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АПвЭгПнг-НF-60 1x1200 ТУ У 31.3-00214534-060:2011

Power cables with aluminium conductor, flame-retardant and halogen-free, with XLPE, longitudinal screen sealing and polymer compound outer sheath

For the cable of this mark correspond the foreign-made analogues: NA2XSH (DE) • A2XSH (DE) • NUHAKXS (PL) Technical cable requirements correspond to IEC 60840

Cables are used for laying:

• in premises, tunnels, ducts, mines, dry soil and outdoor under shelter

• at sites, where low smoke and corrosive gas emission are required (NPP, subway, large industrial facilities, high-rise buildings, etc.)

It is possible to manufacture cables with extruded semiconductor layer along outer sheath. Order entry example:

АПвЭгПнг-НF-П-60 1x1200/95 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:

АПвЭгПнг-HF-60 1x1200/95 (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: АПвЭгПнг-HF-60 1x1200/95 (г) ТУ У 31.3-00214534-060:2011

Fire safety code in accordance with ДСТУ 4809:2007: ПБ102122000 Products of this mark meet the requirements:

• single wire cable flame retardance

• toxicity class Tk2 of the combustion products of nonmetallic elements (toxicity index from 40 up to 120 g/m³)

• class $\prod \kappa 1$ on smoke-forming ability by smouldering of non-metallic elements (coefficient of smoke formation from 50 to 500 m²/kg)

• class ДΠκ2 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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АПвЭгПнг-HF-60 1x1200 ТУ У 31.3-00214534-060:2011

Power cables with aluminium conductor, flame-retardant and halogen-free, with XLPE, longitudinal screen sealing and polymer compound outer sheath

TECHNICAL SPECIFICATIONS

Maximum voltagekV72.5Conductor rated areamm°1200Minimum screen cross-sectionmm°35Partial discharge factor for rated voltage, not more thanpC6Permissible short circuit current across the screen ofkA10.2Maximum permissible short-circuit current in corekA113Permissible continious current rating by aerial laying *-• in trefoil formation with double-side screen earthingA1212• in trefoil formation with single-side screen earthing orA1377cross screen earthingA1159• plane with double-side screen earthing or cross screenA1662earthingPermissible continious current rating by burial *• in trefoil formation with double-side screen earthing orA998cross screen earthingA854-• in trefoil formation with single-side screen earthing orA998cross screen earthingA1056earthing• plane with single-side screen earthing or cross screenA1056earthing• blane with single-side screen earthing or cross screenA1056earthing• trefoil formation with double-side screen earthing or cross screenA1056• continious*C+90• in emergency operation*C+250-• contini	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 kA 10.2 minimum cross-section KA 113 Maximum permissible short-circuit current in core kA 113 Permissible continious current rating by aerial laying * . . • in trefoil formation with double-side screen earthing A 1212 • in trefoil formation with single-side screen earthing or cross screen earthing A 1159 • plane with double-side screen earthing or cross screen A 1662 earthing . . . Permissible continious current rating by burial * . . • in trefoil formation with double-side screen earthing or cross screen earthing A 854 • in trefoil formation with single-side screen earthing or A 998 cross screen earthing A 1056 earthing . . . Maximum permissible conductor temperature . . . • In erefoil formation with double-side screen earthing or cross screen A 1056<		kV	72.5
Partial discharge factor for rated voltage, not more thanpC6Permissible short circuit current across the screen ofkA10.2minimum cross-sectionKA113Permissible continious current rating by aerial laying *.• in trefoil formation with double-side screen earthingA1212• in trefoil formation with single-side screen earthing orA1377cross screen earthingA1159• plane with double-side screen earthing or cross screenA1662earthingPermissible continious current rating by burial *• in trefoil formation with single-side screen earthing or cross screenA1662earthingPermissible continious current rating by burial *• in trefoil formation with single-side screen earthing or cross screen earthingA998cross screen earthingA854.• in trefoil formation with single-side screen earthing or cross screen earthingA998cross screen earthingA733• plane with double-side screen earthing or cross screen earthingA1056• arbane with single-side screen earthing or cross screen earthing• continious°C+90.• plane with single-side screen earthing or cross screen earthing• plane with single-side screen earthing or cro		mm²	1200
Partial discharge factor for rated voltage, not more thanpC6Permissible short circuit current across the screen ofkA10.2minimum cross-sectionKA113Permissible continious current rating by aerial laying *.• in trefoil formation with double-side screen earthingA1212• in trefoil formation with single-side screen earthing orA1377cross screen earthingA1159• plane with double-side screen earthing or cross screenA1662earthingPermissible continious current rating by burial *• in trefoil formation with single-side screen earthing or cross screenA1662earthingPermissible continious current rating by burial *• in trefoil formation with single-side screen earthing or cross screen earthingA998cross screen earthingA854.• in trefoil formation with single-side screen earthing or cross screen earthingA998cross screen earthingA733• plane with double-side screen earthing or cross screen earthingA1056• arbane with single-side screen earthing or cross screen earthing• continious°C+90.• plane with single-side screen earthing or cross screen earthing• plane with single-side screen earthing or cro	Minimum screen cross-section	mm²	35
Permissible short circuit current across the screen of kA 10.2 Maximum permissible short-circuit current in core kA 113 Permissible continious current rating by aerial laying * . . • in trefoil formation with double-side screen earthing A 1212 • in trefoil formation with single-side screen earthing or A 1377 cross screen earthing A 1159 • plane with double-side screen earthing or cross screen A 1662 earthing Permissible continious current rating by burial * . • in trefoil formation with double-side screen earthing or A 998 cross screen earthing A 854 . Permissible continious current rating by burial * . . . • in trefoil formation with double-side screen earthing or cross screen earthing or cross screen earthing A 998 cross screen earthing A 733 . . • plane with double-side screen earthing or cross screen A 1056 earthing Maximum permissible conductor temperature . . . <t< td=""><td>Partial discharge factor for rated voltage, not more than</td><td></td><td>6</td></t<>	Partial discharge factor for rated voltage, not more than		6
Maximum permissible short-circuit current in corekA113Permissible continious current rating by aerial laying *• in trefoil formation with double-side screen earthing orA1212• in trefoil formation with single-side screen earthing orA1377cross screen earthingA1159• plane with double-side screen earthing or cross screenA1662earthingPermissible continious current rating by burial *• in trefoil formation with double-side screen earthing or cross screenA998cross screen earthingA998• in trefoil formation with single-side screen earthing orA998• in trefoil formation with double-side screen earthing orA998• plane with double-side screen earthing or cross screenA1056• plane with double-side screen earthing or cross screenA1056• plane with double-side screen earthing or cross screenA1056• crost screen earthingC+90+130• plane with single-side screen earthing or cross screenA1056• continious°C+90+130• continious°C+2500Operating temperature range°C-60 +50Minimum bending radius by layingmm1424Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the delivery on the drums ***#26YJ-90: 396 • 5.7 <td< td=""><td></td><td>kA</td><td>10.2</td></td<>		kA	10.2
Permissible continious current rating by aerial laying *• in trefoil formation with double-side screen earthing or cross screen earthingA1212• in trefoil formation with single-side screen earthing or cross screen earthingA1377• plane with double-side screen earthing or cross screen earthingA1159• plane with single-side screen earthing or cross screen earthingA1662Permissible continious current rating by burial * • in trefoil formation with double-side screen earthing or cross screen earthingA854• in trefoil formation with double-side screen earthing or cross screen earthingA998• plane with double-side screen earthing or cross screen earthingA733• plane with double-side screen earthing or cross screen earthingA1056• continious* C+90•• continious* C+90•• in emergency operation* C+130• at short circuit* C+250Operating temperature range* C-60• At short circuit* C+250Operating temperature range* C-60• Cable weight (approximate)kg/km10460Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the delivery on the drums ***# 25YJ-90: 396 • 5.7	minimum cross-section		
 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 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 double-side screen earthing or cross screen plane with single-side screen earthing or cross screen premissible continious current rating by burial * in trefoil formation with double-side screen earthing or A plane with double-side screen earthing or A plane with single-side screen earthing or cross screen continious C +90 in emergency operation C +90 in emergency operation C +250 Operating temperature range C -60 +50 Minimum bending radius by laying mm 1424 Rated outer diameter of the cable (for reference) ** mm 89 Cable weight (approximate) kg/km 10460 Rated factory cable length and gross weight of the delivery m, t #25YJ-90: 396 · 5.7 on the drums *** 	Maximum permissible short-circuit current in core	kA	113
 in trefoil formation 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 plane with single-side screen earthing or cross screen a 1159 plane with single-side screen earthing or cross screen a 1662 earthing Permissible continious current rating by burial * in trefoil formation with double-side screen earthing or A 998 cross screen earthing plane with double-side screen earthing or A 998 cross screen earthing plane with double-side screen earthing or cross screen plane with single-side screen earthing or cross screen continious ° C +90 in emergency operation ° C +90 in emergency operation ° C +250 Operating temperature range ° C -60 +50 Minimum bending radius by laying mm t424 Rated outer diameter of the cable (for reference) ** mm 89 Cable weight (approximate) kg/km t0460 Rated factory cable length and gross weight of the delivery m, t #25YJ90: 396 • 5.7 on the drums *** 	Permissible continious current rating by aerial laying *		
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• plane with double-side screen earthingA1159• plane with single-side screen earthing or cross screenA1662earthingPermissible continious current rating by burial *.• in trefoil formation with double-side screen earthing orA854• in trefoil formation with single-side screen earthing orA998cross screen earthingA733• plane with double-side screen earthing or cross screenA1056earthingA1056earthingMaximum permissible conductor temperature.• Continious°C+90• in emergency operation°C+130• at short circuit°C+250Operating temperature range°C-60 +50Minimum bending radius by layingmm1424Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the delivery on the drums ***# 26YД-100: 457 • 6.6	in trefoil formation with single-side screen earthing or	А	1377
 <i>plane with single-side screen earthing or cross screen</i> <i>permissible continious current rating by burial *</i> <i>in trefoil formation with double-side screen earthing</i> <i>in trefoil formation with single-side screen earthing or</i> <i>plane with double-side screen earthing or cross screen</i> <i>plane with single-side screen earthing or cross screen</i> <i>A</i> <i>plane with single-side screen earthing or cross screen</i> <i>A</i> <i>a t short circuit</i> <i>c + 90</i> <i>i n emergency operation</i> <i>c + 250</i> <i>operating temperature range</i> <i>c - 60 + 50</i> <i>Minimum bending radius by laying</i> <i>mm</i> <i>1424</i> <i>Rated outer diameter of the cable (for reference) **</i> <i>mm</i> <i>89</i> <i>Cable weight (approximate)</i> <i>kg/km</i> <i>10460</i> <i>Rated factory cable length and gross weight of the delivery</i> <i>m, t</i> <i># 25YJ</i>-90: <i>396 · 5.7</i> <i>on the drums ***</i> 	cross screen earthing		
earthingPermissible continious current rating by burial *• in trefoil formation with double-side screen earthing or cross screen earthingA854• in trefoil formation with single-side screen earthing or cross screen earthingA998• plane with double-side screen earthing or cross screen earthingA733• plane with single-side screen earthing or cross screen earthingA1056Maximum permissible conductor temperature**• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1424Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the delivery on the drums ***# 25УД-90: 396 • 5.7 # 26УД-100: 457 • 6.6	plane with double-side screen earthing	А	1159
Permissible continious current rating by burial *• in trefoil formation with double-side screen earthingA854• in trefoil formation with single-side screen earthing orA998cross screen earthingA733• plane with double-side screen earthing or cross screenA1056earthingA1056Maximum permissible conductor temperature•• Continious°C+90• in emergency operation°C+130• at short circuit°C+250Operating temperature range°C-60 +50Minimum bending radius by layingmm1424Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 396 • 5.7on the drums ***# 26УД-100: 457 • 6.6	plane with single-side screen earthing or cross screen	А	1662
 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 or cross screen plane with single-side screen earthing or cross screen A 733 plane with single-side screen earthing or cross screen A 1056 earthing Maximum permissible conductor temperature Continious °C +90 in emergency operation °C +130 et short circuit °C +250 Operating temperature range °C -60 +50 Minimum bending radius by laying mm 1424 Rated outer diameter of the cable (for reference) ** mm 89 Cable weight (approximate) kg/km 10460 Rated factory cable length and gross weight of the delivery m, t # 25YД-90: 396 · 5.7 m 26YД-100: 457 · 6.6 	earthing		
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cross screen earthingA733• plane with double-side screen earthing or cross screenA1056earthingA1056Maximum permissible conductor temperature-• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1424Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 396 • 5.7 # 26УД-100: 457 • 6.6	• in trefoil formation with double-side screen earthing	А	854
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 plane with single-side screen earthing or cross screen Plane with single-side screen earthing or cross screen A 1056 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 1424 Rated outer diameter of the cable (for reference) ** mm 89 Cable weight (approximate) kg/km 10460 Rated factory cable length and gross weight of the delivery m, t #25YД-90: 396 • 5.7 m 26YД-100: 457 • 6.6 	cross screen earthing		
earthingMaximum permissible conductor temperature• Continious° C• Continious° C• in emergency operation° C• at short circuit° C• at short circuit° C• 250Operating temperature range° C• C-60 +50Minimum bending radius by layingmm1424Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/kmRated factory cable length and gross weight of the deliverym, t# 26УД-90: 396 • 5.7on the drums ***# 26УД-100: 457 • 6.6	plane with double-side screen earthing	А	733
Maximum permissible conductor temperature• Continious° C+90• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1424Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 396 • 5.7on the drums ***# 26УД-100: 457 • 6.6	plane with single-side screen earthing or cross screen	А	1056
• Continious° C+90• in emergency operation° C+130• at short circuit° C+250• Operating temperature range° C-60 +50Minimum bending radius by layingmm1424Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 396 • 5.7on the drums ***# 26УД-100: 457 • 6.6	earthing		
• in emergency operation° C+130• at short circuit° C+250Operating temperature range° C-60 +50Minimum bending radius by layingmm1424Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 396 • 5.7on the drums ***# 26УД-100: 457 • 6.6	Maximum permissible conductor temperature		
• at short circuit°C+250Operating temperature range°C-60 +50Minimum bending radius by layingmm1424Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 396 • 5.7on the drums ***# 26УД-100: 457 • 6.6	Continious	°C	+90
Operating temperature range° C-60 +50Minimum bending radius by layingmm1424Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 396 • 5.7on the drums ***# 26УД-100: 457 • 6.6	in emergency operation	°C	+130
Minimum bending radius by layingmm1424Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the deliverym, t# 25УД-90: 396 • 5.7on the drums ***# 26УД-100: 457 • 6.6	at short circuit	°C	+250
Rated outer diameter of the cable (for reference) **mm89Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 396 • 5.7# 26УД-100: 457 • 6.6	Operating temperature range	°C	-60 +50
Cable weight (approximate)kg/km10460Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 396 • 5.7# 26УД-100: 457 • 6.6	Minimum bending radius by laying	mm	1424
Rated factory cable length and gross weight of the delivery on the drums ***m, t# 25УД-90: 396 • 5.7 # 26УД-100: 457 • 6.6	Rated outer diameter of the cable (for reference) **	mm	89
on the drums *** # 26УД-100: 457 • 6.6	Cable weight (approximate)	kg/km	10460
	Rated factory cable length and gross weight of the delivery	m, t	# 25УД-90: 396 • 5.7
# ЗОУД-130: **** 683 • 10.0	on the drums ***		
			# 30УД-130: **** 683 • 10.0

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 \cdot 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 ± 10 %

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

**** Option delivery on not full drum



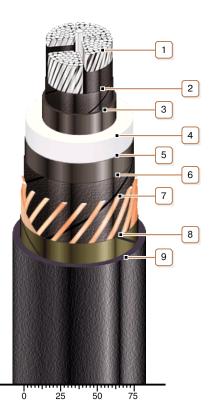


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Power cables with aluminium conductor, flame-retardant and halogen-free, with XLPE, longitudinal screen sealing and polymer compound outer sheath



CONSTRUCTION

- 1. Aluminium multiwire compacted conductor
- Notes: • It is possible to manufacture cable with sealed conductor. • Conductor segment twisting is not illustrated
- 2. Lapping layer of semiconductive swellable tape
- 3. Inner extruded semiconducting layer
- 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 glass tape

9. Polymer compound outer sheath:flame-retardant and halogen-free Note: It is possible to manufacture cable with extruded semiconductor layer along outer sheath