X-VOLT® AL (-OL/-2OL) RHZ1

100% Green Energy Cable Production

Medium Voltage aluminium cable, XLPE insulation.

ACCORDING TO: IEC 60502-2

APPLICATION

X-VOLT® RHZ1 is a Medium Voltage aluminium cable halogen-free for fixed installations. Suitable for transport and distribution of electric power in medium voltage networks.

CONSTRUCTION

Conductor
Aluminium conductor class 2 according to EN 60228 and IEC 60228.
Optionally, with longitudinal sealing (cable type -2OL).

Internal semiconductor
Screen over the conductor, made of thermosetting semiconductor material.

Insulation
Cross-linked polyethylene type XLPE according to IEC 60502-2, natural colour.
Cross linked in catenary line with nitrogen atmosphere through a triple layer extrusion process.

External semiconductor
Screen over the insulation, made of thermosetting and strippable semiconductor material.

Metallic screen
Copper wires and copper tape screen, with a minimum cross-section of 16mm^2.

Longitudinal sealing
Hygroscopic tape completely covering the screen (cable type –OL and -2OL).

Outer sheath
Polyethylene outer sheath type ST7 according to IEC 60502-2.
Red colour.

CHARACTERISTICS

Electrical performance
Medium Voltage: 6/10 kV, 8,7/15 kV, 12/20 kV and 18/30 kV.

Thermal performance
Maximum service temperature: 90°C.
Maximum short-circuit temperature: 250°C (max 5 s)
Minimum service temperature: -15°C.

Fire performance
Halogen free: according to EN 60754-1 / IEC 60754-1.

Mechanical performance
Minimum bending radius: 15x cable diameter.
Abrasion resistant.
Tear resistant.

Environmental performance
UV Resistant according to UNE 211605.

Installation conditions
Open Air.
Buried.
In conduit.

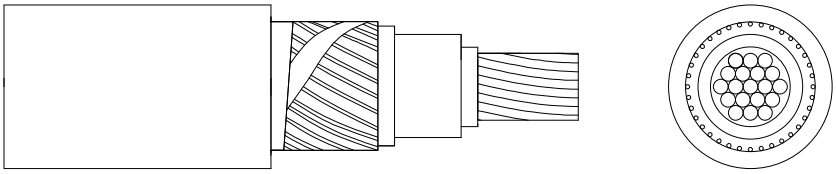
STANDARDS / COMPLIANCE

According to
IEC 60502-2

Standards and approvals
AENOR

X-VOLT® AL (-OL/-2OL) RHZ1

DIMENSIONS & ADMISSIBLE INTENSITIES



X-VOLT® RHZ1 6/10 kV

Cross-section (mm^2)	Screen (mm^2)	Conductor Diameter (mm)	Insulation Diameter (mm)	External Diameter (mm)	Weight (Kg/Km)	R20°C (Ω/km)	X (Ω/km)	C (µF/km)	Open air (A) [1]	Buried (A) [2]
1 x 50	H16	8,1	15,3	21,2	540	0,641	0,119	0,251	184	152
1 x 150	H16	13,9	21,1	27,0	915	0,206	0,100	0,381	368	281
1 x 240	H16	18,0	25,2	31,5	1.260	0,125	0,094	0,462	502	367
1 x 400	H16	22,8	30,0	36,2	1.760	0,0778	0,090	0,587	673	470
1 x 500	H16	26,3	34,0	41,1	2.135	0,0605	0,087	0,652	777	542

X-VOLT® RHZ1 8,7/15 kV

Cross-section (mm^2)	Screen (mm^2)	Conductor Diameter (mm)	Insulation Diameter (mm)	External Diameter (mm)	Weight (Kg/Km)	R20°C (Ω/km)	X (Ωkm)	C (µF/km)	Open air (A) [1]	Buried (A) [2]
1 x 95	H16	11,2	20,4	26,3	790	0,320	0,113	0,255	280	221
1 x 150	H16	13,9	23,1	29,2	1.000	0,206	0,105	0,297	368	281
1 x 240	H16	18,0	27,2	33,5	1.355	0,125	0,098	0,363	502	367
1 x 300	H16	20,0	29,2	35,7	1.550	0,100	0,095	0,395	577	414
1 x 400	H16	22,8	32,2	39,2	1.910	0,0778	0,093	0,443	673	470
1 x 500	H16	26,3	36,0	43,3	2.250	0,0605	0,090	0,504	777	542
1 x 630	H16	29,8	39,2	46,7	2.735	0,0469	0,087	0,555	895	615
1 x 800	H16	34,0	43,7	51,4	3.305	0,0367	0,085	0,627	1.036	700

X-VOLT® RHZ1 12/20 kV

Cross-section (mm^2)	Screen (mm^2)	Conductor Diameter (mm)	Insulation Diameter (mm)	External Diameter (mm)	Weight (Kg/Km)	R20°C (Ω/km)	X (Ω/km)	C (µF/km)	Open air (A) [1]	Buried (A) [2]
1 x 50	H16	8,0	20,0	24,9	660	0,641	0,130	0,174	184	152
1 x 70	H16	10,0	21,0	26,9	765	0,443	0,121	0,201	230	186
1 x 95	H16	11,2	22,2	28,3	870	0,320	0,170	0,217	280	221
1 x 120	H16	12,7	23,7	29,8	980	0,253	0,113	0,237	324	252
1 x 150	H16	13,9	24,9	31,2	1.085	0,206	0,110	0,254	368	281
1 x 185	H16	16,0	28,0	36,3	1.225	0,164	0,106	0,275	424	317
1 x 240	H16	18,0	29,0	35,5	1.455	0,125	0,102	0,308	502	367
1 x 300	H16	20,0	31,0	37,7	1.655	0,100	0,099	0,334	577	414
1 x 400	H16	22,8	34,0	41,0	2.010	0,0778	0,096	0,373	673	470
1 x 500	H16	26,3	37,8	45,3	2.390	0,0605	0,093	0,424	777	542
1 x 630	H16	29,8	41,0	48,7	2.870	0,0469	0,090	0,466	895	615
1 x 1000	H16	39,0	50,5	58,8	4.315	0,0291	0,085	0,591	1.188	795

X-VOLT® AL (-OL/-2OL)
RHZ1

X-VOLT® RHZ1 18/30 kV										
Cross-section (mm^2)	Screen (mm^2)	Conductor Diameter (mm)	Insulation Diameter (mm)	External Diameter (mm)	Weight (Kg/Km)	$R_{20°C}$ (Ω/km)	X (Ω/km)	C (µF/km)	Open air (A) [1]	Buried (A) [2]
1 x 50	H16	8,0	23,6	29,7	845	0,641	0,141	0,135	184	152
1 x 70	H16	10,0	25,6	31,9	970	0,443	0,132	0,154	230	186
1 x 95	H16	11,2	26,8	33,1	1.080	0,320	0,127	0,165	280	221
1 x 120	H16	12,7	28,3	34,8	1.205	0,253	0,122	0,179	324	252
1 x 150	H16	13,9	29,5	36,5	1.325	0,206	0,119	0,190	368	281
1 x 185	H16	16,0	31,6	38,4	1.500	0,164	0,114	0,199	424	317
1 x 240	H16	18,0	33,6	40,7	1.735	0,125	0,110	0,228	502	367
1 x 300	H16	20,0	35,6	42,9	1.950	0,100	0,107	0,247	577	414
1 x 400	H16	22,8	38,6	45,9	2.320	0,0778	0,103	0,274	673	470
1 x 500	H16	26,3	42,4	50,1	2.720	0,0605	0,099	0,308	777	542
1 x 630	H16	29,8	45,6	53,1	3.220	0,0469	0,095	0,342	895	615
1 x 800	H16	34,0	50,1	58,2	3.860	0,0367	0,093	0,378	1.036	700
1 x 1000	H16	39,0	55,1	63,6	4.740	0,0291	0,090	0,423	1.188	795

[1] Three single-core cables in open air at 30°C ambient temperature according to IEC 60502-2.
[2] Three single-core cables direct buried at 0,8 m depth with soil thermal resistivity of 1,5 K·m/W and 20°C of ground temperature.
Reactance (X) is calculated at 50 Hz and for three single-core cables (in triangle or trefoil formation).
Capacitance values (C) are calculated in base to dimensional items of the cables that are in this specification.
In all cases it is supposed a three-phase circuit.