



## **АПвЭоПы(κ)-20 3x120 ТУ У 31.3-00214534-017-2003**

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

---

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*
- 

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

Order entry example:

АПвЭоПы(κ)-П-20 3x120/50 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:

АПвЭоПы(κ)-20 3x120/50 (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.

---

It is possible to manufacture cable with sealed conductors.

Order entry example:

АПвЭоПы(κ)-20 3x120/50 (r) ТУ У 31.3-00214534-017-2003

---



## АПвЭоПу(к)-20 3x120 ТУ У 31.3-00214534-017-2003

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

### TECHNICAL SPECIFICATIONS

Rated voltage	kV	20
Maximum voltage	kV	24
Number and rated area of conductors	mm <sup>2</sup>	3 x 120
Insulation thickness	mm	5.5
Minimum screen cross-section	mm <sup>2</sup>	50
Permissible short circuit current across the screen of minimum cross-section	kA	10.2
Maximum permissible short-circuit current in core	kA	11.3
Permissible continuous current rating *		
• by aerial laying	A	273
• by burial	A	232
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	1104
Rated outer diameter of the cable (for reference) **	mm	69
Cable weight (approximate)	kg/km	5230
Rated factory cable length and gross weight of the delivery on the drums ***	m, t	# 22УД-60: 339 • 2.7 # 25УД-90: 611 • 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

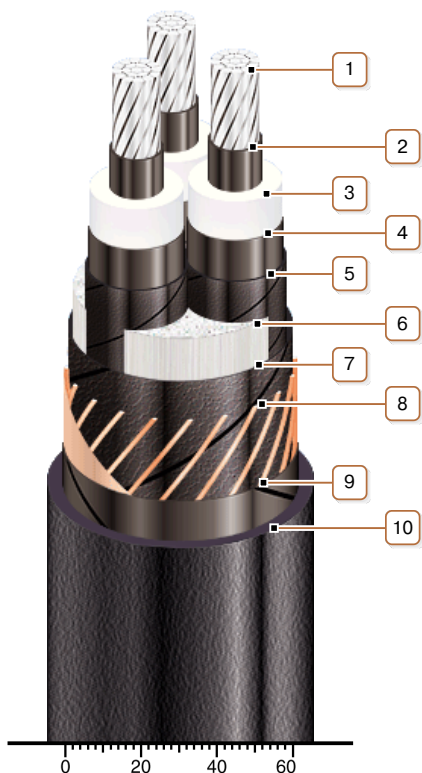
\*\* The external diameter may differ from the rated up to ± 10 %

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



## АПвЭоПу(κ)-20 3x120 ТУ У 31.3-00214534-017-2003

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