



## **АПвЭоПы(κ)-10 3x50 ТУ У 31.3-00214534-017-2003**

Three-core power cables with aluminium conductors, with XLPE, collective screen and strengthened outer polyethylene sheath

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Technical cable requirements correspond to IEC 60502-2

Cables are used for laying:

- *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:

АПвЭоПы(κ)-П-10 3x50/35 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:

АПвЭоПы(κ)-10 3x50/35 (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:

АПвЭоПы(κ)-10 3x50/35 (r) 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	mm <sup>2</sup>	3 x 50
Insulation thickness	mm	3.4
Minimum screen cross-section	mm <sup>2</sup>	35
Permissible short circuit current across the screen of minimum cross-section	kA	7.1
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	°C	-60 ... +50
Minimum bending radius by laying	mm	784
Rated outer diameter of the cable (for reference) **	mm	49
Cable weight (approximate)	kg/km	2660
Rated factory cable length and gross weight of the delivery on the drums	m, t	# 22УД-60: 661 • 2.7 # 20аУД-60: 810 • 2.9 # 25УД-90: 1323 • 5.1

**Notes:**

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

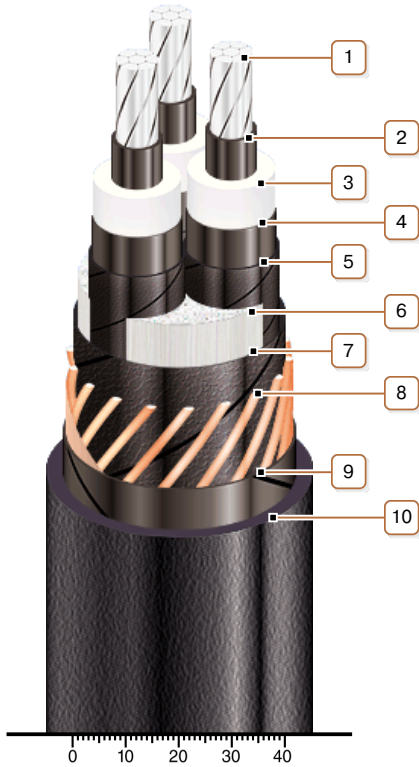
\* Long permissible current loads are calculated for the following conditions: conductor temperature 90 °C, air temperature 30 °C, soil temperature 20 °C, load factor 1.0, thermal resistivity of soil 1.5 °K·m/W, laying depth in the ground 0.8 m, shields are grounded at both ends of the line

\*\* 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. Interstitial filler with polypropylene bundles**

**7. Lapping layer of semiconductive swellable tape**

**8. Copper screen**

**9. Lapping layer of synthetic paper**

**10. Strengthened polyethylene outer sheath**

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

*Note: Conductor twisting is not illustrated*