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## АПвЭКВнгд-15 3х300 ТУ У 31.3-00214534-017-2003

Three-core power cables with aluminium conductors, flame-retardant, with XLPE, steel-wire armoured, with PVC compound outer sheath, with low smoke and gas emission

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
- 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:

АПвЭКВнгд-15 3x300/25 (ОМ) 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:

АПвЭКВнгд-15 3х300/25 (г) ТУ У 31.3-00214534-017-2003

Fire safety code in accordance with ДСТУ 4809:2007: ПБ122121000

Products of this mark meet the requirements:

- · single wire cable flame retardance
- bunched cable flame retardance category A
- toxicity class Tk2 of the combustion products of nonmetallic elements (toxicity index from 40 up to 120 g/m³)
- class  $\Pi T \kappa 1$  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 K $\kappa$ 1 of combustion products of non-metallic elements (the number of halogen hydrides less than 150 mg/g, pH less than 4.3, specific conductivity more than 10  $\mu$ S/mm)







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### **TECHNICAL SPECIFICATIONS**

Rated voltage	kV	15
Maximum voltage	kV	17.5
Number and rated area of conductors	mm²	3 x 300
Insulation thikness	mm	4.5
Minimum screen cross-section	mm²	25
Permissible short circuit current across the screen of	kA	5.1
minimum cross-section		
Maximum permissible short-circuit current in core	kA	28.2
Permissible continious current rating *		
• by aerial laying	Α	472
• by burial	Α	380
Partial discharge factor for rated voltage, not more than	рС	6
Maximum permissible conductor temperature		
Continious	°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	1440
Rated outer diameter of the cable (for reference) **	mm	90
Cable weight (approximate)	kg/km	13620
Rated factory cable length and gross weight of the delivery	m, t	# 25УД-90: 396 • 7.0
on the drums ***		# 26УД-100: 457 • 8.0
		# 30УД-130: **** 524 • 10.0

#### Notes

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

<sup>\*</sup> 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

<sup>\*\*</sup> The external diameter may differ from the rated up to  $\pm$  10 %

<sup>\*\*\*</sup> Отклонение фактической массы брутто от указанного значения может составлять  $\pm\,7\,\%$ 

<sup>\*\*\*\*</sup> Option delivery on not full drum



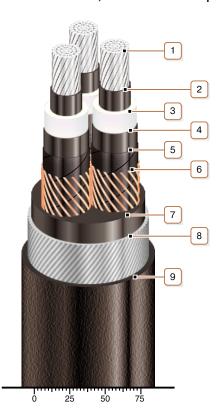




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### **CONSTRUCTION**

- 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

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 low fire-risk PVC compound
- 8. Round galvanized steel-wire armour
- 9. Low fire-risk PVC compound outer sheath

Note: Conductor twisting is not illustrated