

TOXFREE® LSZH XZ1 AI 0,6/1 kV HEAVY DUTY

Aluminium cable.

ACCORDING TO: IEC 60502-1



APPLICATION

Toxfree® LSZH Aluminium cable is suitable for direct buried installations for transport and distribution of electric power in low voltage networks.

CONSTRUCTION

Conductor

Aluminium class 2 according to EN 60228 and IEC 60228.

Insulation

Cross-linked polyethylene type XLPE according to IEC 60502-1.
Natural colour.



Outer sheath

Polyethylene halogen free and UV resistant, type ST7 according to IEC 60502-1 with extra thickness as protection for direct buried cables.
Black colour.

CHARACTERISTICS

- Electrical performance**
Low voltage: 0,6/1 (1,2) kV AC according to IEC 60502-1.
- Thermal performance**
Maximum conductor temperature: 90°C.
Maximum short-circuit temperature: 250°C (max. 5 s).
Minimum service temperature: -40°C (fixed and protected installations).
Minimum installation and handling temperature: 0°C (on cable surface).
- Fire performance**
Halogen free according to EN 60754-1 / IEC 60754-1.
Low corrosive gases emission according to EN 60754-2 / IEC 60754-2.
- Mechanical performance**
Minimum bending radius: 5x cable diameter.
Impact resistance: AG4 (≤ 40 J) Extra high severity according to NF C 33-226.
Abrasion according to NF C 33-226.
- Environmental performance**
UV Resistant according to HD 603-1.
Water resistance: AD8 Submersion.

STANDARDS / COMPLIANCE

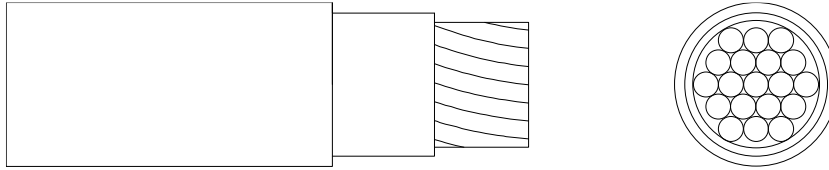
-  According to IEC 60502-1
-  Standards and approvals CE / RoHS.



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DIMENSIONS & ADMISSIBLE INTENSITIES



Cross-section (mm ²)	Diameter (mm)	Weight (Kg/km)	R20°C (Ω/km)	Open air (A) ¹	Buried (A) ²	Voltage drop (V/A · km) ³
1 x 95	18,1	410	0,320	289	204	0,820
1 x 120	19,9	525	0,253	337	233	0,648
1 x 150	21,1	590	0,206	389	261	0,528
1 x 185	23,4	745	0,164	447	296	0,420
1 x 240	25,6	910	0,125	530	343	0,320
1 x 300	27,8	1.085	0,100	613	386	0,256
1 x 400	33,2	1.460	0,0778	740	445	0,199

¹ Reference method F according to IEC 60364-5-52 in open air at 30°C ambient temperature.

² Reference method D2 according to IEC 60364-5-52. Directly buried at 0,7 m depth with soil thermal resistivity of 2,5 K·m/W and 20°C of ground temperature.

³ At maximum conductor temperature and $\cos\phi=1$.

In all cases are supposed a single-phase circuit.

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SHORT-CIRCUIT CURRENT-CARRYING CAPACITIES

Time (s)	0,1	0,2	0,3	0,5	1	1,5	2	2,5	3
A/mm²	299	211	173	134	94	77	67	60	55

CORRECTION FACTORS FOR AIR TEMPERATURE

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 TEMPERATURE

Ground T. (°C)	10	15	20	25	30	35	40	45	50
Factor	1,07	1,04	1	0,96	0,93	0,89	0,85	0,8	0,76

CORRECTION FACTORS FOR SOIL THERMAL RESISTIVITY

Direct buried cables						
0,5 K·m/W	0,7 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
1,88	1,62	1,50	1,28	1,12	1	0,90

Other correction factors (for grouping cables, for harmonic currents), that are not in this specification, can be applied. Further information can be found in IEC 60364-5-52.