнг-LS)** classes.
For installation on routes with unlimited difference of elevation.

REQUIREMENTS COMPLIANCE

TU 16.K71-335-2004

DESIGN

1. Conductor: compacted circular copper or aluminium multiwire with cross-section 50 ... 630.0 mm^2.
2. Semiconducting screen: cross-linked polyethylene compound along the conductor.
3. Insulation: cross-linked polyethylene.
4. Semiconducting screen: cross-linked polyethylene compound along the insulation.
5. A layer of a semiconducting tape.
6. Screen: copper wires fastened with a copper tape.
7. Separating layer: at least one coat of glass fiber tape (nominal thickness 0.2 mm) with at least 30% overlap.
8. Inner sheath: flame-retardant PVC.
9. Thermal barrier: copper or aluminium tape (nominal thickness 0.15 mm) with at least 30% overlap.
10. Sheath: flame-retardant PVC.

MAIN OPERATIONAL CHARACTERISTICS

Environment temperature during operation	+ 50 °C ... - 60 °C
Admissible continuous heating temperature of cores	+ 90 °C
Admissible maximum heating temperature of cores during faults	+ 250 °C
Admissible maximum heating temperature of the copper screen during faults	+ 350 °C
Admissible maximum heating temperature of cores during faults (not exceeding 5 seconds) for the cables' flame-resistance	+ 400 °C
Admissible heating temperature of cores in emergency operation	+130 °C
Emergency operation time should not exceed 8 hours per day and 1,000 hours during the cables' service life period	
Installation of the cables without prior heating should be carried out at a temperature not less than	- 15 °C
Minimum bending radius upon installation	20 cable diameters
Warranty lifetime	5 years from the date of installation, but not more than 8 years from the production date

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

АПвВнг-LS, ПвВнг-LS (APvVng, PvVng) for 10 kV voltage

Single-core power cables with copper and aluminium conductors,
with cross-linked PE insulation and flame-retardant PVC sheath

ОДЕСКАБЕЛЬ

OUTER DIAMETER AND ESTIMATED WEIGHT OF THE CABLES

Nominal cross-section of conductor/screen	Outer diameter, mm	Weight of 1 km of the cable, kg	
		Aluminium conductor	Copper conductor
50/16	26,3	697	1007
70/16	27,8	789	1222
70/25	-	-	-
70/35	-	-	-
95/16	29,4	896	1485
95/25	-	-	-
95/35	-	-	-
120/16	31,2	1003	1746
120/25	-	-	-
120/35	-	-	-
120/50	-	-	-
150/25	32,8	1201	2130
150/35	-	-	-
150/50	-	-	-
185/25	34,6	1337	2482
185/35	-	-	-
185/50	-	-	-
240/25	36,8	1541	3026
240/35	-	-	-
240/50	-	-	-
300/25	39,3	1759	3616
300/35	-	-	-
300/50	-	-	-
300/70	-	-	-
400/35	42,9	2200	4676
400/50	-	-	-
400/70	-	-	-
400/95	-	-	-
500/35	45,7	2539	5634
500/50	-	-	-
500/70	-	-	-
500/95	-	-	-
630/35	49,3	2999	6898
630/50	-	-	-
630/70	-	-	-
630/95	-	-	-

ALLOWABLE CURRENT LOAD, A

Nominal conductor cross-section	Ground installation				Aerial installation			
	Aluminium conductor		Copper conductor		Aluminium conductor		Copper conductor	
	triangle	in-plane	triangle	in-plane	triangle	in-plane	triangle	in-plane
50	170	195	225	250	185	225	240	290
70	210	240	275	310	230	280	300	360
95	253	263	326	336	300	349	387	448
120	288	298	370	380	346	403	445	515
150	322	329	413	416	392	452	503	574
185	364	371	466	466	450	518	577	654
240	422	426	537	531	531	607	677	762
300	476	477	604	590	609	693	776	865
400	541	525	677	633	710	787	891	959
500	614	587	759	697	822	900	1025	1081
630	695	653	848	762	954	1026	1166	1213

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

ОДЕСКАБЕЛЬ

АПвПг, ПвПг for 10 kV voltage

Single-core power cables with copper and aluminium conductors, with cross-linked PE insulation and PE sheath

APPLICATION

The cables are designed for power transmission and distribution in fixed plants with Uo/U(Um) 6/10(12) kV rated AC voltage, frequency 50 Hz, for networks with earthed and insulated neutral.
Uo – rated voltage between the conductor and earth (insulated neutral) for which the cable is designed for;
U – rated voltage between conductors;
Um – maximum main voltage value allowing usage of the cable.

For installation in grounds (tranches) with high corrosive activity and heightened humidity.
Installation is also allowed:
– on routes with unlimited difference of elevation;
– in the air with protection against solar radiation;
– in cable structures with additional fireproofing.

REQUIREMENTS COMPLIANCE

TU U 31.3-20006134-041:2008

DESIGN

1. Conductor: compacted circular copper or aluminium multiwire with cross-section 50 ... 625 mm^2.
2. Semiconducting screen: cross-linked polyethylene compound along the conductor.
3. Insulation: cross-linked polyethylene.
4. Semiconducting screen: cross-linked polyethylene compound along the insulation.
5. A layer of a semiconducting tape.
6. Screen: copper wires fastened with a copper tape.
7. Separating layer: water-blocking tape.
8. Sheath: polyethylene compound.

MAIN OPERATIONAL CHARACTERISTICS

Environment temperature during operation	+ 50 °C ... - 60 °C
Admissible continuous heating temperature of cores	+ 90 °C
Admissible maximum heating temperature of cores during faults	+ 250 °C
Admissible maximum heating temperature of the copper screen during faults	+ 350 °C
Admissible maximum heating temperature of cores during faults (not exceeding 5 seconds) for the cables' flame-resistance	+ 400 °C
Admissible heating temperature of cores in emergency operation	+130 °C
Emergency operation time should not exceed 8 hours per day and 1,000 hours during the cables' service life period	
Installation of the cables without prior heating should be carried out at a temperature not less than	- 15 °C
Minimum bending radius upon installation	20 cable diameters
Warranty lifetime	5 years from the date of installation, but not more than 8 years from the production date

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

АПвПг, ПвПг (APvPg, PvPg) cables for 10 kV voltage

Single-core power cables with copper and aluminium conductors,
with cross-linked PE insulation and PE sheath

ОДЕСКАБЕЛЬ

OUTER DIAMETER AND ESTIMATED WEIGHT OF THE CABLES

Nominal cross-section of conductor/screen	Outer diameter, mm	Weight of 1 km of the cable, kg	
		Aluminium conductor	Copper conductor
50/16	28	648,30	939,45
70/16	29	786,70	1178,14
70/25	29	865,92	1257,24
70/35	29	972,63	1363,78
95/16	31	873,37	1448,90
95/25	31	952,71	1528,17
95/35	31	1059,58	1634,94
120/16	33	992,17	1707,47
120/25	33	1071,72	1786,89
120/35	33	1178,88	1893,88
120/50	33	1313,06	2022,12
150/25	34	1188,89	2074,18
150/35	34	1256,28	2181,38
150/50	34	1425,00	2309,88
185/25	36	1334,22	-
185/35	36	1441,91	-
185/50	36	1570,98	-
240/25	38	1561,74	-
240/35	38	1669,94	-
240/50	38	1799,62	-
300/25	40	-	-
300/35	40	-	-
300/50	40	-	-
300/70	40	-	-
400/35	44	-	-
400/50	44	-	-
400/70	44	-	-
400/95	44	-	-
500/35	47	-	-
500/50	47	-	-
500/70	47	-	-
500/95	47	-	-
625/35	50	-	-
625/50	50	-	-
625/70	50	-	-
625/95	50	-	-

ALLOWABLE CURRENT LOAD, A

Nominal conductor cross-section	Ground installation				Aerial installation			
	Aluminium conductor		Copper conductor		Aluminium conductor		Copper conductor	
	triangle	in-plane	triangle	in-plane	triangle	in-plane	triangle	in-plane
50	177	187	229	241	185	211	242	288
70	217	229	280	295	233	263	300	355
95	260	274	335	354	284	322	369	428
120	296	312	381	402	328	372	423	496
150	331	349	426	448	370	421	473	558
185	375	395	483	508	424	484	543	631
240	436	459	561	591	504	575	643	742
300	492	497	635	640	580	674	740	840
400	561	562	722	725	676	770	842	934
500	639	632	823	814	784	868	953	1047
625	722	696	930	897	915	1050	1113	1150

*** Technical characteristics of the ПвПг, АПвПг cables are analogue to those of the ПвЭгП, АПвЭгП cables**

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

ОДЕСКАБЕЛЬ

АПвВг, ПвВг for 10 kV voltage

Single-core power cables with copper and aluminium conductors, with cross-linked PE insulation and PVC sheath

The cables are designed for power transmission and distribution in fixed plants with Uo/U(Um) 6/10(12) kV rated AC voltage, frequency 50 Hz, for networks with earthed and insulated neutral.
Uo – rated voltage between the conductor and earth (insulated neutral) for which the cable is designed for;
U – rated voltage between conductors;
Um – maximum main voltage value allowing usage of the cable.

For instullation in dry grounds, premises, ducts and tunnels.
Installation is also allowed on routes with unlimited difference of elevation.

REQUIREMENTS COMPLIANCE

TU U 31.3-20006134-041:2008

DESIGN

1. Conductor: compacted circular copper or aluminium multiwire with cross-section 50 ... 625 mm^2.
2. Semiconducting screen: cross-linked polyethylene compound along the conductor.
3. Insulation: cross-linked polyethylene.
4. Semiconducting screen: cross-linked polyethylene compound along the insulation.
5. A layer of a semiconducting tape.
6. Screen: copper wires fastened with a copper tape.
7. Separating layer: water-blocking tape.
8. Sheath: PVC

OPTIONS

It is possible to manufacture cables in fire-retardant PVC sheath **(АПвВгнг, ПвВгнг** cable types**)** and in fire-retardant, low smoke and low corrosion-active gases emission PVC sheath **(АПвВгнгд, ПвВгнгд** cable types**)**

MAIN OPERATIONAL CHARACTERISTICS

Environment temperature during operation	+50 °C ... - 60 °C
Admissible continuous heating temperature of cores	+ 90 °C
Admissible maximum heating temperature of cores during faults	+ 250 °C
Admissible maximum heating temperature of copper screen during faults	+ 350 °C
Admissible maximum heating temperature of cores during faults (not exceeding 5 seconds) for the cables' flame resistance	+ 400 °C
Admissible temperature of cores in emergency operation	+ 130 °C
Emergency operation time should not exceed 8 hours per day and 1,000 hours during the cables' service life	
Installation of the cables without prior heating should be carried out at a temperature not less than	- 15 °C
Minimum bending radius upon installation	not less than 20 cable diameters
Warranty lifetime	5 years from the date of installation, but not more than 8 years from the production date

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

АПвВг (APvVg), ПвВг (PvVg) for 10 kV voltage

Single-core power cables with copper and aluminium conductors,
with cross-linked PE insulation and PVC sheath

ОДЕСКАБЕЛЬ

OUTER DIAMETER AND ESTIMATED WEIGHT OF THE CABLES

Nominal cross-section of conductor/screen	Outer diameter, mm	Weight of 1 km of the cable, kg	
		Aluminium conductor	Copper conductor
50/16	28	735,06	1026,46
70/16	29	884,69	1271,48
70/25	29	965,56	1352,23
70/35	29	1072,27	1458,78
95/16	31	975,54	1548,44
95/25	31	1056,52	1629,36
95/35	31	1163,39	1736,12
120/16	33	1101,21	1812,37
120/25	33	1182,40	1893,44
120/35	33	1289,56	2000,42
120/50	33	1419,50	2161,89
150/25	34	1304,73	2185,90
150/35	34	1412,11	2293,11
150/50	34	1542,33	2423,10
185/25	36	1456,43	-
185/35	36	1564,12	2737,01
185/50	36	1694,69	2867,58
240/25	38	1694,10	-
240/35	38	1802,30	-
240/50	38	1933,48	-
300/25	40	1910,38	-
300/35	40	-	-
300/50	40	-	-
300/70	40	2328,01	-
400/35	44	-	-
400/50	44	-	-
400/70	44	2405,94	-
400/95	44	-	-
500/35	47	-	-
500/50	47	-	-
500/70	47	-	-
500/95	47	-	-
625/35	50	-	-
625/50	50	-	-
625/70	50	-	-
625/95	50	-	-

ALLOWED CURRENT LOAD, A

Nominal conductor cross-section	Ground installation				Aerial installation			
	Aluminium conductor		Copper conductor		Aluminium conductor		Copper conductor	
	triangle	in-plane	triangle	in-plane	triangle	in-plane	triangle	in-plane
50	177	187	229	241	185	211	242	288
70	217	229	280	295	233	263	300	355
95	260	274	335	354	284	322	369	428
120	296	312	381	402	328	372	423	496
150	331	349	426	448	370	421	473	558
185	375	395	483	508	424	484	543	631
240	436	459	561	591	504	575	643	742
300	492	497	635	640	580	674	740	840
400	561	562	722	725	676	770	842	934
500	639	632	823	814	784	868	953	1047
625	722	696	930	897	915	1050	1113	1150

*** Technical characteristics of the ПвПг (PvPg), АПвПг (APvPg) cables are analogue to those of ПвЭгП (PvEgP), АПвЭгП (APvEgP) cables**

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

ОДЕСКАБЕЛЬ

АПвПга, ПвПга for 10 kV voltage

Single-core power cables with copper and aluminium conductors, cross-linked PE insulation, in PE sheath with lengthwise and crosswise water-blocking sealing

APPLICATION

The cables are designed for power transmission and distribution in fixed plants with Uo/U(Um) 6/10(12) kV rated AC voltage, frequency 50 Hz, for networks with earthed and insulated neutral.
Uo – rated voltage between the conductor and earth (insulated neutral) for which the cable is designed for;
U – rated voltage between conductors;
Um – maximum main voltage value allowing usage of the cable.

For installation in grounds with hightened humidity and in damp or partially flooded premises.
Installation is also allowed:
– on routes with unlimited difference of elevation;
– in the air with protection against solar radiation;
– in cable structures with additional fireproofing.

REQUIREMENTS COMPLIANCE

TU U 31.3-20006134-041:2008

DESIGN

1. Conductor: compacted circular copper or aluminium multiwire with cross-section 50 ... 625 mm^2.
2. Semiconducting screen: cross-linked polyethylene compound along the conductor.
3. Insulation: cross-linked polyethylene.
4. Semiconducting screen: cross-linked polyethylene compound along the insulation.
5. A layer of a semiconducting tape.
6. Screen: copper wires fastened with a copper tape.
7. Separating layer: water-blocking tape.
8. Aluminium polyethylene tape (nominal thickness no less than 0.1 mm).
9. Sheath: polyethylene compound.

OPTIONS

It is possible to manufacture cables with reinforced sheath **(АПвПгау, ПвПгау** cable types**)**

MAIN OPERATIONAL CHARACTERISTICS

Environment temperature during operation	+ 50 °C ... - 60 °C
Admissible continuous heating temperature of cores	+ 90 °C
Admissible maximum heating temperature of cores during faults	+ 250 °C
Admissible maximum heating temperature of copper screen during faults	+ 350 °C
Admissible maximum heating temperature of cores during faults (not exceeding 5 seconds) for the cables' flame resistance	+ 400 °C
Admissible temperature of cores in emergency operation	+ 130 °C
Emergency operation time should not exceed 8 hours per day and 1,000 hours during the cables' service life	
Installation of the cables without prior heating should be carried out at a temperature not less than	- 15 °C
Minimum bending radius upon installation	not less than 20 cable diameters
Warranty lifetime	5 years from the date of installation, but not more than 8 years from the production date

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

АПвПга (APvPga), ПвПга (PvPga) for 10 kV voltage

Single-core power cables with copper and aluminium conductors, cross-linked PE insulation, in PE sheath with lengthwise and crosswise water-blocking sealing

ОДЕСКАБЕЛЬ

OUTER DIAMETER AND ESTIMATED WEIGHT OF THE CABLES

Nominal cross-section of conductor/screen	Outer diameter, mm	Weight of 1 km of the cable, kg	
		Aluminium conductor	Copper conductor
50/16	28	685,66	976,81
70/16	29	828,39	1217,67
70/25	29	907,62	1296,77
70/35	29	1014,32	1403,30
95/16	31	912,90	1490,60
95/25	31	994,40	1572,03
95/35	31	1101,28	1678,80
120/16	33	1038,20	1751,33
120/25	33	1117,75	1830,75
120/35	33	1224,90	1937,73
120/50	33	1355,52	2068,14
150/25	34	1234,91	2120,20
150/35	34	1342,30	2227,40
150/50	34	1471,02	2355,91
185/25	36	1386,74	1494,42
185/35	36	1494,42	-
185/50	36	1623,50	-
240/25	38	1616,42	-
240/35	38	1724,62	-
240/50	38	1854,31	-
300/25	40	-	-
300/35	40	1937,60	-
300/50	40	-	-
300/70	40	-	-
400/35	44	-	-
400/50	44	-	-
400/70	44	-	-
400/95	44	-	-
500/35	47	-	-
500/50	47	-	-
500/70	47	-	-
500/95	47	-	-
625/35	50	-	-
625/50	50	-	-
625/70	50	-	-
625/95	50	-	-

ALLOWED CURRENT LOAD, A

Nominal conductor cross-section	Ground installation				Aerial installation			
	Aluminium conductor		Copper conductor		Aluminium conductor		Copper conductor	
	triangle	in-plane	triangle	in-plane	triangle	in-plane	triangle	in-plane
50	177	187	229	241	185	211	242	288
70	217	229	280	295	233	263	300	355
95	260	274	335	354	284	322	369	428
120	296	312	381	402	328	372	423	496
150	331	349	426	448	370	421	473	558
185	375	395	483	508	424	484	543	631
240	436	459	561	591	504	575	643	742
300	492	497	635	640	580	674	740	840
400	561	562	722	725	676	770	842	934
500	639	632	823	814	784	868	953	1047
625	722	696	930	897	915	1050	1113	1150

*** Technical characteristics of the ПвПг (PvPg) and АПвПг (APvPg) cables are analogue to those of ПвЭгП (PvEgP) and АПвЭгП (APvEgP) types**

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

ОДЕСКАБЕЛЬ

АПвВга, ПвВга for 10 kV voltage

Single-core power cables with copper and aluminium conductors, cross-linked PE insulation, in PVC sheath with lengthwise and crosswise water-blocking sealing

APPLICATION

The cables are designed for power transmission and distribution in fixed plants with Uo/U(Um) 6/10(12) kV rated AC voltage, frequency 50 Hz, for networks with earthed and insulated neutral.
Uo – rated voltage between the conductor and earth (insulated neutral) for which the cable is designed for;
U – rated voltage between conductors;
Um – maximum main voltage value allowing usage of the cable.

For instullation in dry grounds, premises, ducts and tunnels.
Installation is also allowed on routes with unlimited difference of elevation.

REQUIREMENTS COMPLIANCE

TU U 31.3-20006134-041:2008

DESIGN

1. Conductor: compacted circular copper or aluminium multiwire with cross-section 50 ... 625 mm^2.
2. Semiconducting screen: cross-linked polyethylene compound along the conductor.
3. Insulation: cross-linked polyethylene.
4. Semiconducting screen: cross-linked polyethylene compound along the insulation.
5. A layer of a semiconducting tape.
6. Screen: copper wires fastened with a copper tape.
7. Separating layer: water-blocking tape.
8. Aluminium polyethylene tape (nominal thickness no less than 0.1 mm).
9. Sheath: PVC.

OPTIONS

It is possible to manufacture cables in fire-retardant PVC sheath **(АПвВганг (APvVgang), ПвВганг (PvVgang)** cable types**)** and in fire-retardant, low smoke and low corrosion-active gases emission PVC sheath **(АПвВгангд (APvVgangd), ПвВгангд (PvVgangd)** cable types**)**

MAIN OPERATIONAL CHARACTERISTICS

Environment temperature during operation	+ 50 °C ... - 60 °C
Admissible continuous heating temperature of cores	+ 90°C
Admissible maximum heating temperature of cores during faults	+250°C
Admissible maximum heating temperature of copper screen during faults	+350°C
Admissible maximum heating temperature of cores during faults (not exceeding 5 seconds) for the cables' flame resistance	+400°C
Admissible temperature of cores in emergency operation	+130°C
Emergency operation time should not exceed 8 hours per day and 1,000 hours during the cables' service life	
Installation of the cables without prior heating should be carried out at a temperature not less than	-15°C
Minimum bending radius upon installation	not less than 20 cable diameters
Warranty lifetime	5 years from the date of installation, but not more than 8 years from the production date

POWER CABLES WITH CROSS-LINKED POLYETHYLENE INSULATION

АПвВга (APvVga), ПвВга (PvVga) for 10 kV voltage

Single-core power cables with copper and aluminium conductors, cross-linked PE insulation, in PVC sheath with lengthwise and crosswise water-blocking sealing

ОДЕСКАБЕЛЬ

OUTER DIAMETER AND ESTIMATED WEIGHT OF THE CABLES

Nominal cross-section of conductor/screen	Outer diameter, mm	Weight of 1 km of the cable, kg	
		Aluminium conductor	Copper conductor
50/16	28	773,77	1065,16
70/16	29	927,73	1312,35
70/25	29	1008,59	1393,10
70/35	29	1115,30	1499,63
95/16	31	1020,74	1591,48
95/25	31	1101,72	1674,56
95/35	31	1208,60	1781,32
120/16	33	1148,58	1857,57
120/25	33	1229,77	1938,64
120/35	33	1336,93	2045,62
120/50	33	1466,87	2177,52
150/25	34	1354,26	2233,27
150/35	34	1461,65	2340,47
150/50	34	1591,86	2470,47
185/25	36	1508,13	-
185/35	36	1615,81	-
185/50	36	1748,55	-
240/25	38	1752,29	-
240/35	38	1860,49	-
240/50	38	1991,67	-
300/25	40	-	-
300/35	40	-	-
300/50	40	-	-
300/70	40	-	-
400/35	44	-	-
400/50	44	-	-
400/70	44	-	-
400/95	44	-	-
500/35	47	-	-
500/50	47	-	-
500/70	47	-	-
500/95	47	-	-
625/35	50	-	-
625/50	50	-	-
625/70	50	-	-
625/95	50	-	-

ALLOWED CURRENT LOAD, A

Nominal conductor cross-section	Ground installation				Aerial installation			
	Aluminium conductor		Copper conductor		Aluminium conductor		Copper conductor	
	triangle	in-plane	triangle	in-plane	triangle	in-plane	triangle	in-plane
50	177	187	229	241	185	211	242	288
70	217	229	280	295	233	263	300	355
95	260	274	335	354	284	322	369	428
120	296	312	381	402	328	372	423	496
150	331	349	426	448	370	421	473	558
185	375	395	483	508	424	484	543	631
240	436	459	561	591	504	575	643	742
300	492	497	635	640	580	674	740	840
400	561	562	722	725	676	770	842	934
500	639	632	823	814	784	868	953	1047
625	722	696	930	897	915	1050	1113	1150

INSULATED WIRES FOR AERIAL LINES

ОДЕСКАБЕЛЬ

АВКАПс
with cross-linked black polyethylene sheath

APPLICATION

The wire is designed for power transmission and distribution in power and lighting networks with the nominal AC voltage up to 380 V, frequency 50 Hz.
Outdoor installation for lead-in into buildings and utility structures in ice coating areas 1 and 2.

REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-056:2007

DESIGN

1. Conductor: inner single aluminium wire with cross-section 16.0 mm^2
2. Inner conductor insulation: PVC
3. Outer concentric conductor: aluminium wires
4. Sheath: black cross-linked PE

MAIN OPERATIONAL CHARACTERISTICS

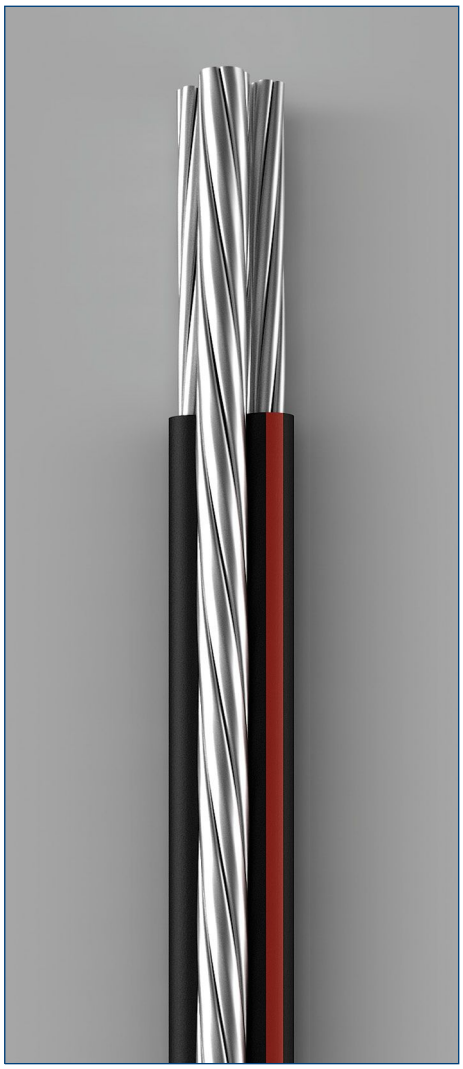
Operation temperature	-50°C ... +50°C
Minimum bending radius upon installation	10 wire diameters
Minimum service life	25 years

Wire size	Rated outer diameter of the wire, mm (reference)	Wire weight, kg/km (reference)
АВКАПс 16/16	11,5	158

INSULATED AND PROTECTED SELF-SUPPORTING WIRES

СИП-1 (SIP-1), СИП-2 (SIP-2)
with black cross-linked PE insulation

ОДЕСКАБЕЛЬ



APPLICATION

The wire is designed for backbone overhead power lines and their linear branches.
For nominal voltage 0,6/1kV, frequency 50 Hz.

REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-048:2007

DESIGN

1. Conductor: compacted aluminium multiwire with cross-section 16.0 ... 240.0 mm^2
2. Conductor insulation: black cross-linked polyethylene
3. Neutral supporting conductor: compacted aluminium alloy multiwire with cross-section 25.0 ... 95.0 mm^2
   uninsulated for SIP-1
   insulated for SIP-2

OPTIONS

It is possible to manufacture **СИПг (SIPg)** wires with water-blocking compounds, **СИПн (SIPn)** wires with flame-retardant compounds, and **СИПгн (SIPgn)** with water-blocking and flame-retardant compounds.

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-60°C ... +50°C
Minimum installation temperature	-20°C
Admissible continuous conductor heating temperature	+90°C
Minimum bending radius upon installation	10 wire diameters
Minimum service life	40 years

Wire size	Rated outer dimensions of the wire, mm (reference)	Weight of the wire, kg/km (reference)
СИП-1 1 x 16 + 1 x 25 – 0,6/1	14,9	136,26
СИП-1 3 x 16 + 1 x 25 – 0,6/1	17,955	271,87
СИП-1 3 x 25 + 1 x 35 – 0,6/1	20,980	387,38
СИП-1 3 x 35 + 1 x 50 – 0,6/1	22,509	500,05
СИП-1 3 x 50 + 1 x 50 – 0,6/1	25,986	625,23
СИП-1 3 x 50 + 1 x 70 – 0,6/1	25,986	690,23
СИП-1 3 x 70 + 1 x 70 – 0,6/1	32,104	989,50
СИП-1 3 x 70 + 1 x 95 – 0,6/1	32,104	1045,15
СИП-1 3 x 95 + 1 x 70 – 0,6/1	35,200	1164,00
СИП-1 3 x 95 + 1 x 95 – 0,6/1	35,200	1232,26
СИП-1 3 x 120 + 1 x 95 – 0,6/1	38,047	1417,25
СИП-1 3 x 150 + 1 x 95 – 0,6/1	41,593	1682,75
СИП-1 3 x 185 + 1 x 95 – 0,6/1	49,177	2277,88
СИП-1 3 x 240 + 1 x 95 – 0,6/1	52,971	2642,20
СИП-2 1 x 16 + 1 x 25 – 0,6/1	14,9	165,89
СИП-2 3 x 10 + 1 x 16 – 0,6/1	15,164	209,62
СИП-2 3 x 16 + 1 x 25 – 0,6/1	17,955	301,50
СИП-2 3 x 16 + 1 x 54,6 – 0,6/1	17,955	404,35
СИП-2 3 x 25 + 1 x 35 – 0,6/1	20,980	419,54
СИП-2 3 x 25 + 1 x 54,6 – 0,6/1	20,980	495,19
СИП-2 3 x 25 + 1 x 54,6 + 1 x 16 – 0,6/1	23,505	562,99
СИП-2 3 x 25 + 1 x 54,6 + 2 x 16 – 0,6/1	25,116	630,80
СИП-2 3 x 25 + 1 x 54,6 + 1 x 25 – 0,6/1	23,505	593,27

INSULATED AND PROTECTED SELF-SUPPORTING WIRES

ОДЕСКАБЕЛЬ

СИП-1, СИП-2
with black cross-linked PE insulation

Wire size	Rated outer dimensions of the wire, mm (reference)	Weight of the wire, kg/km (reference)
СИП-2 3 x 35 + 1 x 35 – 0,6/1	22,509	501,18
СИП-2 3 x 35 + 1 x 50 – 0,6/1	22,509	562,95
СИП-2 3 x 35 + 1 x 50 + 1 x 16 – 0,6/1	25,218	610,71
СИП-2 3 x 35 + 1 x 50 + 1 x 25 – 0,6/1	25,218	640,99
СИП-2 3 x 35 + 1 x 54,6 – 0,6/1	22,509	576,82
СИП-2 3 x 35 + 1 x 54,6 + 1 x 16 – 0,6/1	25,218	644,62
СИП-2 3 x 35 + 1 x 54,6 + 2 x 16 – 0,6/1	28,020	712,43
СИП-2 3 x 35 + 1 x 54,6 + 1 x 25 – 0,6/	25,218	674,90
СИП-2 3 x 35 + 1 x 54,6 + 2 x 25 – 0,6/	28,020	772,98
СИП-2 3 x 50 + 1 x 50 – 0,6/1	25,986	668,09
СИП-2 3 x 50 + 1 x 50 + 1 x 16 – 0,6/1	29,113	735,89
СИП-2 3 x 50 + 1 x 50 + 1 x 25 – 0,6/1	29,113	766,17
СИП-2 3 x 50 + 1 x 54,6 – 0,6/1	25,986	702,00
СИП-2 3 x 50 + 1 x 54,6 + 1 x 16 – 0,6/1	29,113	769,81
СИП-2 3 x 50 + 1 x 54,6 + 2 x 16 – 0,6/1	32,348	837,61
СИП-2 3 x 50 + 1 x 54,6 + 1 x 25 – 0,6/1	29,113	808,05
СИП-2 3 x 50 + 1 x 54,6 + 2 x 25 – 0,6/1	32,348	898,17
СИП-2 3 x 50 + 1 x 70 – 0,6/1	25,986	754,23
СИП-2 3 x 50 + 1 x 70 + 1 x 16 – 0,6/1	29,113	831,44
СИП-2 3 x 50 + 1 x 70 + 1 x 25 – 0,6/1	29,113	861,72
СИП-2 3 x 70 + 1 x 50 – 0,6/1	32,104	954,75
СИП-2 3 x 70 + 1 x 50 + 1 x 16 – 0,6/1	35,967	1022,55
СИП-2 3 x 70 + 1 x 54,6 – 0,6/1	34,339	1015,17
СИП-2 3 x 70 + 1 x 54,6 + 1 x 16 – 0,6/1	35,937	1056,17
СИП-2 3 x 70 + 1 x 54,6 + 2 x 16 – 0,6/1	39,963	1124,27
СИП-2 3 x 70 + 1 x 54,6 + 1 x 25 – 0,6/1	35,967	1086,74
СИП-2 3 x 70 + 1 x 54,6 + 2 x 25 – 0,6/1	39,963	1184,83
СИП-2 3 x 70 + 1 x 70 – 0,6/1	35,967	1118,10
СИП-2 3 x 70 + 1 x 70 + 1 x 16 – 0,6/1	32,104	1050,30
СИП-2 3 x 70 + 1 x 70 + 2 x 16 – 0,6/1	39,963	1185,91
СИП-2 3 x 70 + 1 x 70 + 1 x 25 – 0,6/1	35,967	1148,38
СИП-2 3 x 70 + 1 x 70 + 2 x 25 – 0,6/1	39,963	1246,47
СИП-2 3 x 70 + 1 x 95 – 0,6/1	32,104	1129,57
СИП-2 3 x 70 + 1 x 95 + 1 x 16 – 0,6/1	35,967	1194,77
СИП-2 3 x 70 + 1 x 95 + 2 x 16 – 0,6/1	39,963	1262,57
СИП-2 3 x 70 + 1 x 95 + 1 x 35 – 0,6/1	35,967	1252,26
СИП-2 3 x 95 + 1 x 70 – 0,6/1	35,2	1237,41
СИП-2 3 x 95 + 1 x 70 + 1 x 16 – 0,6/1	39,436	1305,22
СИП-2 3 x 95 + 1 x 70 + 2 x 16 – 0,6/1	43,818	1373,02
СИП-2 3 x 95 + 1 x 70 + 1 x 25 – 0,6/1	39,436	1335,50
СИП-2 3 x 95 + 1 x 70 + 2 x 25 – 0,6/1	43,818	1433,58
СИП-2 3 x 95 + 1 x 95 – 0,6/1	35,2	1299,79
СИП-2 3 x 95 + 1 x 95 + 1 x 16 – 0,6/1	39,436	1380,06
СИП-2 3 x 95 + 1 x 95 + 2 x 16 – 0,6/1	43,818	1449,69
СИП-2 3 x 95 + 1 x 95 + 1 x 25 – 0,6/1	39,436	1412,16
СИП-2 3 x 120 + 1 x 70 – 0,6/1	38,047	1422,40
СИП-2 3 x 120 + 1 x 70 + 1 x 16 – 0,6/1	42,625	1490,20
СИП-2 3 x 120 + 1 x 70 + 2 x 16 – 0,6/1	47,361	1558,01
СИП-2 3 x 120 + 1 x 95 – 0,6/1	38,047	1484,77
СИП-2 3 x 120 + 1 x 95 + 1 x 16 – 0,6/1	42,625	1566,87
СИП-2 3 x 120 + 1 x 95 + 2 x 16 – 0,6/1	47,361	1634,67
СИП-2 3 x 120 + 1 x 95 + 1 x 25 – 0,6/1	42,625	1597,15
СИП-2 3 x 120 + 1 x 95 + 2 x 25 – 0,6/1	47,361	1695,23
СИП-2 3 x 150 + 1 x 70 – 0,6/1	41,593	1687,90
СИП-2 3 x 150 + 1 x 95 – 0,6/1	41,593	1750,27
СИП-2 3 x 150 + 1 x 95 + 1 x 16 – 0,6/1	46,597	1832,37
СИП-2 3 x 150 + 1 x 95 + 2 x 16 – 0,6/1	51,775	1900,17
СИП-2 3 x 150 + 1 x 95 + 1 x 25 – 0,6/1	46,597	1862,64
СИП-2 3 x 150 + 1 x 95 + 2 x 25 – 0,6/1	51,775	1960,73
СИП-2 3 x 185 + 1 x 95 – 0,6/1	49,177	2345,40
СИП-2 3 x 240 + 1 x 95 – 0,6/1	52,971	2709,72

INSULATED AND PROTECTED SELF-SUPPORTING WIRES

СИП-3 (SIP-3)
with black cross-linked PE insulation

ОДЕСКАБЕЛЬ

APPLICATION

The wire is designed for backbone overhead power lines with 20 kV nominal voltage (for networks with 10, 15, and 20 kV voltage) and 35 kV nominal voltage (for networks with 35 kV voltage), rated frequency 50 Hz.

REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-048:2007

DESIGN

1. Conductor: compacted aluminium multiwire with cross-section 35.0 ... 240.0 mm^2
2. Conductor insulation: black cross-linked PE

OPTIONS

It is possible to manufacture **СИПг (SIPg)** wires with water-blocking compounds, **СИПн (SIPn)** wires with flame-retardant compounds, and **СИПгн (SIPgn)** with water-blocking and flame-retardant compounds.

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-60°C... +50°C
Minimum installation temperature	-20°C
Admissible continuous conductor heating temperature	+90°C
Minimum bending radius upon installation	10 wire diameters
Minimum service life	40 years

Wire size	Rated outer dimensions of the wire, mm (reference)	Weight of the wire, kg/км (reference)
СИП-3 1 x 35 – 20	11,340	156,14
СИП-3 1 x 50 – 20	13,606	217,23
СИП-3 1 x 70 – 20	14,521	286,44
СИП-3 1 x 95 – 20	16,838	378,30
СИП-3 1 x 120 – 20	16,987	414,16
СИП-3 1 x 150 – 20	18,458	504,77
СИП-3 1 x 185 – 20	21,206	694,49
СИП-3 1 x 240 – 20	22,779	817,03
СИП-3 1 x 35 – 35	13,740	202,22
СИП-3 1 x 50 – 35	14,783	244,22
СИП-3 1 x 70 – 35	16,921	344,20
СИП-3 1 x 95 – 35	18,206	413,24
СИП-3 1 x 120 – 35	19,387	480,99
СИП-3 1 x 150 – 35	20,858	577,00
СИП-3 1 x 185 – 35	23,606	776,81
СИП-3 1 x 240 – 35	25,179	905,14

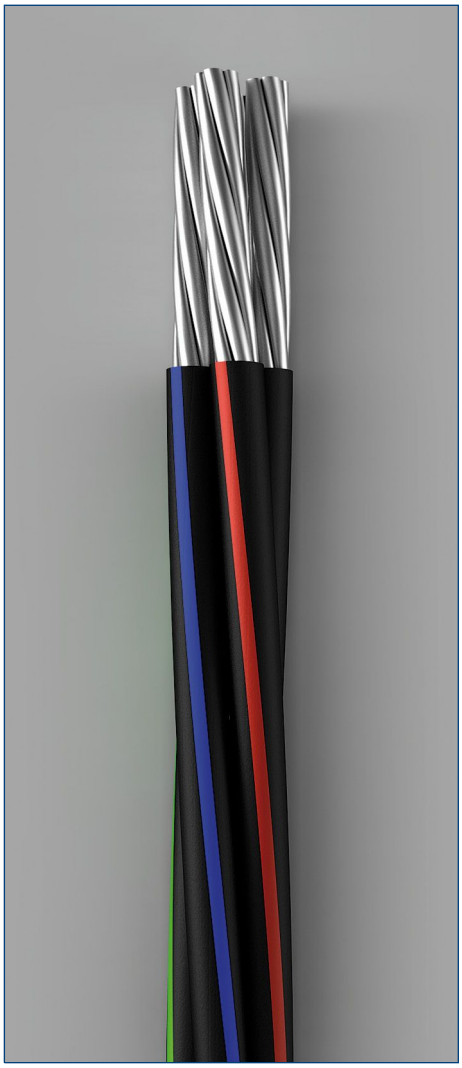
INSULATED AND PROTECTED SELF-SUPPORTING WIRES

ОДЕСКАБЕЛЬ

СИП-4
with black cross-linked PE insulation

APPLICATION

The wire is designed for submains of backbone overhead power lines and for on-wall installations. For nominal voltage 0.6/1 kV, frequency 50 Hz.



REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-048:2007

DESIGN

1. Conductor: compacted aluminium multiwire with cross-section 16.0 ... 240.0 mm^2
2. Conductor insulation: black cross-linked PE

OPTIONS

It is possible to manufacture **СИПг (SIPg)** wires with water-blocking compounds, **СИПн (SIPn)** wires with flame-retardant compounds, and **СИПгн (SIPgn)** with water-blocking and flame-retardant compounds.

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	- 60°C ... +50°C
Minimum installation temperature	-20°C
Admissible continuous conductor heating temperature	+90°C
Minimum bending radius upon installation	10 wire diameters
Minimum service life	40 years

Wire size	Rated outer dimensions of the wire,mm (reference)	Weight of the wire, kg/km (reference)
СИП-4 1 x 16 – 0,6/1	7,450	67,33
СИП-4 2 x 16 – 0,6/1	14,9	135,61
СИП-4 3 x 16 – 0,6/1	16,018	203,41
СИП-4 4 x 16 – 0,6/1	17,965	271,22
СИП-4 4 x 16 + 1 x 16 – 0,6/1	20,115	339,02
СИП-4 1 x 25 – 0,6/1	8,705	97,40
СИП-4 2 x 25 – 0,6/1	17,411	196,17
СИП-4 2 x 25 + 1 x 16 – 0,6/1	18,717	263,97
СИП-4 2 x 25 + 2 x 16 – 0,6/1	20,980	331,78
СИП-4 3 x 25 – 0,6/1	18,717	294,25
СИП-4 3 x 25 + 1 x 16 – 0,6/1	20,980	362,05
СИП-4 4 x 25 – 0,6/1	20,980	392,33
СИП-4 4 x 25 + 1 x 16 – 0,6/1	23,505	460,14
СИП-4 4 x 25 + 1 x 25 – 0,6/1	23,505	490,42
СИП-4 1 x 35 – 0,6/1	9,340	124,42
СИП-4 2 x 35 – 0,6/1	18,680	250,59
СИП-4 2 x 35 + 1 x 16 – 0,6/1	20,081	318,39
СИП-4 2 x 35 + 2 x 16 – 0,6/1	22,509	386,20
СИП-4 2 x 35 + 1 x 25 – 0,6/1	20,081	353,64
СИП-4 2 x 35 + 2 x 25 – 0,6/1	22,509	446,75
СИП-4 3 x 35 – 0,6/1	20,081	375,88
СИП-4 3 x 35 + 1 x 16 – 0,6/1	22,509	443,69

INSULATED AND PROTECTED SELF-SUPPORTING WIRES

СИП-4 (SIP-4)
with black cross-linked PE insulation

ОДЕСКАБЕЛЬ

Wire size	Rated outer dimensions of the wire, mm (reference)	Weight of the wire kg/km (reference)
СИП-4 3 x 35 + 1 x 50 – 0,6/1	22,509	539,77
СИП-4 4 x 35 – 0,6/1	22,509	501,18
СИП-4 4 x 35 + 1 x 16 – 0,6/1	25,218	568,98
СИП-4 4 x 35 + 1 x 25 – 0,6/1	25,218	599,26
СИП-4 4 x 35 + 2 x 25 – 0,6/1	28,020	697,34
СИП-4 4 x 35 + 1 x 35 – 0,6/1	25,218	626,47
СИП-4 1 x 50 – 0,6/1	10,783	165,86
СИП-4 2 x 50 – 0,6/1	21,565	334,04
СИП-4 2 x 50 + 1 x 16 – 0,6/1	23,183	401,85
СИП-4 2 x 50 + 2 x 16 – 0,6/1	25,986	469,65
СИП-4 2 x 50 + 1 x 25 – 0,6/1	23,183	432,13
СИП-4 2 x 50 + 2 x 25 – 0,6/1	25,986	530,21
СИП-4 3 x 50 – 0,6/1	23,183	501,06
СИП-4 3 x 50 + 1 x 16 – 0,6/1	25,986	568,87
СИП-4 3 x 50 + 2 x 16 – 0,6/1	29,113	636,67
СИП-4 3 x 50 + 1 x 25 – 0,6/1	25,986	599,15
СИП-4 3 x 50 + 2 x 25 – 0,6/1	29,113	697,23
СИП-4 4 x 50 – 0,6/1	25,986	668,09
СИП-4 4 x 50 + 1 x 16 – 0,6/1	29,113	735,89
СИП-4 4 x 50 + 2 x 16 – 0,6/1	32,348	803,70
СИП-4 4 x 50 + 1 x 25 – 0,6/1	29,113	766,17
СИП-4 4 x 50 + 2 x 25 – 0,6/1	32,348	864,25
СИП-4 4 x 50 + 1 x 35 – 0,6/1	29,113	793,38
СИП-4 4 x 50 + 1 x 50 – 0,6/1	29,113	835,11
СИП-4 2 x 70 – 0,6/1	26,642	525,15
СИП-4 3 x 70 – 0,6/1	28,640	787,72
СИП-4 4 x 70 – 0,6/1	32,104	1050,30
СИП-4 4 x 70 + 1 x 25 – 0,6/1	35,967	1148,38
СИП-4 4 x 70 + 1 x 35 – 0,6/1	35,967	1175,59
СИП-4 4 x 70 + 1 x 70 – 0,6/1	35,967	1312,87
СИП-4 2 x 95 – 0,6/1	29,212	649,89
СИП-4 3 x 95 – 0,6/1	31,403	974,84
СИП-4 4 x 95 – 0,6/1	35,2	1299,79
СИП-4 4 x 95 + 1 x 25 – 0,6/1	39,436	1397,87
СИП-4 4 x 95 + 1 x 35 – 0,6/1	39,436	1425,08
СИП-4 2 x 120 – 0,6/1	31,574	773,22
СИП-4 3 x 120 – 0,6/1	33,942	1159,82
СИП-4 4 x 120 – 0,6/1	38,047	1546,43
СИП-4 4 x 120 + 1 x 35 – 0,6/1	42,625	1671,73
СИП-4 4 x 120 + 2 x 35 – 0,6/1	47,361	1797,02
СИП-4 2 x 150 – 0,6/1	34,517	950,21
СИП-4 2 x 185 – 0,6/1	40,811	1346,97
СИП-4 2 x 240 – 0,6/1	43,959	1589,85
СИП-4 4 x 150 – 0,6/1	41,593	1900,43
СИП-4 4 x 185 – 0,6/1	49,177	2693,93
СИП-4 4 x 240 – 0,6/1	52,971	3179,69

INSULATED SELF-SUPPORTING WIRE FOR 0.38 LINES

ОДЕСКАБЕЛЬ

САПт
with black thermoplastic polyethylene insulation

APPLICATION

The wire is designed for electricity transmission and distribution in overhead power transmission lines, outdoor installation in main feeds and submains up to lead-ins to household buildings. For areas with moderate climate.
For nominal voltage 0.6 or 1 kV, frequency 50 Hz.

REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-048:2007

DESIGN

- Conductor: round aluminium wire (single or multiple).
- Insulation: black thermoplastic polyethylene

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-50°C ... +50°C
Minimum installation temperature	-20°C
Admissible continuous temperature of conductors	+90°C
Minimum bending radius upon installation	10 wire diameters
Minimum service life	40 years

Number and cross-section of main conductors	Rated outer dimensions of the wire, mm (reference)	Wire weight, kg/km (reference)
2 x 10	12,584	94,05
2 x 16	14,5	130,49
2 x 25	17,811	200,73
4 x 10	15,164	188,09
4 x 16	17,473	260,99
4 x 25	21,462	401,46
4 x 35	23,955	534,60
4 x 50	26,468	679,04
4 x 70	32,586	1063,38
4 x 95	35,682	1314,07
4 x 120	39,493	1601,15

WIRES FOR ELECTRIC INSTALLATIONS

BB (VV)
round single wire with PVC insulation and PVC sheath

ОДЕСКАБЕЛЬ

APPLICATION

The wire is designed for electric installations with the nominal voltage up to 380/660 V or DC voltage up to 1,000 V inclusive. It is also used for electric circuit assembly inside of devices, for lighting fittings in dry and damp premises, and for externally installed circuits.

Application of wires by their flexibility:
BB-1 (VV-1) - for fixed installation
BB-2 (VV-2) - for areas with possible bends
BB-4 (VV-4) - for areas with frequent bends

REQUIREMENTS COMPLIANCE

TU U 05758730.011-99

DESIGN

- conductor: single copper wire (BB-1) or multiwire (BB-2; BB-4) with cross-section 1.0 ... 35.0 mm^2
- conductor insulation: PVC
- sheath: PVC

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	- 50°C ... +70°C
Installation temperature	-15°C ... +70°C
Admissible continuous temperature of conductors	+70°C
Minimum bending radius upon installation	10 wire diameters
Minimum service life	15 years

Wire type	Nominal conductor cross-section, mm^2	Maximum outer diameter of the wire, mm (reference)	Weight of the wire, kg/km (reference)
	1,0	3,93	24,58
BB-1 (VV-1)	1,5	4,38	32,34
	2,5	4,98	45,89
	1,0		
	1,5	4,5	32,87
	2,5	5,21	48,63
	4,0		
BB-2 (VV-2)	6,0		
	10,0		
	16,0		
	25,0		
	35,0		
	1,0		
BB-4 (VV-4)	1,5		
	2,5		

We reserve the right to change this specification without notice

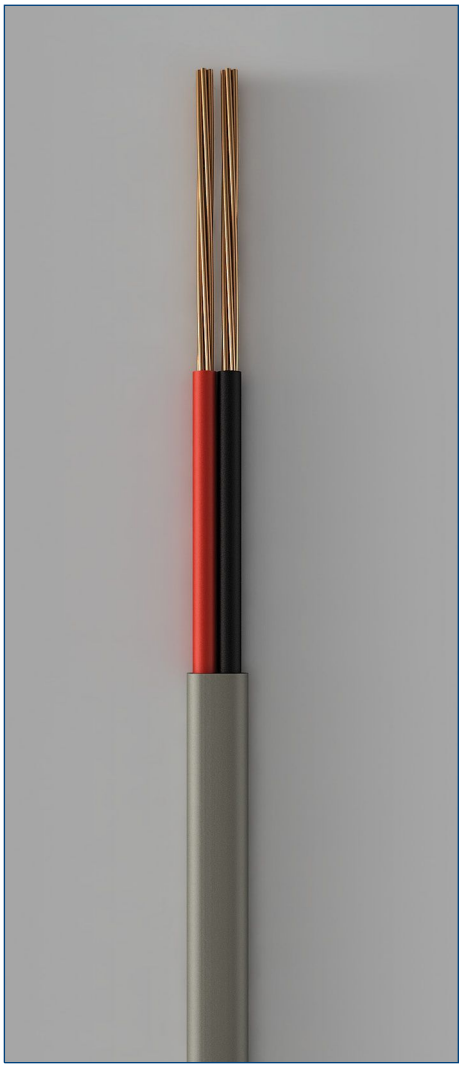
ОДЕСКАБЕЛЬ

ВВП
flat wire with PVC insulation and PVC sheath

APPLICATION

The wire is designed for electric installations with the nominal voltage up to 380/660 V or DC voltage up to 1,000 V inclusive. It is also used for electric circuit assembly inside walls, on boards, in cavitated passages of building units or for embedding in plaster in dry or damp premises; for wiring of power networks and lighting leads.

Application of wires by their flexibility:
ВВП-1 (VVP-1) - for fixed installation
ВВП-2 (VVP-2) - for areas with possible bends
ВВП-4 (VVP-4) - for areas with frequent bends



REQUIREMENTS COMPLIANCE

TU U 05758730.011-99

DESIGN

- conductor: single copper wire (ВВП-1) or multiwire (ВВП-2; ВВП-4) with cross-section 1.0 ... 16.0 mm^2
- conductor insulation: PVC. Insulated conductors are laid parallel within one plane.
- sheath: PVC

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-50°C...+70°C
Installation temperature	-15°C ... +70°C
Admissible continuous temperature of conductors	+70°C
Minimum bending radius upon installation	10 minimum outer wire sizes
Minimum service life	15 years

Wire type	Number and nominal cross-section of conductor, mm^2	Maximum outer diameter of the wire, mm (reference)	Wire weight, kg/km (reference)
	2 x 1,0	4,1x6,5	44,69
	2 x 1,5	4,6x7,4	60,19
	2 x 2,5	5,4x8,8	90,34
	2 x 4	-	127,28
	2 x 6	-	175,26
	2 x 10	-	279,31
ВВП-1 (VVP-1)	3 x 1	4,1x8,8	64,67
	3 x 1,5	4,6x10,1	91,03
	3 x 2,5	5,4x12,1	132,66
	3 x 4	-	183,11
	3 x 6	-	259,30
	3 x 10	-	415,17
	2 x 1	4,3x6,7	44,45
	2 x 1,5	4,7x7,7	61,26
	2 x 2,5	5,6x9,2	96,07
	2 x 4	6,2x10,3	133,46
	2 x 6	6,9x11,6	182,83
ВВП-2 (VVP-2)	2 x 10	8,5x14,5	293,67
	2 x 16	9,7x16,8	424,59
	3 x 1	4,3x9,2	64,31
	3 x 1,5	4,8x10,7	89,56
	3 x 2,5	5,6x12,8	141,32

WIRES FOR ELECTRIC INSTALLATIONS

ВВП
flat wire with PVC insulation and PVC sheath

ОДЕСКАБЕЛЬ

Wire type	Number and nominal cross-section of conductor, mm²	Maximum outer diameter of the wire, mm (reference)	Wire weight, kg/km (reference)
ВВП-2 (VVP-2)	3 x 4	6,4x14,7	202,10
	3 x 6	6,9x16,4	271,16
	3 x 10	8,5x20,6	437,41
	3 x 16	9,7x23,9	633,75
	4 x 2,5	5,6x16,4	186,56
	4 x 4	6,4x18,8	267,26
	4 x 6	6,9x21,1	359,48
ВВП-4 (VVP-4)	2 x 1	4,9x7,9	-
	2 x 1,5	5,7x9,0	65,60
	2 x 2,5	6,7x10,7	-
	3 x 1,5	-	96,11
	3 x 2,5	-	144,65

We reserve the right to change this specification without notice

ОДЕССКАБЕЛЬ

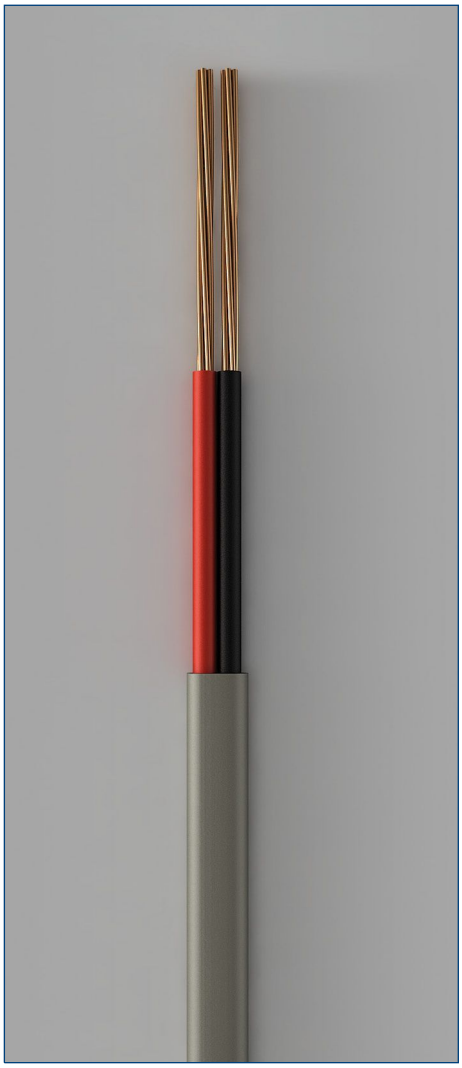
ВВПз

flat wire with ground core, PVC insulation and PVC sheath

APPLICATION

The wire is designed for electric installations with the nominal voltage up to 380/660 V or DC voltage up to 1,000 V inclusive. It is also used for electric circuit assembly inside walls, on boards, in cavitated passages of building units or for embedding in plaster in dry or damp premises; for wiring of power networks and lighting leads when grounding is needed.

Application of wires by their flexibility:
ВВПз-1 (VVPz-1) - for fixed installation
ВВПз-2 (VVPz-2) - for areas with possible bends
ВВПз-4 (VVPz-4) - for areas with frequent bends



REQUIREMENTS COMPLIANCE

TU U 05758730.011-99

DESIGN

- conductor: single copper wire (ВВПз-1) or multiwire (ВВПз-2; ВВПз-4) with cross-section 1.0 ... 16.0 mm^2
- conductor insulation: PVC
- grounding core: copper single or multiple wire. Insulated conductors and grounding core are laid parallel within one plane.
- sheath: PVC

MAIN OPERATIONAL CHARACTERISTICS

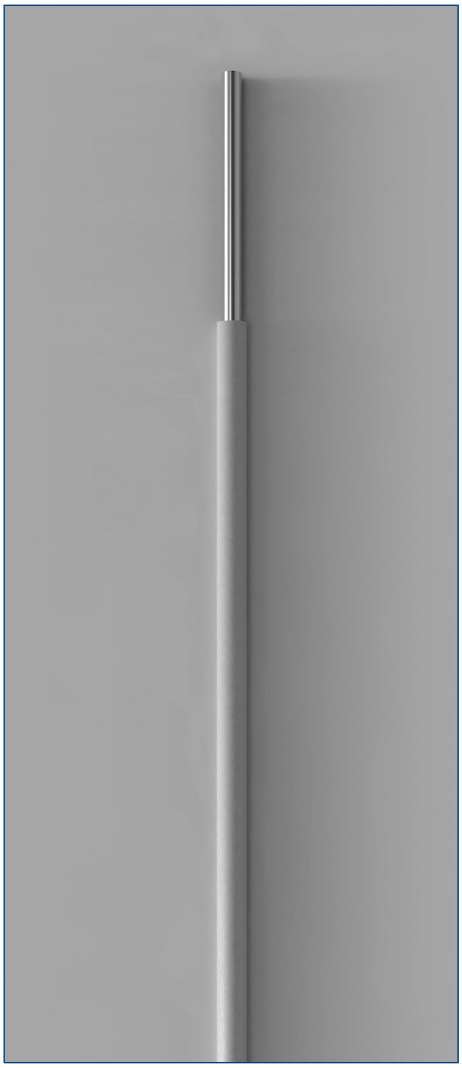
Operation temperature	-50°C ... +70°C
Installation temperature	-15°C ... +70°C
Admissible continuous temperature of conductor	+70°C
Minimum bending radius upon installation	10 minimum outer wire sizes
Minimum service life	15 years

Wire Type	Number and nominal cross-section of conductor,mm^2	Maximum outer diameter of the wire, mm (reference)	Wire weight, kg/km (reference)
ВВПз-1 (VVPz-1)	2 x 1 + 1 x 1	4,1x7,6	60,54
	2 x 1,5 + 1 x 1	4,6x8,5	74,32
	2 x 2,5 x 1 + 1,5	5,4x10,1	111,05
	3 x 1 + 1 x 1	4,1x9,2	81,22
	3 x 1,5 + 1 x 1	4,6x11,3	105,70
	3 x 2,5 + 1 x 1	5,4x13,3	152,77
ВВПз-2 (VVPz-2)	2 x 1 + 1 x 1	4,3x7,9	58,04
	2 x 1,5 + 1 x 1	4,8x8,9	75,56
	2 x 2,5 + 1 x 1,5	5,6x9,2	117,18
	2 x 4,0 + 1 x 1,5	6,2x11,7	155,50
	2 x 6 + 1 x 2,5	6,9x13,4	223,10
	2 x 10 + 1 x 4	8,5x17,0	350,60
	2 x 10 + 1 x 6	-	371,52
	2 x 16 + 1 x 6	9,7x19,2	514,73
	3 x 1 + 1 x 1	4,3x10,3	77,91
	3 x 1,5 + 1 x 1	4,8x11,8	103,86
	3 x 2,5 + 1 x 1	5,6x14,0	162,08
	3 x 4 + 1 x 1,5	6,9x18,1	231,12
	3 x 6 + 1 x 2,5	8,0x20,0	163,348
	3 x 10 + 1 x 4	8,5x23,1	502,88
	3 x 16 + 1 x 6	9,7x27,0	727,69
ВВПз-4 (VVPz-4)	2 x 1 + 1 x 1	4,3x8,0	-
	2 x 1,5 + 1 x 1	4,9x9,1	-
	2 x 2,5 + 1 x 1,5	5,7x10,8	-

WIRES FOR ELECTRIC INSTALLATIONS

АПВ (APV)
with PVC insulation

ОДЕСКАБЕЛЬ



APPLICATION

The wire is designed for fixed wiring in lighting and power networks and for assembly of electrical equipment, devices and machines with the nominal voltage up to 450 V (for networks up to 450/750 V) and frequency up to 400 Hz, or DC voltage up to 1,000 V.
For installation in steel tubes, cavitated ducts of building units, on trays, ect.;
for electric circuit wiring.

АПВ (APV) – for fixed installation

REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-025-2002

DESIGN

- conductor: single or multistrained aluminium wire with cross-section 2.5 ... 240 mm^2
- conductor insulation: PVC

Insulation colours: white, natural or grey - **Б (B)**, yellow or orange **- Ж (Zh)**, red or pink **- К (K)**, dark-blue or blue **- С (S)**, green **- З (Z)**, brown **- Кч (Kch)**, black or violet **- Ч (Ch)**, green-yellow **- З-Ж (Z-Zh)**

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-50°C ... +70°C
Installation temperature	-15°C ... +70°C
Admissible continuous temperature of conductors	+70°C
Minimum bending radius upon installation	10 wire diameters
Minimum service life	15 years

Nominal conductor cross-section, mm^2	Rated outer diameter of the wire, mm (reference)	Rated weight of 1 km of the wire, kg (reference)
2,5	3,4	15,4
4,0	3,9	21,0
6,0	4,4	28,1
10,0	5,6	46,3
16,0	6,5	66,1
25,0	8,8	114,8
35,0	10,0	146,9

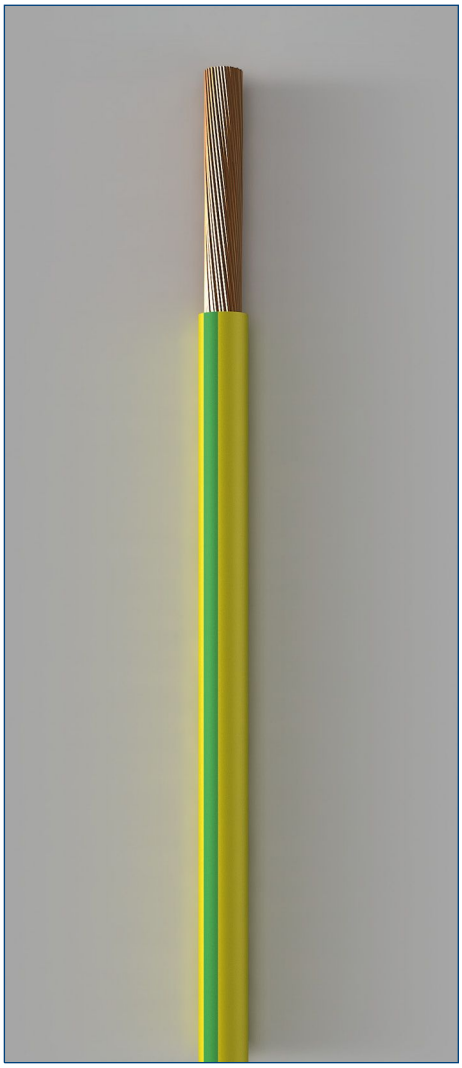
ОДЕСКАБЕЛЬ

ПВ
with PVC insulation

APPLICATION

The wire is designed for fixed wiring in lighting and power networks and for assembly of electrical equipment, devices and machines with the nominal voltage up to 450 V (for networks up to 450/750 V) and frequency up to 400 Hz, or DC voltage up to 1,000 V.
For installation in steel tubes, cavitated ducts of building units, on trays, ect.;
for electric circuit wiring.

ПВ1 (PV1) – for fixed installation
ПВ2, ПВ3 (PV2, PV3) - for areas with possible bends
ПВ4 (PV4) – for areas with frequent bends



REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-025-2002

DESIGN

- conductor: single or multistranded copper wire with cross-sections:
  ПВ1 (PV1) – 0.5 ... 240 mm²
  ПВ2 (PV2) – 2.5 ... 240 mm²
  ПВ3 (PV3) – 0.5 ... 240 mm²
  ПВ4 (PV4) – 0.5 ... 240 mm²
- conductor insulation: PVC

Insulation colours: white, natural or grey - Б (B), yellow or orange - Ж (Zh), red or pink - К (K), dark-blue or blue - С (S), green - З (Z), brown - Кч (Kch), black or violet - Ч (Ch), green-yellow - З-Ж (Z-Zh)

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-50°C ... +70°C
Installation temperature	-15°C ... +70°C
Admissible continuous temperature of conductors	+70°C
Minimum bending radius upon installation	
for ПВ1 (PV1) wires	10 wire diameters
for ПВ2, ПВ3, ПВ4 (PV2, PV3, PV4) wires	5 wire diameters
Minimum service life	15 years

RATED OUTER DIAMETER OF THE WIRE, mm (reference)

Nominal conductor cross-section, mm²	ПВ1 (PV1)	ПВ3 (PV3)	ПВ4 (PV4)
0,5	2	2,1	2,140
0,75	2,170	2,310	
1	2,330	2,4	2,540
1,5	2,780	2,9	3,068
2,5	3,38	3,6	3,719
4	3,850	4,1	4,837
6	4,36	4,8	5,335
10	5,570	6	6,980
16	7,1	8,225	8
25	8,820	9,9	10,097
35	9,197	11,4	12
50	10,648	13,453	13,6
70	12,346	15,692	-
95	14,406	17,960	20,728
120	15,842	19,582	-
150	18,030	23,2	-
185	20,025	24,584	-
240	22,762	31,2	-

WIRES FOR ELECTRIC INSTALLATIONS

ПВ (PV)
with PVC insulation

ОДЕСКАБЕЛЬ

RATED WEIGHT OF 1 KM OF THE WIRE, KG (reference)

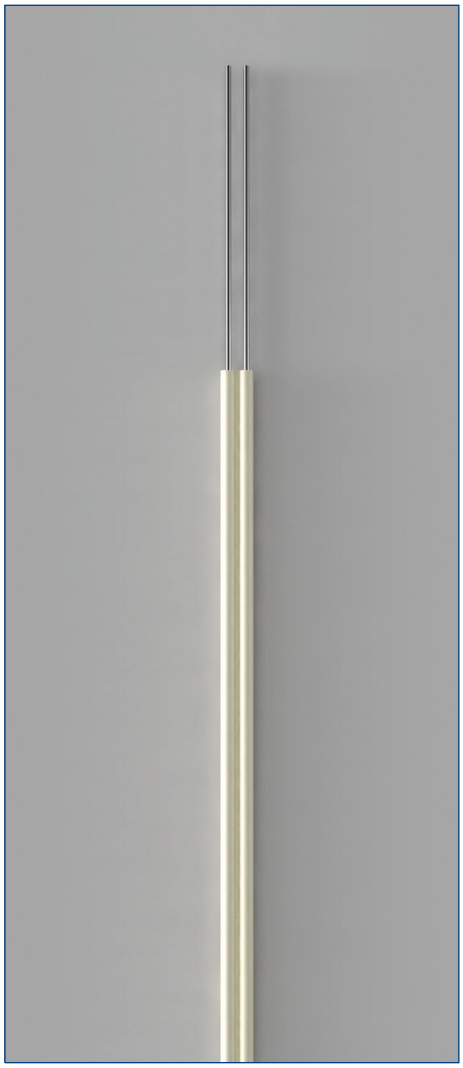
Nominal conductor cross-section, mm²	ПВ1 (PV1)	ПВ3 (PV3)	ПВ4 (PV4)
0,5	8	8,58	8,76
0,75	10,54	11,51	-
1	13,29	12,92	14,45
1,5	19,43	19,52	21,08
2,5	30,81	31,95	33,37
4	45,62	46,72	52,83
6	65,18	71,19	74,62
10	108,23	111,24	130,42
16	174,50	193,70	186,26
25	274,04	283	305,72
35	355,31	394,23	410,05
50	474,47	545,80	565,62
70	683,71	762,74	-
95	939,17	1042,27	1063,63
120	1174,15	1281,24	-
150	1472,01	1629,30	-
185	1823,05	2001,77	-
240	2394,99	2640,17	-

ОДЕСКАБЕЛЬ

АППВ
with PVC insulation

APPLICATION

The wire is designed for fixed wiring in lighting and power networks and for assembly of electrical equipment, devices and machines with the nominal voltage up to 450 V (for networks up to 450/750 V) and frequency up to 400 Hz, or DC voltage up to 1,000 V. For installation in steel tubes, cavitated ducts of building units, on trays, ect.; for electric circuit wiring. For inflexible installation.



REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-025-2002

DESIGN

- conductor: single aluminium wire with cross-section 2.5...6.0 mm^2
- number of conductors: 2 or 3. Conductors are laid parallel within one plane and insulated with a separating strip base.
- conductor insulation: PVC. Insulation colours: white, natural or grey - Б (B), yellow or orange - Ж (Zh), red or pink - К (K), dark-blue or blue - С (S), green - З (Z), brown - Кч (Kch), black or violet - Ч (Ch), green-yellow - З-Ж (Z-Zh).

MAIN OPERATIONAL CHARACTERISTICS

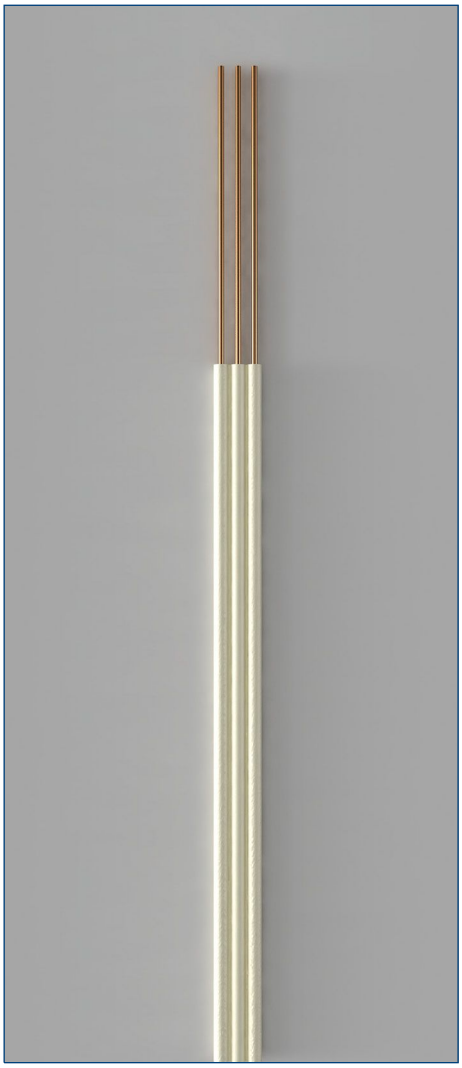
Operation temperature	-50°C ... +70°C
Installation temperature	-15°C ... +70°C
Admissible continuous temperature of conductors	+70°C
Minimum bending radius upon installation	10 wire diameters
Minimum service life	15 years

Wire size	Rated outer wire dimensions, mm (reference)	Wire weight, kg/km (reference)
АППВ 2х2,5	3,4х7,8	32,2
АППВ 2х4,0	3,9х8,7	43,5
АППВ 2х6,0	4,4х9,7	57,9
АППВ 3х2,5	3,4х12,1	50,0
АППВ 3х4,0	3,9х13,6	66,9
АППВ 2х6,0	4,4х15,1	88,6
АППВ 3х6,0	-	80,43

WIRES FOR ELECTRIC INSTALLATIONS

ППВ (PPV)
with PVC insulation

ОДЕСКАБЕЛЬ



APPLICATION

The wire is designed for fixed wiring in lighting and power networks and for assembly of electrical equipment, devices and machines with the nominal voltage up to 450 V (for networks up to 450/750 V) and frequency up to 400 Hz, or DC voltage up to 1,000 V.
For installation in steel tubes, cavitated ducts of building units, on trays, ect.;
for electric circuit wiring.
For inflexible installation.

REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-025-2002

DESIGN

- conductor: single copper wire with cross-section 1.0 ... 6.0 mm^2
- number of conductors: 2 or 3. The conductors are laid parallel, in one plane, insulated with a separating strip base.
- conductor insulation: PVC. Insulation colours: white, natural or grey - Б (B), yellow or orange - Ж (Zh), red or pink - К (K), dark-blue or blue - С (S), green - З (Z), brown - Кч (Kch), black or violet - Ч (Ch), green-yellow - З-Ж (Z-Zh).

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-50°C ... +70°C
Installation temperature	-15°C ... +70°C
Admissible continuous temperature of conductors	+70°C
Minimum bending radius upon installation	10 wire diameters
Minimum service life	15 years

Nominal conductor cross-section, mm^2	Rated outer dimensions of the wire, mm (reference)	Wire weight, kg/km (reference)
ППВ 2 x 1	-	27,24
ППВ 2 x 1,5	2,8x6,6	39,52
ППВ 2 x 2,5	3,4x7,8	69,29
ППВ 2 x 4	3,9x8,7	91,91
ППВ 3 x 1,5	2,8x10,3	59,62
ППВ 3 x 2,5	3,4x12,1	93,77
ППВ 3 x 4	3,9x13,6	138,20
ППВ 3 x 6	-	196,87

WINDING WIRES FOR SUBMERSIBLE ELECTRIC MOTORS

ОДЕСКАБЕЛЬ

ПВДП
with double PE insulation

APPLICATION

The wire is designed for winding of stators of submersible water-filled electric motors continuously operating in waters of artesian wells (AC voltage up to 660 V, frequency 40-60 Hz).

REQUIREMENTS COMPLIANCE

TU 16-505.733-78

DESIGN

- conductor: single or multistrained copper wire, Ø 0.95 ... 5.3 mm
- conductor insulation: 2 layers of polyethylene

OPTIONS

Other diameters of conductors are possible.

MAIN OPERATIONAL CHARACTERISTICS

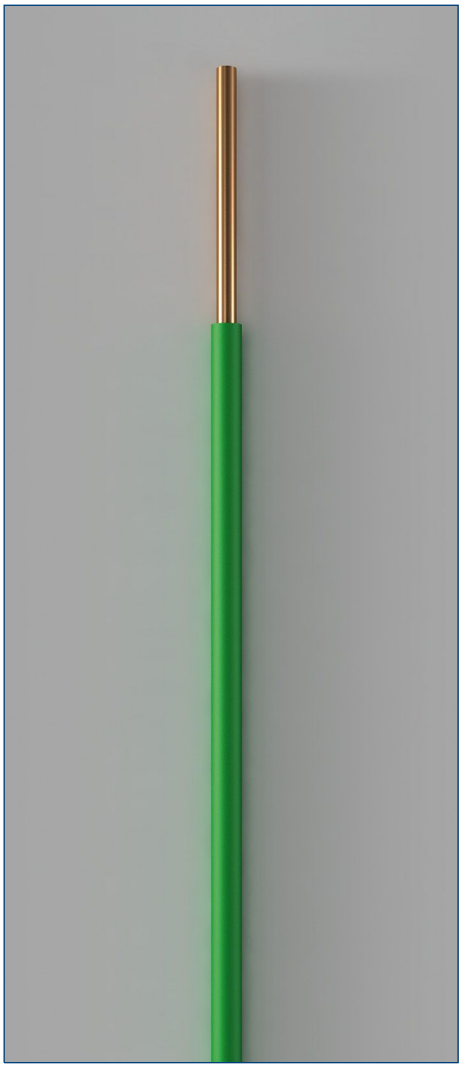
Operation temperature	-50°C ... +80°C
Permissible working pressure	7.09 MPa max

Conductor diameter, mm, nom.	Rated outer diameter, mm (reference)	Wire weight, kg/km (reference)
0,95	1,75	7,94
1,06	1,86	9,61
1,18	1,98	11,63
1,4	2,3	16,19
1,6	2,5	20,65
1,8	2,8	26,10
2,0	3,0	31,70
2,36	3,56	44,25
2,8	4,0	60,90
3,0	4,2	69,36
3,18	4,58	65,01
3,54	4,94	79,33
3,75	5,150	88,35
4,5	5,9	123,61
5,3	6,8	167,65

HOOK-UP WIRES

HBM (NVM), HB (NV)
with PVC insulation

ОДЕСКАБЕЛЬ



APPLICATION

The wire is designed for operation in circuits of general industrial devices with the nominal AC voltage 600 and 1000 V, frequency up to 5,000 Hz and DC voltage 840 and 1,400 V respectively.

REQUIREMENTS COMPLIANCE

GOST 17515

DESIGN

- conductor: single or multiple copper wire (HBM) or tinned copper wire (HB) with conductor cross-section 0.08; 0.12; 0.20; 0.35; 0.50; 0.75; 1.00; 1.5; 2.5 mm^2
- conductor insulation: PVC. Insulation colours: white, natural or grey - **Б**, yellow or orange - **Ж**, red or pink - **К**, dark blue or blue - **С**, green - **З**, brown - **Кч**, black or violet - **Ч**

OPTIONS

It is possible to manufacture НП (NP) wire with a tinned copper conductor and PE insulation.

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-50°C ... +105°C
Average service life	15 years

RATED OUTER DIAMETER OF THE WIRE, mm (reference)

Wire type	Conductor grade acc. to GOST 22483	Rated outer diameter of the wire, mm, for 600 V voltage with cross-section, mm^2								
		0,08	0,12	0,20	0,35	0,50	0,75	1,00	1,5	2,5
HB (NV)	1	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	1,6	1,945	-	2,310	-
		Rated outer diameter of the wire, mm, for 600 V voltage with cross-section, mm^2								
		0,08	0,12	0,20	0,35	0,50	0,75	1,00	1,5	2,5
HB (NV)	1	-	-	-	1,7	1,7	-	-	-	-
	4	-	-	-	1,68	-	2,145	-	2,510	-
HBM (NVM)	1	-	-	-	-	1,6	-	-	-	-

RATED WEIGHT OF 1 KM OF THE WIRE, kg (reference)

Wire type	Conductor grade acc. to GOST 22483	Rated outer diameter of the wire, mm, for 600 V voltage with cross-section, mm^2								
		0,08	0,12	0,20	0,35	0,50	0,75	1,00	1,5	2,5
HB (NV)	1	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	6,48	9,6	-	16,79	-
		Rated outer diameter of the wire, mm, for 600 V voltage with cross-section, mm^2								
		0,08	0,12	0,20	0,35	0,50	0,75	1,00	1,5	2,5
HB (NV)	1	-	-	-	6,83	6,83	-	-	-	-
	4	-	-	-	5,88	-	10,52	-	17,87	-
HBM (NVM)	1	-	-	-	-	6,5	-	-	-	-

ОДЕСКАБЕЛЬ

ПВСн
flexible wire with PVC insulation and PVC sheath

APPLICATION

The wire is designed for connection of machines and household appliances to networks with 380 V nominal AC voltage and to systems with 380/660 V.

REQUIREMENTS COMPLIANCE

GOST 7399-97, IEC 227

DESIGN

- conductor: copper multiwire with cross-sections 0.75; 1.0; 1.5; 2.5 mm^2
- conductor insulation: PVC. Number of conductors: 2; 3; 4 or 5. Insulated conductors are twisted.
- sheath: PVC. Sheath colours: white, blue, yellow, green, brown, red, grey, dark blue or black.

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	25°C ... +40°C
Admissible continuous temperature of conductors	+70°C
Conductor grade according to GOST 22483	5
Minimum bending radius upon installation:	
ПВС (PVS) up to 1.0 mm^2	40 mm
ПВС (PVS) up to 2.5 mm^2	60 mm

	Conductor insulation colours	
Number of conductors	**Wire with a grounding core**	**Wire without a grounding core**
2	-	blue, brown
3	green-yellow, blue, brown	blue, black, brown
4	green-yellow, blue, black, brown	blue, black, brown, black or brown
5	green-yellow, blue, black, brown, black or brown	blue, black, brown, black or brown, black or brown

Number and nominal cross-section of conductors, mm^2	Rated outer diameter of the wire, mm (reference)	Wire weight ,kg/km (reference)
2 x 0,6	6,0	46,78
2 x 0,75	6,4	58,48
2 x 1	6,680	66,16
2 x 1,5	7,735	91,15
2 x 2,5	9,438	140,23
2 x 4	10,820	195,03
2 x 0,6 + 1 x 0,6	6,330	59,01
2 x 0,75 + 1 x 0,75	6,760	69,14
2 x 1 + 1 x 1	7,061	79,97
2 x 1,5 + 1 x 1,5	8,395	113,85
2 x 2,5 + 1 x 2,5	10,196	175,16
3 x 0,6 + 1 x 0,6	6,902	71,14
3 x 0,75 + 1 x 0,75	7,384	83,39

CONNECTING WIRES AND CORDS

ПВСн (PVSn)
flexible wire with PVC insulation and PVC sheath

ОДЕСКАБЕЛЬ

Number and nominal cross-section of conductors, mm^2	Rated outer diameter of the wire, mm (reference)	Wire weight, kg/km (reference)
3 x 1 + 1 x 1	7,921	100,92
3 x 1,5 + 1 x 1,5	9,393	149,20
3 x 2,5 + 1 x 2,5	11,163	214,04
3 x 4 + 1 x 4	12,546	295,52
4 x 0,75 + 1 x 0,75	8,28	105,56
4 x 1 + 1 x 1	8,658	121,52
4 x 1,5 + 1 x 1,5	10,483	179,19
4 x 2,5 + 1 x 2,5	12,441	268,75

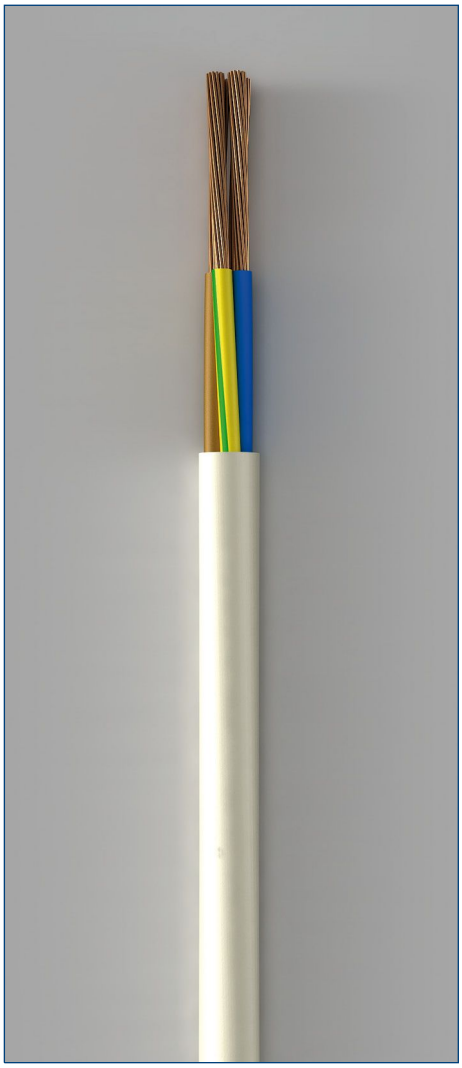
INSTALLATION WIRES

ОДЕСКАБЕЛЬ

ПВСм, ПВСмп
with PVC insulation and PVC sheath

APPLICATION

The wire is designed for installation and stationary connection of electric equipment, household and similar machines to networks with the nominal AC voltage up to 380/660 V.



REQUIREMENTS COMPLIANCE

TU U 31.3-05758730-039

DESIGN

1. Conductor: copper multiwire with cross-sections 0.75 ... 25.0 mm^2
2. Insulation: PVC. Number of conductors: 2; 3; 4 or 5. Insulated conductors are twisted.
3. Belt insulation: synthetic tape (belt insulation is only applied in ПВСмп (PVSmp) wires).
4. Sheath: PVC. Sheath colours: white, grey or black.

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-25°C... +40°C
Installation temperature	-15°C ... +40°C
Admissible continuous temperature of conductors	+70°C
Conductor grade according to GOST 22483	3
Minimum installation bending radius	6 wire diameters
Minimum service life	6 years

Wire size	Rated outer diameter of the wire, mm (reference)	Weight of the wire, kg/km (reference)
ПВСм 2 x 0,75	6,220	55,58
ПВСм 2 x 1	6,4	60,86
ПВСм 2 x 1,5	7,4	84,37
ПВСм 2 x 2,5	9,2	134,18
ПВСм 2 x 4	10,6	187,93
ПВСм 2 x 6	12,6	276,08
ПВСм 2 x 10	15,0	404,63
ПВСм 2 x 16	19,850	695,28
ПВСм 2 x 0,75 + 1 x 0,75	6,556	66,85
ПВСм 2 x 1 + 1 x 1	6,76	72,70
ПВСм 2 x 1,5 + 1 x 1,5	8,035	105,69
ПВСм 2 x 2,5 + 1 x 2,5	9,940	167,87
ПВСм 2 x 4 + 1 x 4	11,215	231,35
ПВСм 2 x 6 + 1 x 6	13,320	345,12
ПВСм 2 x 10 + 1 x 10	15,9	510,94
ПВСм 2 x 16 + 1 x 16	21,084	863,75
ПВСм 3 x 0,75 + 1 x 0,75	7,167	80,77
ПВСм 3 x 1 + 1 x 1	7,584	91,62
ПВСм 3 x 1,5 + 1 x 1,5	8,989	132,81
ПВСм 3 x 2,5 + 1 x 2,5	10,876	205,17
ПВСм 3 x 4 + 1 x 4	12,281	284,91
ПВСм 3 x 6 + 1 x 6	14,568	426,49

INSTALLATION WIRES

ПВСм (PVSm), ПВСмп (PVSmp)
with PVC insulation and PVC sheath

ОДЕСКАБЕЛЬ

Wire size	Rated outer diameter of the wire, mm (reference)	Weight of the wire, kg/km (reference)
ПВСм 3 x 10 + 1 x 10	17,460	635,36
ПВСм 3 x 16 + 1 x 16	23,222	1070,67
ПВСм 4 x1 + 1 x 1	8,28	111,69
ПВСм 4 x 1,5 + 1 x 1,5	10,030	166,62
ПВСм 4 x 2,5 + 1 x 2,5	12,120	256,88
ПВСм 4 x 4 + 1 x 4	13,070	337,41
ПВСм 4 x 6 + 1 x 6	15,960	523,68
ПВСм 4 x 10 + 1 x 10	19,6	804,39
ПВСм 4 x 16 + 1 x 16	26,008	1379,29

Wire size	Rated outer diameter of the wire, mm (reference)	Wire weight, kg/km (reference)
ПВСмп 2 x 0,75	6,26	44,05
ПВСмп 2 x 1	6,440	47,63
ПВСмп 2 x 1,5	7,440	66,38
ПВСмп 2 x 2,5	9,440	108,29
ПВСмп 2 x 4	10,640	148,65
ПВСмп 2 x 6	12,640	223,69
ПВСмп 2 x 10	15,040	323,02
ПВСмп 2 x 16	19,920	543,61
ПВСмп 2 x 0,75 + 1 x 0,75	6,606	57,24
ПВСмп 2 x 1 + 1 x 1	6,8	62,17
ПВСмп 2 x 1,5 + 1 x 1,5	8,075	90,41
ПВСмп 2 x 2,5 + 1 x 2,5	9,980	144,07
ПВСмп 2 x 4 +1 x 4	11,255	200,36
ПВСмп 3x6,0	13,360	306,26
ПВСмп 2 x 10 + 1 x 10	15,940	444,23
ПВСмп 2 x 16 + 1 x 16	21,254	753,61
ПВСмп 3 x 0,75 + 1 x 0,75	7,207	71,39
ПВСмп 3 x 1 + 1 x 1	7,624	81,40
ПВСмп 3 x 1,5 + 1 x 1,5	9,029	177,77
ПВСмп 3 x 2,5 + 1 x 2,5	10,916	181,86
ПВСмп 3 x 4 + 1 x 4	12,321	254,56
ПВСмп 3 x 6 + 1 x 6	14,638	385,68
ПВСмп 3 x 10 + 1 x 10	17,5	569,98
ПВСмп 3 x 16 + 1 x 16	23,292	970,73
ПВСмп 3 x 25 + 1 x 25	25,054	1326,55
ПВСмп 4 x 1 + 1 x 1	8,32	100,72
ПВСмп 4 x 1,5 + 1 x 1,5	10,070	150,85
ПВСмп 4 x 2,5 + 1 x 2,5	12,160	232,47
ПВСмп 4 x 4 + 1 x 4	13,510	318,56
ПВСмп 4 x 6 + 1 x 6	16,0	479,88
ПВСмп 4 x 10 + 1 x 10	19,640	714,50
ПВСмп 4 x 16 + 1 x 16	26,078	1248,94
ПВСмп 4 x 25+ 1 x 25	27,603	1669,66

ОДЕССКАБЕЛЬ

ШВПн
flexible cord with PVC insulation

APPLICATION

The cord is designed for connection of machines, household appliances and similar devices to networks with 380 V nominal AC voltage and to systems with 380/660 V.
It is used for connection of electronics, household lighting units, microclimate electrical appliances, electromechanical household appliances, electric fans and other similar devices.
Rare, light mechanical deformation is permissible.

REQUIREMENTS COMPLIANCE

GOST 7399-97, IEC 227

DESIGN

1. Conductor: multiple copper wire with cross-sections 0.35 ... 2.5 mm^2
2. Conductor insulation: PVC. Number of conductors: 2.
   Insulated conductors are laid parallel, with separation.
   Insulation colours: white, blue, yellow, green, brown, red, ivory, grey, dark blue or black.

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-25°C ... +40°C
Admissible continuous temperature of conductors	+70°C
Minimum bending radius upon installation	30 mm

Number and nominal cross-section of conductors, mm^2	Rated outer dimensions of the cord, mm (reference)	Weight of the cord, kg/km (reference)
2x0,50	2,5x5,1	20,76
2x0,75	2,8x5,6	26,78
2x1,50	3,3x6,5	43,45
2x2,50	3,7x7,4	64,66

these types of the cord are manufactured under individual orders

CONNECTIVE WIRES AND CORDS

ШВВПн
with PVC insulation, PVC sheath, flexible

ОДЕСКАБЕЛЬ

APPLICATION

The cord is designed for connection of machines, household appliances and similar devices to networks with 380 V nominal AC voltage and to systems with 380/660 V.
It is also used for connection of microclimate and personal hygiene electrical appliances, electric soldering irons, lamps, kitchen electromecanical appliances, electronics, extension cords, washing machines, refrigerators and other similar devices used in administrative and living premises.

REQUIREMENTS COMPLIANCE

GOST 7399-97, IEC 227

DESIGN

1. Conductor: miltiple copper wire with cross-sections 0.5 ... 4.0 mm^2
2. Conductor insulation: PVC. Number of conductors: 2 or 3.
   Insulated conductors are laid parallel.
3. Sheath: PVC
   Sheath colours: white, blue, yellow, green, brown, red, grey, dark blue or black.

MAIN OPERATIONAL CHARACTERISTICS

Operation temperature	-25°C ... +40°C
Admissible continuous temperature of conductors	+70°C
Minimum bending radius upon installation	30 mm

Number of conductors	Conductor insulation colours	
	Cord with a grounding core	Cord without a grounding core
2	-	blue, brown
3	yellow-green, blue, brown	blue, black, brown

Number and nominal cross-section of connductors, mm^2	Rated outer dimensions of the cord, mm (reference)	Weight of the cord, kg/km (reference)
2 x 0,5	3,1x5,1	25,13
2 x 0,75	3,4x5,6	31,93
3 x 0,5	3,1x7,0	37,31
3 x 0,75	3,4x7,8	47,90
2 x 1	-	37,71
2 x 1,5	4,1x6,9	52,48
2 x 2,5	4,7x8,2	78,87
2 x 4	-	152,51
3 x 1	-	59,48
3 x 1,5	4,1x9,8	82,36
3 x 2,5	4,7x11,6	124,36
3 x 4	-	238,00

these types of the cord are manufactured under individual orders

Certificate

Standard **ISO 9001:2008**

Certificate Registr. No. **75 100 60124**

TÜV Rheinland InterCert certifies:

Certificate Holder: **Public Joint-Stock Company**
“Odessa Cable Works “Odeskabel”
Nikolaevskaya doroga, 144
65013, Odessa
Ukraine

Scope: Development and production of cables, wires, cords and copper rod.

An audit was performed. Proof has been furnished that the requirements according to ISO 9001:2008 are fulfilled.

Validity: The certificate is valid from **2011.11.14** until **2014.09.29**
First certification: 1999

Brussels, 2011.11.14.

TÜV Rheinland InterCert
1138 Budapest, Váci út 48/a-b.
www.tuv.hu

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