



X-VOLT® AL (-OL/-2OL) RHZ1



Medium voltage aluminium cable with XLPE insulation.

REFERENCE STANDARD: UNE-HD 620-10E (type 10E-1)



Fca

APPLICATION

X-VOLT® AL RHZ1 is a halogen-free medium voltage aluminium cable for fixed installations.

Suitable for the transport and distribution of electrical energy in medium voltage networks.

CONSTRUCTION

Driver

Class 2 aluminum according to UNE-EN 60228 and IEC 60228.

Optionally with longitudinal sealing (cable type -2OL).

Internal semiconductor display Display

on conductor, made of thermosetting semiconductor material.

Insulation

Cross-linked polyethylene type DIX 3 according to HD 620-1, natural color.

Catenary crosslinked with nitrogen atmosphere by a triple extrusion process.

External semiconductor screen Screen

on insulation, made of peelable, thermosetting semiconductor material.

Metal screen Screen

of copper wires and counterspiral, with a minimum section of 16 mm²

Longitudinal sealing

Hygroscopic tape completely covering the screen (type cables -OL and -2OL).

Outer cover

Polyethylene type DMZ 1 according to HD 620-1.

Red.

CHARACTERISTICS



Electrical characteristics

Medium Voltage: 6/10 kV, 8.7/15 kV, 12/20 kV and 18/30 kV.



Thermal characteristics

Maximum conductor temperature: 90°C.

Maximum short-circuit temperature: 250°C (maximum 5 s).

Minimum serving temperature: -15°C.



Fire characteristics Reaction to fire

CPR: Fca according to EN 50575.

Halogen free according to UNE-EN 60754-1 / IEC 60754-1.

Low emission of corrosive gases according to UNE-EN 60754-2 / IEC 60754-2.



Mechanical characteristics

Radius of curvature: 15x outer diameter.

Abrasion resistance.

Tear resistance.



Environmental characteristics Resistance

to ultraviolet rays according to UNE 211605 Installation conditions In the open air.



Buried.

Intubated.

STANDARDS / CERTIFICATIONS



Reference standard

UNE-HD 620 10-E (type 10E-1)



Certifications

AENOR



CPR (Construction Products Regulation)

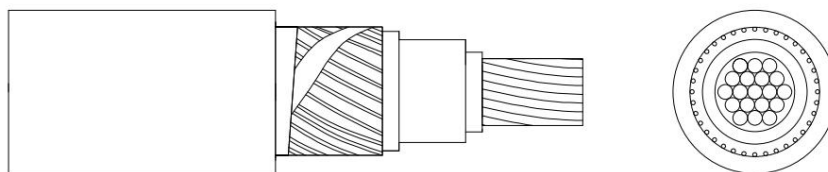
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ADMISSIBLE DIMENSIONS AND INTENSITIES



X-VOLT® RHZ1 6/10 kV

Section (mm ²)	Screen (mm ²)	Diameter Driver (mm)	Diameter Isolation (mm)	Diameter Abroad (mm)	Weight (Kg/Km)	R20°C (ȳ/km)	X (ȳ /km)	C (ȳF/km)	Outdoors (ȳO) ¹	Buried (ȳO) ²
1 x 50	H16	8.0	15.8	22.7	590	0.641	0.125	0.231	184	152
1 x 95	H16	11.2	19.0	25.9	780	0.320	0.111	0.294	280	221
1 x 150	H16	13.9	21.7	28.6	980	0.206	0.104	0.346	368	281
1 x 240	H16	18.0	25.8	33.5	1.360	0.125	0.098	0.426	502	367
1 x 400	H16	22.9	30.9	38.8	1.885	0.0778	0.092	0.524	673	470
1 x 630	H16	29.8	37.8	45.7	2.675	0.0469	0.086	0.657	895	615

X-VOLT® RHZ1 8.7/15 kV

Section (mm ²)	Screen (mm ²)	Diameter Driver (mm)	Diameter Isolation (mm)	Diameter Abroad (mm)	Weight (Kg/Km)	R20°C (ȳ/km)	X (ȳ /km)	C (ȳF/km)	Outdoors (ȳO) ¹	Buried (ȳO) ²
1 x 150	H16	13.9	23.9	31.2	1.090	0.206	0.109	0.276	368	281
1 x 240	H16	18.0	28.0	35.7	1.465	0.125	0.102	0.336	502	367
1 x 400	H16	22.8	32.2	39.2	1.910	0.0778	0.095	0.411	673	470

X-VOLT® RHZ1 12/20 kV

Section (mm ²)	Screen (mm ²)	Diameter Driver (mm)	Diameter Isolation (mm)	Diameter Abroad (mm)	Weight (Kg/Km)	R20°C (ȳ/km)	X (ȳ /km)	C (ȳF/km)	Outdoors (ȳO) ¹	Buried (ȳO) ²
1 x 95	H16	11.2	23.2	30.5	965	0.320	0.122	0.202	280	221
1 x 150	H16	13.9	25.9	33.6	1,200	0.206	0.115	0.235	368	281
1 x 240	H16	18.0	30.0	38.2	1,580	0.125	0.106	0.285	502	367
1 x 400	H16	22.9	35.1	43.0	2.130	0.0778	0.096 0.0469	0.346	673	470
1 x 630	H16	29.8	42.0	49.9	2.960	0.092 0.0367	0.0887	0.429	895	615
1 x 800	H16	34.0	46.5	54.4	3.555			0.483	1.036	700

X-VOLT® RHZ1 18/30 kV

Section (mm ²)	Screen (mm ²)	Diameter Driver (mm)	Diameter Isolation (mm)	Diameter Abroad (mm)	Weight (Kg/Km)	R20°C (ȳ/km)	X (ȳ /km)	C (ȳF/km)	Outdoors (ȳO) ¹	Buried (ȳO) ²
1 x 95	H16	11.2	28.2	35.9	1.220	0.320	0.132	0.155	280	221
1 x 150	H16	13.9	30.9	39.1	1,470	0.206	0.124	0.178	368	281
1 x 240	H16	18.0	35.0	42.9	1.865	0.125	0.136	0.213	502	367
1 x 400	H16	22.9	40.1	48.0	2.450	0.0778	0.106	0.256	673	470
1 x 630	H16	29.8	47.0	54.9	3.330	0.0469	0.098	0.313	895	615

¹ Three single core cables in free air at 30°C ambient temperature according to IEC 60502-2.

² Three single-core cables directly buried at a depth of 0.8 m with a soil thermal resistivity of 1.5 Km/W and 20 °C ground temperature according to IEC 60502-2.

The reactance (X) is calculated at 50 Hz and for three unipolar cables (in a triangle or cloverleaf formation).

Capacitance (C) values are calculated based on the cable dimensional data listed in this specification.

In all cases a three-phase circuit is assumed.



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SHORT CIRCUIT INTENSITIES

Time(s)	0.1	0.2	0.3	0.5	1	1.5	2	2.5	3
A/mm ²	299	211	173	134	94	77	67	60	55

CORRECTION FACTORS FOR AIR TEMPERATURES

Air T. (°C)	20	25	30	35	40	45	50	55	60
Factor	1.08	1.04	1	0.96	0.91	0.87	0.82	0.76	0.71

CORRECTION FACTORS FOR GROUND TEMPERATURES

T. Soil (°C)	10	15	20	25	30	35	40	45	50
Factor	1.07	1.04	1	0.96	0.93	0.89	0.85	0.80	0.76

CORRECTION FACTORS FOR SOIL THERMAL RESISTIVITIES (calculated for 240 mm² of cable)

Directly buried cables						
0.5 K m/W	0.8 K·m/W	1 K·m/W	1.5 K·m/W	2 K·m/W	2.5 K·m/W	3 K·m/W
1.36	1.29	1.18	1	0.88	0.80	0.73

Other correction factors (for cable bundling, for harmonic currents), not in the specification, may be applied.
More information can be found in IEC 60502-2.