

TOXFREE[®] MARINE

XOxZ1-K (AS)

XOxTCuZ1-K (AS)

The marine armoured instrumentation cable.



APPLICATION

The Toxfree Marine XOxZ1-K (AS) and XOxTCuZ1-K (AS) cable with halogen free is a safety instrumentation and telecommunication 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.

CONSTRUCTION

Conductor

Electrolytic annealed copper conductor class 5 (flexible) according to EN 60228 (conductor resistance according to IEC 60092-376, Table 6).

Insulation

Cross-linked polyethylene insulation type HF XLPE 90°C according to IEC 60092-360.

The standard identification of insulated conductors is the following:
 Pair White + Blue (each core numbered with the pair number)
 Other colours available on request.

Assembly of cores

Stranded conductors in pairs.

Individual screen (XO3Z1-K and XO3TCuZ1-K)

Aluminium + polyester tape with 100% coverage + tinned copper drain wire applied over the assembled cores.

Assembly of pairs

Cabled in concentric layers.

Collective screen

Aluminium + polyester tape with 100% coverage + tinned copper drain wire applied over the assembled pairs







Braid armour (XO2TCuZ1-K and XO3TCuZ1-K)

Tinned copper wire braid armour over the collective screen.



Outer sheath

Low smoke halogen free (LSHF) thermoplastic polyolefin outer sheath type SHF1 according to IEC 60092-360. Grey colour, fire retardant.

CHARACTERISTICS

-  **Electrical performance**
Instrumentation: 150/250 V.
-  **Thermal performance**
Maximum service temperature: 90°C.
Maximum short-circuit temperature: 250°C (max 5 s).
Minimum service temperature: -40°C (fixed installations).
Lowest installation temperature: -15°C
-  **Fire performance**
Flame non-propagation according to EN 60332-1 / IEC 60332-1.
Fire non-propagation according to EN 60332-3-22 / IEC 60332-3-22.
LSHF (Low Smoke Halogen Free) according to EN 60754-1 / IEC 60754-1.
Low smoke emission according to EN 61034 / IEC 61034:
light transmittance > 60%.
Low corrosive gases emission according to EN 60754-2 and IEC 60754-2.
-  **Mechanical performance**
Minimum bending radius:
≤ 25mm 4x cable diameter.
> 25mm 6x cable diameter.
Impact resistance: AG3 high severity.
-  **Environmental performance**
Chemical & Oil resistance: Acceptable.
UV Resistant according to EN 50618.
Water resistance: AD6 waves.
-  **Installation conditions**
Open Air.
In conduit on a bulkhead.
On a bulkhead.

STANDARDS / COMPLIANCE

-  According to IEC 60092-376
-  Standards and approvals
ABS / DNV-GL / BUREAU VERITAS / CE / RoHS

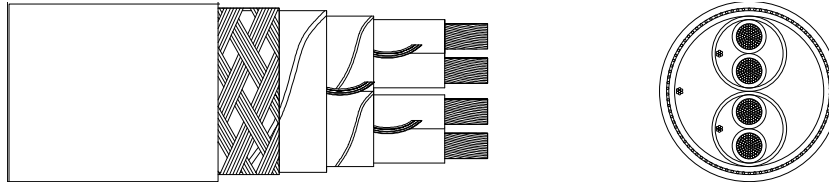


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XOxTCuZ1-K (AS)

DIMENSIONS & ADMISSIBLE INTENSITIES



XO2Z1-K (AS)

Cross-section (mm ²)	Diameter (mm)	Weight (kg/km)	Open Air (A) ¹	Resistance at 20°C (Ω/km)
1 x 2 x 0,75	6,7	55	17,1	27,6
2 x 2 x 0,75	9,0	95	13,7	27,6
4 x 2 x 0,75	10,3	130	11,2	27,6
7 x 2 x 0,75	13,5	205	9,2	27,6
10 x 2 x 0,75	16,1	265	8,6	27,6
14 x 2 x 0,75	17,8	370	7,4	27,6
19 x 2 x 0,75	20,0	480	6,5	27,6
24 x 2 x 0,75	23,5	605	6,5	27,6

XO3Z1-K (AS)

Cross-section (mm ²)	Diameter (mm)	Weight (kg/km)	Open Air (A) ¹	Resistance at 20°C (Ω/km)
2 x 2 x 0,75	10,1	115	13,7	27,6
4 x 2 x 0,75	11,5	180	11,2	27,6
7 x 2 x 0,75	13,9	265	9,2	27,6
10 x 2 x 0,75	18,1	380	8,6	27,6
14 x 2 x 0,75	19,6	495	7,4	27,6
19 x 2 x 0,75	22,0	660	6,5	27,6
24 x 2 x 0,75	26,2	830	6,5	27,6

XO2TCuZ1-K (AS)

Cross-section (mm ²)	Diameter (mm)	Weight (kg/km)	Open Air (A) ¹	Resistance at 20°C (Ω/km)
1 x 2 x 0,75	7,6	95	17,1	27,6
2 x 2 x 0,75	9,8	130	13,7	27,6
4 x 2 x 0,75	11,8	180	11,2	27,6
7 x 2 x 0,75	13,9	260	9,2	27,6
10 x 2 x 0,75	17,0	390	8,6	27,6
14 x 2 x 0,75	17,5	480	7,4	27,6
19 x 2 x 0,75	21,2	615	6,5	27,6
24 x 2 x 0,75	25,0	780	6,5	27,6

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XO3TCuZ1-K (AS)				
Cross-section (mm ²)	Diameter (mm)	Weight (kg/km)	Open Air (A) ¹	Resistance at 20°C (Ω/km)
2 x 2 x 0,75	10,6	155	13,7	27,6
4 x 2 x 0,75	12,0	220	11,2	27,6
7 x 2 x 0,75	15,8	380	9,2	27,6
10 x 2 x 0,75	18,9	490	8,6	27,6
14 x 2 x 0,75	21,1	645	7,4	27,6
19 x 2 x 0,75	23,6	820	6,5	27,6
24 x 2 x 0,75	27,6	1.020	6,5	27,6

¹Reference method E according to IEC 60092-352 and IEC 60364-5-52 in open air at 30°C ambient temperature.
For cables having more than 1 unit a factor is applied according to the Table A6 of the IEC 60092-352 standard