



## **ПвЕгПу(κ)-20 3x50 ТУ У 31.3-00214534-017-2003**

Three core power cables with copper conductors, XLPE-insulated, core-filled with bundles, with reinforced outer sheath of polyethylene

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Technical cable requirements correspond to IEC 60502-2

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Cables are used for laying:

- *in soil (trenches)*
  - *on difficult route sections, according to the unique specification*
  - *in the air, including cable structures, if provided the additional fire protection*
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It is possible to manufacture cables with extruded semiconductor layer along outer sheath.

Order entry example:

ПвЕгПу(κ)-П-20 3x50/16 ТУ У 31.3-00214534-017-2003

An extruded semiconductor layer along outer sheath ensures the correct testing of cable line with sections of underground laying in polymer pipes.

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

Order entry example:

ПвЕгПу(κ)-20 3x50/16 (OM) 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.

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It is possible to manufacture cable with sealed conductors.

Order entry example:

ПвЕгПу(κ)-20 3x50/16 (г) ТУ У 31.3-00214534-017-2003

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### TECHNICAL SPECIFICATIONS

|                                                                              |                 |                                                                        |
|------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------|
| Rated voltage                                                                | kV              | 20                                                                     |
| Maximum voltage                                                              | kV              | 24                                                                     |
| Number and rated area of conductors                                          | mm <sup>2</sup> | 3 x 50                                                                 |
| Insulation thickness                                                         | mm              | 5.5                                                                    |
| Minimum screen cross-section                                                 | mm <sup>2</sup> | 16                                                                     |
| Permissible short circuit current across the screen of minimum cross-section | kA              | 3.3                                                                    |
| Maximum permissible short-circuit current in core                            | kA              | 7.2                                                                    |
| Permissible continuous current rating *                                      |                 |                                                                        |
| • by aerial laying                                                           | A               | 158                                                                    |
| • by burial                                                                  | A               | 140                                                                    |
| Partial discharge factor for rated voltage, not more than                    | pC              | 6                                                                      |
| Maximum permissible conductor temperature                                    |                 |                                                                        |
| • Continuous                                                                 | °C              | +90                                                                    |
| • in emergency operation                                                     | °C              | +130                                                                   |
| • at short circuit                                                           | °C              | +250                                                                   |
| Operating temperature range                                                  | °C              | -60 ... +50                                                            |
| Minimum bending radius by laying                                             | mm              | 912                                                                    |
| Rated outer diameter of the cable (for reference) **                         | mm              | 57                                                                     |
| Cable weight (approximate)                                                   | kg/km           | 3480                                                                   |
| Rated factory cable length and gross weight of the delivery on the drums *** | m, t            | # 18аУД-40: 423 • 2.0<br># 20аУД-60: 526 • 2.5<br># 25УД-90: 838 • 4.5 |

#### 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 %

\*\*\* Отклонение фактической массы брутто от указанного значения может составлять ± 7 %



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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. Copper screen

#### 7. Interstitial filler with polypropylene bundles

#### 8. Lapping layer of semiconductive tape

#### 9. Strengthened polyethylene outer sheath

*Note: It is possible to manufacture cable with extruded semiconductor layer along outer sheath*

*Note: Conductor twisting is not illustrated*