



# TOXFREE ZH ROZ1-K (AS) VFD EMC 0,6/1 kV

Flexible EMC LSZH screened cable for Variable Frequency Drivers cables (VFD cables).

IEC 60502-1 / IEC 60092-353

## DESIGN

### Conductor

Electrolytic copper, class 5 (flexible), based on EN 60228 and IEC 60228.

### Grounding Conductor

The grounding conductor is divided into three conductors; the equivalent cross section is approximately 50% of the section of the phase conductor.

### Insulation

Cross-linked polyethylene (XLPE)

The standard identification of insulated conductors is the following:

4G      grey + brown + black + Green/yellow (up to 4 mm<sup>2</sup>)  
3x + 3G    grey + brown + black + Green/yellow (3 x) (from 6 mm<sup>2</sup> onwards)

### Screen

"Aluminium-polyester tape screen, helically placed over the insulated conductors. Over the tape there is a tinned copper braid screen. The tape and the braid act as a double screen to cut out all of the the electromagnetic interference.

The screen has a cover of 100% and its total section is approximately 10% of one of the conductors.

### Outer sheath

Polyolefin LSZH outer sheath, black colour. The ripcord allows you to gently tear the outer-sheath allowing you to gently peel it away without damaging the screen.

## APPLICATIONS

ROZ1-K EMC VFD cable has been specially designed for Variable Frequency Drive Motors and installations where it is necessary to limit the effects of electromagnetic interference (EMI).



C<sub>ca</sub>-s1a, d1, a1





## CHARACTERISTICS



### Electrical performance

LOW VOLTAGE 0.6/1 KV



### Standard

IEC 60502-1 / IEC 60092-353



### Approvals

CE  
DNV-GL  
ABS (in progress)  
RoHS



C<sub>ca</sub>-s1a, d1, a1



### Thermal performance

Maximum service temperature: 90°C.  
Maximum short-circuit temperature: 250°C (max. 5 s).  
Minimum service temperature: -40°C (fixed and protected installations).



### Fire performance

Flame non-propagation based on UNE-EN 60332-1 and IEC 60332-1.  
Fire non-propagation based on UNE-EN 60332-3 and IEC 60332-3 and EN 50399.  
LSZH (Low Smoke Zero Halogen) based on UNE-EN 60754-1 and IEC 60754.  
Low smoke emission based on UNE-EN 61034 and IEC 61034: Light transmittance > 60%.  
Low corrosive gases emission based on UNE-EN 60754-2 and IEC 60754-2.  
Reaction to fire CPR: C<sub>ca</sub>-s1a, d1, a1, according to EN 50575.



### Mechanical performance

Minimum bending radius: x10 cable diameter.  
Impact resistance: AG2 Medium severity.



### Chemical performance

Chemical & Oil resistance: Good.



### Water performance

Water resistance: AD5 Jets.



### Other

Meter by meter marking.  
Ripcord.  
Electric fields resistant.



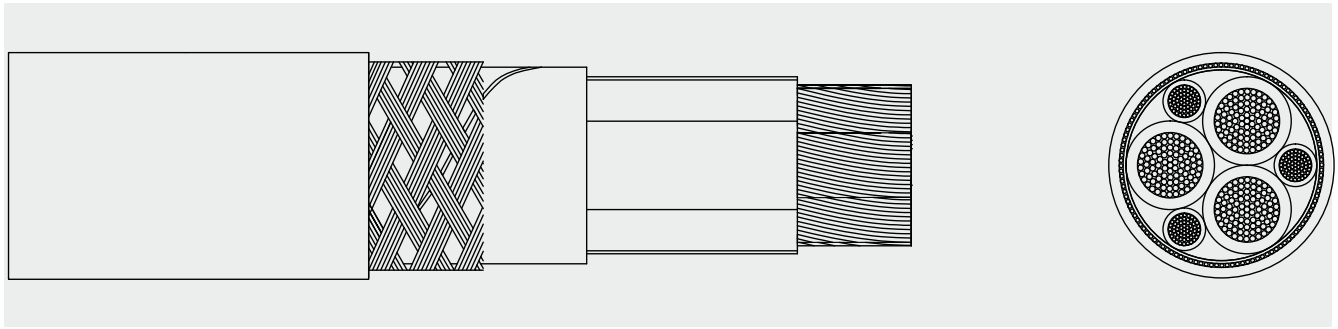
### Installation conditions

Open Air.  
Buried.  
In conduit.



### Applications

Industrial use.  
Variable Frequency Drive (VFD)



## DIMENSIONS

Cross section (mm <sup>2</sup> )	Diameter (mm)	Outer Diameter (mm)	Aprox Weight (Kg/km)	Open Air 30°C (A)	Buried 20°C (A)	Conductor resistance (Ohm/Km)	Voltage Drop (V/A · km)
3 x 4 + 3G4	9,7	13	379	42	37	4,95	10,9
3 x 16 + 3G2,5	14,8	18,3	708	100	79	1,21	2,67
3 x 25 + 3G4	17,7	22,3	1.078	127	101	0,78	1,72
3 x 35 + 3G6	20,5	25,3	1.448	158	122	0,554	1,22
3 x 35 + 3G16	21,3	26,3	1.831	158	122	0,554	1,22
3 x 50 + 3G10	25,3	30,5	2.175	192	144	0,386	0,852
3 x 70 + 3G10	25,7	30,5	2.571	246	178	0,272	0,601
3 x 70 + 3G35	28,1	33,4	3.467	246	178	0,272	0,601
3 x 95 + 3G16	31	36,6	3.535	298	211	0,206	0,455
3 x 120 + 3G16	36,9	42,9	4.450	346	240	0,161	0,356
3 x 150 + 3G25	39,3	45,2	5.344	399	271	0,129	0,285
3 x 185 + 3G35	44,5	51	6.686	456	304	0,106	0,234
3 x 240 + 3G50	49,8	56,8	8.973	538	351	0,0801	0,177
3 x 300 + 3G70	55,9	63,2	10.602	621	396	0,0641	0,142
4G1,5	7	10,4	149	23	22	13,3	29,4
4G2,5	7,9	11,2	192	32	29	7,98	17,6
4G4	9,2	12,6	259	42	37	4,95	10,9
4G6	10,6	14	341	54	46	3,3	7,29
4G10	12,9	17	544	75	61	1,91	4,22



Maximum current capacity according to IEC 60364-5-52.

For other installation conditions, please refer to correction factors in the appendix to this catalogue.

See more technical data on the particular cable specification and on its Declaration of Performance (DoP)

Top Cable reserves the right to carry out any modification to the data sheets whatsoever without giving previous notice.



For more information please contact [sales@topcable.com](mailto:sales@topcable.com)