



## **АПВЭКВ-20 3x35 ТУ У 31.3-00214534-017-2003**

Three-core power cables with aluminium conductors, with XLPE, steel-wire armoured, with PVC compound outer sheath

For the cable of this mark correspond the foreign-made analogues:

Al/XLPE/CWS/PVC/SWA/PVC (GB)

Technical cable requirements correspond to IEC 60502-2

Cables are used for laying:

- *in places, where mechanical impacts on cable are possible, including tensile forces*
- *in premises, tunnels, ducts, mines, dry soil and outdoor under shelter*
- *single laying*

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

Order entry example:

АПВЭКВ-20 3x35/16 (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.

It is possible to manufacture cable with sealed conductors.

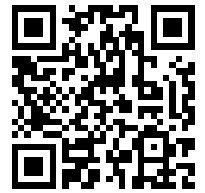
Order entry example:

АПВЭКВ-20 3x35/16 (r) ТУ У 31.3-00214534-017-2003

Fire safety code in accordance with ДСТУ 4809:2007: ПБ100000000

Products of this mark meet the requirements:

- *single wire cable flame retardance*



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### TECHNICAL SPECIFICATIONS

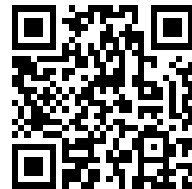
|  |                 |  |
|--|-----------------|--|
| Rated voltage  | kV              | 20   |
| Maximum voltage  | kV              | 24   |
| Number and rated area of conductors  | mm <sup>2</sup> | 3 x 35                                       |
| Insulation thickness   | mm              | 5.5  |
| 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              | 3.3  |
| Permissible continuous current rating *                                      |                 |  |
| • by aerial laying   | A               | 133  |
| • by burial  | A               | 119  |
| 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              | 1008   |
| Rated outer diameter of the cable (for reference) **                         | mm              | 63   |
| Cable weight (approximate)   | kg/km           | 5810   |
| Rated factory cable length and gross weight of the delivery on the drums     | m, t            | # 22УД-60: 450 • 3.5<br># 25УД-90: 771 • 6.0 |

**Notes:**

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

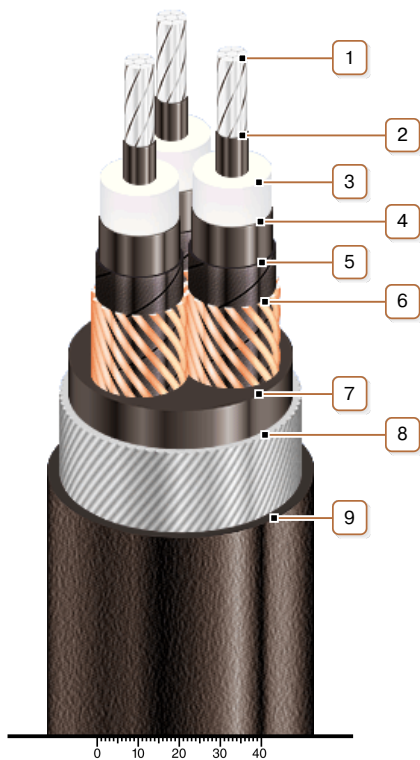
\* Long permissible current loads are calculated for the following conditions: conductor temperature 90 °C, air temperature 30 °C, soil temperature 20 °C, load factor 1.0, thermal resistivity of soil 1.5 °K·m/W, laying depth in the ground 0.8 m, shields are grounded at both ends of the line

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



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### CONSTRUCTION

**1. 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. Copper screen**

**7. Extruded filling of PVC compound**

**8. Round galvanized steel-wire armour**

**9. PVC compound outer sheath**

*Note: Conductor twisting is not illustrated*