

UWM XLPE-PA 1000V

Contact

Industry Möchengladbach
Phone: +49 (0) 2166 27 2326
frontoffice.mg@nexans.com

Winding wires for submersible motors, type UWM XLPE insulated / Polyamid sheathed.

DESCRIPTION

Special cables for Submersible pumps. (winding wires)

mainly used in the motor's stators of "wet type motors".

Construction

Conductor :annealed copper

Insulation :Cross-linked XLPE + PA

(raw insulation developed by Nexans)

Voltage : 1000V (phase/earth)

Main characteristics :

- High dielectric strength
- High insulation resistance
- Low dielectric losses ($\tan \delta$)
- Good thermal and chemical resistance 90°C

History

NEXANS has been in the market of selling water-tight winding wires for submersible pump motors since 1950. Thanks to our longstanding experience, NEXANS has developed its own raw material for insulation.

Nexans uses the proper materials and guarantees the highest standards.



STANDARDS

National DIN 53483;
DIN VDE 0472 part 502

CHARACTERISTICS

Electrical characteristics


Maximum operating voltage	1000 V
Test voltage	7000 V

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Nexans is indicative only and shall not be binding on Nexans or be treated as constituting a representation on the part of Nexans.

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UWM XLPE-PA TESTS

The following tests are carried out on **100 % of every production lot**:

<p>1. Mechanical tests:</p> <p>a) Dimension of the bare copper conductor b) Dimension of the insulated wire c) Eccentricity d) Surface</p> <p>2. Test voltage and duration of test:</p> <p>Test voltage and duration of test on Line 2 in bottom table</p>	
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Electrical characteristics

Working voltage		50 Hz	1000 V
Test voltage after 48 h in water at 20°C		15 min.	7000 V DC
Operating temperature			90°C
Loss factor	(acc. to DIN 53483)	20°C/800 Hz 90°C/800 Hz	6 x 10 ⁻³ 14 x 10 ⁻³
Relative dielectric constant	(acc. to DIN 53483)	20°C/800 Hz 90°C/800 Hz	2.8 2.6
Volume resistivity	(acc. to VDE 0472, Teil 502)	20°C/500 V DC 90°C/500 V DC	10 ¹⁶ Ω x cm 2 x 10 ¹⁵ Ω xcm
Breakdown voltage measured on wire	1,6/2,4 mm-Ø	20°C 90°C	≥ 60 kV/mm ≥ 50 kV/mm

Mechanical characteristics

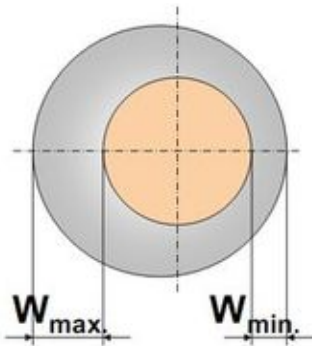
Tensile strength on delivery		σ B	≥ 20 N/mm
Tensile strength after ageing	28 d/90°C	Δ σ B	≤ ± 15 %
Elongation at break on delivery		ε B	≥ 200 %
Elongation at break after ageing (VDE 0472/602)	28 d/90°C	Δ ε B	≤ ± 15 %
Hot deformation (reduction of wall thickness) (VDE 0472/609)		100°C/4 h 90°C/4 h	≤ 10 % ≤ 2 %

TOLERANCES / ECCENTRICITY UWM

Tolerances

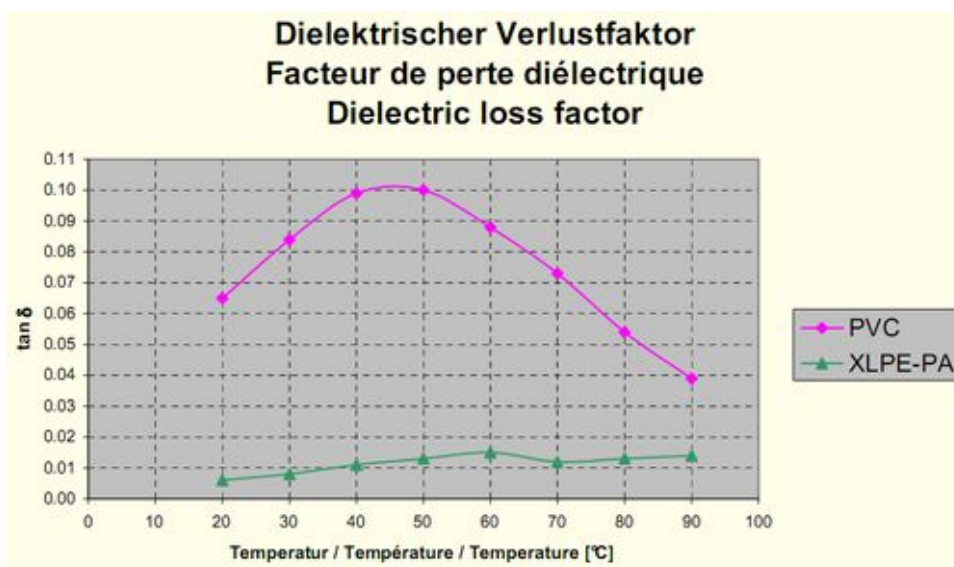
Outer diameter of the insulated wire	< 2,20 mm	2,21 – 3,00 mm	3,01 – 4,30mm	4,31 – 6,00 mm
Tolerances on outer diameter of the insulated wire	± 0,05 mm	± 0,07 mm	± 0,10 mm	± 0,15 mm
Eccentricity	≤ 10 %	≤ 12 %	≤ 15 %	≤ 15 %

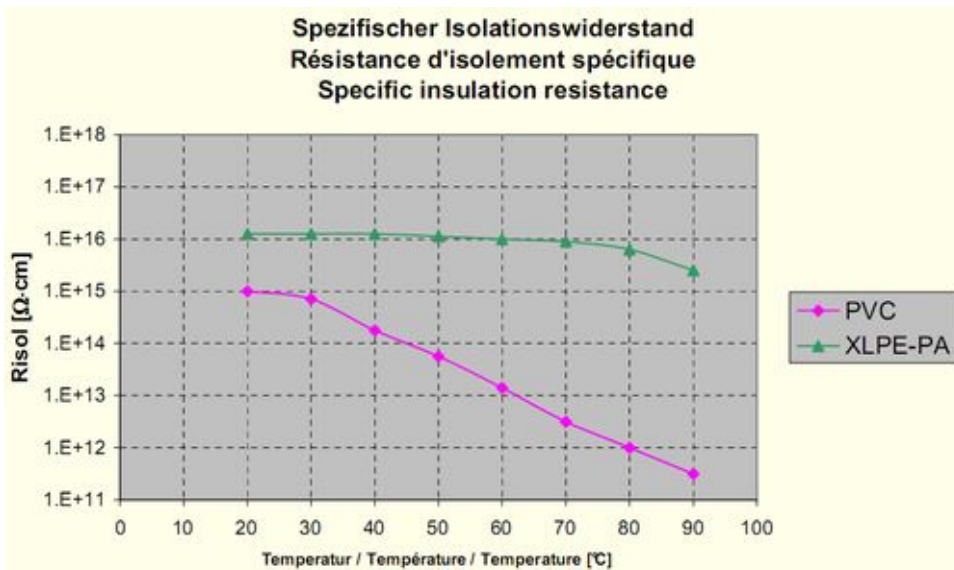
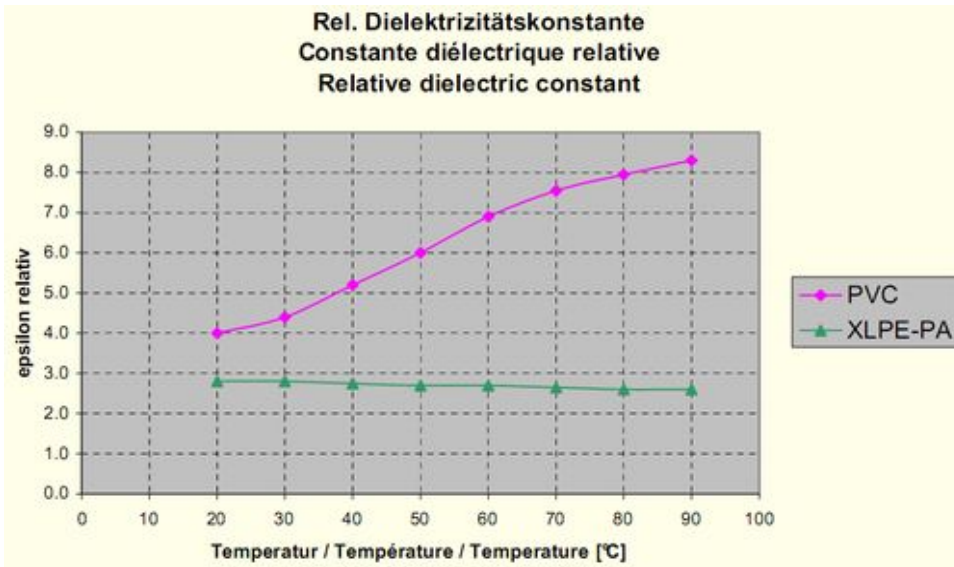
Definition Eccentricity



$$E \% = \frac{W_{max.} - W_{min.}}{W_{max.} + W_{min.}} \times 100 \%$$

ELECTRICAL SPECIFICATIONS UWM





PACKAGING UWM XLPE-PA

The UWM wire can be packed on 3 kinds of plastic reels.

Drums : **K5**

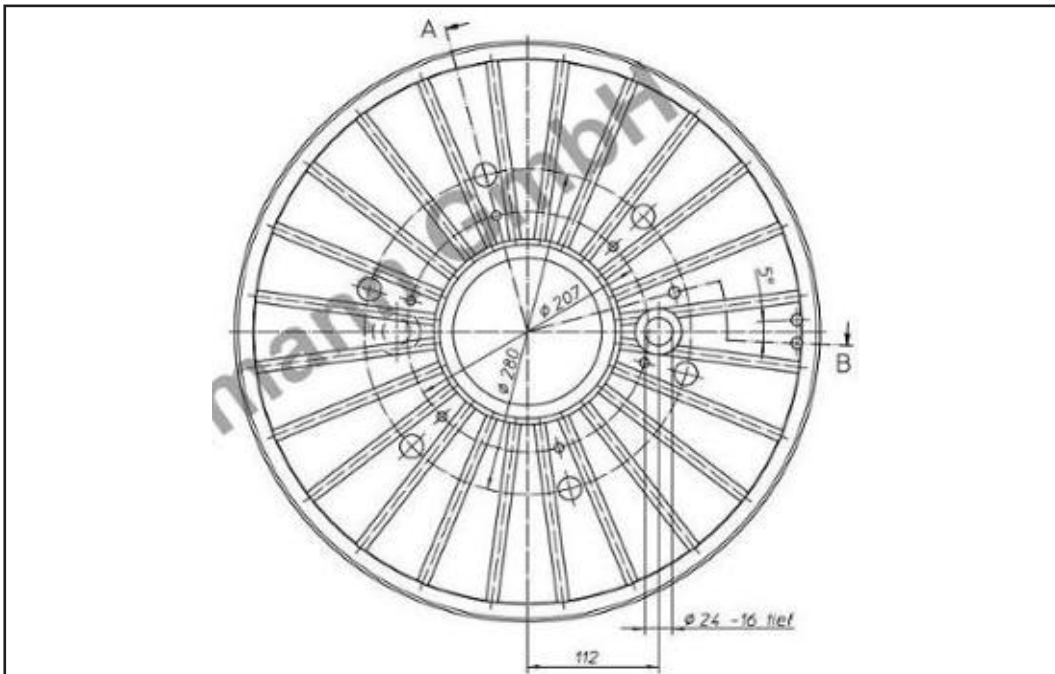
One reference for one packaging.

All packaging are NOT available for each wire.

One label per drum. (picture on the right)



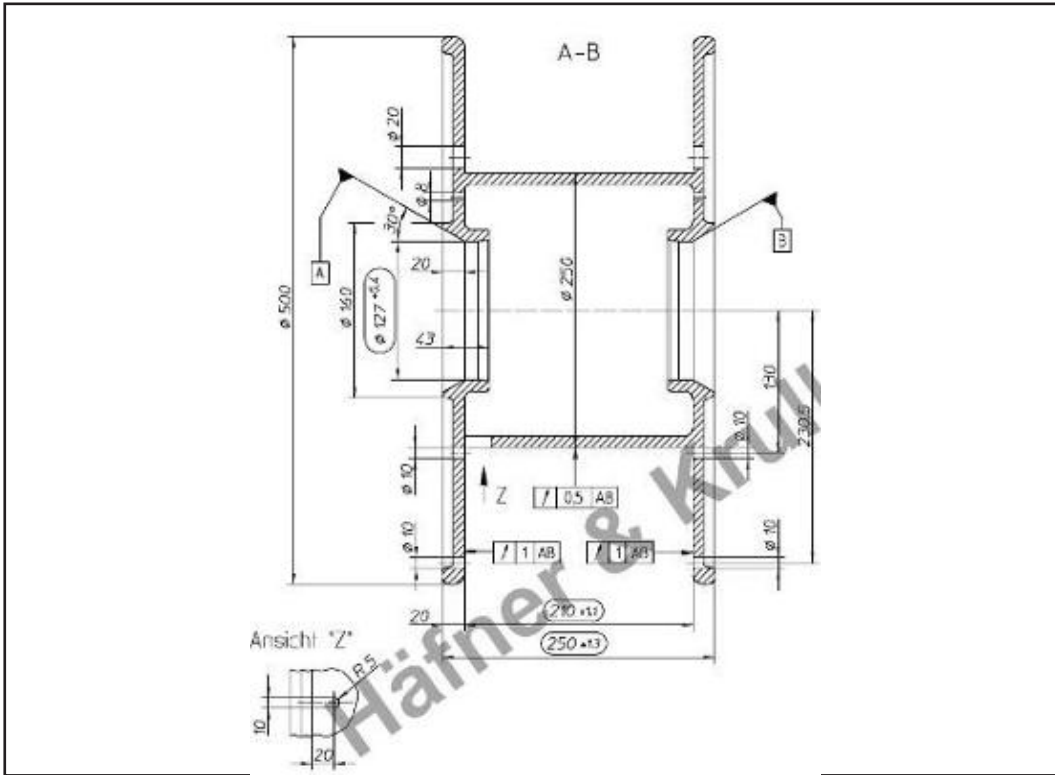
Drum K5



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