

Taped wires

3FO 100 round

- **Polyimide-Film taped round copper wire**

Description:

The winding wire 3FO 100 is a round copper wire wrapped tightly with 3 layers of Kapton® (Polyimide)-FN tape with 48 - 50 % overlap. Both tapes are coated on one side with a Teflon®-(FEP)-adhesive. A suitable heat treatment melts the thermoplastic FEP-coating and thus bonds firmly the overlapping films. This nonporous, highly flexible insulation of superior thermal, electrical and chemical resistance. The Temperature Index of the insulation is 240. ¹⁾

Dimensions :

Round copper according to IEC 60317-0-1.

Insulation Construction:

Type	Construction:
3FO 100	Lapping with 3 layers, one side FEP-coated Polyimide film, thickness 0.04 mm, overlap 51 - 53 %

Standards:

Polyimide-film insulated round wires meet the requirements of IEC 60317-43 , Class 220.

Applications:

3FO 100 insulated wires are - due to their superior thermal, dielectric and chemical properties - used especially where traditional wire insulations are inadequate.

Processing instructions:

Because of the excellent adherence of the polyimide insulation to the conductor, the low friction properties and mechanical toughness, such insulated wires can be processed on all common types of winding and coil forming machines.

- Nevertheless, because of the high sensitivity of the polyimide insulation, the use of hard or sharp-edged tools is to be avoided.
- The best method for stripping the insulation of these wires is the mechanical one (using hand cutting tools or rotary knives).

	Value	Test norm
Taping		
Overlap	%	48-50 %
Increase in insulation		
Thickness increase due to insulation	mm	Max. 0.456
Mechanical properties		
Adherence after elongation	10 %	no loss of adhesion IEC 60851-3, Test 8
Electrical properties		
Breakdown voltage Mandrel 3 x wire diameter	kV	Min. 10 IEC 60851-5, Test 13
Thermal properties		
Heat shock at 240°C / 30 min.	kV	Min. 10 IEC 60851-6, Test 9
Breakdown voltage Mandrel winding 3 x d		

Order data :

Quantity, Designation and Mode of Supply

The designation shall contain:

Type of wire	round (DR)
Nominal dimension e.g.	0.40 mm
Conductor material	Cu ETP1
Designation of the insulation	3FO 100

The mode of supply shall indicate the type of reel required, e.g. cylindrical reel according to IEC 60264-2 (identical with DIN 46399) or other types.

Example of complete order:

100 kg DR 3FO 100 0.40 mm, reels DIN 355

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