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# АПвЭАкПу-10 1x120 ТУ У 31.3-00214534-017-2003

Single-core power cables with aluminium conductor, with XLPE, aluminium-wire armoured, with strengthened polyethylene outer sheath

Due to non-magnetic armour, cables operate at AC Technical cable requirements correspond to IEC 60502-2

#### Cables are used for laying:

- · in places, where small mechanical impacts on cable are possible, including 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

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

Order entry example:

АПвЭАкПу-П-10 1х120/16 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.

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

Order entry example:

АПвЭАкПу-10 1x120/16 (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

Order entry example:

АПвЭАкПу-10 1х120/16 (ожк) ТУ У 31.3-00214534-017-2003

It is possible to manufacture cable with sealed conductor.

Order entry example:

АПвЭАкПу-10 1x120/16 (г) ТУ У 31.3-00214534-017-2003







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### **TECHNICAL SPECIFICATIONS**

Rated voltage	kV	10
Maximum voltage	kV	12
Number and rated area of conductors	mm²	1 x 120
Insulation thikness	mm	3.4
Minimum screen cross-section	mm²	16
Permissible short circuit current across the screen of	kA	3.3
minimum cross-section		
Maximum permissible short-circuit current in core	kA	11.3
Permissible continious current rating *		
by aerial laying in trefoil formation	Α	324
by aerial flat laying	Α	391
by burial in trefoil formation	Α	252
• by burial flat	Α	260
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	°C	-60 +50
Minimum bending radius by laying	mm	640
Rated outer diameter of the cable (for reference) **	mm	40
Cable weight (approximate)	kg/km	1620
Rated factory cable length and gross weight of the delivery	m, t	# 18аУД-40: 1062 • 2.3
on the drums ***		# 22УД-60: 1093 • 2.7
		# 20aУД-60: 1244 • 2.7
Al-1		

#### 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, thermal resistivity of soil 1.5 °K • m/W, laying depth in the soil 0.8 m, while laying in flat formation the distance between cables in clear is equal to the cable diameter, while laying in trefoil formation cables are laid side by side, shields are earthed on 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  $\pm\,7\,\%$ 



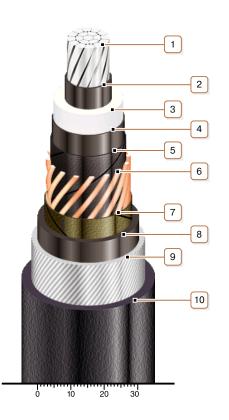




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### CONSTRUCTION

# 1. Aluminium multiwire compacted conductor

- It is possible to manufacture cable with a single-wire conductor
- · It is possible to manufacture cable with sealed conductor.
- 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 nonwoven cloth tape
- 8. Extruded bedding of polyethylene
- 9. Aluminium-wire armour

#### 10. Strengthened polyethylene outer sheath

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