TOXFREE® MARINE XZ1-K (AS)

The marine power cable.

BASED ON: IEC 60092-353

100% Green Energy Cable Production

APPLICATION

The Toxfree® Marine XZ1-K (AS) cable with halogen free is a safety cable. In case of fire, it does not emit toxic or corrosive gases, thereby protecting public health and avoiding any possible damage to electronic equipment. For this reason, its use is recommended in marine applications.

- Marine use.
- Public use.

CONSTRUCTION

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

Insulation
Cross-linked polyethylene, type HF XLPE-90 °C according to IEC 60092-360.
The standard identification of insulated conductors is the following:

1 x	Natural
3 x	Brown + Black + Grey
3 G	Blue + Brown + Green/Yellow

Other colours available on request.

Outer sheath
Low smoke halogen free polyolefin, type SHF1 according to IEC 60092-360.
Black colour.

CHARACTERISTICS

Electrical performance
Low voltage: 1,8/3 kV.

Thermal performance
Maximum conductor temperature: 90°C.
Maximum short-circuit temperature: 250°C (max 5 s).
Lowest installation temperature: -15°C
Minimum service temperature: -40°C (fixed and protected installations).

Fire performance
Flame non-propagation according to IEC 60332-1.
Fire non-propagation according to IEC 60332-3-22.
Low smoke halogen free according to IEC 60754-1.
Low corrosive gases emission according to IEC 60754-2.
Low smoke emission according to IEC 61034:
Light transmittance > 60%.

Mechanical performance
Minimum bending radius:
Ø ≤ 25mm 4x cable diameter.
Ø > 25mm 6x cable diameter.
Impact resistance: AG2 medium severity.

Environmental performance
Chemical & Oil resistance: Good.
UV Resistant according to EN 50618.
Water resistance: AD6 waves.

Installation conditions
Open Air.
In conduit on a bulkhead.
On a bulkhead.

STANDARDS / COMPLIANCE

Based on
IEC 60092-353

Standards and approvals
BUREAU VERITAS / CE / RoHS

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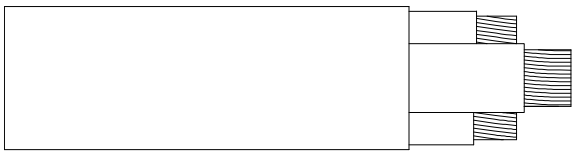
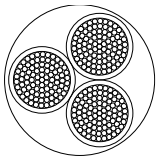
TOXFREE® MARINE
XZ1-K (AS)

DIMENSIONS & ADMISSIBLE INTENSITIES





Cross-section (mm^2)	Diameter (mm)	Weight (kg/km)	Open Air (A) [1]	R20ºC (Ω/km)	Voltage drop (V/A · km) [2]
1 x 120	20,7	1.220	333	0,161	0,355
1 x 150	22,2	1.490	386	0,129	0,284
1 x 185	23,9	1.770	444	0,106	0,234
1 x 240	26,8	2.290	528	0,0801	0,176
3 x 70	35,5	2.815	214	0,272	0,600
3 x 95	40,2	3.630	259	0,206	0,454
3 x 120	43,8	4.440	301	0,161	0,355

[1] Reference method F for single-core and method E for multicore cables according to IEC 60092-352 in open air at 45°C ambient temperature.
[2] At maximum conductor temperature and cosφ=1.
In all cases are supposed a three-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. (°C)	35	40	45	50	55	60	65	70	75	80
Factor	1,10	1,05	1	0,94	0,88	0,82	0,74	0,67	0,58	0,47

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 60092-352.