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# ПвБбПнг-FRHF 4x50-1 ТУ У 31.3-00214534-069:2011

Fire-resistant power cables with copper conductors, XLPE-insulated, galvanized steel-tape armoured, with polymer compound outer sheath, flame-retardant, halogen-free

Cables are used for laying:

• in places, where small mechanical impacts on cable are possible, including tensile forces

• power supply cable lines of NPP electric equipment, wiring in office premises , which are computerized and intelligent, in kindergartens, schools, hospitals and for cable lines of spectating complexes and sport structures

• power supply cable lines of NPP safety system equipment, circuits wiring of fire safety systems (fire alarm circuits, power supply of fire-fighting pumps, lightning of emergency exits and evacuation routes, smoke exhaust and blowing ventilation systems, evacuation elevators); for wiring in hospital surgical wings, emergency and equipment (current collectors) power supply circuits, operating in a fire emergency

Manufacturing of cable with multiwire conductors is possible Manufacturing of extruded fire-resistant barrier is possible

Fire safety code in accordance with ДСТУ 4809:2007: ПБ123122580 Products of this mark meet the requirements:

• single wire cable flame retardance

• bunched cable flame retardance category A

• toxicity class Tk3 of the combustion products of nonmetallic elements (toxicity index over  $120 \text{ g/m}^3$ )

• class  $\[mu]T\kappa 1$  on smoke-forming ability by smouldering of non-metallic elements (coefficient of smoke formation from 50 to 500 m<sup>2</sup>/kg)

• class ДΠκ2 on smoke-forming ability by combustion (minimum luminous flux more than 60 %)

• corrosive class Kk2 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  $\mu$ S/mm)

• flame-resistant class Ex90 under fire conditions at standard temperature conditions ДСТУ Б В.1.1-4

• flame-resistant class FE180 under fire conditions with a temperature not less than 750 °C





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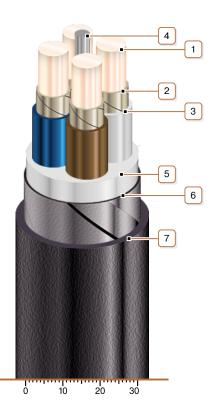
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## **TECHNICAL SPECIFICATIONS**

Rated voltage	kV	1
Number and rated area of conductors	mm²	4 x 50
Phase insulation thikness	mm	1
Permissible continious current rating (AC of industrial frequency)	*	
• by aerial laying	А	194
Maximum permissible conductor temperature		
Continious	°C	+90
in emergency operation	°C	+130
at short circuit	°C	+250
Operating temperature range	°C	-50 +50
Minimum bending radius by laying	mm	270
Rated outer diameter of the cable (for reference) **	mm	36
Cable weight (approximate)	kg/km	2960
Rated factory cable length and gross weight of the delivery	m, t	# 16a: 780 • 2.6
on the drums ***		# 18: 890 • 3.1
Notes:		

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

\* Long permissible current loads are calculated during operation in four-wire networks with load in all the conductors for the following conditions: air temperature plus 25 °C, soil temperature plus 15 °C, thermal resistivity of soil 1.2  $K \cdot m/W$ , laying depth in the soil 0.7 m \*\* The external diameter may differ from the rated up to ± 10 %



### **CONSTRUCTION**

- 1. Copper conductor
- 2. Fire-resistant barrier
- Note: Manufacturing of extruded fire-resistant barrier is possible
- 3. XLPE insulation
- 4. PVC compound bundle
- 5. Halogen-free polymer compound inner sheath
- 6. Double galvanized steel-tape armour
- 7. Polymer compound outer sheath:flame-retardant and halogen-free

Note: Conductor twisting is not illustrated