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180137-130500110250

# ПвВГнгд-FR 3х50+1х25-1
# ТУ У 31.3-00214534-055:2006

## Fire resistant power cables with copper conductors, XLPE-insulated, 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 (main and additional one) 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 Тк3 of the combustion products of nonmetallic elements (toxicity index over 120 g/m$^3$)*
- *class ДТк1 on smoke-forming ability by smouldering of non-metallic elements (coefficient of smoke formation from 50 to 500 m$^2$/kg)*
- *class ДПк2 on smoke-forming ability by combustion (minimum luminous flux more than 60 %)*
- *corrosive class Кк1 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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Fire resistant power cables with copper conductors, XLPE-insulated, with low fire-risk PVC-compound outer sheath

## TECHNICAL SPECIFICATIONS

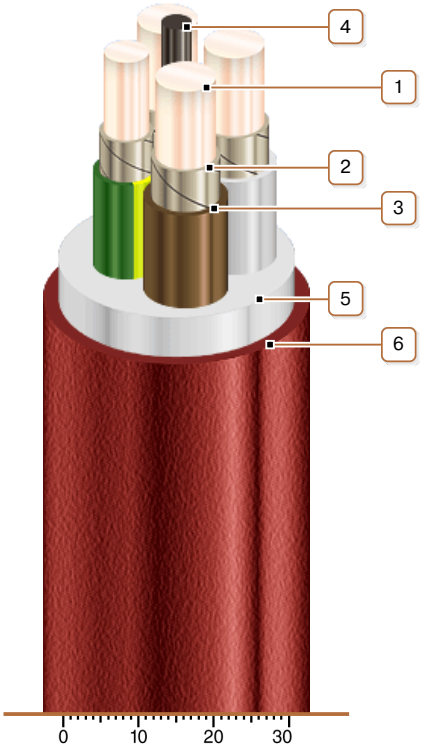
| | | |
|---|---|---|
| Rated voltage | kV | 1 |
| Number and rated area of conductors | $mm^2$ | 3 x 50 + 1 x 25 |
| Phase insulation thikness | mm | 1 |
| Permissible continious current rating (AC of industrial frequency) * | | |
| • *by aerial laying* | A | 209 |
| • *by burial* | A | 205 |
| Maximum 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 | 262.5 |
| Rated outer diameter of the cable (for reference) ** | mm | 35 |
| Cable weight (approximate) | kg/km | 2320 |
| Rated factory cable length and gross weight of the delivery on the drums | m, t | # 16a: 780 • 2.1<br># 18: 890 • 2.5 |

*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 ˚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. XLPE insulation*

*4. Low fire-risk PVC-compound bundle*

*5. Low fire-risk PVC-compound inner sheath*

*6. Low fire-risk PVC compound outer sheath*

*Note: Conductor twisting is not illustrated*