

# Taped and covered wires

## FO 150 GL 300

### Polyimide-Film taped and Glass-Yarn covered copper wire

**Description :**

The winding wire FO 150 GL 300 is a round copper wire wrapped tightly with 1 layer of Kapton® FWR (Polyimide water-resistant) tape with 50 % overlap. The tape is 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 non-porous, highly flexible insulation of superior thermal and chemical resistance is finally covered with a single layer of Polyester-imide varnished Glass Yarn (special alkali-free E-Glass) to form a covering of excellent mechanical properties with high abrasion resistance and good bonding strength.

**Dimensions :**

Round copper wire according to IEC 60317-0-1. Bare or nickel-plated copper wires may be used as conductor material (nickel plating thickness 3 up to 10 microns).

**Insulation Construction:**

Type	Construction
FO 150	Lapping 1 layer with one side FEP-coated water-resistant Polyimide film, thickness 0.04 mm, overlap 50 %
GL 300	Covering 1 layer with PEI-impregnated Glass yarn

**Standards:**

Polyimide-film insulated rectangular wires meet the requirements of IEC 60317-43, Class 220. Glass-fiber covered rectangular wires with thermal Class 180 meet the requirements of IEC 60317-49.

**Applications:**

FO 150 GL 300 insulated wires are - due to their superior thermal, mechanical, dielectric and chemical properties - used especially where traditional wire insulations are inadequate.

		Value	Test norm
<b>Increase in insulation</b>			
Thickness increase due to insulation	mm	0.30 +/- 0.05	
<b>Mechanical properties</b>			
Adherence after elongation	10 %	no loss of adhesion	IEC 60851-3, Test 8
<b>Electrical properties</b>			
Breakdown voltage			
Mandrel winding 3 x d	V	min. 4000	IEC 60851-5, Test 13
Nominal resistance D.C. at 20 °C	Ohm.mm <sup>2</sup> /m	max. 0.01724	IEC 60851-5, Test 5

**Order data :**

Quantity, Designation and Mode of Supply

The designation shall contain:

Type of wire	round (DR)
Nominal dimension (diameter) e.g.	1.50 mm
Conductor material	Cu
Designation of the insulation	FO 150 GL 300

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 FO 150 GL 300 1.50 mm, reels D250

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