

Fiber-insulated wires

VS 240 EF round

- **Fiber-insulated winding wire**
- **for motor windings**
- **- Temperature Index > 220 °C**

General description

VS240 is a round copper wire, coated with an aromatic polyimide enamel which is additionally insulated with a polyimide varnish impregnated glass and polyester fiber blend covering. VS240 wires can also be supplied as flat conductor, see the corresponding datasheet.

Application

- Traction auxiliary motor.
- Stator and rotor windings submitted to higher temperatures.

Conventional types

VS 240 covered enameled wires are available in the standard version VS240 EF.

Conductor diameter from 0.9 to 5.0 mm

The standard dimensions of the conductors (nominal dimensions), the tolerance and the overall dimension of the enameled wire, complies with the IEC standard 60317-0-1.

Standards

There are no existing IEC standards for VS 240 wires today.

The test methods are based on IEC Publication 60851:60851-1

- General
- 60851-2 Definition of dimensions
- 60851-3 Mechanical properties
- 60851-4 Chemical properties
- 60851-5 Electrical properties
- 60851-6 Thermal properties

Advantages

- Very high thermal resistance
- Very good dielectric properties
- Covering with high mechanical strength

Processing Instructions

VS 240 round wires can be processed without reservation under the normal working conditions.

Order data

The designation shall comprise:

- For round shape: RD
- Description of the insulation: VS 220 EF
- Reel type: e.g.: DIN 500
- Complete order:
2000 kg RD VS220 EF 2.24mm D500

	unit	value	Test standard
Increase due the insulation			
For width above 2.00 mm	mm	0.18 to 0.22	
Mechanical properties			
Springiness	°	≤ 5.5	IEC60851-3 test 7
Adherence after elongation	20 %	No loss of adhesion	IEC60851-3 test 8
Flexibility - bent on mandrel Ø 8 x d	visual	no cracks	IEC60851-3 test 8
Electrical properties			
Break down voltage after bending	V	≥ 3000	IEC60851-5 test 13
Thermal properties			
Heat shock 30 min / 240 °C mandrel Ø 10 x d	visual	no cracks	IEC60851-6 test 9
Thermal endurance	TI	220 - 240	NEMA MW 1000

Appearance

Slight color variations are raw material or process-related and have no influence on the technical properties of the wire

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