

Fiber optic sensing cable model



Overview

Sensor cables are available with multimode (MM) and singlemode (SM) fibers or a combination of both.

Key Takeaways

Fiber optic sensing cables come in various models designed for temperature, strain, and acoustic monitoring, with options for armored, metal-free, and specialty configurations to suit harsh environments.

- Key Models and Configurations
 - Senstar FiberPatrol® Sensor Cables
 - Available in 12, 24, 36, and 48 fiber counts
- Features gated steel tape armor with double polyethylene jacket for durability
- Sold per meter and suitable for fence and perimeter security applications
- Designed for integration with Senstar sensing systems for real-time intrusion detection
- AP Sensing Fiber Optic Sensor Cables
 - Supports temperature, strain, and acoustic sensing
- Configurations include metal-tubing, metal-free, tube-in-tube, and armored stainless steel
- Metal-free cables are flexible and reduce induced voltages

- Armored cables provide robust protection against harsh environments and rodent damage
- Coatings vary: polyacrylate for standard temperatures, polyimide or metal for high-temperature or cryogenic conditions
- NBG Fiber Optics Sensing Cables
- Supports DTS, DAS, DSS, DTSS, and FBG-based sensing
- Compatible with Raman, Brillouin, Rayleigh, and FBG technologies
- Operational temperature ranges from -196°C to +300°C depending on design
- Options include tight-buffered fibers in metal tubes, metal armor, and temperature-compensated designs
- Ultra-compact and crush-resistant cables for acoustic sensing, with up to 4 SMF or MMF fibers
- Prysmian SensO Fiber Optic Cables
- Designed for Distributed Fibre Optic Sensing (DFOS)
- Supports DAS, DSS, and multi-sensing applications
- Can detect acoustic signals, vibrations, leaks, and ground movements
- Flexible, robust, and suitable for direct burial, duct installation, or clamping to fences
- Customizable core configurations, fiber types, jacketing, and armoring to match environmental requirements
- Rockwell Automation Fiber Optic Cables
- Glass fiber bundles with varying diameters for long-range sensing or high-resolution detection
- Plastic fiber options for high shock and vibration applications
- Standard lengths typically 0.91 m (36 in.) from tip to tip
- Not recommended for continuous flexing or hazardous environments without special design

Common Specifications Across Models

- Fiber Types: Single-mode (SMF) or multi-mode (MMF)
- Armoring: Steel tape, metal-free, or stainless steel for protection
- Temperature Range: From cryogenic (-196°C) to high-temperature applications (+300°C)

- Applications: Perimeter security, pipeline monitoring, landslide detection, structural health monitoring, and industrial process control
 - Sensing Technologies: Raman, Brillouin, Rayleigh, FBG, DAS, DTS, DSS, DTSS
 - Coatings: Polyacrylate, polyimide, or metal depending on environmental conditions
- These fiber optic sensing cables are engineered to provide high sensitivity, long-distance monitoring, and durability in challenging environments, making them suitable for both industrial and security applications.

Article Content

Fiber Optic Sensor Cables for Advanced Monitoring | AP Sensing

Sensor cables are available with multimode (MM) and singlemode (SM) fibers or a combination of both. For MM fibers, typically a

Fiber Optic Sensors | KEYENCE America

This is a series of fiber optic sensor heads designed to be connected to a fiber optic sensor amplifier. The FU Series offers a wide

Fiber Optic Sensor Cables | Industrial Fiber Optics

Model Key Configure your own fiber optic sensor cables to your specific design. Use chart below to figure out the part number.

TECHNICAL SPECIFICATIONS FiberPatrol® Sensor Cabl

Performance Specifications Fiber type: single-mode (ITU G.652 C & D) Attenuation: 0.25 dB/km or less at 1550 nm Testing in

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Learn how fiber optic sensing technology, including distributed acoustic sensing (DAS), distributed temperature sensing (DTS), and

Fiber Optic Sensor

This paper reviews the fiber optic sensors that have been developed and applied to measure cable forces, including fiber Bragg

Distributed Sensing Cables

Our distributed sensing cables provide optimized monitoring of your critical harsh environment infrastructure. Distributed sensing is a

Fiber Sensors

1. Detection in Narrow Locations The small sensing section and flexible Fiber Unit cable enable a Fiber Sensor to detect objects in

Strain Transfer Model Assessment for Steel-Reinforced and Polymer ...

Strain transfer in distributed optical fiber sensors is typically represented by a simplified 1-D model that incorporates a

Distributed Fiber Optic Sensing Cable in Industrial ...

As in other networks, a distributed sensor network contains both active (source/interrogator boxes) and passive (fiber-optic cable,

Fiber Optic Sensing Cable in Industrial Environments

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Fiber Optic Sensors: Types, Working Principle

Explore fiber optic sensors: their working principles, types (intrinsic, extrinsic, hybrid), and diverse

FOSC | Fiber Optic Sensor Cables | OPTRAL

Fiber Optic Cables specially designed for distributed or multipoint sensing using any DTS, DVS, FBG or DAS technology and

Fiber Optic Linear Heat Detection (LHD) | Raman-OTDR | AP Sensing

A fiber optic Linear Heat Detection system essentially consists of the interrogator unit and the sensor element, i.e. the fiber optic

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Fiber-optic cables

Together with the right fiber optic amplifier, optical fiber cables are crucial for mastering complex detection tasks in automation

Fiber Optic Sensing Cables • NBG Fiber Optics

NBG's fiber optic sensor cables are compatible with Raman, Brillouin, and Fiber Bragg Grating (FBG) technologies, enabling precise

Distributed Sensing Cables | Fiber Optic Sensing Cable

Corning Distributed Sensing Cables have been designed with the specific needs for the optical sensing

Rugged Fiber Optic Cables for Sensing Applications

Choose EBSM cables if you need to support both single-mode and multi-mode fibers in one cable — ideal for more complex or

FIBER-OPTIC SENSORS

Today, already with over 500 standard, application or customer specific fiber optic sensors, we take pride in working together with

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