

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.
Low smoke 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

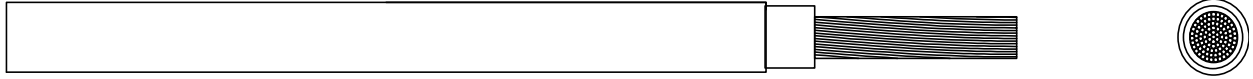
 **According to**
IEC 60502-1

 **Standards and approvals**
RoHS / CE

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



DIMENSIONS & ADMISSIBLE INTENSITIES



Cross-section (mm ²)	Diameter (mm)	Weight (kg/km)	Open air (A) ¹	Buried (A) ²	Voltage drop (V/A · km) ³
1 x 95	17,5	905	377	270	0,525
1 x 150	21,0	1.415	504	343	0,328
1 x 185	23,1	1.710	575	387	0,270
1 x 240	26,2	2.240	679	448	0,204
1 x 300	28,9	2.830	783	502	0,163
1 x 400	33,8	3.710	930	592	0,123
1 x 500	37,5	4.655	1.083	670	0,097

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

²Reference 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.

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

In all cases are supposed a single-phase circuit.

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. (°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

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.