

Product

The MR121 ZapFREE Encoder Cable was developed to ensure effective communication between motion sensors and controllers in environments with troublesome electromagnetic interference and over long distances.

This device employs the use of optical fiber in a manner that is transparent to the user, so it has all of the benefits of fiber without the extra engineering time and effort. This cable is ruggedized, so it is perfectly suited for use in harsh environments.



Features

- Solves communication difficulties that result from electromagnetic interference or long distances
- Easy to use – requires no additional engineering time
- Highly durable – can withstand a wide range of environmental conditions
- More economical than other communication solutions
- Customization available – can be optimized for individual applications
- Extensive customer service available – knowledgeable sales engineers are available to guide you throughout the selection, purchasing, and implementation processes
- No knowledge of optical fiber required – no special cleaning or care techniques are necessary
- Looks and performs just like regular cable links – simply remove old cable links troubled by communication difficulties and replace with the ZapFREE Encoder Cable

Applications

Communication in Environments with Electromagnetic Interference

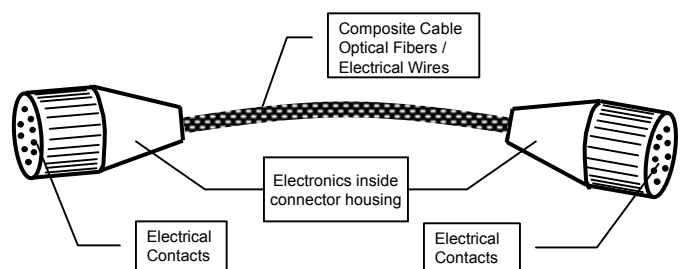
- Perfect for use near motors and other high voltage equipment
- Effective when EMI Shielding is not effective

Communication over Long Distances

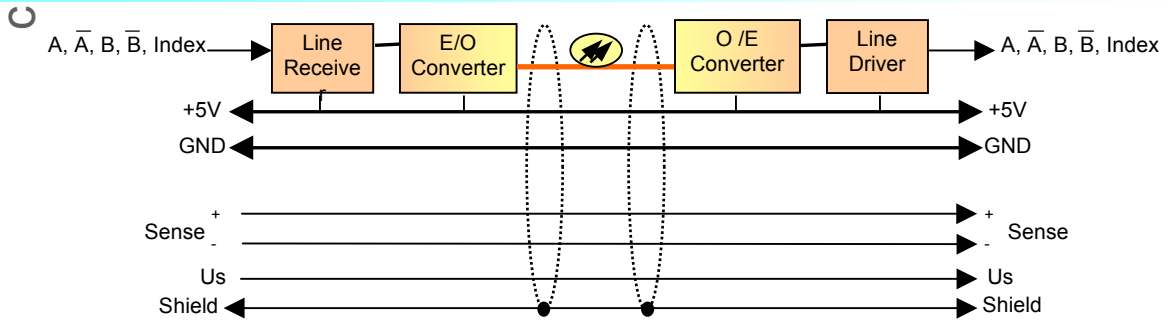
- Situations where the sensor and controller must be physically separated due to logistical concerns
- Error-free communication in excess of 1000m

Challenging Projects with Limited Budgets and Resources

- Less expensive than fiber optic modems
- Does not require fiber optic expertise or additional engineering resources to use



Schematic



Specifications

Connector Interface	RDE; MIL-I-5015
Electrical Interface	RS422 Line Driver Input 1000
Max Frequency	500kHz each channel
Max Phase Uncertainty	< 0.5µs
Power Supply Wire	22AWG
Sense Wire	22AWG
Input Voltage Range	+5V to +12V
Max Cable Length	2km
Operating Temperature Humidity	-25°C to +85°C
Humidity	0 to 95% Relative Humidity (Condensing)
Water Immersion	IP67 / NEMA 6,6P (indefinite immersion of 10cm or less below surface)
Bend Radius	10cm minimum (5cm without damage)
Flex	R=infinity to R=15cm >10000 cycles
Chemical Resistance	Inert to: Water, Gasoline, Jet Fuel, Lubricants, Cooling Fluids, Alcohol, Acetone

About Micronor

MICRONOR provides custom, precision-engineered feedback units, brushless resolvers, encoders, and other automation control components along with a fast turn-around service to accommodate specific customer requirements. We specialize in the repair or replacement of the feedback units and motion control devices of other manufacturers because reengineering an obsolete unit may be more cost effective than reengineering an entire system.

MICRONOR has served the automation industry with components since 1968 and continues to support and manufacture these products. Thousands of customer-specific solutions have been engineered and are controlling equipment from CNC machines to ship-board diesel engines.

Ordering Information

To order, please reference the MR121 ZapFREE Encoder Cable. Our sales engineers will be able to help determine the customization necessary for the specific requirements of your application, including situations with devices other than encoders. We would be pleased to work with you to achieve a solution for your unique situation.

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