

# Toxfree RC4Z1F-K EMC 0,6/1kV

TOP CABLE TOXFREE ZH ROZ1-K (AS) EMC



## Applications

The new generation of variable-frequency drives (VFD) provides a series of advantages to the industry. However, one of their main disadvantages is the emission of electromagnetic interference. In order to limit the extent of this type of electromagnetic interference, it is necessary to use equipment and cables with Electromagnetic Compatibility, also known as EMC.

The necessary EMC within the cable is achieved first of all by ensuring asymmetrical distribution of the conductors. Secondly, a special protective screen is added to ensure the required EMC, when variable-frequency drives are used. This means a longer lifespan for the motor or pump being used.

This cable has been specially designed for use in installations where it is necessary to limit the effects of Electromagnetic Interference (EMI) also known as Radio Frequency Interference (RFI). The source of this kind of interference may be an object or device that carries changing electrical currents.

VFD cables are designed with three phase conductors plus grounding, and they have a halogen free sheath and a low smoke emission. The EMC cables are flexible and suitable for fixed installations.

## Characteristics:

- ✓ ELECTROMAGNETICALLY PROTECTED
- ✓ FOR INDUSTRIAL USE
- ✓ CHEMICAL & OIL RESISTANT
- ✓ WATER RESISTANT: AD3 ASPERSION
- ✓ HALOGEN FREE
- ✓ LOW SMOKE EMISSION
- ✓ LOW EMISSION OF CORROSIVE GASES
- ✓ FLAME RETARDANT
- ✓ FIRE RETARDANT
- ✓ WITHSTANDS MOISTURE
- ✓ CAN BE BURIED
- ✓ IN CONDUIT
- ✓ OUTDOOR DECOMMISSIONING
- ✓ MARINE APPROVED BY DNV 2013



# Toxfree RC4Z1F-K EMC 0,6/1kV

LOW VOLTAGE 0.6/1 (1,2) KV

Based on: IEC 60502

## DESIGN

The EMI / RFI noise protection cable

### Conductor

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

### Grounding Conductor

From 6 mm<sup>2</sup>, the grounding conductor is divided into three conductors; the equivalent section of the three protective conductors is in total approximately 50% of the section of the phase conductor.

### Insulation

XLPE

The standard identification:

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>)

### Screen

Aluminium-polyester tape is helically placed over the insulated conductors. The tape serves as a screen. Over the tape there is braided tinned copper 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.

### Outer sheath

Polyolefin LSZH outer sheath, black colour, type ST8 according to IEC 60502-1.



## CHARACTERISTICS



Flexible conductor



Min. bending radius: 10 x cable diameter



Impact resistance: AG2, medium impact



Permanent outdoor installation



Industrial use



Withstands moisture



Min. working temp. for fixed installation: -40°C



Meter by meter marking



Halogen free



Water resistance: AD3 aspersion



Marine use



Outdoor decommissioning



Max. working temp. 90°C



Flame retardant



Low smoke emission: Light transmittance > 60%



Chemical & oil resistance: acceptable



In conduit



Max. short-circuit temperature: 250°C (max. 5 s)



Fire retardant



Low emission of corrosive gases



Electric fields resistant



Buried

## INSTALLATION CONDITIONS