

# ASSORTMENT OF WIRES



|  | <b>Bare wires</b><br>(in mm)  | <b>Rectangular and round wires</b><br>insulated with polyimide sheet<br>(in mm) *   | <b>Rectangular and round wires</b><br>insulated with mica sheet<br>(in mm) *   | <b>Rectangular and round wires</b><br>insulated with paper or aramid paper<br>(in mm) * †  | <b>Rectangular and round wires</b><br>enamelled<br>(in mm)   | <b>Rectangular wires</b><br>insulated with glass filament<br>and/or mixed yarn (in mm) *  | <b>Litz wire</b><br>insulated with mica and/or<br>PET sheet   |
|--|---|---|--|--|--|---|---|
| Conductor material   | Rectangular wire<br>Round wire  | Rectangular wire<br>Round wire  | Rectangular wire<br>Round wire   | Rectangular wire<br>Round wire   | Rectangular wire<br>Round wire   | Rectangular wire  | Single<br>round wire  |
| <b>Rectangular wire **</b><br>acc. to DIN EN<br>Width (W)<br>Thickness (T) | W: 1.00 ... 30.00<br>T: 0.80 ... 7.00   | W: 1.00 ... 16.00<br>T: 0.80 ... 7.00   | W: 1.00 ... 25.00<br>T: 0.80 ... 7.00  | W: 3.35 ... 20.00<br>T: 1.00 ... 7.00  | W: 1.00 ... 14.00<br>T: 0.80 ... 6.00  | W: 3.35 ... 20.00<br>T: 1.00 ... 5.00   | <b>Single wire</b><br>Cross section<br>of litz wire:<br>6 mm <sup>2</sup> ... 70 mm <sup>2</sup>          |
| <b>Round wire</b><br>acc. to DIN EN  | ∅: 0.50 ... 11.00   | ∅: 2.00 ... 6.00  | ∅: 0.85 ... 6.00   | ∅: 2.00 ... 6.00   | ∅: 0.50 ... 2.60   |   |   |
| Insulation/<br>design  |   | <ul style="list-style-type: none"> <li>• Polyimide sheet, FEP coated and hot-sealed, also corona resistant (TI 220°C)</li> </ul>                          | <ul style="list-style-type: none"> <li>• Mica with PET-liner (TI 155°C)</li> <li>• Mica with PI-liner (TI 185°C)</li> <li>• Mica with glass fibre liner (TI on request)</li> <li>• Combinations with enamelled wire and/or PET sheet possible ***</li> </ul> | <ul style="list-style-type: none"> <li>• Kraft paper</li> <li>• Nomex® (TI 120°C)</li> <li>• Possible in combination with enamelled</li> </ul> | <p><b>Rectangular wire</b></p> <ul style="list-style-type: none"> <li>• Enamel</li> </ul> <p>Polyamidimide acc. to DIN EN (TI 220°C)</p> <p><b>Round wire</b></p> <ul style="list-style-type: none"> <li>• Base coat Polyesterimide, Over coat Polyamidimide acc. to DIN EN (TI 200°C)</li> <li>• UL-file: MW35-C</li> </ul> | <ul style="list-style-type: none"> <li>• Combinations with bare, enamelled or polyimide-sheet insulated wires possible (TI 155°C ... 180°C)</li> <li>• Glass filament and/or mixed yarn, impregnated</li> </ul> | <ul style="list-style-type: none"> <li>• PET sheet</li> <li>• Mica sheet (TI 155°C) ***</li> </ul>        |
| Increase   |   | Acc. to the customer's specifications   | Acc. to the customer's specifications  | Acc. to the customer's specifications  | • Class 1, 2 and 3 acc. to DIN EN or to the customer's specifications  | Acc. to the customer's specifications   | Acc. to the customer's specifications   |
| Number of layers/<br>taping  |   | • 1 ... 2 layers opposite directions  | • 1 ... 4 layers same and opposite directions ***  | • 1 ... 8 layers same and opposite directions ***  |  | • 1 ... 2 layers opposite directions  | • 1 ... 3 layers, same direction<br>• 2 layers, opposite direction  |
| Overlap  |   | Steplessly variable, max. 75%   | Edge to edge, steplessly variable, max. 75%  | Edge to edge, steplessly variable<br>• Rectangular wire max. 80%<br>• Round wire max. 50%  |  |   | Steplessly variable, min. 30% to max. 80%   |
| Application examples   | <ul style="list-style-type: none"> <li>• Conductor material for further insulation</li> <li>• Rotor bars</li> </ul> | <ul style="list-style-type: none"> <li>• Traction motors</li> <li>• Special-purpose motors</li> <li>• Motors for high-temperature applications</li> </ul> | <ul style="list-style-type: none"> <li>• High- and low-voltage machines</li> <li>• Frequency-converter-proof extraction</li> <li>• Gas motors</li> <li>• Fire resistant cables</li> <li>• Transformers</li> </ul>  | <ul style="list-style-type: none"> <li>• Transformer windings</li> <li>• Reactors</li> </ul>   | <ul style="list-style-type: none"> <li>• Motors</li> <li>• Generators</li> <li>• Transformers</li> </ul>   | <ul style="list-style-type: none"> <li>• Traction motors</li> <li>• Generators</li> <li>• High-voltage motors</li> <li>• Special-purpose motors</li> </ul>  | <ul style="list-style-type: none"> <li>• HF motors</li> <li>• Reactors</li> <li>• Transformers</li> </ul> |

\* Insulated round wire is not suited for drawing-in technology! \*\* Feasibility depends on the W/T ratio  
\*\*\* Further variants possible at the customer's specifications



**Copper round wire**  
Bare



**Round wire**  
Insulated with polyimide sheet



**Round wire**  
Insulated with glass fibre mica tape



**Round wire**  
Enamelled with mica tape



**Round wire**  
Insulated with Nomex® aramid paper



**Round wire**  
Enamelled



**Stranded copper wire**  
6 mm<sup>2</sup> Insulated with PET film



**Copper rectangular wire**  
Bare



**Copper rectangular wire**  
Insulated with 2 layers of polyimide sheet



**Copper rectangular wire**  
Mica-insulated



**Copper rectangular wire**  
Insulated with Nomex® aramid paper



**Copper rectangular wire**  
Enamelled



**Copper rectangular wire**  
Enamelled and braided with 1 layer of mixed yarn



**Stranded copper wire**  
35 mm<sup>2</sup> Insulated with PET film