

Toxfree ZH ROZ1-K (AS) VFD EMC

TOP CABLE TOXFREE ZH ROZ1-K (AS) EMC

✓ APPLICATIONS

The new generation of variable-speed drive (VDF) provide a series of advantages to the industry, but at the same time 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 cable with Electromagnetic Compatibility, known as EMC.

With regards to cable the necessary EMC is achieved by firstly ensuring a symmetrical distribution of the conductors. Secondly, a special protective screen is added to ensure the required EMC when variation-speed 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 know 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 have a low smoke emitting and halogen free sheath. They are flexible cables suitable for fixed installations.

Characteristics:

- ✓ ELECTRIC FIELDS RESISTANT
- ✓ INDUSTRIAL USE
- ✓ CHEMICAL & OIL RESISTANCE
- ✓ WATER RESISTANCE: AD3 ASPERSION
- ✓ LSZH
- ✓ LOW SMOKE EMISSION
- ✓ LOW CORROSIVE GASES EMISSION
- ✓ FLAME NON-PROPAGATION
- ✓ FIRE NON PROPAGATION
- ✓ DAMP ENVIRONMENT
- ✓ BURIED
- ✓ IN CONDUIT
- ✓ OPEN AIR



✓ The VFD cable.

Toxfree ZH ROZ1-K (AS) VFD EMC

LOW VOLTAGE 0.6/1 (1,2) KV

Based on:

IEC 60502



The EMI / RFI noise protection cable

DESIGN

Conductor

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

Grounding Conductor

From 6 mm², the grounding conductor is divided into three conductors; the equivalent section of the three protective conductors together is approximately 50% of the section of the phase conductor.

Insulation

XLPE

The standard identification is the following:

4G grey + brown + black + yellow/green (up to 4 mm²)

3x + 3G grey + brown + black + yellow/green (3 x) (from 6 mm²)

Screen

Aluminium-polyester tape, helically placed over the insulated conductors. The tape serves as a screen. 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, type ST8 according to IEC 60502-1.

CHARACTERISTICS



Flexible conductor: class 5



Minimum bending radius: 10 x cable diameter



Impact resistance: AG2, medium impact



Outdoor installation: permanent



Industrial use



Damp environment



Minimum service temperature for fixed installation: -40°C



Meter by meter marking



LSZH



Water resistance: AD3 aspersion



Open air



Maximum service temperature 90°C



Flame non-propagation



Low smoke emission: Light transmittance > 60%



Chemical & oil resistance: acceptable



In conduit



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



Fire non propagation



Low corrosive gases emission



Electric fields resistant



Buried

INSTALLATION CONDITIONS