MR121

ZapFree™ ENCODER CABLE – INCREMENTAL & SSI

MICRONOR
automation components

Products

MR121 ZapFree™ ENCODER CABLES were developed to ensure reliable communication between encoders and controllers in environments with troublesome interference, ground loops or distance related transmission problems. If you were to start over from scratch and redesign the system, you would find that fiber optics would solve all of these problems.

ZapFree™ ENCODER CABLES offer a fiber optic solution with copper cable convenience. These cables directly replace your existing copper encoder cables WITHOUT ANY DESIGN CHANGE! 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.

Features

- A/B/M version for use with Incremental Encoders
- SSI version for use with Absolute Encoders.
- Immune to EMI, RFI, and ground loops.
- Allows extended sensor-controller links to 1000m
- Easy to use – requires no additional engineering time or redesign effort. No knowledge of optical fiber required.
- Highly durable and environmentally rugged– can withstand a wide range of handling, misuse and environmental conditions.
- Micronor offers a wide range of encoder and connector interface options for plug-and-play compatibility with sensors from most major manufacturers (BEI, EPC, Heidenhain, Kubler, Micronor, RENCO, etc.). Knowledgeable sales engineers will guide you throughout the selection, ordering and implementation processes.
- Looks and performs just like your existing electrical cable links – simply replace existing problem cable links with the ZapFREE cable.
- ZapFree™ cables can also be engineered for use with other interface, sensor and actuator applications with similar transmission problems.

Applications

Communication in Environments with Electromagnetic Interference

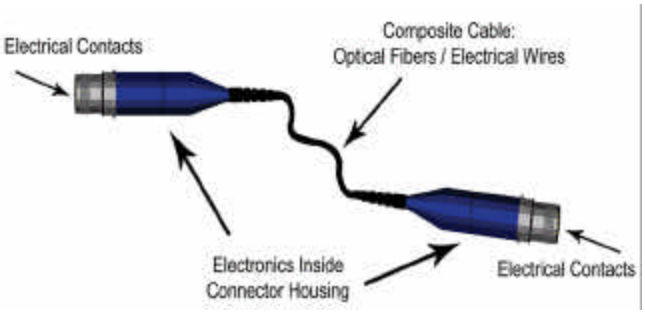
- Perfect for use near motors, brakes, clutches, smelters, welding robots, transformers and other pronounced sources of EMI/RFI interference.
- Effective when EMI shielding is not effective

Communication over Long Distances

- Situations where the sensor and controller must be physically separated over distance due to logistical concerns
- Error-free communication up to 1000 m (3280 ft)

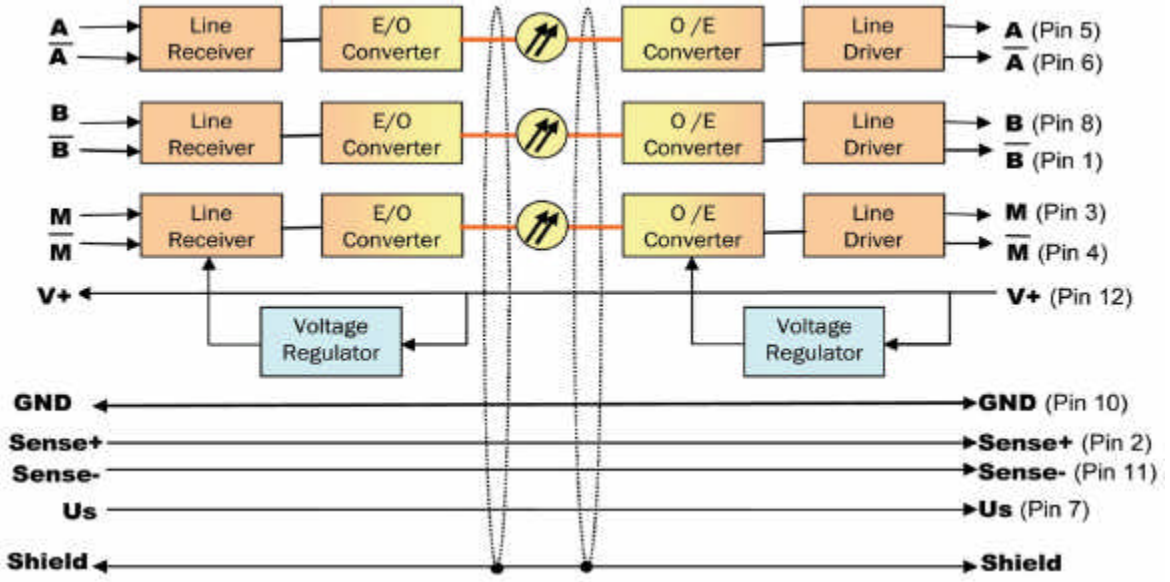
Challenging Projects with Limited Budgets and Resources

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



Schematic

Diagram of Interface Code 101 For Kubler 8.5800/Micronor ESI58 Incremental Encoders



Specifications

Connector Interface Options	M series, MS series and most other popular multi-channel connector types used by various encoder manufacturers
Electrical Interface Options	+5V Logic, Open Collector or RS422 Line Driver Input (100Ω terminated or open). SSI version is also available.
Max Frequency	500 kHz each channel
Max Phase Uncertainty	< 0.5µs
Power Supply Wire	22AWG
Sense Wire	22AWG
Input Voltage Range	+5V to +12V
Max Cable Length	1000 meters (3280 feet)
Operating Temperature	-25°C to +75°C
Humidity	0 to 95% Relative Humidity (Condensing)
Water Immersion	IP67 / NEMA 6.6p
Bend Radius	10cm minimum (5cm without damage)
Flex	R=infinity to R=15cm > 1000 cycles
Chemical Resistance	Inert to: Water, Gasoline, Jet Fuel, Lubricants, Cooling Fluids, Alcohol, Acetone.

Ordering Info

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Interface and Connector Type
Consult with Micronor Sales Engineer for proper codes as interface wiring, line driver characteristics, and connector types must be clearly specified. Non-connectorized options with bare wires are also available. SSI version will soon be available.

Length

Unit
M Meters
FT Feet

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