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# ВВГнгд-FR 3x185-1 ТУ У 31.3-00214534-055:2006



Fire-resistant power cables with copper conductors, with low fire-risk PVC-compound insulation, with low fire-risk PVC-compound outer sheath

Cables are used for laying:

- in bunches
- · in premises, dry ducts and tunnels, in corrosive environment
- in bunches, in crowded places

• 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 low fire-risk PVC compound inner sheath is possible Manufacturing of extruded fire-resistant barrier is possible

Fire safety code in accordance with ДСТУ 4809:2007: ПБ123121080

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 g/m<sup>3</sup>)
- 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 K $\kappa$ 1 of combustion products of non-metallic elements (the number of halogen hydrides less than 150 mg/g, pH less than 4.3, specific conductivity more than 10  $\mu$ S/mm)

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





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## **TECHNICAL SPECIFICATIONS**

Rated voltage	kV	1
Number and rated area of conductors	mm²	3 x 185
Phase insulation thikness	mm	2
Permissible continious current rating (AC of industrial frequency)	*	
• by aerial laying	А	397
• by burial	А	405
Maximum permissible conductor temperature		
Continious	°C	+70
in emergency operation	°C	+80
at short circuit	°C	+250
Operating temperature range	°C	-50 +50
Minimum bending radius by laying	mm	360
Rated outer diameter of the cable (for reference) **	mm	48
Cable weight (approximate)	kg/km	6340
Rated factory cable length and gross weight of the delivery	m, t	# 18: 500 • 3.6
on the drums ***		# 20: 800 • 5.7
Notes:		

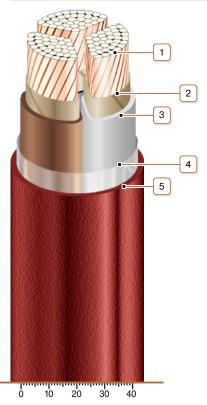
Notes:

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: air temperature plus 25 °C, soil temperature plus 15 °C,

thermal resistivity of soil 1.2  $^{\circ}\!K\!\cdot\!m/W$ , laying depth in the soil 0.7 m

\*\* The external diameter may differ from the rated up to  $\pm$  10 %



#### **CONSTRUCTION**

- 1. Copper multiwire compact conductor
- 2. Fire-resistant barrier

Note: Manufacturing of extruded fire-resistant barrier is possible

- 3. Low fire-risk PVC compound insulation
- 4. PET film winding
- 5. Low fire-risk PVC compound outer sheath

Note: Conductor twisting is not illustrated