

Through-beam photoelectric sensor fiber optic



Article Overview

Through-beam photoelectric sensors detect objects by interrupting a light beam between a separate emitter and receiver, while fiber optic sensors use flexible fiber heads to transmit and receive light in challenging or confined environments.

Through-Beam Photoelectric Sensors

Working Principle: Through-beam sensors consist of a separate emitter and receiver aligned opposite each other. When an object interrupts the light beam, the receiver detects a change in the signal, triggering an output response . **Advantages:**

- **High reliability:** Can detect almost any object regardless of color, surface, or material .
- **Long detection range:** Capable of ranges up to 150 m, and even 800 m for object radiation .
- **Insensitive to surface characteristics:** Works effectively with reflective, transparent, or dark objects, including metalized films .
- **Fast response time:** Light travels at high speed, allowing rapid detection .

Applications: Widely used in packaging, material handling, automotive, and electronics industries. They are particularly effective for detecting objects in films, separating packaged items, and ensuring precise positioning .

Fiber Optic Sensors...

Article Content

Dec 23, 2025

How to Specify Fiber Optic Sensors |Library tomatonDirect

Photoelectric sensors come with a variety of light emission types (infrared, visible red, laser Class 1 and 2), sensing

May 23, 2026

Fiber Optic Sensors | KEYENCE America

The FU Series offers a wide variety of options including thru-beam, reflective, retro-reflective and definite

Nov 08, 2025

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

Aug 30, 2025

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

May 29, 2026

THE SELF-CONTAINED THRU-BEAM SENSOR

Dynamic Optical Windows – a specialized thru-beam sensor Dynamic optical windows are closed thru-beam photoelectric sensors

Feb 22, 2026

Through Beam Fiber Optic Sensors – Mouser

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

Nov 03, 2025

Through-beam sensors | Balluff

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

Aug 16, 2025

What Are Through-Beam Photoelectric Sensors? | Working Principle

Learn what through-beam photoelectric sensors are and how they work. Discover their key advantages, common uses, and benefits

Oct 10, 2025

Through-Beam Fiber Optic Sensors

When it comes to Through-Beam Fiber Optic Sensors, you can count on Grainger. Supplies and solutions for every industry, plus

May 29, 2026

Through Beam Fiber Optic Proximity Sensors | GlobalSpec

Fiber optic through beam sensor -- E20059 from ifm efector inc. For installation with limited mounting space. Operation as through

Jan 10, 2026

Through-Beam

Through-beam photoelectric sensors consist of an emitter and a receiver in separate housings. The emitter

Nov 06, 2025

Through-beam Fiber Optic Sensor

Through-beam Fiber Optic Sensor With high precision, superior sensitivity, and excellent environmental adaptability, this sensor

Nov 08, 2025

Throughbeam photoelectric sensors | Leuze

Throughbeam photoelectric sensors always consist of a sensor and receiver. With ranges up to 150 m (800

Jan 19, 2026

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

Oct 26, 2025

Photoelectric Sensors

Fiber optic sensors and cables are the perfect solution for applications where the direct mounting of

Dec 16, 2025

Fibre optic through-beam sensor

All information about the E21351 at a glance. We assist you with your requirements.
Technical data Instructions Scale drawings

Jan 03, 2026

What Is a Photoelectric Sensor? | Types & Working Principle

Explore how photoelectric sensors detect objects using light. Learn about the different types—through-beam, retroreflective, and

Aug 07, 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

Jun 23, 2026

Through-Beam Sensor Overview | PDF | Optics | Sensor

Through-Beam Sensor Overview The document discusses through-beam photoelectric sensors, including their principle of operation

Jul 12, 2026

XUFN12301

Photoelectric sensors XU, plastic fibre optic for sensor, thru beam, general use, std., 2 m, Sn200mm.

Contact Us

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