Fiber Optic Sensor Loc

Article Overview

LOC settings on fiber optic sensors determine whether the sensor operates in Light-ON (L-on) or Dark-ON (D-on) mode, and include sensitivity calibration and preset reference adjustments for accurate detection.

Understanding LOC Settings

LOC (Light-ON / Dark-ON) mode defines the sensor's output behavior:

o Light-ON (L-on): The sensor output is active when the received light intensity exceeds the set threshold.
o Dark-ON (D-on): The sensor output is active when the received light intensity falls below the set threshold . This setting is crucial for adapting the sensor to different detection environments, such as reflective or transmissive applications.

Basic Configuration Steps
o Power and Mode Selection:
o Use the power select switch to choose between standard and MEGA mode for light emission intensity .
o Press the button to toggle between L-on and D-on modes .

o Sensitivity Adjustment:
o Press the button to adjust sensitivity.
o The sensor can automatically set sensitivity while a workpiece passes through, which is useful for continuous line operations .
o Fine adjustments can be made to ensure the current value reads 100.0 for the reference condition, compensating for dust or dirt on the fiber tip .

o Preset Function:
o Press to set the current light intensity as a reference.
o Holding disables the function.
o This allows arbitrary two-point calibration to 0.0 and 100.0, useful for reflective models or background detection .

o Initialization:
o Press and hold + for three seconds.
o Select "rSt" -> "init" using the button to reset the sensor to default values .

Advanced Tips

o Avoid wiring the amplifier line alongside power or high-tension lines to prevent noise interference .

o For long-term use in S-APC mode, the sensor may switch automatically to ACC mode to maintain constant current and prevent LED overload .
o Ensure the fiber unit is properly inserted and locked using the fiber lock lever to maintain consistent detection .
o Regularly check and clean the fiber tip to maintain accurate light reception and prevent false readings .

Summary

Proper LOC configuration involves selecting the correct Light-ON or Dark-ON mode, calibrating sensitivity, and using preset and initialization functions to maintain reliable detection. These settings help compensate for environmental factors, ensure consistent operation, and extend sensor life in industrial applications .

Lab-in-a-Fiber (LIF), a counterpart of Lab-on-a-chip, however, deployed within the cylindrical optical fiber geometry,

A fiber optic circuit that is routed through some form of a barrier, sensor, enclosure, or cable. The form can

Different types of fiber-optic sensors based on glass or polymeric fibers are used to evaluate material behavior or to

This article explores the different types of Fiber Optic Sensors, their working principles, and various

Optical fiber sensors present several advantages in relation to other types of sensors. These advantages are

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

This article explains what fiber optics are and how they work in industrial applications. Learn important

Distributed optical fiber sensors characterized by spatially resolved measurements along a

Optical fibre sensors are an essential subset of optical fibre technology, designed specifically for sensing and

Fiber optic sensors are defined as sensing devices that utilize optical fibers to convert lightwave properties into information about the

Imagine a world where the Internet doesn"t just connect but senses--detecting earthquakes,

If it is necessary for even higher requirements to be fulfilled, such as sensing range, temperature resistance,

material durability or a

communication system via using fiber optics there was a great demand to measure and sense the rate of data transmission, change

Fiber optic sensors are compact because the detection circuit is located in the amplifier, allowing for

Fiber-optic sensors detect objects and conditions by directing light to a test object and evaluating the intensity change of the

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