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ПвЭАкПнг-35 1х630 ТУ У 31.3-00214534-058:2007

Single-core power cables with copper conductor, flame-retardant, with XLPE, aluminium-wire armoured, with polymer compound 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 premises, tunnels, ducts, mines, dry soil and outdoor under shelter
- · single laying

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

Order entry example:

ПвЭАкПнг-П-35 1х630/35 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.

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

Order entry example:

ПвЭАкПнг-35 1х630/35 (ОМ) 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.

It is possible to manufacture cable with sealed conductor.

Order entry example:

ПвЭАкПнг-35 1х630/35 (г) ТУ У 31.3-00214534-058:2007

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

Fire safety code in accordance with ДСТУ 4809:2007: ПБ101122000

Products of this mark meet the requirements:

- · single wire cable flame retardance
- toxicity class Tk1 of the combustion products of nonmetallic elements (toxicity index from 13 up to 40 g/m³)
- class $\protect\ensuremath{\mathsf{ATK1}}$ on smoke-forming ability by smouldering of non-metallic elements (coefficient of smoke formation from 50 to 500 m²/kg)
- class ДПк2 on smoke-forming ability by combustion (minimum luminous flux more than 60 %)
- corrosive class Kk2 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 μ S/mm)







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TECHNICAL SPECIFICATIONS

Maximum voltagekV42Number and rated area of conductorsmm²1 x 630Insulation thiknessmm8.6Minimum screen cross-sectionmm²35Permissible short circuit current across the screen of minimum cross-sectionkA7.1Maximum permissible short-circuit current in corekA90.1Permissible continious current rating *by aerial laying in trefoil formationA1113by aerial flat layingA1182by burial in trefoil formationA724by burial flatA639Partial discharge factor for rated voltage, not more thanpC6Maximum permissible conductor temperature°C+90in emergency operation°C+90in emergency operation°C+130at short circuit°C+250Operating temperature range°C-60 +50Minimum bending radius by layingmm1120Rated outer diameter of the cable (for reference) **mm70Cable weight (approximate)kg/km9800	Rated voltage	kV	35
Insulation thikness mm 8.6 Minimum screen cross-section mm² 35 Permissible short circuit current across the screen of kA 7.1 minimum cross-section Maximum permissible short-circuit current in core kA 90.1 Permissible continious current rating * • by aerial laying in trefoil formation A 1113 • by aerial flat laying A 1182 • by burial in trefoil formation A 724 • by burial flat A 639 Partial discharge factor for rated voltage, not more than pC 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 1120 Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800	Maximum voltage	kV	42
Minimum screen cross-section mm² 35 Permissible short circuit current across the screen of kA 7.1 minimum cross-section Maximum permissible short-circuit current in core kA 90.1 Permissible continious current rating * • by aerial laying in trefoil formation A 1113 • by aerial flat laying A 1182 • by burial in trefoil formation A 639 Partial discharge factor for rated voltage, not more than pC 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 1120 Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800	Number and rated area of conductors	mm²	1 x 630
Permissible short circuit current across the screen of minimum cross-section Maximum permissible short-circuit current in core kA 90.1 Permissible continious current rating * • by aerial laying in trefoil formation A 1113 • by aerial flat laying A 1182 • by burial in trefoil formation A 724 • by burial flat A 639 Partial discharge factor for rated voltage, not more than pC 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 1120 Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800	Insulation thikness	mm	8.6
minimum cross-section Maximum permissible short-circuit current in core kA 90.1 Permissible continious current rating * • by aerial laying in trefoil formation A 1113 • by aerial flat laying A 1182 • by burial in trefoil formation A 724 • by burial flat A A 639 Partial discharge factor for rated voltage, not more than pC 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 1120 Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800	Minimum screen cross-section	mm²	35
Maximum permissible short-circuit current in core kA 90.1 Permissible continious current rating * • by aerial laying in trefoil formation A 1113 • by aerial flat laying A 1182 • by burial in trefoil formation A 724 • by burial flat A 639 Partial discharge factor for rated voltage, not more than pC 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 1120 Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800	Permissible short circuit current across the screen of	kA	7.1
Permissible continious current rating * • by aerial laying in trefoil formation • by aerial flat laying • by burial flat laying • by burial in trefoil formation • by burial flat • by burial flat • by burial flat • A 639 Partial discharge factor for rated voltage, not more than pC 6 Maximum permissible conductor temperature • Continious • C • 130 • at short circuit • C Operating temperature range Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) A 1113 A 1113 A 1112 A 1120 A 1113 A 1120	minimum cross-section		
 by aerial laying in trefoil formation by aerial flat laying by by burial in trefoil formation by burial in trefoil formation by burial flat by burial flat A 639 Partial discharge factor for rated voltage, not more than 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 1120 Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800 	Maximum permissible short-circuit current in core	kA	90.1
 by aerial flat laying by burial in trefoil formation by burial flat by burial flat Continious in emergency operation at short circuit Coperating temperature range Cominimum bending radius by laying Rated outer diameter of the cable (for reference) by burial flat laying A 1182 A 724 A 639 C 6 E 190 C +90 C +90 C +130 C +250 C -60 +50 Minimum bending radius by laying mm 1120 Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800 	Permissible continious current rating *		
 by burial in trefoil formation by burial flat Partial discharge factor for rated voltage, not more than Maximum permissible conductor temperature Continious in emergency operation c +130 at short circuit C +250 Operating temperature range C -60 +50 Minimum bending radius by laying mm 1120 Rated outer diameter of the cable (for reference) ** kg/km 9800 	by aerial laying in trefoil formation	Α	1113
 by burial flat Partial discharge factor for rated voltage, not more than Maximum permissible conductor temperature Continious in emergency operation at short circuit C +250 Operating temperature range C -60 +50 Minimum bending radius by laying mm 1120 Rated outer diameter of the cable (for reference) ** kg/km 9800 	• by aerial flat laying	Α	1182
Partial discharge factor for rated voltage, not more than pC 6 Maximum permissible conductor temperature • Continious • in emergency operation • at short circuit Coperating temperature range Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** Cable weight (approximate) pC 6 +90 • C +90 • C +130 • C +250 C -60 +50 mm 1120 Rated outer diameter of the cable (for reference) ** mm 70 Rated 9800	by burial in trefoil formation	Α	724
Maximum permissible conductor temperature • Continious • in emergency operation • at short circuit • C Operating temperature range Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** Cable weight (approximate) • C +90 +130 • C +250 • C -60 +50 mm 1120 70 Rated outer diameter of the cable (for reference) ** mm 70 Rated 9800	• by burial flat	Α	639
 Continious in emergency operation at short circuit C +250 Operating temperature range C -60 +50 Minimum bending radius by laying mm 1120 Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800 	Partial discharge factor for rated voltage, not more than	рС	6
 in emergency operation at short circuit C +250 Operating temperature range C -60 +50 Minimum bending radius by laying mm 1120 Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800 	Maximum permissible conductor temperature		
 at short circuit C +250 Operating temperature range C -60 +50 Minimum bending radius by laying mm 1120 Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800 	Continious	° C	+90
Operating temperature range °C -60 +50 Minimum bending radius by laying mm 1120 Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800	· in emergency operation	° C	+130
Minimum bending radius by laying mm 1120 Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800	• at short circuit	° C	+250
Rated outer diameter of the cable (for reference) ** mm 70 Cable weight (approximate) kg/km 9800	Operating temperature range	° C	-60 +50
Cable weight (approximate) kg/km 9800	Minimum bending radius by laying	mm	1120
	Rated outer diameter of the cable (for reference) **	mm	70
D. I. I. G. I. J.	Cable weight (approximate)	kg/km	9800
Rated factory cable length and gross weight of the delivery m, t # 25УД-90: 611 • 7.6 on the drums ***	Rated factory cable length and gross weight of the delivery on the drums ***	m, t	# 25УД-90: 611 • 7.6

Notes:

When ordering it is neccesary 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, 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

^{**} The external diameter may differ from the rated up to \pm 10 %

^{***} Отклонение фактической массы брутто от указанного значения может составлять ± 7 %



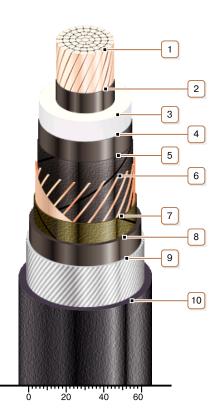




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CONSTRUCTION

- 1. Copper multiwire compact conductor
- Note: 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. Flame-retardant polymer compound outer sheath

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