



Watertight Three-core Aluminium Power Cable **/Nepraleidžiantis vandens trigyslis alumininis jėgos kabelis**

CONSTRUCTION / Konstrukcija

Conductor/ <i>Laidininkas:</i>	Watertight, round stranded and compacted aluminium conductor (IEC 60228 class 2). / <i>Daugiavielis, apvaliai susuktas, ir sutankintas alumininis laidininkas su išilgine apsauga nuo vandens (IEC 60228 klasė 2).</i>
Conductor screen / <i>Laidininko ekranas:</i>	Semiconductive cross-linked polyethylene (XLPE) with nominal thickness of 0,5 mm. / <i>Pusiau laidus kryžmintas polietilenas (XLPE), vardinis storis 0,5 mm.</i>
Insulation/ <i>Izoliacija:</i>	Extruded cross-linked polyethylene having nominal thickness of 3,4 mm. / <i>Užlietas kryžmintas polietilenas (XLPE), vardinis storis 3,4 mm.</i>
Insulation screen: / <i>Izoliacijos ekranas:</i>	Semiconductive XLPE with nominal thickness of 0,5 mm. A layer of semi-conducting water swellable tape applied over insulation screen. / <i>Pusiau laidus XLPE, vardinis storis 0,5 mm. Ant izoliacijos ekrano užvyniota pusiau laidus vandenyje brinkstanti juosta.</i> Three insulated conductors are laid up together with water swellable fillers and semi-conducting water swellable tapes. / <i>Trys izoliuoti laidininkai yra apvynioti pusiau laidžia vandenyje brinkstančia juosta su vandenyje brinkstančiais užpildais.</i>
Metallic screen: / <i>Metalinis ekranas:</i>	Layer of helically wound copper wires with a copper equalization tape. / <i>Spirale apvyniotos vario vielos su išlyginimo varine juoste.</i>
Radial watertightness: / <i>Skersinė vandens apsauga:</i>	Polyester laminated aluminium foil wrapped around the metallic screen and bonded to the sheath. / <i>Poliesteriu laminuota aluminio folija apvyniota aplink metalinį ekraną ir priklijuota prie apvalkalo.</i>
Sheath/ <i>Apvalkalas:</i>	Black weather resistant polyethylene (PE LLD). / <i>Juodas, atmosferos poveikiui atsparus polietileno apvalkalas (PE LLD).</i>
Temperature limits: / <i>Temperatūros diapazonas:</i>	Max. conductor temperature 90 °C / <i>Maksimali laidininko temperatūra +90 °C</i> Max. short circuit temperature 250 °C (duration not exceeding 5 sec.) / <i>Maksimali trumpo jungimo temperatūra +250 °C (trukmė iki 5 sek.).</i> Min. temperature during handling and installation - 20 °C / <i>Minimali temperatūra montavimui -20 °C</i> Min. temperature during transport - 40 °C / <i>Minimali temperatūra transportavimui -40 °C</i>
Applications/ <i>Taikymas:</i>	Cable is intended for fixed installations indoors and outdoors, on cable ladders, in conduits and cable ducts. Cable may also be buried in soil. Cable is both longitudinally and radially watertight and therefore suitable for extremely wet conditions. Not for submarine or similar applications. / <i>Klojimui lauke, pastatų viduje, ant kabelinių kopėčių, kabelių kanaluose, esant drėgnai ar vandeningai dirvai. Netinkamas naudoti laivų statybai.</i>

AXLJ-F TT 12 kV
 6/10(12) kV
 CENELEC HD 620 S2:2010 Part 10
 Section M

Technical details / Techniniai duomenys

Product code / Gaminio kodas	1187893 3x50/16	1187894 3x70/16	1187895 3x95/16	1187885 3x95/25	1187896 3x120/16	1187897 3x150/25	1187898 3x185/25	1187899 3x240/25	1187889 3x240/35	1187890 3x300/35
Diameter of conductor (mm) / Laidininko diametras	8,1	9,5	11,2	11,2	12,6	14,1	15,8	18,0	18,0	20,3
Nominal cross section of metallic screen (mm ²) / Metalinio ekrano kvadratura	16	16	16	25	16	25	25	25	35	35
Nominal thickness of sheath (mm) / Apvalkalo storis	2,4	2,5	2,6	2,7	2,8	2,9	3,0	3,1	3,1	3,3
Diameter of cable, approx. (mm) / Viso kabelio diametras apytiksliai	45	49	52	52	56	59	64	68	68	73
Weight of cable, approx. (kg/km) / Kabelio svoris apytiksliai	1400	1620	1950	2000	2270	2800	3190	3800	3850	4600
Maximum forces during installation when pulling by / Maksimali jėga instaliuojant kai klojama										
- pulling stocking (kN) / traukiant su kojine	2,3	3,2	4,3	4,3	5,4	6,8	8,3	8,5	8,5	8,5
- pulling-eye (kN) / traukiant už gyslos	7,5	10,5	14,3	14,3	18,0	20	20	20	20	20
Minimum bending radii / Minimalus lenkimo spindulys										
- during handling and installation (m) / klojimo metu	0,54	0,59	0,62	0,62	0,67	0,71	0,77	0,82	0,82	0,88
- in case of one smooth bending to final position (m) / vienam švelniam palenkimui į galutinę poziciją	0,38	0,41	0,44	0,44	0,47	0,50	0,54	0,57	0,57	0,61
Max resistance of conductor at 20°C (Ω/km) / Maksimali laidininko varža prie +20 °C	0,641	0,443	0,320	0,320	0,253	0,206	0,164	0,125	0,125	0,100
Max resistance of metallic screen at 20°C (Ω/km) / Maksimali ekrano varža prie +20 °C	1,2	1,2	1,2	0,8	1,2	0,8	0,8	0,8	0,6	0,6
Inductance per phase (mH/km) ¹ / Fazės induktyvumas	0,33	0,32	0,30	0,30	0,29	0,28	0,27	0,27	0,27	0,26
Capacitance (μF/km) ¹ / Talpumas	0,24	0,27	0,30	0,30	0,33	0,36	0,39	0,44	0,44	0,49
Charging current (A/km) ² / Liekamoji srovė	0,4	0,5	0,5	0,5	0,6	0,7	0,7	0,8	0,8	0,9
Earth fault current (A/km) ² / Įžemėjimo srovė	1,3	1,5	1,6	1,6	1,8	2,0	2,1	2,4	2,4	2,6
Current ratings (according to HD 620 S2 part 10F) / Srovės reikšmės (pagal HD 620 S2 dalį 10F)										
Cables in ground (15 °C, laying depth 0,7 m, conductor temperature 65 °C, screen circuit closed) (A) / kabelis dirvoje	145	175	205	205	230	260	290	340	340	380
Cables in air (25 °C, conductor temperature 90 °C, screen circuit closed) (A) / kabelis ore	160	190	230	230	265	305	340	400	400	460
Max 1 second thermal short-circuit current (kA) / Maksimali 1 sekundės termo trumo jungimo srovė	4,7	6,6	8,9	8,9	11,3	14,1	17,4	22,6	22,6	28,3
- conductor (temp. at the beginning 90 °C, final temp. 250 °C) / laidininkas	2,4	2,4	2,4	3,7	2,4	3,7	3,7	3,7	5,2	5,2
- metallic screen (temp. at the beginning 80 °C, final temp. 250 °C) / metalinis ekranas										

1) Calculated value, for guidance only / nurodyti duomenys yra patariamieji

2) Calculated value, U = 10 kV / apskaičiuota U = 10 kV

AXLJ-F TT AHXCMK-W TT
12 kV
6/10(12) kV
CENELEC HD 620S2:2010 Part 10
Section M and F Applicable parts**Medium Voltage Aluminium Power Cable****CONSTRUCTION**

Conductor:	Watertight round stranded and compacted aluminium conductor, IEC 60228 class 2.
Conductor screen:	Semi-conducting cross-linked polyethylene (XLPE) with nominal thickness of 0,5 mm.
Insulation:	Extruded cross-linked polyethylene having nominal thickness of 3,4 mm.
Insulation screen:	Semi-conducting XLPE with nominal thickness of 0,5 mm.
Longitudinal watertightness:	Semi-conducting swelling tape over insulation screen and metallic screen area. Swelling waterblocking powder also between the conductor wires.
Metallic screen:	Cu-screen made of helically applied copper wires.
Radial watertightness:	PE-laminated aluminium foil bonded to the sheath. Nominal thickness of aluminium is 0,2 mm. Aluminium foil acts also as a part of the metallic screen.
Sheath:	Black weather resistant polyethylene (PE-LLD).
Temperature limits:	Max. conductor temperature 90 °C Max. short circuit temperature 250 °C (duration not exceeding 5 sec.) Min. temperature during handling and installation -20 °C Min. temperature during transport -40 °C
Applications:	Cable is intended for fixed installations indoors and outdoors and may also be buried in soil. This longitudinally and radially watertight cable construction is applicable where wet soil and/or existence of water in cable ducts permanently occurs.

AXLJ-F TT AHXCMK-W TT 12 kV 6/10(12) kV

CENELEC HD 620S2:2010 Part 10 Section M and F Applicable parts

Technical details	1x50/16	1x95/16	1x120/16	1x150/25	1x185/25	1x240/25	1x240/35	1x300/25	1x400/35	1x500/35	1x630/35	1x800/35	1x1000/35	1x1200/35
Product code	1186342	1181054	1186355	1186356	1186357	1186358	1186698	1186359	1186360	1186361	1186362	1186363	1186364	1186365
Conductor diameter (mm)	8,1	11,2	12,6	14,1	15,8	18,0	18,0	20,3	23,0	25,7	29,4	33,3	37,8	41,4
Insulation thickness (mm)	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4
Nominal screen size (mm ²)	16	16	16	25	25	25	35	25	35	35	35	35	35	35
Outersheath thickness (mm)	1,8	1,8	1,8	1,9	2,0	2,0	2,0	2,1	2,2	2,3	2,4	2,6	2,7	2,8
Outer diameter (mm)	25	28	29	31	34	35	35	38	43	44	47	52	57	62
Weight (kg)	520	700	850	970	1130	1300	1400	1520	1970	2280	2750	3550	4300	4850
Max. pulling force														
- with pulling eye (kN)	2,5	4,8	6,0	7,5	9,3	12	12	15	20	20	20	20	20	20
- with pulling stocking (kN)	0,8	1,4	1,8	2,3	2,8	3,6	3,6	4,5	6,0	7,5	8,5	8,5	8,5	8,5
Min. bending radius														
- during installation (m)	0,38	0,42	0,44	0,47	0,51	0,53	0,53	0,57	0,65	0,66	0,71	0,78	0,86	0,93
- in final installation, only one pending (m)	0,27	0,31	0,32	0,34	0,36	0,39	0,39	0,42	0,45	0,46	0,52	0,55	0,60	0,65
Min. handling temperature (°C)	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20
Min. transporting temperature (°C)	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40
Conductor DC-resistance 20°C														
- phase (Ω/km)	0,641	0,320	0,253	0,206	0,164	0,125	0,125	0,100	0,0778	0,0605	0,0469	0,0367	0,0291	0,0247
- screen (Ω/km)	1,2	1,2	1,2	0,8	0,8	0,8	0,6	0,8	0,6	0,6	0,6	0,6	0,6	0,6
Inductance (mH/km)¹														
-in flat formation, conductors together (mH/km) ¹	0,60	0,56	0,53	0,53	0,52	0,51	0,51	0,50	0,50	0,48	0,47	0,46	0,46	0,45
-in trefoil, conductors together (mH/km) ¹	0,41	0,37	0,35	0,35	0,33	0,32	0,32	0,31	0,31	0,30	0,28	0,28	0,27	0,27
Capacitance (μF/km) ¹	0,24	0,30	0,33	0,36	0,38	0,44	0,44	0,48	0,53	0,56	0,66	0,41	0,79	0,89
Charging current (A/km) ²	0,4	0,5	0,6	0,6	0,7	0,8	0,8	0,9	1,0	1,0	1,2	1,3	1,4	1,6
Current carrying capacity (HD 620S2 Part 10F)														
Cable in the air (25°C)														
- in trefoil, (conductor temperature 90°C, open screen) (A)	195	285	330	380	430	505	505	580	695	800	915	1045	1170	1290
- in trefoil, (conductor temperature 90°C, closed screen) (A)	195	280	325	370	425	490	490	565	680	775	880	1010	1130	1230
Cable in the ground (15°C ja 1,0 K.m/W), Installation depth 0,7 m														
- in trefoil, (conductor temperature 65°C, open screen) (A)	155	240	265	305	345	395	395	445	525	590	665	725	800	860
- in trefoil, (conductor temperature 65°C, closed screen) (A)	155	235	270	300	330	385	385	435	510	570	635	695	760	810
Max. thermal short circuit current during 1s														
- phase (initial temperature 90°C and final temperature 250°C.) (kA)	4,7	8,9	11,3	14,1	17,4	22,6	22,6	28,3	37,8	47,2	59,5	75,6	94,5	113
- screen (initial temperature 80°C and final temperature 250°C.) (kA)	2,4	2,4	2,4	3,5	3,5	3,5	4,7	3,5	4,7	4,7	4,7	4,7	4,7	4,7

1) Calculated value, for guidance only

2) Calculated value, U = 10 kV