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АПвЭгаПу-60 1x240 ТУ У 31.3-00214534-060:2011

Power cables with aluminium conductor, with XLPE, longitudinal and transverse screen sealing and strengthened polyethylene outer sheath

For the cable of this mark correspond the foreign-made analogues:

ΑΠ_ΒΠ_γ2_Γ (RU)

Technical cable requirements correspond to IEC 60840

Cables are used for laying:

- · in soil (trenches)
- · in damp, partially flooded premises
- · in ground with high humidity
- · in non-navigable waters
- · 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:

АПвЭгаПу-П-60 1х240/95 ТУ У 31.3-00214534-060:2011

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:

АПвЭгаПу-60 1х240/95 (ОМ) ТУ У 31.3-00214534-060:2011

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:

АПвЭгаПу-60 1х240/95 (г) ТУ У 31.3-00214534-060:2011







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АПвЭгаПу-60 1x240 ТУ У 31.3-00214534-060:2011

Power cables with aluminium conductor, with XLPE, longitudinal and transverse screen sealing and strengthened polyethylene outer sheath

TECHNICAL SPECIFICATIONS

Maximum voltage kV 72.5 Conductor rated area mm² 240 Minimum screen cross-section mm² 35 Partial discharge factor for rated voltage, not more than pC 6 Permissible short circuit current across the screen of kA 5.1 Minimum cross-section kA 5.1 Maximum permissible short-circuit current in core kA 22.7 Permissible continious current rating by aerial laying * in trefoil formation with double-side screen earthing A 464 in trefoil formation with single-side screen earthing or cross screen earthing plane with double-side screen earthing A 565 earthing permissible continious current rating by burial * in trefoil formation with single-side screen earthing or cross screen A 565 earthing Permissible continious current rating by burial * in trefoil formation with double-side screen earthing A 387 in trefoil formation with double-side screen earthing or A 399 cross screen earthing plane with double-side screen earthing A 379 plane with double-side screen earthing A 416 earthing 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 880 Rated outer diameter of the cable (for reference) ** mm 55 Cable weight (approximate) Rated factory cable length and gross weight of the delivery m, t # 22VJ-60: 499 · 2.9 mined the drums *** # 25VJ-60: 1404 · 7.3	Rated voltage	kV	60
Minimum screen cross-section Partial discharge factor for rated voltage, not more than Pc 6 Permissible short circuit current across the screen of minimum cross-section Maximum permissible short-circuit current in core Permissible continious current rating by aerial laying * in trefoil formation with double-side screen earthing Interfoil formation with single-side screen earthing Interfoil formation with double-side screen earthing Interfoil formation with single-side screen earthing Interfoil formation with double-side screen earthing Permissible continious current rating by burial * in trefoil formation with double-side screen earthing Interfoil formation with single-side screen earthing Interfoil formati	Maximum voltage	kV	72.5
Partial discharge factor for rated voltage, not more than pC 6 Permissible short circuit current across the screen of minimum cross-section kA 5.1 Maximum permissible short-circuit current in core kA 22.7 Permissible continious current rating by aerial laying * * • in trefoil formation with double-side screen earthing A 464 • in trefoil formation with single-side screen earthing or cross screen earthing A 477 cross screen earthing A 511 • plane with double-side screen earthing or cross screen A 565 earthing A 387 Permissible continious current rating by burial * * * • in trefoil formation with double-side screen earthing or cross screen earthing A 387 • plane with double-side screen earthing or cross screen A 416 earthing A 379 • plane with single-side screen earthing or cross screen A 416 earthing A 416 washingle-side screen earthing or cross screen C +90 • plane with double-side screen eart	Conductor rated area	mm²	240
Permissible short circuit current across the screen of minimum cross-section Maximum permissible short-circuit current in core Permissible continious current rating by aerial laying * · in trefoil formation with double-side screen earthing · plane with double-side screen earthing · plane with single-side screen earthing or cross screen earthing Permissible continious current rating by burial * · in trefoil formation with double-side screen earthing Permissible continious current rating by burial * · in trefoil formation with double-side screen earthing Permissible continious current rating by burial * · in trefoil formation with double-side screen earthing or cross screen earthing Permissible continious current rating by burial * · in trefoil formation with single-side screen earthing or A 387 · in trefoil formation with single-side screen earthing or cross screen earthing · plane with double-side screen earthing or cross screen A 416 earthing Maximum permissible conductor temperature · Continious · C +90 · in emergency operation · C +250 Operating temperature range · C -60 +50 Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** mm 880 Rated outer diameter of the cable (for reference) ** mn 55 Cable weight (approximate) kg/km 3910 Rated factory cable length and gross weight of the delivery on the drums *** # 25yД-90: 1028 · 5.6	Minimum screen cross-section	mm²	35
minimum cross-section Maximum permissible short-circuit current in core Permissible continious current rating by aerial laying * · in trefoil formation with double-side screen earthing or cross screen earthing · plane with double-side screen earthing or cross screen earthing · plane with single-side screen earthing or cross screen earthing Permissible continious current rating by burial * · in trefoil formation with double-side screen earthing Permissible continious current rating by burial * · in trefoil formation with double-side screen earthing or cross screen earthing · in trefoil formation with single-side screen earthing or A 399 cross screen earthing · plane with double-side screen earthing or A 379 · plane with single-side screen earthing or cross screen earthing Maximum permissible conductor temperature · Continious · in emergency operation · C +90 · in emergency operation · C +130 · 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 55 Cable weight (approximate) Rated factory cable length and gross weight of the delivery on the drums *** # 25VД-90: 1028 · 5.6	Partial discharge factor for rated voltage, not more than	рС	6
Maximum permissible short-circuit current in core Permissible continious current rating by aerial laying * in trefoil formation with double-side screen earthing or cross screen earthing or plane with double-side screen earthing or cross screen earthing or plane with single-side screen earthing or cross screen plane with single-side screen earthing or cross screen plane with single-side screen earthing or cross screen permissible continious current rating by burial * in trefoil formation with double-side screen earthing or in trefoil formation with single-side screen earthing or plane with double-side screen earthing or plane with double-side screen earthing or plane with double-side screen earthing or plane with single-side screen earthing or cross screen A 379 plane with single-side screen earthing or cross screen A 416 maximum permissible conductor temperature Continious c C +90 in emergency operation at short circuit c C +250 Operating temperature range at c -60 +50 Minimum bending radius by laying mm 880 Rated outer diameter of the cable (for reference) ** mm 55 Cable weight (approximate) Rated factory cable length and gross weight of the delivery on the drums *** # 22VД-60: 499 · 2.9 on the drums *** # 25VД-90: 1028 · 5.6	Permissible short circuit current across the screen of	kA	5.1
Permissible continious current rating by aerial laying * · in trefoil formation with double-side screen earthing	minimum cross-section		
• in trefoil formation with double-side screen earthing A 464 • in trefoil formation with single-side screen earthing or cross screen earthing A 477 cross screen earthing A 511 • plane with double-side screen earthing or cross screen earthing A 565 earthing Permissible continious current rating by burial * • in trefoil formation with double-side screen earthing or in trefoil formation with single-side screen earthing or cross screen earthing A 387 • in trefoil formation with single-side screen earthing or cross screen earthing A 399 cross screen earthing A 379 • plane with double-side screen earthing or cross screen earthing A 416 earthing A 416 Maximum permissible conductor temperature • C +90 • in emergency operation ° C +90 • in emergency operation ° C +250 Operating temperature range ° C -60 +50 Minimum bending radius by laying mm 880 Rated outer diameter of the cable (for reference) ** mm 55 Cable weight (approximate) kg/km 3910 Rated fa	Maximum permissible short-circuit current in core	kA	22.7
• in trefoil formation with single-side screen earthing or cross screen earthing A 477 • plane with double-side screen earthing A 511 • plane with single-side screen earthing or cross screen A 565 earthing Bermissible continious current rating by burial * • in trefoil formation with double-side screen earthing A 387 • in trefoil formation with single-side screen earthing or cross screen earthing A 399 • cross screen earthing A 379 • plane with double-side screen earthing or cross screen A 416 earthing A 416 Maximum permissible conductor temperature • C +90 • in emergency operation • C +90 • in emergency operation • C +130 • at short circuit • C +250 Operating temperature range • C -60 +50 Minimum bending radius by laying mm 880 Rated outer diameter of the cable (for reference) ** mm 55 Cable weight (approximate) kg/km 3910 Rated factory cable length and gross weight of the delivery on the drums *** m, t # 25yД-60	Permissible continious current rating by aerial laying *		
ross screen earthing plane with double-side screen earthing or cross screen plane with single-side screen earthing or cross screen permissible continious current rating by burial * in trefoil formation with double-side screen earthing in trefoil formation with single-side screen earthing or cross screen earthing plane with double-side screen earthing or cross screen earthing plane with double-side screen earthing or cross screen plane with single-side screen earthing or cross screen earthing or cross screen plane with single-side screen earthing or cross	 in trefoil formation with double-side screen earthing 	Α	464
· plane with double-side screen earthing · plane with single-side screen earthing or cross screen earthing Permissible continious current rating by burial * · in trefoil formation with double-side screen earthing · in trefoil formation with single-side screen earthing or cross screen earthing · plane with double-side screen earthing or · plane with double-side screen earthing · plane with single-side screen earthing or cross screen earthing Maximum permissible conductor temperature · Continious · in emergency operation · in emergency operation · at short circuit · chance of the cable (for reference) ** Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** Cable weight (approximate) Rated factory cable length and gross weight of the delivery on the drums *** # 25УД-90: 1028 · 5.6	 in trefoil formation with single-side screen earthing or 	Α	477
 plane with single-side screen earthing or cross screen earthing Permissible continious current rating by burial * in trefoil formation with double-side screen earthing in trefoil formation with single-side screen earthing or cross screen earthing plane with double-side screen earthing plane with single-side screen earthing or cross screen plane with single-side screen earthing or cross screen plane with single-side screen earthing or cross screen 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 880 Rated outer diameter of the cable (for reference) ** mm 55 Cable weight (approximate) kg/km 3910 Rated factory cable length and gross weight of the delivery on the drums *** # 22УД-60: 499 · 2.9 on the drums *** # 25УД-90: 1028 · 5.6 	cross screen earthing		
earthing Permissible continious current rating by burial * • in trefoil formation with double-side screen earthing or cross screen earthing • plane with double-side screen earthing or cross screen earthing • plane with single-side screen earthing or cross screen • plane with single-side screen earthing or cross screen • plane with single-side screen earthing or cross screen • carthing 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 Rated outer diameter of the cable (for reference) ** Cable weight (approximate) Rated factory cable length and gross weight of the delivery on the drums *** # 25УД-90: 1028 • 5.6	 plane with double-side screen earthing 	Α	511
Permissible continious current rating by burial * · in trefoil formation with double-side screen earthing · in trefoil formation with single-side screen earthing or cross screen earthing · plane with double-side screen earthing · plane with single-side screen earthing or cross screen earthing Maximum permissible conductor temperature · Continious · in emergency operation · in emergency operation · at short circuit Operating temperature range Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** Cable weight (approximate) Rated factory cable length and gross weight of the delivery on the drums *** # 25УД-90: 1028 · 5.6	 plane with single-side screen earthing or cross screen 	Α	565
 in trefoil formation with double-side screen earthing in trefoil formation with single-side screen earthing or cross screen earthing plane with double-side screen earthing plane with single-side screen earthing or cross screen carthing 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 880 Rated outer diameter of the cable (for reference) ** mm 55 Cable weight (approximate) kg/km 3910 Rated factory cable length and gross weight of the delivery on the drums *** # 22УД-60: 499 · 2.9 on the drums *** # 25УД-90: 1028 · 5.6 	earthing		
・ in trefoil formation with single-side screen earthing or cross screen earthing ・ plane with double-side screen earthing ・ plane with single-side screen earthing or cross screen	Permissible continious current rating by burial *		
cross screen earthingA379• plane with double-side screen earthing or cross screenA416• plane with single-side screen earthing or cross screenA416earthingMaximum permissible conductor temperature• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm880Rated outer diameter of the cable (for reference) **mm55Cable weight (approximate)kg/km3910Rated factory cable length and gross weight of the delivery on the drums ***# 22УД-60: 499 • 2.9on the drums ***# 25УД-90: 1028 • 5.6		Α	
• plane with double-side screen earthing • plane with single-side screen earthing or cross screen earthing Maximum permissible conductor temperature • Continious • in emergency operation • at short circuit Operating temperature range Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** Cable weight (approximate) Rated factory cable length and gross weight of the delivery on the drums *** A 379 416 416 416 C +90 • C +90 • C +130 • C +250 Operating temperature range • C -60 +50 mm 880 Rated outer diameter of the cable (for reference) ** mm 55 Cable weight (approximate) Rated factory cable length and gross weight of the delivery on the drums *** # 22УД-60: 499 • 2.9 # 25УД-90: 1028 • 5.6	 in trefoil formation with single-side screen earthing or 	Α	399
 • plane with single-side screen earthing or cross screen earthing 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) ** Cable weight (approximate) Rated factory cable length and gross weight of the delivery on the drums *** A 416 416 420 490 490 410 <			
earthingMaximum permissible conductor temperature• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm880Rated outer diameter of the cable (for reference) **mm55Cable weight (approximate)kg/km3910Rated factory cable length and gross weight of the delivery on the drums ***# 22УД-60: 499 • 2.9	 plane with double-side screen earthing 	Α	379
Maximum permissible conductor temperature° C+90• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm880Rated outer diameter of the cable (for reference) **mm55Cable weight (approximate)kg/km3910Rated factory cable length and gross weight of the delivery on the drums ***# 22УД-60: 499 • 2.9	 plane with single-side screen earthing or cross screen 	Α	416
· Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm880Rated outer diameter of the cable (for reference) **mm55Cable weight (approximate)kg/km3910Rated factory cable length and gross weight of the delivery on the drums ***# 22УД-60: 499 • 2.9			
• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm880Rated outer diameter of the cable (for reference) **mm55Cable weight (approximate)kg/km3910Rated factory cable length and gross weight of the delivery on the drums ***# 22УД-60: 499 • 2.9	Maximum permissible conductor temperature		
• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm880Rated outer diameter of the cable (for reference) **mm55Cable weight (approximate)kg/km3910Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 499 • 2.9	Continious		
Operating temperature range° C-60 +50Minimum bending radius by layingmm880Rated outer diameter of the cable (for reference) **mm55Cable weight (approximate)kg/km3910Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 499 • 2.9	 in emergency operation 	°C	+130
Minimum bending radius by layingmm880Rated outer diameter of the cable (for reference) **mm55Cable weight (approximate)kg/km3910Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 499 • 2.9	at short circuit		
Rated outer diameter of the cable (for reference) **mm55Cable weight (approximate)kg/km3910Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 499 • 2.9# 25УД-90: 1028 • 5.6	· · · · · · · · · · · · · · · · · · ·	° C	
Cable weight (approximate)kg/km3910Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 499 • 2.9# 25УД-90: 1028 • 5.6		mm	880
Rated factory cable length and gross weight of the delivery m, t # 22УД-60: 499 • 2.9 on the drums *** # 25УД-90: 1028 • 5.6	Rated outer diameter of the cable (for reference) **	mm	55
on the drums *** # 25УД-90: 1028 • 5.6		kg/km	3910
• •		m, t	• •
# 26УД-100: 1404 • 7.3	on the drums ***		• •
			# 26УД-100: 1404 • 7.3

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 1.0 °K • m/W, laying depth in the ground 1.5 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

^{**} 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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АПвЭгаПу-60 1x240 ТУ У 31.3-00214534-060:2011

Power cables with aluminium conductor, with XLPE, longitudinal and transverse screen sealing and strengthened polyethylene outer sheath



CONSTRUCTION

1. Aluminium multiwire compacted 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

Note: It is possible to manufacture a cable with a fiber optic module built into the screen, including as a DTS system sensor

- 7. Lapping layer of semiconductive swellable tape
- 8. Alumopolymer tape
- 9. Strengthened polyethylene outer sheath

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