







АПвЭБПнг-35 3x120 ТУ У 31.3-00214534-058:2007

Three-core power cables with aluminium conductors, flame-retardant, with XLPE, steel-tape armoured, with polymer compound outer sheath

Technical cable requirements correspond to IEC 60502-2

Cables are used for laying:

- · in places, where mechanical impacts on cable are possible, except 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:

АПвЭБПнг-П-35 3x120/16 ТУ У 31.3-00214534-058:2007

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:

АПвЭБПнг-35 3x120/16 (ОМ) ТУ У 31.3-00214534-058:2007

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 conductors.

Order entry example:

АПВЭБПнг-35 3х120/16 (г) ТУ У 31.3-00214534-058:2007

It is possible manufacturing of cables in versions (A) and (B), flame-retardant when laying in bunches

Fire safety code in accordance with ДСТУ 4809:2007: ΠБ101122000

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 ДПк2 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)







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TECHNICAL SPECIFICATIONS

Maximum voltage Number and rated area of conductors Insulation thikness Insulation thi	Rated voltage	kV	35
Number and rated area of conductors Insulation thikness Minimum screen cross-section Permissible short circuit current across the screen of minimum cross-section Maximum permissible short-circuit current in core Maximum permissible short-circuit current in core Maximum permissible continious current rating * · by aerial laying A 274 · by burial A 232 Partial discharge factor for rated voltage, not more than Maximum permissible conductor temperature · Continious · in emergency operation · at short circuit Operating temperature range Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** mm 87 Cable weight (approximate) Rated factory cable length and gross weight of the delivery on the drums *** # 269Д-100: 457 · 5.9			
Minimum screen cross-sectionmm²16Permissible short circuit current across the screen of minimum cross-sectionkA3.3Maximum permissible short-circuit current in corekA11.3Permissible continious current rating *• by aerial layingA274• by burialA232Partial discharge factor for rated voltage, not more thanpC6Maximum permissible conductor temperature• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1392Rated outer diameter of the cable (for reference) **mm87Cable weight (approximate)kg/km8990Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 396 • 5.1on the drums ***# 26УД-100: 457 • 5.9			3 x 120
Permissible short circuit current across the screen of minimum cross-sectionkA3.3Maximum permissible short-circuit current in corekA11.3Permissible continious current rating * • by aerial layingA274• by burialA232Partial discharge factor for rated voltage, not more than Maximum permissible conductor temperaturepC6• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1392Rated outer diameter of the cable (for reference) **mm87Cable weight (approximate)kg/km8990Rated factory cable length and gross weight of the delivery on the drums ***# 25УД-90: 396 • 5.1	Insulation thikness	mm	8.6
minimum cross-section Maximum permissible short-circuit current in core RA 11.3 Permissible continious current rating * · by aerial laying A 274 · by burial Partial discharge factor for rated voltage, not more than pC 6 Maximum permissible conductor temperature · Continious · C +90 · in emergency operation · at short circuit Operating temperature range Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** Cable weight (approximate) Rated factory cable length and gross weight of the delivery on the drums *** Maximum permissible conductor temperature C +90 · C +90 · C +90 · C +250 Operating temperature range ° C -60 +50 Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** mm 87 Cable weight (approximate) kg/km 8990 Rated factory cable length and gross weight of the delivery on the drums *** # 25УД-90: 396 · 5.1 on the drums *** # 26УД-100: 457 · 5.9	Minimum screen cross-section	mm²	16
Maximum permissible short-circuit current in corekA11.3Permissible continious current rating *• by aerial layingA274• by burialA232Partial discharge factor for rated voltage, not more thanpC6Maximum permissible conductor temperature• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1392Rated outer diameter of the cable (for reference) **mm87Cable weight (approximate)kg/km8990Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 396 • 5.1on the drums ***# 26УД-100: 457 • 5.9	Permissible short circuit current across the screen of	kA	3.3
Permissible continious current rating *A274• by aerial layingA232Partial discharge factor for rated voltage, not more thanpC6Maximum permissible conductor temperature° C+90• Continious° C+130• in emergency operation° C+250• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1392Rated outer diameter of the cable (for reference) **mm87Cable weight (approximate)kg/km8990Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 396 • 5.1on the drums ***# 26УД-100: 457 • 5.9	minimum cross-section		
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• by burialA232Partial discharge factor for rated voltage, not more thanpC6Maximum permissible conductor temperature• Continious°C+90• in emergency operation°C+130• at short circuit°C+250Operating temperature range°C-60 +50Minimum bending radius by layingmm1392Rated outer diameter of the cable (for reference) **mm87Cable weight (approximate)kg/km8990Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 396 • 5.1on the drums ***# 26УД-100: 457 • 5.9	Permissible continious current rating *		
Partial discharge factor for rated voltage, not more thanpC6Maximum permissible conductor temperature• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1392Rated outer diameter of the cable (for reference) **mm87Cable weight (approximate)kg/km8990Rated factory cable length and gross weight of the delivery on the drums ***# 25УД-90: 396 • 5.1	by aerial laying	Α	274
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· Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1392Rated outer diameter of the cable (for reference) **mm87Cable weight (approximate)kg/km8990Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 396 • 5.1on the drums ***# 26УД-100: 457 • 5.9	Partial discharge factor for rated voltage, not more than	рС	6
• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1392Rated outer diameter of the cable (for reference) **mm87Cable weight (approximate)kg/km8990Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 396 • 5.1	Maximum permissible conductor temperature		
• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1392Rated outer diameter of the cable (for reference) **mm87Cable weight (approximate)kg/km8990Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 396 • 5.1on the drums ****# 26УД-100: 457 • 5.9	Continious	°C	+90
Operating temperature range°C-60 +50Minimum bending radius by layingmm1392Rated outer diameter of the cable (for reference) **mm87Cable weight (approximate)kg/km8990Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 396 • 5.1	in emergency operation	°C	+130
Minimum bending radius by layingmm1392Rated outer diameter of the cable (for reference) **mm87Cable weight (approximate)kg/km8990Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 396 • 5.1# 26УД-100: 457 • 5.9	• at short circuit	°C	+250
Rated outer diameter of the cable (for reference) ** mm 87 Cable weight (approximate) kg/km 8990 Rated factory cable length and gross weight of the delivery m, t # 25УД-90: 396 • 5.1 on the drums *** # 26УД-100: 457 • 5.9	Operating temperature range	°C	-60 +50
Cable weight (approximate)kg/km8990Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 396 • 5.1on the drums ***# 26УД-100: 457 • 5.9	Minimum bending radius by laying	mm	1392
Rated factory cable length and gross weight of the delivery m, t # 25УД-90: 396 • 5.1 on the drums *** # 26УД-100: 457 • 5.9	Rated outer diameter of the cable (for reference) **	mm	87
on the drums *** # 26УД-100: 457 • 5.9	Cable weight (approximate)	kg/km	8990
• • • • • • • • • • • • • • • • • • • •	Rated factory cable length and gross weight of the delivery	m, t	# 25УД-90: 396 • 5.1
# 30УД-130: 790 · 10.0	on the drums ***		# 26УД-100: 457 • 5.9
			# 30УД-130: 790 • 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 1.5 °K • m/W, laying depth in the ground 0.8 m, shields are grounded at both ends of the line

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

^{***} Отклонение фактической массы брутто от указанного значения может составлять $\pm\,7\,\%$









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CONSTRUCTION

1. Aluminium multiwire compacted conductor

- It is possible to manufacture cable with a single-wire conductor
- · It is possible to manufacture cable with sealed conductors.
- 2. Inner extruded semiconducting layer
- 3. XLPE insulation
- 4. Outer extruded semiconducting layer
- 5. Lapping layer of semiconductive swellable tape
- 6. Copper screen
- 7. Extruded filling of PVC compound
- 8. Double galvanized steel-tape armour
- 9. Flame-retardant polymer compound outer sheath

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

Note: Conductor twisting is not illustrated