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# ВВГнгд-FR 4x16-1 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 multiwire conductors 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  $\mbox{$\Pi$r$}$  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 Kκ1 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**

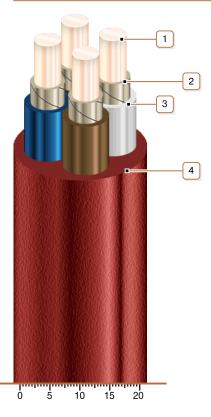
| Rated voltage  | kV    | 1                |
|--|-------|------------------|
| Number and rated area of conductors                                  | mm²   | 4 x 16           |
| Phase insulation thikness  | mm    | 1                |
| Permissible continious current rating (AC of industrial frequency) * |       |                  |
| • by aerial laying   | А     | 78               |
| • by burial  | А     | 94               |
| 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    | 172.5            |
| Rated outer diameter of the cable (for reference) **                 | mm    | 23               |
| Cable weight (approximate)   | kg/km | 1080             |
| Rated factory cable length and gross weight of the delivery          | m, t  | # 14: 1090 • 1.4 |
| on the drums ***   |       |                  |
|  |       |                  |

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  $\pm$  10 %



### **CONSTRUCTION**

1. Copper conductor

2. Fire-resistant barrier Note: Manufacturing of extruded fire-resistant barrier is possible

3. Low fire-risk PVC compound insulation

#### 4. Low fire-risk PVC compound outer sheath

Note: Conductor twisting is not illustrated