



## **АПвЭБПу-20 3x50** **ТУ У 31.3-00214534-017-2003**

Three-core power cables with aluminium conductors, with XLPE, steel-tape armoured, with strengthened polyethylene outer sheath

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Technical cable requirements correspond to IEC 60502-2

Cables are used for laying:

- *in places, where mechanical impacts on cable are possible, except tensile forces*
- *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:

АПвЭБПу-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:

АПвЭБПу-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.

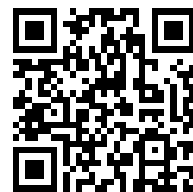
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It is possible to manufacture cable with sealed conductors.

Order entry example:

АПвЭБПу-20 3x50/16 (r) 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	4.7
Permissible continuous current rating *		
• by aerial laying	A	159
• 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	1008
Rated outer diameter of the cable (for reference) **	mm	63
Cable weight (approximate)	kg/km	4130
Rated factory cable length and gross weight of the delivery on the drums ***	m, t	# 22УД-60: 450 • 2.8 # 25УД-90: 771 • 4.8

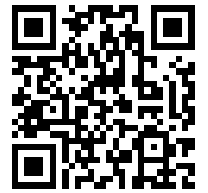
**Notes:**

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

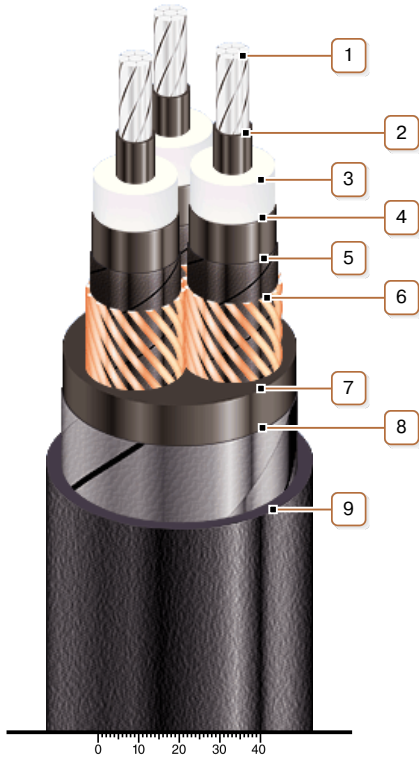
\*\* The external diameter may differ from the rated up to ± 10 %

\*\*\* 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. Copper screen**

**7. Extruded filling of PVC compound**

**8. Double galvanized steel-tape armour**

**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*