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АПвЭгП-60 1х400 ТУ У 31.3-00214534-060:2011

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

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

NA2XS2Y (DE) · NA2XS(F)2Y (DE) · A2XS2Y (DE) · A2XS(F)2Y (DE) · AI/XLPE/CWS/MDPE (GB) ·

XUHAKXS (PL) · XHAKXS (PL) · ΑΠΒΠΓ (RU) · ΑΠΒΠ (RU)

Technical cable requirements correspond to IEC 60840

Cables are used for laying:

- · in soil (trenches)
- 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:

АПвЭгП-П-60 1х400/95 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:

АПвЭгП-60 1х400/95 (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:

АПвЭгП-60 1х400/95 (г) ТУ У 31.3-00214534-060:2011







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АПвЭгП-60 1х400 ТУ У 31.3-00214534-060:2011

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TECHNICAL SPECIFICATIONS

Maximum voltage	Rated voltage	kV	60
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 minimum cross-section Maximum permissible short-circuit current in core kA 37.6 Permissible continious current rating by aerial laying * - in trefoil formation with double-side screen earthing A 597 - in trefoil formation with single-side screen earthing or cross screen earthing A 622 cross screen earthing - plane with double-side screen earthing or cross 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 double-side screen earthing A 486 - in trefoil formation with single-side screen earthing or A 511 cross screen earthing - plane with double-side screen earthing or A 511 cross screen earthing - plane with double-side screen earthing or A 534 - plane with single-side screen earthing or cross screen A 534 - plane with single-side screen earthing or cross screen A 534 - earthing Maximum permissible conductor temperature - Continious - C +90 - in emergency operation - C +130 - at short circuit - C -50 +50 Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** mm 58 Cable weight (approximate) Rated factory cable length and gross weight of the delivery on the drums *** # 25VД-90: 838 · 5.2	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 Maximum permissible short-circuit current in core kA 37.6 Permissible continious current rating by aerial laying * • in trefoil formation with double-side screen earthing A 597 • in trefoil formation with single-side screen earthing or A 622 cross screen earthing A 625 • plane with double-side screen earthing or cross screen A 735 earthing Permissible continious current rating by burial * • in trefoil formation with double-side screen earthing or cross screen A 735 earthing Permissible continious current rating by burial * • in trefoil formation with double-side screen earthing or A 511 cross screen earthing • plane with double-side screen earthing or A 511 cross screen earthing • plane with double-side screen earthing or A 534 earthing Maximum permissible conductor temperature • Continious • C +90 • in emergency operation • C +130 • at short circuit • C -60 +50 Minimum bending radius by laying Rated outer diameter of the cable (for reference) ** mm 58 Cable weight (approximate) kg/km 4280 Rated factory cable length and gross weight of the delivery on the drums *** # 25VД-90: 838 • 5.2	Conductor rated area	mm²	400
Permissible short circuit current across the screen of minimum cross-section Maximum permissible short-circuit current in core Maximum permissible short-circuit current in core **A 37.6** **Permissible continious current rating by aerial laying * ** in trefoil formation with double-side screen earthing or A 622 **cross screen earthing	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 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 double-side screen earthing or · in trefoil formation with double-side screen earthing or cross screen earthing · plane with double-side screen earthing or ross screen earthing · plane with double-side screen earthing or ross screen earthing A 462 · plane with single-side screen earthing or cross screen 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 Rated outer diameter of the cable (for reference) ** mm 58 Cable weight (approximate) Rated factory cable length and gross weight of the delivery m, t # 22VД-60: 499 · 3.1 on the drums *** # 25VД-90: 838 · 5.2	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 in trefoil formation with single-side screen earthing or in trefoil formation with single-side screen earthing or plane with double-side screen earthing permissible continious current rating by burial * in trefoil formation with double-side screen earthing or in trefoil formation with double-side screen earthing or 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 cross screen plane with single-side screen earthing or cross screen plane	Permissible short circuit current across the screen of	kA	7.1
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 597 • in trefoil formation with single-side screen earthing or cross screen earthing A 622 • plane with double-side screen earthing or cross screen earthing A 625 • plane with single-side screen earthing or cross screen earthing A 735 earthing Permissible continious current rating by burial * • in trefoil formation with double-side screen earthing or cross screen earthing A 486 • in trefoil formation with single-side screen earthing or cross screen earthing A 511 cross screen earthing A 462 • plane with double-side screen earthing or cross screen earthing A 534 • plane with single-side screen earthing or cross screen earthing A 534 • plane with single-side screen earthing or cross screen earthing A 534 • plane with single-side screen earthing or cross screen earthing A 504 • plane with single-side screen earthing or cross screen A 534 • plane with single-side screen earthing or cross screen C +90 • in emergency operation °C +90 • in eme	Maximum permissible short-circuit current in core	kA	37.6
• in trefoil formation with single-side screen earthing or cross screen earthing A 622 • plane with double-side screen earthing A 625 • plane with single-side screen earthing or cross screen earthing A 735 earthing A 486 Permissible continious current rating by burial * • in trefoil formation with double-side screen earthing A 486 • in trefoil formation with single-side screen earthing or cross screen earthing A 462 • plane with double-side screen earthing or cross screen A 534 • plane with single-side screen earthing or cross screen A 534 earthing A 462 • plane with single-side screen earthing or cross screen A 534 earthing A 462 • plane with single-side screen earthing or cross screen A 534 earthing C +90 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<	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 a blank of the foliation of the foliation with single-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 contining Maximum permissible conductor temperature Continious conti	in trefoil formation with double-side screen earthing	Α	597
 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 plane with double-side 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 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 928 Rated outer diameter of the cable (for reference) ** mm 58 Cable weight (approximate) kg/km 4280 Rated factory cable length and gross weight of the delivery m, t # 22УД-60: 499 · 3.1 on the drums *** # 25УД-90: 838 · 5.2 	 in trefoil formation with single-side screen earthing or 	Α	622
 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 double-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 Continious in emergency operation in emergency operation at short circuit C +250 Operating temperature range C -60 +50 Minimum bending radius by laying mm 928 Rated outer diameter of the cable (for reference) ** mm 58 Cable weight (approximate) kg/km 4280 Rated factory cable length and gross weight of the delivery on the drums *** # 25yД-90: 838 • 5.2 	cross screen earthing		
earthing Permissible continious current rating by burial * • in trefoil formation with double-side screen earthing or cross 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 • 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: 838 • 5.2	 plane with double-side screen earthing 	Α	625
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 earthing Maximum permissible conductor temperature · Continious · C +90 · in emergency operation · 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 *** # 25УД-90: 838 • 5.2	 plane with single-side screen earthing or cross screen 	Α	735
 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 plane with single-side screen earthing or cross screen plane with single-side screen earthing plane with double-side screen earthing or A 462 plane with double-side screen earthing or A 462 plane with double-side screen earthing or plane with double-side screen plane with double-side screen plane with double-side sc	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 earthing Maximum permissible conductor temperature ・Continious ・Contini	Permissible continious current rating by burial *		
cross screen earthing plane with double-side screen earthing or cross screen plane with single-side screen earthing or cross screen earthing Maximum permissible conductor temperature Continious in emergency operation in emergency operation cat 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 *** * 462 * 462 * 462 * 490 * 534 * 490 * C * +90 * 130 * 130 * C * +250 Operating temperature range * C * C * -60 +50 * mm * 58 Cable weight (approximate) * kg/km * 4280 Rated factory cable length and gross weight of the delivery on the drums *** # 25УД-60: 499 • 3.1 on the drums *** # 25УД-90: 838 • 5.2		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 462 A 534 Factory cable length and gross weight of the delivery on the drums *** A 462 A 534 Factory cable length and gross weight of the delivery on the drums *** A 462 A 534 Factory cable length and gross weight of the delivery on the drums *** A 462 A 534 Factory cable length and gross weight of the delivery on the drums *** A 462 A 534 Factory cable length and gross weight of the delivery on the drums *** A 462 A 534 Factory cable length and gross weight of the delivery on the drums *** # 25УД-90: 838 • 5.2	 in trefoil formation with single-side screen earthing or 	Α	511
・ plane with single-side screen earthing or cross screen earthing Maximum permissible conductor temperature ・ Continious ・ C +90 ・ in emergency operation ・ at short circuit ・ C +250 Operating temperature range			
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 layingmm928Rated outer diameter of the cable (for reference) **mm58Cable weight (approximate)kg/km4280Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 499 • 3.1	 plane with double-side screen earthing 	Α	462
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 layingmm928Rated outer diameter of the cable (for reference) **mm58Cable weight (approximate)kg/km4280Rated factory cable length and gross weight of the deliverym, t# 22УД-60: 499 • 3.1on the drums ***# 25УД-90: 838 • 5.2	 plane with single-side screen earthing or cross screen 	Α	534
· Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm928Rated outer diameter of the cable (for reference) **mm58Cable weight (approximate)kg/km4280Rated factory cable length and gross weight of the deliverym, t# 22УД-60: 499 • 3.1on the drums ***# 25УД-90: 838 • 5.2			
• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm928Rated outer diameter of the cable (for reference) **mm58Cable weight (approximate)kg/km4280Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 499 • 3.1	Maximum permissible conductor temperature		
• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm928Rated outer diameter of the cable (for reference) **mm58Cable weight (approximate)kg/km4280Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 499 • 3.1	Continious		
Operating temperature range°C-60 +50Minimum bending radius by layingmm928Rated outer diameter of the cable (for reference) **mm58Cable weight (approximate)kg/km4280Rated factory cable length and gross weight of the delivery on the drums ***m, t# 22УД-60: 499 • 3.1	 in emergency operation 	°C	+130
Minimum bending radius by layingmm928Rated outer diameter of the cable (for reference) **mm58Cable weight (approximate)kg/km4280Rated factory cable length and gross weight of the deliverym, t# 22УД-60: 499 • 3.1on the drums ***# 25УД-90: 838 • 5.2	at short circuit		
Rated outer diameter of the cable (for reference) ** mm 58 Cable weight (approximate) kg/km 4280 Rated factory cable length and gross weight of the delivery m, t # 22УД-60: 499 • 3.1 on the drums *** # 25УД-90: 838 • 5.2	· · · · · · · · · · · · · · · · · · ·	° C	
Cable weight (approximate)kg/km4280Rated factory cable length and gross weight of the deliverym, t# 22УД-60: 499 • 3.1on the drums ***# 25УД-90: 838 • 5.2		mm	928
Rated factory cable length and gross weight of the delivery m, t # 22УД-60: 499 • 3.1 on the drums *** # 25УД-90: 838 • 5.2	Rated outer diameter of the cable (for reference) **	mm	58
on the drums *** # 25УД-90: 838 • 5.2		kg/km	4280
· ·	, , , , , , , , , , , , , , , , , , , ,	m, t	• •
# 26УД-100: 1372 • 7.7	on the drums ***		
			# 26УД-100: 1372 • 7.7

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 %



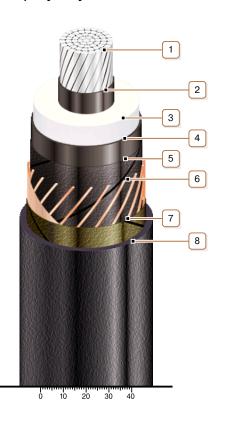




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АПвЭгП-60 1х400 ТУ У 31.3-00214534-060:2011

Power cables with aluminium conductor, with XLPE, longitudinal screen sealing and 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 nonwoven cloth tape
- 8. Outer sheath of polyethylene or polyethylene copolymer

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