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# ПвЭВнгд(б)-35 3х185 ТУ У 31.3-00214534-017-2003

Three core power cables with copper conductors, XLPE-insulated, without core filling, with outer sheath of PVC compound, , flame retardant, 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:

ПвЭВнгд(б)-35 3х185/25 (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:

ПвЭВнгд(б)-35 3х185/25 (г) 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/m³)
- class  $\Pi T \kappa 1$  on smoke-forming ability by smouldering of non-metallic elements (coefficient of smoke formation from 50 to 500 m<sup>2</sup>/kg)
- class ДПк2 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)







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## **TECHNICAL SPECIFICATIONS**

| Rated voltage   | kV    | 35                          |
|---|-------|-----------------------------|
| Maximum voltage   | kV    | 42                          |
| Number and rated area of conductors                         | mm²   | 3 x 185                     |
| Insulation thikness   | mm    | 8.6                         |
| Minimum screen cross-section                                | mm²   | 25                          |
| Permissible short circuit current across the screen of      | kA    | 5.1                         |
| minimum cross-section                                       |       |                             |
| Maximum permissible short-circuit current in core           | kA    | 26.5                        |
| Permissible continious current rating *                     |       |                             |
| by aerial laying  | Α     | 455                         |
| • by burial   | Α     | 377                         |
| Partial discharge factor for rated voltage, not more than   | рС    | 6                           |
| Maximum permissible conductor temperature                   |       |                             |
| Continious  | °C    | +90                         |
| in emergency operation                                      | °C    | +130                        |
| at short circuit  | °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    | 1408                        |
| Rated outer diameter of the cable (for reference) **        | mm    | 88                          |
| Cable weight (approximate)                                  | kg/km | 9330                        |
| Rated factory cable length and gross weight of the delivery | m, t  | # 25УД-90: 396 • 5.3        |
| on the drums ***  |       | # 26УД-100: 457 • 6.1       |
|   |       | # 30УД-130: **** 766 • 10.0 |
|   |       |                             |

#### Notes

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

<sup>\*</sup> 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

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

<sup>\*\*\*</sup> Отклонение фактической массы брутто от указанного значения может составлять  $\pm\,7\,\%$ 

<sup>\*\*\*\*</sup> Option delivery on not full drum



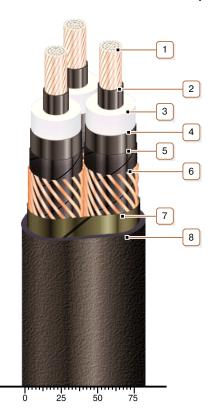




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## **CONSTRUCTION**

- 1. Copper multiwire compact conductor
- 2. Inner extruded semiconducting layer
- 3. XLPE insulation
- 4. Outer extruded semiconducting layer
- 5. Lapping layer of semiconductive swellable tape
- 6. Copper screen
- 7. Lapping layer of glass tape
- 8. Low fire-risk PVC compound outer sheath

Note: Conductor twisting is not illustrated