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АПвСПнг-45 1x185 ТУ У 31.3-00214534-060:2011

Power cables with aluminium conductor, XLPE-insulated, lead-sheathed, with outer sheath of polymer composition, flame retardant

Technical cable requirements correspond to IEC 60840

Cables are used for laying:

- in places, where small mechanical impacts on cable are possible, including tensile forces
- in premises, tunnels, ducts, mines, dry soil and outdoor under shelter
- single laying

It is possible to manufacture cables with extruded semiconductor layer along outer sheath.

Order entry example:

АПВСПнг-П-45 1х185/95 ТУ У 31.3-00214534-060:2011

An extruded semiconductor layer along outer sheath ensures the correct testing of cable line with sections of underground laying in polymer pipes.

It is possible to manufacture cables with an integrated fiber-optic module.

Order entry example:

АПвСПнг-45 1x185/95 (ОМ) ТУ У 31.3-00214534-060:2011

In conjunction with the DTS system, the integrated fiber-optic module can act as a distributed cable line temperature sensor.

It is possible to manufacture cable with sealed conductor.

Order entry example:

АПвСПнг-45 1х185/95 (г) ТУ У 31.3-00214534-060:2011

Fire safety code in accordance with ДСТУ 4809:2007: ПБ101122000

Products of this mark meet the requirements:

- · single wire cable flame retardance
- toxicity class Tk1 of the combustion products of nonmetallic elements (toxicity index from 13 up to 40 g/m³)
- class μ TK1 on smoke-forming ability by smouldering of non-metallic elements (coefficient of smoke formation from 50 to 500 m²/kg)
- class ДΠκ2 on smoke-forming ability by combustion (minimum luminous flux more than 60 %)
- corrosive class $K\kappa 2$ of combustion products of non-metallic elements (the number of halogen hydrides less than 150 mg/g, pH more than 4.3, specific conductivity less than 10 μ S/mm)







АПвСПнг-45 1х185 ТУ У 31.3-00214534-060:2011



Power cables with aluminium conductor, XLPE-insulated, lead-sheathed, with outer sheath of polymer composition, flame retardant

TECHNICAL SPECIFICATIONS

Maximum voltage kV 52 Conductor rated area mm² 185 Sheath thikness mm 2 Partial discharge factor for rated voltage, not more than pC 6 Permissible short circuit current across the screen kA 7.80 Maximum permissible short-circuit current in core kA 17.5 Permissible continious current rating by aerial laying * * • in trefoil formation with double-side screen earthing A 401 • in trefoil formation with single-side screen earthing or cross screen earthing A 410 • plane with double-side screen earthing or cross screen A 485 • arthing A 485 Permissible continious current rating by burial * * • in trefoil formation with double-side screen earthing A 338 • in trefoil formation with double-side screen earthing or cross screen earthing A 346 • in trefoil formation with single-side screen earthing or a screen earthing A 346 • in trefoil formation with double-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • plane with double-side screen earthing or cross scre	Rated voltage	kV	45
Sheath thiknessmm2Partial discharge factor for rated voltage, not more thanpC6Permissible short circuit current across the screenkA7.80Maximum permissible short-circuit current in corekA17.5Permissible continious current rating by aerial laying *	Maximum voltage	kV	52
Partial discharge factor for rated voltage, not more than Permissible short circuit current across the screen RA 7.80 Maximum permissible short-circuit current in core RA 17.5 Permissible continious current rating by aerial laying Interfoil formation with double-side screen earthing Rated and Rated	Conductor rated area	mm²	185
Permissible short circuit current across the screen kA 7.80 Maximum permissible short-circuit current in core kA 17.5 Permissible continious current rating by aerial laying * • in trefoil formation with double-side screen earthing or cross screen earthing • plane with double-side screen earthing or cross screen earthing or plane with single-side screen earthing or cross screen earthing • plane with single-side screen earthing or cross screen earthing or cross screen earthing • plane with single-side screen earthing or cross screen earthing • in trefoil formation with double-side screen earthing or a 338 • in trefoil formation with single-side screen earthing or a 346 • in trefoil formation with single-side screen earthing or a 346 • in trefoil formation with single-side screen earthing or a 361 • plane with double-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with single-side screen earthing or cross screen a 361 • plane with	Sheath thikness	mm	2
Maximum permissible short-circuit current in core Permissible continious current rating by aerial laying * · in trefoil formation with double-side screen earthing or cross screen earthing · plane with double-side screen earthing or cross screen permissible continious current rating by burial * · plane with single-side screen earthing or cross screen permissible continious current rating by burial * · in trefoil formation with double-side screen earthing or cross screen arthing Permissible continious current rating by burial * · in trefoil formation with double-side screen earthing or A 338 · in trefoil formation with single-side screen earthing or A 346 · in trefoil formation with single-side screen earthing or A 361 · plane with double-side screen earthing or cross screen A 361 earthing Maximum permissible conductor temperature · Continious in emergency operation c C +90 · in emergency operation c C +250 Operating temperature range c C -60+50 Minimum bending radius by laying mm 1350 Rated outer diameter of the cable (for reference) ** mm 54 Cable weight (approximate) Rated factory cable length and gross weight of the delivery on the drums *** # 22YД-60: 635 · 5.0 # 25YД-90: 1068 · 8.5 # 26YД-100: **** 1268 · 10.	Partial discharge factor for rated voltage, not more than	рС	6
Permissible continious current rating by aerial laying * • in trefoil formation with double-side screen earthing A 401 • in trefoil formation with single-side screen earthing or cross screen earthing B A 410 cross screen earthing A 450 • plane with double-side screen earthing or cross screen A 485 earthing Permissible continious current rating by burial * • in trefoil formation with double-side screen earthing A 338 • in trefoil formation with single-side screen earthing or A 346 cross screen earthing • plane with double-side screen earthing or A 361 • plane with double-side screen earthing or cross screen A 361 earthing Maximum permissible conductor temperature • Continious	Permissible short circuit current across the screen	kA	7.80
• in trefoil formation with double-side screen earthing A 401 • in trefoil formation with single-side screen earthing or cross screen earthing A 410 • plane with double-side screen earthing or cross screen A 450 • plane with single-side screen earthing or cross screen A 485 • earthing A 338 • permissible continious current rating by burial * • in trefoil formation with double-side screen earthing or cross screen earthing or cross screen earthing A 338 • in trefoil formation with single-side screen earthing or cross screen earthing A 346 • plane with double-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 • pl	Maximum permissible short-circuit current in core	kA	17.5
• in trefoil formation with single-side screen earthing or cross screen earthing A 410 • plane with double-side screen earthing A 450 • plane with single-side screen earthing or cross screen earthing A 485 Permissible continious current rating by burial * • in trefoil formation with double-side screen earthing A 338 • in trefoil formation with single-side screen earthing or cross screen earthing A 346 • plane with double-side screen earthing or cross screen A 361 • plane with single-side screen earthing or cross screen A 361 earthing A 361 Maximum permissible conductor temperature • C +90 • in emergency operation • C +90 • in emergency operation • C +250 • at short circuit • C +250 Operating temperature range • C -60 +50 Minimum bending radius by laying mm 1350 Rated outer diameter of the cable (for reference) ** mm 54 Cable weight (approximate) kg/km 6450 Rated factory cable length and gross weight of the delivery on the drums *** # 25УД-60: 635 · 5.0 w 25УД-90: 1068 · 8.5 # 25УД-90: 1068 · 8.5 # 26УД-100: **** 1268 · 10.	Permissible continious current rating by aerial laying *		
cross screen earthing plane with double-side screen earthing or cross screen plane with single-side screen earthing or cross screen permissible continious current rating by burial * in trefoil formation with double-side screen earthing or cross screen earthing in trefoil formation with single-side screen earthing or cross screen earthing plane with double-side screen earthing or cross screen earthing plane with single-side screen earthing or cross screen screen earthing o	in trefoil formation with double-side screen earthing	Α	401
• plane with double-side screen earthing A 450 • plane with single-side screen earthing or cross screen A 485 earthing A 485 Permissible continious current rating by burial * • in trefoil formation with double-side screen earthing A 338 • in trefoil formation with single-side screen earthing or A 346 cross screen earthing A 335 • plane with double-side screen earthing or cross screen A 361 earthing A 361 Maximum permissible conductor temperature • C +90 • in emergency operation • C +90 • in emergency operation • C +250 • Operating temperature range • C -60 +50 Minimum bending radius by laying mm 1350 Rated outer diameter of the cable (for reference) ** mm 54 Cable weight (approximate) kg/km 6450 Rated factory cable length and gross weight of the delivery on the drums *** m, t # 22УД-60: 635 • 5.0 each of the drums *** # 25УД-90: 1068 • 8.5 # 25УД-90: 1068 • 8.5 # 26УД-100: ***** 1268 • 10.	in trefoil formation with single-side screen earthing or	Α	410
 plane with single-side screen earthing or cross screen earthing Permissible continious current rating by burial * in trefoil formation with double-side screen earthing in trefoil formation with single-side screen earthing or cross screen earthing plane with double-side screen earthing plane with single-side screen earthing or cross screen earthing plane with single-side screen earthing or cross screen arthing plane with single-side screen earthing or cross screen earthing continious continious in emergency operation c +90 in emergency operation c +130 at short circuit c +250 Operating temperature range c -60 +50 Minimum bending radius by laying mm 1350 Rated outer diameter of the cable (for reference) ** mm 54 Cable weight (approximate) kg/km 6450 Rated factory cable length and gross weight of the delivery on the drums *** # 22УД-60: 635 · 5.0 # 25УД-90: 1068 · 8.5 # 26УД-100: **** 1268 · 10. 	cross screen earthing		
earthingPermissible continious current rating by burial *• in trefoil formation with double-side screen earthingA338• in trefoil formation with single-side screen earthing or cross screen earthingA346• plane with double-side screen earthingA335• plane with single-side screen earthing or cross screenA361earthingMaximum permissible conductor temperature• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1350Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the delivery on the drums ***# 22УД-60: 635 • 5.0# 25УД-90: 1068 • 8.5 # 26УД-100: ***** 1268 • 10.	plane with double-side screen earthing	Α	450
Permissible continious current rating by burial * · in trefoil formation with double-side screen earthing	plane with single-side screen earthing or cross screen	Α	485
• in trefoil formation with double-side screen earthingA338• in trefoil formation with single-side screen earthing or cross screen earthingA346• plane with double-side screen earthingA335• plane with single-side screen earthing or cross screen earthingA361Maximum permissible conductor temperature• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1350Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the delivery on the drums ***# 22УД-60: 635 • 5.0# 25УД-90: 1068 • 8.5 # 26УД-100: **** 1268 • 10.	earthing		
• in trefoil formation with single-side screen earthing or cross screen earthingA346• plane with double-side screen earthingA335• plane with single-side screen earthing or cross screen earthingA361Maximum permissible conductor temperature• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1350Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the delivery on the drums ***# 22УД-60: 635 • 5.0# 25УД-90: 1068 • 8.5 # 26УД-100: ***** 1268 • 10.	Permissible continious current rating by burial *		
ross screen earthing plane with double-side screen earthing	in trefoil formation with double-side screen earthing	Α	338
• plane with double-side screen earthingA335• plane with single-side screen earthing or cross screen earthingA361Maximum permissible conductor temperature° C+90• Continious° C+130• in emergency operation° C+250• at short circuit° C-60 +50Minimum bending radius by layingmm1350Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the delivery on the drums ***# 22УД-60: 635 • 5.0# 25УД-90: 1068 • 8.5 # 26УД-100: **** 1268 • 10.	in trefoil formation with single-side screen earthing or	Α	346
• plane with single-side screen earthing or cross screen earthingA361Maximum permissible conductor temperature• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1350Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the delivery on the drums ***# 22УД-60: 635 • 5.0# 25УД-90: 1068 • 8.5 # 26УД-100: **** 1268 • 10.	cross screen earthing		
earthingMaximum permissible conductor temperature• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1350Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 635 • 5.0# 25УД-90: 1068 • 8.5 # 26УД-100: ***** 1268 • 10.	plane with double-side screen earthing	Α	335
Maximum permissible conductor temperature°C+90• In emergency operation°C+130• at short circuit°C+250Operating temperature range°C-60 +50Minimum bending radius by layingmm1350Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 635 • 5.0*** 25УД-90: 1068 • 8.5# 26УД-100: ***** 1268 • 10.	plane with single-side screen earthing or cross screen	Α	361
• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1350Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the deliverym, t# 22УД-60: 635 • 5.0on the drums ***# 25УД-90: 1068 • 8.5# 26УД-100: ***** 1268 • 10.	earthing		
• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1350Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 635 • 5.0# 25УД-90: 1068 • 8.5 # 26УД-100: ***** 1268 • 10.	Maximum permissible conductor temperature		
• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1350Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the deliverym, t# 22УД-60: 635 • 5.0on the drums ***# 25УД-90: 1068 • 8.5# 26УД-100: ***** 1268 • 10.	Continious	°C	+90
Operating temperature range° C-60 +50Minimum bending radius by layingmm1350Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 635 • 5.0# 25УД-90: 1068 • 8.5 # 26УД-100: ***** 1268 • 10.	in emergency operation	°C	+130
Minimum bending radius by layingmm1350Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 635 • 5.0# 25УД-90: 1068 • 8.5 # 26УД-100: **** 1268 • 10.	at short circuit	°C	+250
Rated outer diameter of the cable (for reference) **mm54Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the deliverym, t# 22УД-60: 635 • 5.0on the drums ***# 25УД-90: 1068 • 8.5# 26УД-100: **** 1268 • 10.	Operating temperature range	°C	-60 +50
Cable weight (approximate)kg/km6450Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 635 • 5.0# 25УД-90: 1068 • 8.5 # 26УД-100: **** 1268 • 10.	Minimum bending radius by laying	mm	1350
Rated factory cable length and gross weight of the delivery on the drums *** m, t # 22УД-60: 635 • 5.0 # 25УД-90: 1068 • 8.5 # 26УД-100: **** 1268 • 10.	Rated outer diameter of the cable (for reference) **	mm	54
on the drums *** # 25УД-90: 1068 • 8.5 # 26УД-100: **** 1268 • 10.	Cable weight (approximate)	kg/km	6450
# 26УД-100: **** 1268 • 10.	Rated factory cable length and gross weight of the delivery	m, t	# 22УД-60: 635 • 5.0
	on the drums ***		• •
0			# 26УД-100: **** 1268 • 10.
			0

Notes:

When ordering it is neccesary to agree the factory length of the product with the manufacturer

^{*} Long permissible current loads are calculated for the following conditions: conductor temperature 90 °C, air temperature 30 °C, soil temperature 20 °C, load factor 1.0, thermal resistivity of soil 1.0 °K•m/W, laying depth in the ground 1.5 m, while laying in flat formation the distance between cables in clear is equal to the cable diameter, while laying in trefoil formation cables are laid side by side

^{**} The external diameter may differ from the rated up to \pm 10 %

^{***} Отклонение фактической массы брутто от указанного значения может составлять ± 7 %

^{****} Option delivery on not full drum



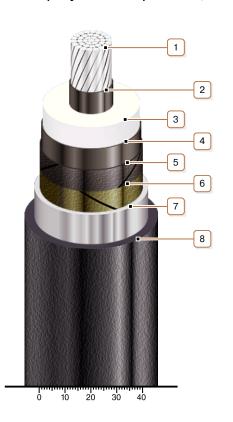




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Power cables with aluminium conductor, XLPE-insulated, lead-sheathed, with outer sheath of polymer composition, flame retardant



CONSTRUCTION

- 1. Aluminium multiwire compacted conductor
 Note: It is possible to manufacture cable with sealed conductor.
- 2. Inner extruded semiconducting layer
- 3. XLPE insulation
- 4. Outer extruded semiconducting layer
- 5. Lapping layer of semiconductive swellable tape
- 6. Lapping layer of semiconductive tape
- 7. Lead sheath
- 8. Flame-retardant polymer compound outer sheath

Note: It is possible to manufacture cable with extruded semiconductor layer along outer sheath