



## **ПвЭоВнгд(к)-10 3x95 ТУ У 31.3-00214534-017-2003**

Three-core power cables with copper conductors, flame-retardant, with XLPE, collective screen and PVC compound outer sheath and with low smoke and gas emission

Technical cable requirements correspond to IEC 60502-2

Cables are used for laying:

- *in premises, tunnels, ducts, mines, dry soil and outdoor under shelter*
- *in bunches*
- *at sites, where low smoke and gas emission are required (NPP, subway, large industrial facilities, high-rise buildings, etc.)*

It is possible to manufacture cables with an integrated fiber-optic module.

Order entry example:

ПвЭоВнгд(к)-10 3x95/35 (ОМ) ТУ У 31.3-00214534-017-2003

In conjunction with the DTS system, the integrated fiber-optic module can act as a distributed cable line temperature sensor.

It is possible to manufacture cable with sealed conductors.

Order entry example:

ПвЭоВнгд(к)-10 3x95/35 (r) ТУ У 31.3-00214534-017-2003

Fire safety code in accordance with ДСТУ 4809:2007: ПБ132121000

Products of this mark meet the requirements:

- *single wire cable flame retardance*
- *bunched cable flame retardance category B*
- *toxicity class Tk2 of the combustion products of nonmetallic elements (toxicity index from 40 up to 120 g/m<sup>3</sup>)*
- *class ДТк1 on smoke-forming ability by smouldering of non-metallic elements (coefficient of smoke formation from 50 to 500 m<sup>2</sup>/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)*



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### TECHNICAL SPECIFICATIONS

|  |                 |  |
|--|-----------------|--|
| Rated voltage  | kV              | 10   |
| Maximum voltage  | kV              | 12   |
| Number and rated area of conductors  | mm <sup>2</sup> | 3 x 95   |
| Insulation thickness   | mm              | 3.4  |
| Minimum screen cross-section   | mm <sup>2</sup> | 35   |
| Permissible short circuit current across the screen of minimum cross-section | kA              | 7.1  |
| Maximum permissible short-circuit current in core                            | kA              | 13.6   |
| Permissible continuous current rating *                                      |                 |  |
| • <i>by aerial laying</i>  | A               | 304  |
| • <i>by burial</i>   | A               | 262  |
| Partial discharge factor for rated voltage, not more than                    | pC              | 6  |
| Maximum permissible conductor temperature                                    |                 |  |
| • <i>Continuous</i>  | °C              | +90  |
| • <i>in emergency operation</i>  | °C              | +130   |
| • <i>at short circuit</i>  | °C              | +250   |
| Operating temperature range (in climate version NF)                          | °C              | -50 ... +50  |
| Operating temperature range (in climate version T)                           | °C              | -25 ... +65  |
| Minimum bending radius by laying   | mm              | 880  |
| Rated outer diameter of the cable (for reference) **                         | mm              | 55   |
| Cable weight (approximate)   | kg/km           | 5420   |
| Rated factory cable length and gross weight of the delivery on the drums     | m, t            | # 22УД-60: 499 • 3.6<br># 20аУД-60: 619 • 4.1<br># 25УД-90: 1028 • 7.1 |

**Notes:**

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

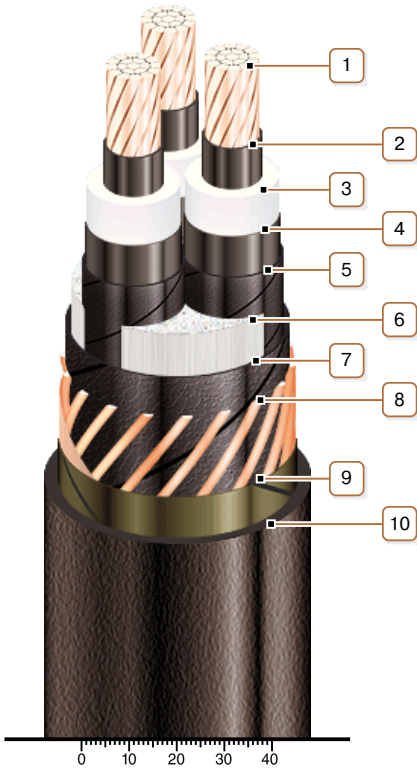
\* Long permissible current loads are calculated for the following conditions: conductor temperature 90 °C, air temperature 30 °C, soil temperature 20 °C, load factor 1.0, thermal resistivity of soil 1.5 °K·m/W, laying depth in the ground 0.8 m, shields are grounded at both ends of the line

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



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### CONSTRUCTION

**1. Copper multiwire compact conductor**

*Note: It is possible to manufacture cable with sealed conductors.*

**2. Inner extruded semiconducting layer**

**3. XLPE insulation**

**4. Outer extruded semiconducting layer**

**5. Lapping layer of semiconductive swellable tape**

**6. Interstitial filler with polypropylene bundles**

**7. Lapping layer of semiconductive swellable tape**

**8. Copper screen**

**9. Lapping layer of glass tape**

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

*Note: Conductor twisting is not illustrated*