

# Kerrigan-Lewis™ Specialty Wire

Litz Wire | Resistance Wire



# Specialty wire for unique applications



Whether you are building miniature inductors for space-constrained printed circuit board applications, transformers for arc welding equipment, or high-efficiency motors for precise motion control, look to Alpha Wire for windings that work better. From the fine twists of hearing aids



to large windings in medical equipment, you need a proven source with the expertise to work with fine wire, the ability to customize products into application-specific solutions, and support to give you the best technology at the lowest cost.

Alpha Wire's Kerrigan-Lewis brand of specialty wire is designed and manufactured to stringent standards of quality and performance. From expertise in fine copper wire and insulations to an exact understanding of your most rigorous application requirements, we can help you increase efficiency, reduce size, and achieve higher levels of productivity.

Beyond our competitive lead times and attractive pricing, we also offer the lowest minimum order levels in the industry. Save money by ordering only what you need.

## Litz wire

Litz wire reduces AC losses in conductors from skin and proximity effects at high frequencies to make transformers and motors more efficient. It consists of individually insulated strands

woven or twisted in a specific pattern so that each tends to occupy all possible positions in the cross section. This



equalizes flux linkages and reactances so that

current is evenly divided among the strands. The increased current-carrying efficiency makes litz wire popular in such applications as:

- High-frequency inductors and transformers
- Motors
- Relays
- Inverters
- Power supplies
- Ultrasonic and sonar equipment
- Heat-induction equipment
- High-twist applications, up to 300 turns per foot

Kerrigan-Lewis litz wire is available in a wide range of configurations to meet specific operating frequencies, voltages, and current-carrying capacities. Individual strands range from 50 to 16 AWG, with anywhere from a few strands to thousands in the wire. Besides traditional round conductors, we also offer space-saving square and



rectangular cross sections for maximum copper density. Some popular configurations include 60 strands of 36 AWG, 100 strands of 38 AWG, and 2100 strands of 36 AWG.

While polyurethane is the most common insulation film, we offer all NEMA-approved films and a range of additional insulations that include Teflon®, nylon, cotton, Celanese synthetic yarn, and a nylon/Celanese mix.

	Variations	Features
Insulations/servings	NEMA-approved films	To 105°C, 155°C, 200°C Single and heavy coatings
	Cotton	To 105°C Abrasion resistant
	Nylon	To 130°C Abrasion resistant Good high-frequency properties
	Celanese synthetic yarn	To 105°C Excellent high-frequency properties Chemically soluble
	Nylon/Celanese mix	To 105°C Excellent high-frequency properties Chemically soluble
	Teflon textile	To 200°C Abrasion resistant Excellent high-frequency properties Excellent handling properties
	Teflon extrusion	To 200°C Waterproof Abrasion resistant Excellent high-frequency properties Excellent handling properties
	PVC	To 105°C
Strand range	50 to 16 AWG	Flexibility in meeting application goals
Configurations	Round Square Rectangular	Configurable for maximum operating and space efficiencies

## Resistance wire

Kerrigan-Lewis resistance wire achieves high-tolerance resistive values with a copper-nickel alloy. Standard configurations are 55% copper/45% nickel for a resistance of 294 ohms per circular mil-foot and 78% copper/22% nickel for a resistance of 180 ohms, with

others available. We offer the wire in sizes from 40 AWG to 25 AWG to meet specific resistance and current-carrying needs.

## Get help from the experts

Tap the experts at Alpha Wire in selecting the right wire. We understand the advantages



and disadvantages of various stranding options and insulations, as well as their effect on the mechanical and electrical properties when applied. We'll help you find a standard product or customize a wire for your application.

## The cables you trust. The service you deserve.

Every application is critical and wire failure is not an option when the performance of your equipment and reliability are paramount. Specify Kerrigan-Lewis for harsh environments and crucial applications, since the integrity of your system is only as robust as the products you use.

## Made to order

Because litz wire is highly specialized to each application, we custom build every order. That way, you get the exact wire you need. And, with Alpha Wire, custom built also means fast turnaround times, so you get the best of both worlds.

## Service and support, second-to-none

Selecting the correct wire or cable for your critical application is essential to overall system reliability, performance, and safety. So we make it easy for you to select the right product for your specific application. Our online resources include a wire and cable selection guide, technical information, product catalogs, and a distributor locator to make it easy to select and get the wire you need. Can't find what you're looking for? Design the cable to your specification. It's easy, just visit **[www.alphawire.com](http://www.alphawire.com)**!

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