TOXFREE® ULTRA TXXI/RZ1-K

Extra flexible LSHF power cable.

ACCORDING TO: IEC 60502-1



D_{ca}

APPLICATION

Toxfree®ULTRA TXXI/RZ1-K is an extra flexible low smoke halogen free cable for fixed installations. Suitable for installations where an enhanced flexibility is needed to aid swift installation into compact and restricted spaces.

CONSTRUCTION

Conductor
Electrolytic annealed copper, class 5 (flexible) according to EN 60228 and IEC 60228.

Insulation
Flexible cross-linked polyethylene type XLPE according to IEC 60502-1.
Natural colour.

Outer sheath
Low smoke halogen free and flexible polyolefin, type ST8 according to IEC 60502-1.
Black colour.

CHARACTERISTICS

Electrical performance
Low voltage: 0,6/1 kV

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. If the air temperature is below 0°C, the cable must be preheated to a temperature of 0°C to be handled.

Fire performance
Flame non-propagation according to IEC 60332-1 / EN 60332-1.
Fire non-propagation according to EN 50399.
Reaction to fire CPR: D_{ca}-s1, d2, a1 according to EN 50575.
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: AG2 Medium severity.

Environmental performance
Chemical & Oil resistance: Acceptable.
UV Resistant according to EN 50618.
Water resistance: AD8 Submersion.

Installation conditions
Open Air.
Buried.
In conduit.

STANDARDS / COMPLIANCE

According to
IEC 60502-1

Standards and approvals
RoHS / CE

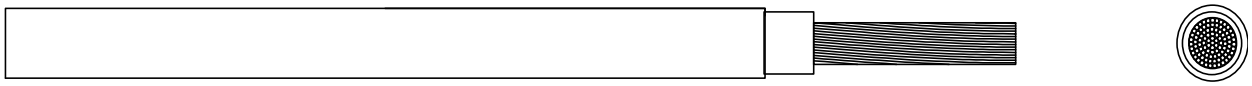
CPR (Construction Products Regulation)
D_{ca} -s1, d2, a1

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TOXFREE® ULTRA
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DIMENSIONS & ADMISSIBLE INTENSITIES



Cross-section (mm^2)	Conductor Diameter (mm)	External Diameter (mm)	Weight (kg/km)	Open air (A) [1]	Buried (A) [2]	Voltage drop (V/A · km) [3]
1 x 95	12,3	17,5	905	377	270	0,525
1 x 150	15,0	21,0	1.415	504	343	0,328
1 x 185	16,7	23,1	1.710	575	387	0,270
1 x 240	19,4	26,2	2.240	679	448	0,204
1 x 300	21,5	28,9	2.830	783	502	0,163
1 x 400	25,4	33,8	3.710	940	592	0,123
1 x 500	29,1	37,5	4.655	1.083	670	0,097

[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 $\cos\varphi=1$.
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	452	320	261	202	143	117	101	90	83

CORRECTION FACTORS FOR AIR TEMPERATURE

Air T. (ºC)	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. (ºC)	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

Moisture degree of soil	Very damp	Slightly damp	Slightly dry	Dry	Very dry
Thermal Resist. (K·m/W)	1	1,5	2	2,5	3
Factor	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.

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