



Litz Wire Types and Constructions

The individually insulated twisted or braided magnet wires that comprise Litz wire reduce AC losses in high frequency applications. Daburn offers all 9 types of Litz Wire constructions with many different varieties of insulation.

Below are some common applications where Litz wire is used:

- Motors
- Electric Vehicle Chargers
- Sonar Equipment
- Sensors
- Medical Device Chargers

Type 1 Litz Wire



Single film-insulated wire strand, twisted with optional outer insulation of textile yarn, tape or extruded components.

Type 2 Litz Wire



Bundles of Type 1 Litz wire twisted together with optional outer insulation of textile yarn, tape, or extruded products.

Type 3 Litz Wire



Bundles of Type 2 insulated Litz wire twisted together with optional outer insulation of textile yarn, tape, or extruded compounds.

Type 4 Litz Wire



Bundles of Type 2 Litz wire twisted around a central fiber core with optional outer insulation of textile yarn, tape, or extruded components.

Type 5 Litz Wire



Insulated bundles of Type 2 Litz wire twisted around a fiber core with optional outer insulation of textile yarn, tape or extruded compounds.



Type 6 Litz Wire



Insulated bundles of Type 4 Litz wire twisted around a fiber core with optional outer insulation of textile yarn, tape, or extruded compounds.

Type 7 Litz Wire



Film-insulated wire braided and formed into a rectangular profile with optional outer insulation of textile yarn, tape, or extruded compounds.

Type 8 Litz Wire



Compacted film-insulated wires or groups of compacted film-insulated wires twisted and compressed into a rectangular profile with outer insulation of textile yarn, tape, or extruded compounds.

Type 9 Litz Wire



Coax-style construction featuring a core constructed of Litz wire with transposed bundles, an insulation layer of controlled dielectric constant and thickness, an additional braid or coax-style conductor that matches the conductor area of the core conductor, with optional outer insulation of textile yarn, tape, or extruded compounds.

Litz wire constructions are available with multiple layers of insulation to meet voltage-withstand requirements of UL and IEC. Multiple extruded layers of fluoropolymers such as FEP, PFA and ETFE are most common. These extrusions are offered in different colors so that the different layers are easily noticed.

Various tape wraps such as polyimide and polyester are available for applications requiring greater cut-through resistance and minimum diameter. These products, most used in power conversion equipment, are desirable in any application requiring additional voltage withstand between windings.

Insulations available for complex bundles are also available over single-strand bare, tinned and silver-plated copper as well as various copper alloys and magnet wires.

If you're interested in learning more about using Litz wire in your next project, please reach out to our sales team at your earliest convenience and we will answer any questions you may have, as well as designing and quoting a Litz wire solution to meet your needs.