



## **АПВЭБПнг-НФ-20 3x240 ТУ У 31.3-00214534-058:2007**

Three-core power cables with aluminium conductors, flame-retardant and halogen-free, with XLPE, steel-tape armoured, with polymer 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 places, where mechanical impacts on cable are possible, except tensile forces*
- *in premises, tunnels, ducts, mines, dry soil and outdoor under shelter*
- *at sites, where low smoke and corrosive gas emission are required (NPP, subway, large industrial facilities, high-rise buildings, etc.)*
- *single laying*

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It is possible to manufacture cables with extruded semiconductor layer along outer sheath.

Order entry example:

АПВЭБПнг-НФ-П-20 3x240/25 ТУ У 31.3-00214534-058:2007

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:

АПВЭБПнг-НФ-20 3x240/25 (OM) ТУ У 31.3-00214534-058:2007

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:

АПВЭБПнг-НФ-20 3x240/25 (r) ТУ У 31.3-00214534-058:2007

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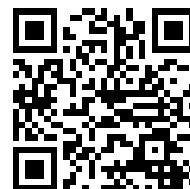
It is possible manufacturing of cables in versions (A) and (B), flame-retardant when laying in bunches

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Fire safety code in accordance with ДСТУ 4809:2007: ПБ102122000

Products of this mark meet the requirements:

- *single wire cable flame retardance*
- *toxicity class Tk2 of the combustion products of nonmetallic elements (toxicity index from 40 up to 120 g/m<sup>3</sup>)*
- *class ДТк1 on smoke-forming ability by smouldering of non-metallic elements (coefficient of smoke formation from 50 to 500 m<sup>2</sup>/kg)*
- *class ДПк2 on smoke-forming ability by combustion (minimum luminous flux more than 60 %)*
- *corrosive class Кк2 of combustion products of non-metallic elements (the number of halogen hydrides less than 150 mg/g, pH more than 4.3, specific conductivity less than 10 μS/mm)*



## АПвЭБПнг-НГ-20 3x240 ТУ У 31.3-00214534-058:2007

Three-core power cables with aluminium conductors, flame-retardant and halogen-free, with XLPE, steel-tape armoured, with polymer compound outer sheath

### TECHNICAL SPECIFICATIONS

Rated voltage	kV	20
Maximum voltage	kV	24
Number and rated area of conductors	mm <sup>2</sup>	3 x 240
Insulation thickness	mm	5.5
Minimum screen cross-section	mm <sup>2</sup>	25
Permissible short circuit current across the screen of minimum cross-section	kA	5.1
Maximum permissible short-circuit current in core	kA	22.7
Permissible continuous current rating *		
• by aerial laying	A	415
• by burial	A	338
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	1360
Rated outer diameter of the cable (for reference) **	mm	85
Cable weight (approximate)	kg/km	9320
Rated factory cable length and gross weight of the delivery on the drums ***	m, t	# 25УД-90: 420 • 5.5 # 26УД-100: 604 • 7.4 # 30УД-130: **** 767 • 10.0

#### Notes:

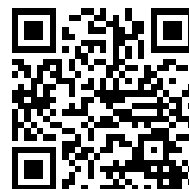
When ordering it is necessary to agree the factory length of the product with the manufacturer

\* 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 %

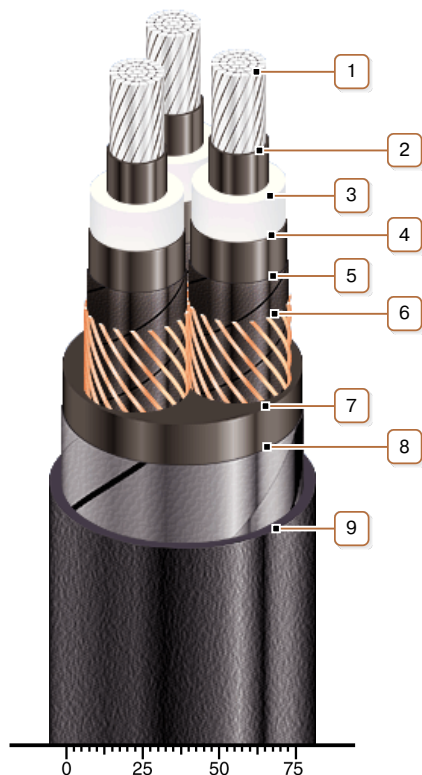
\*\*\* Отклонение фактической массы брутто от указанного значения может составлять ± 7 %

\*\*\*\* Option delivery on not full drum



## АПвЭБПнг-HF-20 3x240 ТУ У 31.3-00214534-058:2007

Three-core power cables with aluminium conductors, flame-retardant and halogen-free, with XLPE, steel-tape armoured, with polymer compound outer sheath



### CONSTRUCTION

#### 1. Aluminium multiwire compacted conductor

Notes:

- It is possible to manufacture cable with a single-wire conductor
- 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

Note: It is possible to manufacture a cable with a fiber optic module built into the screen, including as a DTS system sensor

#### 7. Extruded filling of PVC compound

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

#### 9. Polymer compound outer sheath: flame-retardant and halogen-free

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

Note: Conductor twisting is not illustrated