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# АПвЭгП-132 1x1000 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 cable with a segmented conductor

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

Order entry example:

АПвЭгП-П-132 1х1000/95 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-132 1х1000/95 (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-132 1х1000/95 (г) ТУ У 31.3-00214534-060:2011









### АПвЭгП-132 1x1000 ТУ У 31.3-00214534-060:2011

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

### **TECHNICAL SPECIFICATIONS**

Maximum voltage kV 145 Conductor rated area mm² 1000 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 10.2 Minimum cross-section kA 10.2 Minimum cross-section kA 10.2 Minimum cross-section kA 94 Permissible short-circuit current in core kA 94 Permissible continious current rating by aerial laying *  • in trefoil formation with double-side screen earthing A 1005 • in trefoil formation with single-side screen earthing or cross screen earthing • plane with double-side screen earthing or cross screen A 1282  earthing Permissible continious current rating by burial *  • in trefoil formation with double-side screen earthing or cross screen A 1282  earthing Permissible continious current rating by burial *  • in trefoil formation with double-side screen earthing or A 843  cross screen earthing • plane with double-side screen earthing or A 843  cross screen earthing  • plane with single-side screen earthing A 668 • 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  • 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  • 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  • 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  • 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  • plane with single-side screen earthing or cross screen  • plane with single-side screen earthing or cross screen  • plane with single-side screen e	Rated voltage	kV	132
Conductor rated area mm² 1000 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 10.2 minimum cross-section Maximum permissible short-circuit current in core kA 94 Permissible continious current rating by aerial laying *	<del>-</del>	kV	145
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       kA       10.2         Maximum permissible short-circuit current in core       kA       94         Permissible continious current rating by aerial laying *       *         * in trefoil formation with double-side screen earthing       A       1005         * in trefoil formation with single-side screen earthing or cross screen earthing       A       1095         cross screen earthing       A       936         * plane with double-side screen earthing or cross screen       A       1282         earthing       A       760         Permissible continious current rating by burial *       *         * in trefoil formation with double-side screen earthing or cross screen earthing       A       43         * in trefoil formation with single-side screen earthing or cross screen earthing       A       843         * plane with double-side screen earthing or cross screen       A       897         * plane with double-side screen earthing or cross screen       A       897         * plane with single-side screen earthing or cross screen       A       897         * plane with single-side screen earthing or cross	Conductor rated area	mm²	1000
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 or cross screen earthing  · plane with double-side screen earthing or cross screen earthing or plane with single-side screen earthing or earthing  Permissible continious current rating by burial *  · in trefoil formation with double-side screen earthing or cross screen earthing or 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 or cross screen earthing or explain earthing or cross screen earthing or 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 91  Cable weight (approximate)  Rated factory cable length and gross weight of the delivery  m, t # 25yД-90: 305 · 4.7  on the drums ***  # 26yД-100: 457 · 6.5	Minimum screen cross-section		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 cross screen earthing  Permissible continious current rating by burial *  · in trefoil formation with double-side screen earthing or A 843  cross screen earthing  · plane with double-side screen earthing or A 843  cross screen earthing  A 668  · plane with single-side screen earthing or cross screen A 897  earthing  Maximum permissible conductor temperature  · Continious  · C +90  · in emergency operation  · C +250  Operating temperature range  · C -60 +50  Minimum bending radius by laying  mm 1456  Rated outer diameter of the cable (for reference) **  mm 91  Cable weight (approximate)  Rated factory cable length and gross weight of the delivery  m, t # 25yД-90: 305 · 4.7  on the drums ***  # 26yД-100: 457 · 6.5	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  · 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 with single-side screen earthing or cross screen  · plane with single-side screen earthing or cross screen  · in trefoil formation with double-side screen earthing or  · in trefoil formation with single-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  A 897  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 91  Cable weight (approximate)  Rated factory cable length and gross weight of the delivery  m, t # 25VД-90: 305 · 4.7  on the drums ***  # 26VД-100: 457 · 6.5	Permissible short circuit current across the screen of	kA	10.2
Permissible continious current rating by aerial laying *	minimum cross-section		
• in trefoil formation with double-side screen earthing       A       1005         • in trefoil formation with single-side screen earthing or cross screen earthing       A       1095         • plane with double-side screen earthing or cross screen earthing       A       936         • plane with single-side screen earthing or cross screen earthing       A       1282         earthing       Permissible continious current rating by burial *       • in trefoil formation with double-side screen earthing or cross screen earthing or an earthing       A       760         • in trefoil formation with single-side screen earthing or cross screen earthing       A       843         cross screen earthing       A       668         • plane with double-side screen earthing or cross screen       A       897         earthing       A       668         • plane with single-side screen earthing or cross screen       A       897         earthing       A       668         • plane with single-side screen earthing or cross screen       A       897         earthing       A       668         • plane with single-side screen earthing or cross screen       A       897         earthing       A       668       • Plane with could be self-streen earthing or cross screen       A       897         earthing       B	Maximum permissible short-circuit current in core	kA	94
• in trefoil formation with single-side screen earthing or cross screen earthing A 1095   • plane with double-side screen earthing A 936   • plane with single-side screen earthing or cross screen earthing A 1282   earthing A 760   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 843   • in trefoil formation with single-side screen earthing or cross screen earthing A 668   • plane with double-side screen earthing or cross screen earthing A 897   • plane with single-side screen earthing or cross screen earthing A 897   earthing   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 1456   Rated outer diameter of the cable (for reference) ** mm 91   Cable weight (approximate) kg/km 10180   Rated factory cable length and gross weight of the delivery on the drums *** m, t # 25УД-90: 305 • 4.7   on the drums *** # 26УД-100: 457 • 6.5	Permissible continious current rating by aerial laying *		
cross screen earthingA936• plane with double-side screen earthing or cross screenA1282earthingA1282Permissible continious current rating by burial *• in trefoil formation with double-side screen earthingA760• in trefoil formation with single-side screen earthing orA843cross screen earthingA668• plane with double-side screen earthing or cross screenA897earthingA897Maximum permissible conductor temperature° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1456Rated outer diameter of the cable (for reference) **mm91Cable weight (approximate)kg/km10180Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 305 · 4.7on the drums ***# 26УД-100: 457 · 6.5	in trefoil formation with double-side screen earthing	Α	1005
<ul> <li>plane with double-side screen earthing</li> <li>plane with single-side screen earthing or cross screen</li> <li>earthing</li> <li>Permissible continious current rating by burial *</li> <li>in trefoil formation with double-side screen earthing</li> <li>in trefoil formation with single-side screen earthing or</li> <li>in trefoil formation with single-side screen earthing or</li> <li>plane with double-side screen earthing</li> <li>plane with single-side screen earthing or cross screen</li> <li>earthing</li> <li>Maximum permissible conductor temperature</li> <li>Continious</li> <li>°C +90</li> <li>in emergency operation</li> <li>°C +130</li> <li>at short circuit</li> <li>°C +250</li> <li>Operating temperature range</li> <li>°C -60 +50</li> <li>Minimum bending radius by laying</li> <li>mm 1456</li> <li>Rated outer diameter of the cable (for reference) **</li> <li>mm 91</li> <li>Cable weight (approximate)</li> <li>kg/km 10180</li> <li>Rated factory cable length and gross weight of the delivery</li> <li>on the drums ***</li> <li># 25УД-90: 305 · 4.7</li> <li>on the drums ***</li> <li># 26УД-100: 457 · 6.5</li> </ul>	in trefoil formation with single-side screen earthing or	Α	1095
<ul> <li>plane with single-side screen earthing or cross screen earthing</li> <li>Permissible continious current rating by burial * <ul> <li>in trefoil formation with double-side screen earthing</li> <li>in trefoil formation with single-side screen earthing or cross screen earthing</li> <li>plane with double-side screen earthing</li> <li>plane with double-side screen earthing or cross screen</li> <li>plane with single-side screen earthing or cross screen</li> <li>plane with single-side screen earthing or cross screen</li> <li>continious</li> <li>Continious</li> <li>in emergency operation</li> <li>in emergency operation</li> <li>at short circuit</li> <li>C +250</li> <li>Operating temperature range</li> <li>C -60+50</li> <li>Minimum bending radius by laying</li> <li>mm 1456</li> <li>Rated outer diameter of the cable (for reference) **</li> <li>mm 91</li> <li>Cable weight (approximate)</li> <li>kg/km 10180</li> <li>Rated factory cable length and gross weight of the delivery on the drums ***</li> <li># 25УД-90: 305 · 4.7</li> <li>on the drums ***</li> <li># 26УД-100: 457 · 6.5</li> </ul> </li> </ul>	cross screen earthing		
earthing Permissible continious current rating by burial *  · in trefoil formation with double-side screen earthing or A 843  cross screen earthing  · plane with double-side screen earthing or Cross screen earthing or Plane with single-side screen earthing or Cross screen A 897  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 1456  Rated outer diameter of the cable (for reference) ** mm 91  Cable weight (approximate) kg/km 10180  Rated factory cable length and gross weight of the delivery on the drums *** # 26УД-100: 457 · 6.5	plane with double-side screen earthing	Α	936
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) **  Maximum permissible conductor temperature     · C     -60 +50  Minimum bending radius by laying  Rated factory cable length and gross weight of the delivery on the drums ***  # 26УД-100: 457 · 6.5	plane with single-side screen earthing or cross screen	Α	1282
<ul> <li>in trefoil formation with double-side screen earthing</li> <li>in trefoil formation with single-side screen earthing or cross screen earthing</li> <li>plane with double-side screen earthing</li> <li>plane with single-side screen earthing or cross screen</li> <li>plane with single-side screen earthing</li> <li>plane with single-side screen earthing or cross screen</li> <li>plane with single-side screen earthing</li> <li>plane with double-side screen earthing or</li> <li>A 843</li> <li>843</li> <li>cost screen earthing</li> <li>A 668</li> <li>plane with single-side screen earthing or</li> <li>c + 90</li> <li>c + 90</li> <li>d + 90</li> <li>c + 250</li> <li>c + 250</li> <li>c + 250</li> <li>c + 250</li> <li>o + 250</li></ul>	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  • at short circuit  • C +250  Operating temperature range  Minimum bending radius by laying  Minimum bending radius by laying  Rated outer diameter of the cable (for reference) **  mm 91  Cable weight (approximate)  Rated factory cable length and gross weight of the delivery on the drums ***  # 26УД-100: 457 • 6.5	in trefoil formation with double-side screen earthing	Α	760
• plane with double-side screen earthingA668• plane with single-side screen earthing or cross screen earthingA897Maximum permissible conductor temperature° C+90• Continious° C+130• in emergency operation° C+250• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1456Rated outer diameter of the cable (for reference) **mm91Cable weight (approximate)kg/km10180Rated factory cable length and gross weight of the delivery on the drums ***# 25УД-90: 305 • 4.7	<ul> <li>in trefoil formation with single-side screen earthing or</li> </ul>	Α	843
・ 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	cross screen earthing		
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 layingmm1456Rated outer diameter of the cable (for reference) **mm91Cable weight (approximate)kg/km10180Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 305 • 4.7on the drums ****# 26УД-100: 457 • 6.5	<ul> <li>plane with double-side screen earthing</li> </ul>	Α	668
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 layingmm1456Rated outer diameter of the cable (for reference) **mm91Cable weight (approximate)kg/km10180Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 305 • 4.7on the drums ***# 26УД-100: 457 • 6.5	<ul> <li>plane with single-side screen earthing or cross screen</li> </ul>	Α	897
• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1456Rated outer diameter of the cable (for reference) **mm91Cable weight (approximate)kg/km10180Rated factory cable length and gross weight of the delivery on the drums ***# 25УД-90: 305 • 4.7	earthing		
• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1456Rated outer diameter of the cable (for reference) **mm91Cable weight (approximate)kg/km10180Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 305 • 4.7on the drums ***# 26УД-100: 457 • 6.5	Maximum permissible conductor temperature		
• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1456Rated outer diameter of the cable (for reference) **mm91Cable weight (approximate)kg/km10180Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 305 • 4.7	Continious		+90
Operating temperature range°C-60 +50Minimum bending radius by layingmm1456Rated outer diameter of the cable (for reference) **mm91Cable weight (approximate)kg/km10180Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 305 • 4.7	<ul> <li>in emergency operation</li> </ul>	° C	+130
Minimum bending radius by layingmm1456Rated outer diameter of the cable (for reference) **mm91Cable weight (approximate)kg/km10180Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 305 • 4.7on the drums ***# 26УД-100: 457 • 6.5	• at short circuit		
Rated outer diameter of the cable (for reference) **mm91Cable weight (approximate)kg/km10180Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 305 • 4.7on the drums ***# 26УД-100: 457 • 6.5	Operating temperature range	°C	-60 +50
Cable weight (approximate)kg/km10180Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 305 • 4.7on the drums ***# 26УД-100: 457 • 6.5		mm	1456
Rated factory cable length and gross weight of the delivery m, t # 25УД-90: 305 • 4.7 on the drums *** # 26УД-100: 457 • 6.5	Rated outer diameter of the cable (for reference) **	mm	91
on the drums *** # 26УД-100: 457 • 6.5	Cable weight (approximate)	kg/km	10180
• • • • • • • • • • • • • • • • • • • •		m, t	
# 30УД-130: 639 • 9.4	on the drums ***		
			# 30УД-130: 639 • 9.4

#### Notes:

When ordering it is neccesary to agree the factory length of the product with the manufacturer

<sup>\*</sup> 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

<sup>\*\*</sup> The external diameter may differ from the rated up to  $\pm$  10 %

<sup>\*\*\*</sup> Отклонение фактической массы брутто от указанного значения может составлять ± 7 %



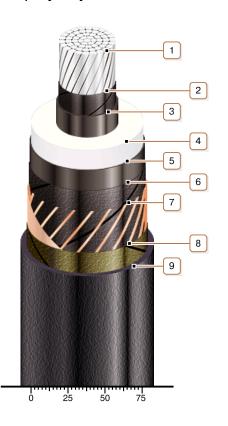




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# АПвЭгП-132 1x1000 ТУ У 31.3-00214534-060:2011

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



### **CONSTRUCTION**

- 1. Aluminium multiwire compacted conductor
- · It is possible to manufacture cable with a segmented conductor
- · It is possible to manufacture cable with sealed conductor.
- 2. Lapping layer of semiconductive swellable tape
- 3. Inner extruded semiconducting layer
- o. Illilei extraded seriilcondactiii
- 4. XLPE insulation
- 5. Outer extruded semiconducting layer
- 6. Lapping layer of semiconductive swellable tape
- 7. 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

- 8. Lapping layer of nonwoven cloth tape
- 9. Outer sheath of polyethylene or polyethylene copolymer

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