



## **АПвЭВнгд(б)-20 3x50 ТУ У 31.3-00214534-017-2003**

Three core power cables with aluminium 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:

АПвЭВнгд(б)-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.

It is possible to manufacture cable with sealed conductors.

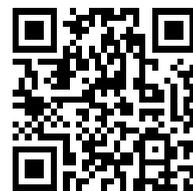
Order entry example:

АПвЭВнгд(б)-20 3x50/16 (r) ТУ У 31.3-00214534-017-2003

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 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	4.7
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 (in climate version NF)	°C	-50 ... +50
Operating temperature range (in climate version T)	°C	-25 ... +65
Minimum bending radius by laying	mm	896
Rated outer diameter of the cable (for reference) **	mm	56
Cable weight (approximate)	kg/km	2260
Rated factory cable length and gross weight of the delivery on the drums	m, t	# 22УД-60: 499 • 2.0 # 20аУД-60: 619 • 2.1 # 25УД-90: 1028 • 3.9

#### Notes:

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

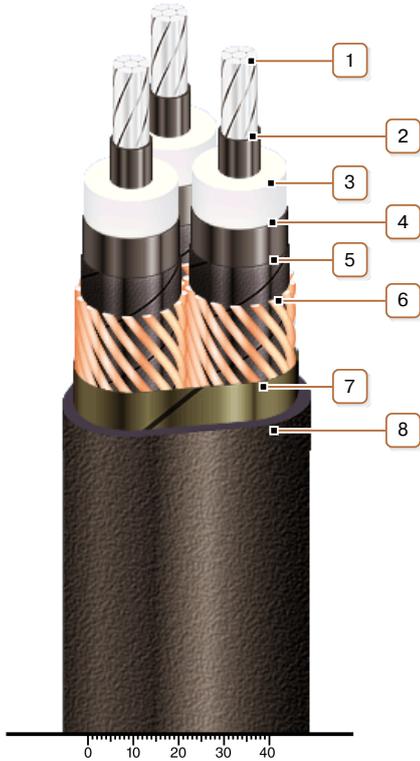
\* Long permissible current loads are calculated for the following conditions: conductor temperature 90 °C, air temperature 30 °C, soil temperature 20 °C, load factor 1.0, thermal resistivity of soil 1.5 °K·m/W, laying depth in the ground 0.8 m, shields are grounded at both ends of the line

\*\* 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. Lapping layer of glass tape**

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

*Note: Conductor twisting is not illustrated*