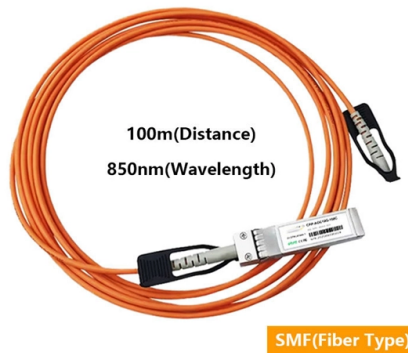


Long-distance through-beam fiber optic sensor



AI Overview

Long-distance fiber optic through-beam sensors detect objects by transmitting light from a separate emitter to a receiver, offering precise, non-contact detection over distances up to hundreds of meters.

Overview

A through-beam fiber optic sensor consists of two main components: a fiber optic emitter and a receiver, connected to a sensor amplifier. The emitter projects a light beam directly to the receiver, and the sensor detects the presence or absence of an object when the beam is interrupted. This non-contact detection method ensures minimal wear and is ideal for harsh or confined environments where conventional sensors may fail ().

Key Features

- Long Sensing Range: Certain models can detect objects up to 150 meters, and specialized configurations for object radiation can reach 800 meters ().
- High Environmental Resistance: Fiber optic heads contain no electronics, making them suitable for high temperatures, dust, moisture, and vibration ().
- Fast Response Time: The sensors can operate at high speeds, making them suitable for automation and production line applications ().
- Flexible Installation: Fiber optic cables can be routed through tight spaces or around obstacles, allowing detection in areas inaccessible to standard sensors ()....

Article Content

Mar 03, 2026

Fiber-optic sensors through-beam FU

FU-66Z and FU-68 are suitable for high-precision, short-distance detection scenarios, such as precise

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Fiber optic through beam sensor

All information about the E20752 at a glance. We assist you with your requirements. Technical data Mounting and Installation

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10.083-97_Photo1

Fiber-optic waveguides These extend the range of possible applications of photoelectric fiber sensors with important additional fi

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Through Beam Fiber Optic Sensors – Mouser

Mouser offers inventory, pricing, & datasheets for Through Beam Fiber Optic Sensors.

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Through-Beam Type Sensors

Through-Beam Type Sensors from KEYENCE, SICK & OMRON. High-precision detection.

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FIBER OPTIC SENSOR GUIDE

What is a Fiber Optic Sensor? ic amplifier and a unit. The amplifier emits and receives light energy and converts it to

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Through-beam Fiber Optic Sensor

Product Description And Features This Through-Beam Fiber Optic Sensor offers exceptional performance and versatile design,

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Overview of Photoelectric Sensors | OMRON Industrial Automation

Photoelectric Sensors detect photo-optical workpieces. OMRON provides many varieties of Sensor, including diffuse-reflective,

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Fiber Optic Sensors | KEYENCE America

Some fiber optic sensors are also capable of long-range detection by increasing the power of emitted light, while still having fast

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Through Beam Rectangular Fiber Optic Sensor

High-quality through beam rectangular fiber optic sensors offer a wide range of detection ranges of 10mm, 15mm, and 20mm for

Oct 30, 2025

Through Beam Fiber Optic Proximity Sensors | GlobalSpec

Optical Technology Type: Through Beam Electrical Connection: Cable Operation Distance: 1.97 to 10.63 Length: 0.4331 Fiber optic

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Through Beam Fiber Optic Sensor, M3/M4/M6

This through beam fiber optic sensor has high performance and professional design, thread size M3, M4,

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fiber optic through-beam and dif. reflection sensors

The ipf plastic fiber optic systems consist of a flexible plastic fiber with a sensing head and an optoelectronic fiber optic amplifier.

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Through-Beam Fiber Optic Sensors

Due to the light's tight focus, they can detect subtle or rapid motions over a long distance. They are not affected by electromagnetic

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Photoelectric Through Beam with Fiber-Optics

If smaller aperture through-beam fiberoptic cables are best for sensing a smaller part, then the span distance is significantly reduced

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Through beam fiber-F& C sensors

Amplifier Fiber Optic Sensor Through beam fiber Diffuse reflection fiber Coaxial fiber
Right Angle Fiber Matrix fiber Side view fiber

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Array Through-beam Fiber Optic Sensor

Array Through-beam Fiber Optic Sensor This Array Fiber optical sensor is ideal for a wide range of industries, including electronics

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Omron E32-T16WR Fiber Optic Sensor | Features & Guide

Examine the Omron E32-T16WR fiber optic through-beam sensor. Learn its specs, features, amplifier options, and

Nov 20, 2025

Thru-Beam/Opposed Mode Sensors | TRI-TRONICS

AC/DC Sensor with Timer, Relay, or Triac Output Self-contained, easy-to-use sensors available in a wide variety of sensing models

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FIBER-OPTIC SENSORS

» Long operational life » Easy to install and set up FIBER-OPTIC SENSORS High precision in small spaces Today, already with over

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Fiber-optic sensors through-beam FU-66Z/67/77TZ/68/49U/7F diffuse ...

Fiber-optic sensors through-beam FU-66Z/67/77TZ/68/49U/7F diffuse reflective M3 M4
FU-66Z and FU-68 are suitable for high

Sep 05, 2025

Fiber optic through beam sensor

For installation with limited mounting space Operation as through-beam sensor Very long range For cutting to size Small bending radius

Apr 17, 2026

THE SELF-CONTAINED THRU-BEAM SENSOR

As a result, self-contained thru-beam sensor designs are superior to traditional thru-beam and more complex fiber optic multipiece

Nov 01, 2025

Long-distance through-beam optical fiber-F& C Sensor Technology

Long-distance through-beam optical fibers have an extremely long detection distance, can switch between multiple modes, and have

Apr 01, 2026

Fibre Optic Sensors | KEYENCE UK & Ireland

Some fibre optic sensors are also capable of long-range detection by increasing the power of emitted light,

Dec 09, 2025

Thru-Beam Sensors

The optics made of temperature-resistant glass are resistant to radiant heat. For higher ambient

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Fiber optic through beam sensor

For installation with limited mounting space Operation as through-beam sensor With 90° deflection of the light beam for use where

Jul 29, 2025

Through-Beam Fiber Optic Sensors

Fiber optic sensors detect the presence of objects using highly focused light transmitted through a fiber optic cable and detected with

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Understanding Fiber Optic's Role in Photoelectric Sensing

Photoelectric sensors and fiber optic sensors are very similar in a lot of ways, but which one is superior in function

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Through Beam Fiber Optic Sensors - Mouser

Through Beam Fiber Optic Sensors are available at Mouser Electronics. Mouser offers inventory, pricing, & datasheets for Through

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FT Thru-Beam Type Fiber Optic Sensors

Panasonic Industrial Automation FT Thru-Beam Type Fiber Optic Sensors feature tough, high-quality fiber and a

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E32 Longer distance | OMRON, Europe

With built-in focal lenses, longer sensing distances can be achieved up to 5 times longer compared to

May 07, 2026

HIGH INTENSITY Super Bright IR Thru-Beam Sensor | TRI-TRONICS

Super Bright IR Thru-BeamSolves thru-beam sensing tasks where the material is dense for container contents sensing, where the

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Through-Beam

Through-beam photoelectric sensors have an emitter and a receiver housed separately. The emitter sends

May 06, 2026

Fiber Optic Sensor Cable, 2M Array-type, Thru-beam,

Our thru-beam fiber optic sensor cable can detect an object with a minimum size of 30 mm. This 2M array

Feb 26, 2026

Distributed optical fiber sensors: what is known and what ...

Abstract This perspective article delves into the current performance limitations of distributed optical fiber sensors and

Jul 29, 2025

Through-beam sensors | Balluff

Through-beam sensors from Balluff serve to detect objects reliably, regardless of surface, color, material -

Contact Us

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