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ПвЭоПнг(к)-10 3x70 ТУ У 31.3-00214534-058:2007

Three-core power cables with copper conductors, flame-retardant, with XLPE, collective screen and polymer compound outer sheath

Technical cable requirements correspond to IEC 60502-2

Cables are used for laying:

- · 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:

Пв9оПнг(к)-П-103х70/35 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:

ПвЭоПнг(к)-10 3х70/35 (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 conductors.

Order entry example:

Пв Θ оПнг(к)-10 3x70/35 (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: ΠБ101122000

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 $\Pi T \kappa 1$ 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 voltagekV12Number and rated area of conductorsmm²3 x 70Insulation thiknessmm3.4Minimum screen cross-sectionmm²35Permissible short circuit current across the screen of minimum cross-sectionkA7.1Maximum permissible short-circuit current in corekA10Permissible continious current rating * by aerial layingA253 by burialA221Partial discharge factor for rated voltage, not more thanpC6Maximum permissible conductor temperature Continious C+90 in emergency operation C+90 at short circuit C-250Operating temperature range C-60 +50Minimum bending radius by layingmm848Rated outer diameter of the cable (for reference) **mm53	Rated voltage	kV	10
Number and rated area of conductors mm² 3 x 70 Insulation thikness mm 3.4 Minimum screen cross-section mm² 35 Permissible short circuit current across the screen of minimum cross-section Maximum permissible short-circuit current in core kA 10 Permissible continious current rating * · by aerial laying A 253 · by burial A 221 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 848 Rated outer diameter of the cable (for reference) ** mm 53			
Minimum screen cross-sectionmm²35Permissible short circuit current across the screen of minimum cross-sectionkA7.1Maximum permissible short-circuit current in corekA10Permissible continious current rating *• by aerial layingA253• by burialA221Partial discharge factor for rated voltage, not more thanpC6Maximum permissible conductor temperature• Continious°C+90• in emergency operation°C+130• at short circuit°C+250Operating temperature range°C-60 +50Minimum bending radius by layingmm848Rated outer diameter of the cable (for reference) **mm53	Number and rated area of conductors	mm²	3 x 70
Permissible short circuit current across the screen of minimum cross-section Maximum permissible short-circuit current in core kA 10 Permissible continious current rating * • by aerial laying A 253 • by burial A 221 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 848 Rated outer diameter of the cable (for reference) ** mm 53	Insulation thikness	mm	3.4
minimum cross-sectionkA10Permissible continious current rating *	Minimum screen cross-section	mm²	35
Maximum permissible short-circuit current in corekA10Permissible continious current rating *. by aerial layingA253. by burialA221Partial discharge factor for rated voltage, not more thanpC6Maximum permissible conductor temperature. Continious° C+90. in emergency operation° C+130. at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm848Rated outer diameter of the cable (for reference) **mm53	Permissible short circuit current across the screen of	kA	7.1
Permissible continious current rating * • by aerial laying • by burial Partial discharge factor for rated voltage, not more than PC 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) ** A 253 A 221 C C C +90 • C +130 • C +250 C -60 +50 mm 848 Rated outer diameter of the cable (for reference) ** mm 53	minimum cross-section		
 by aerial laying by burial Partial discharge factor for rated voltage, not more than PC Maximum permissible conductor temperature Continious in emergency operation at short circuit C +250 Operating temperature range C -60 +50 Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** 	Maximum permissible short-circuit current in core	kA	10
 by burial 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 Rated outer diameter of the cable (for reference) ** 	Permissible continious current rating *		
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 848 Rated outer diameter of the cable (for reference) ** mm 53	by aerial laying	Α	253
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) ** **C +90 +90 **C +130 **C +250 Coperating temperature range **C -60 +50 mm 848 **Rated outer diameter of the cable (for reference) **	• by burial	Α	221
 Continious in emergency operation at short circuit C +250 Operating temperature range C -60 +50 Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** mm 53 	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 848 Rated outer diameter of the cable (for reference) ** mm 53 	Maximum permissible conductor temperature		
 at short circuit Operating temperature range C -60 +50 Minimum bending radius by laying mm 848 Rated outer diameter of the cable (for reference) ** mm 53 	Continious	°C	+90
Operating temperature range °C -60 +50 Minimum bending radius by laying mm 848 Rated outer diameter of the cable (for reference) ** mm 53	 in emergency operation 	° C	+130
Minimum bending radius by laying mm 848 Rated outer diameter of the cable (for reference) ** mm 53	at short circuit	° C	+250
Rated outer diameter of the cable (for reference) ** mm 53	Operating temperature range	° C	-60 +50
	Minimum bending radius by laying	mm	848
Cable weight (approximate) kg/km 4590	Rated outer diameter of the cable (for reference) **	mm	53
Cable Weight (approximate) kg/km 4550	Cable weight (approximate)	kg/km	4590
Rated factory cable length and gross weight of the delivery m, t # 18аУД-40: 534 • 3.0	Rated factory cable length and gross weight of the delivery	m, t	# 18аУД-40: 534 • 3.0
on the drums *** # 20aУД-60: 648 • 3.7	on the drums ***		# 20aУД-60: 648 • 3.7
# 25УД-90: 1068 • 6.5			# 25УД-90: 1068 • 6.5

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, 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 \pm 10 %

^{***} Отклонение фактической массы брутто от указанного значения может составлять $\pm\,7\,\%$



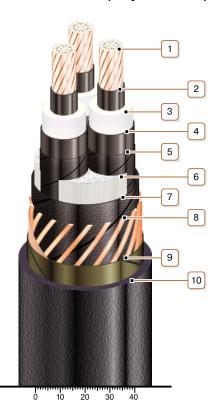




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CONSTRUCTION

1. Copper multiwire compact 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 glass tape
- 10. Flame-retardant polymer compound outer sheath

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

Note: Conductor twisting is not illustrated