



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

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

IEC 60502-1 / IEC 60092-353

## DESIGN

### 1. Conductor

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

### 2. Grounding Conductor

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

### 3. Insulation

Cross-linked polyethylene (XLPE)

The standard identification of insulated conductors is the following:

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

### 4. 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 electromagnetic interference.

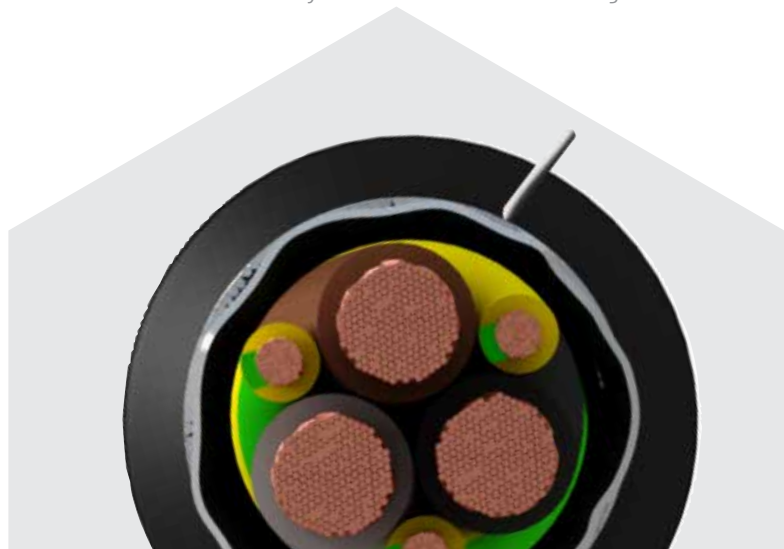
The screen has a cover of 100% and its total section is approximately 10% of one of the conductors.

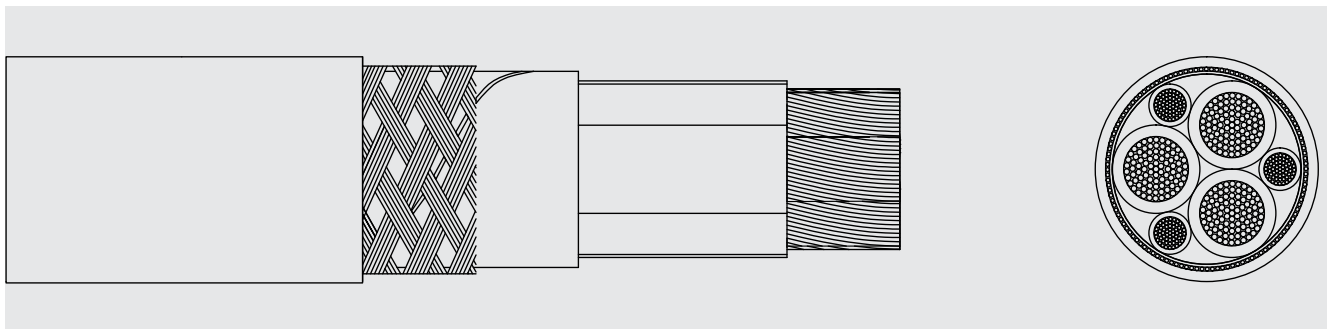
### 5. Outer sheath

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





## CHARACTERISTICS



### Electrical performance

LOW VOLTAGE 0,6/1 KV



### Standards

IEC 60502-1 / IEC 60092-353



### Approvals

DNV-GL  
ABS (in progress)  
Bureau Veritas (in progress)  
CE  
RoHS



### 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 EN 60332-3-22 and IEC 60332-3-22.  
LSZH (Low Smoke Zero Halogen) based on UNE-EN 60754-1 and IEC 60754-1.  
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.



### Mechanical performance

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



### Chemical performance

Chemical & Oil resistance: Good.



### Water performance

Water resistance: AD6 Waves.



### Other

Meter by meter marking.  
Ripcord.  
Electric fields resistant.



### Installation conditions

Open Air.  
In conduit.



### Applications

Marine use.  
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)
4G1,5	7,0	10,4	155	23	22	13,3	29,4
4G2,5	7,9	11,3	195	32	29	7,98	17,6
4G4	9,2	12,4	260	42	37	4,95	10,9
4G6	10,6	14	345	54	46	3,3	7,29
4G10	12,9	17,2	595	75	61	1,91	4,22
3 x 6 + 3 G 1,5	10,6	13,9	335	54	46	3,30	7,29
3 x 10 + 3 G 1,5	11,7	15,0	450	75	61	1,91	4,22
3 x 16 + 3 G 2,5	13,5	17,2	670	100	79	1,21	2,67
3 x 25 + 3 G 4	16,8	21,4	1.085	127	101	0,78	1,72
3 x 35 + 3 G 6	19,4	24,1	1.455	158	122	0,554	1,22
3 x 50 + 3 G 10	22,8	28,0	2.025	192	144	0,386	0,852
3 x 70 + 3 G 10	27,1	32,5	2.650	246	178	0,272	0,601
3 x 95 + 3 G 16	30,5	36,1	3.455	298	211	0,206	0,455
3 x 120 + 3 G 16	34,6	41,0	4.345	346	240	0,161	0,356
3 x 150 + 3 G 25	38,9	45,5	5.450	399	271	0,129	0,285
3 x 185 + 3 G 35	43,4	50,4	6.755	456	304	0,106	0,234
3 x 240 + 3 G 50	49,2	56,6	8.860	538	351	0,0801	0,177
3 x 300 + 3 G 50	55,3	63,0	10.695	621	396	0,0641	0,142

Maximum admissible intensities 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.

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