

## **АПвЕоВнг(κ)-20 3х70 ТУ У 31.3-00214534-017-2003**

Three-core power cables with aluminium conductors, flame-retardant, with XLPE, collective screen and PVC compound outer sheath

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Technical cable requirements correspond to IEC 60502-2

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Cables are used for laying:

- *in premises, tunnels, ducts, mines, dry soil and outdoor under shelter*
- *in bunches*

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

Order entry example:

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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:

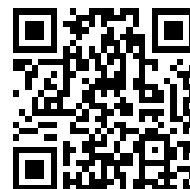
АПвЕоВнг(κ)-20 3х70/35 (г) ТУ У 31.3-00214534-017-2003

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Fire safety code in accordance with ДСТУ 4809:2007: ПБ130000000

Products of this mark meet the requirements:

- *single wire cable flame retardance*
- *bunched cable flame retardance category B*



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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 70                                                                 |
| Insulation thickness                                                         | mm              | 5.5                                                                    |
| 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              | 6.6                                                                    |
| Permissible continuous current rating *                                      |                 |                                                                        |
| • by aerial laying                                                           | A               | 196                                                                    |
| • by burial                                                                  | A               | 171                                                                    |
| 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 (in climate version NF)                          | °C              | -50 ... +50                                                            |
| Operating temperature range (in climate version T)                           | °C              | -25 ... +65                                                            |
| Minimum bending radius by laying                                             | mm              | 960                                                                    |
| Rated outer diameter of the cable (for reference) **                         | mm              | 60                                                                     |
| Cable weight (approximate)                                                   | kg/km           | 4230                                                                   |
| Rated factory cable length and gross weight of the delivery on the drums *** | m, t            | # 18аУД-40: 404 • 2.2<br># 20аУД-60: 500 • 2.8<br># 25УД-90: 838 • 5.1 |

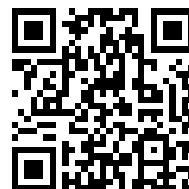
#### Notes:

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

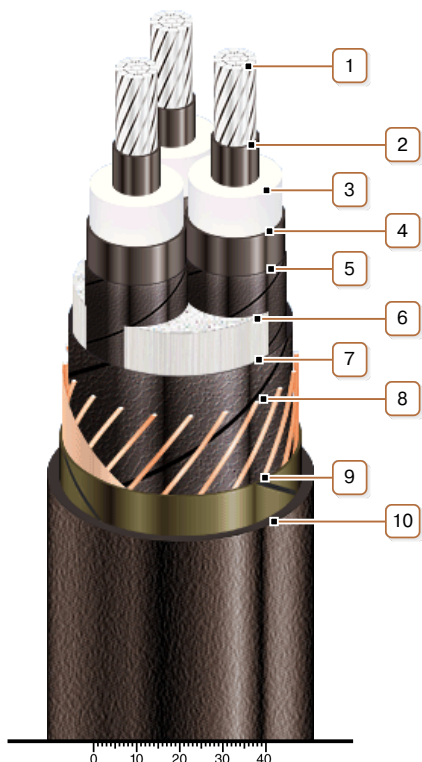
\*\* The external diameter may differ from the rated up to ± 10 %

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



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### CONSTRUCTION

#### 1. Aluminium multiwire compacted 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 flammable PVC compound outer sheath

*Note: Conductor twisting is not illustrated*