



ВВГнгд-FR 3x4-1 **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*
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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/m³)*
- *class ДТк1 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 Kк1 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 μS/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 | mm ² | 3 x 4 |
| Phase insulation thickness | mm | 1 |
| Permissible continuous current rating (AC of industrial frequency) * | | |
| • by aerial laying | A | 36 |
| • by burial | A | 47 |
| Maximum permissible conductor temperature | | |
| • Continuous | °C | +70 |
| • in emergency operation | °C | +80 |
| • at short circuit | °C | +250 |
| Operating temperature range | °C | -50 ... +50 |
| Minimum bending radius by laying | mm | 120 |
| Rated outer diameter of the cable (for reference) ** | mm | 16 |
| Cable weight (approximate) | kg/km | 390 |
| Rated factory cable length and gross weight of the delivery on the drums | m, t | # 12: 1280 • 0.6 |

Notes:

When ordering it is necessary 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 °K·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. Low fire-risk PVC compound insulation
4. Low fire-risk PVC compound outer sheath

Note: Conductor twisting is not illustrated

