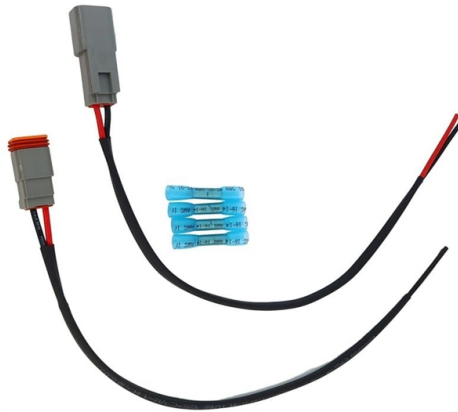


How to connect a through-beam fiber optic sensor



Article Overview

A through-beam fiber optic sensor detects objects by transmitting light from an emitter to a receiver, and sensing when the beam is interrupted, with fiber optics allowing remote placement and precise detection in tight or harsh environments.

Understanding the Sensor

A through-beam fiber optic sensor consists of two main components: a light emitter and a receiver. The emitter sends a beam of light, often visible red, laser red, or infrared, across a detection path to the receiver. Detection occurs when an object interrupts or diminishes the light intensity received, triggering an electrical output . Fiber-optic cables can be used to extend the sensing tips into tight or hazardous areas, keeping the main sensor body away from heat, moisture, or mechanical damage .

Installation and Alignment

- Position the Emitter and Receiver: Mount the emitter and receiver facing each other across the detection path. Ensure the beam path is clear of obstructions.
- Use Fiber-Optic Cables if Needed: Insert fiber-optic tips into the desired sensing locations. This is especially useful for small parts or confined spaces .
- Align the Beam: Adjust the emitter and receiver (or fiber tips) so the light beam is centered on the receiver lens. Many modern sensors have automatic alignment or one-touch setup features .
- Check Span Distance: The maximum distance between emitter and receiver depe...

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Through-Beam

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