

Article Overview

Adjusting a SICK fiber optic sensor involves proper alignment, setting the switching threshold via teach-in, and optionally resetting to factory settings for calibration.

Step 1: Mounting and Alignment

Ensure the fiber optic head is securely mounted using its hex nut and threaded body, pointing the sensing tip toward the target area. Avoid mechanical stress, chemical exposure, or temperatures above the sensor's rated maximum (e.g., +70°C for LL3-TV05) to maintain accuracy and longevity. Proper alignment is crucial for reliable detection, especially in confined spaces or when detecting small objects.

Step 2: Power and Connection

Connect the fiber optic cable to the compatible amplifier (e.g., WLL180T or WLL170-2) and ensure the amplifier is powered on. Verify that the electrical connections follow the amplifier's wiring diagram to prevent signal loss or malfunction.

Step 3: Teach-In Procedure

SICK sensors typically offer 1-point or 2-point teach-in to set the switching threshold:

- o 1-Point Teach-In: Adjust the sensor to the background (without the object) and press the Teach-in key for 2 seconds. A successful teach-in is indicated by the switching threshold blinking three times.
- o 2-Point Teach-In: Press the Teach-in key for 2 seconds, select "2-point Teach-in" on the display, and perform the first teach-in with the object present. Then perform the second teach-in with only the background. The sensor calculates the switching threshold between these two points, confirmed by three blinks on the display.

Step 4: Sensitivity Adjustment

Some SICK sensors allow manual sensitivity adjustments via the amplifier interface or control panel. Adjust the sensitivity to ensure the sensor reliably detects the target without false triggers. Video tutorials demonstrate this process for various SICK models, showing how to fine-tune the sensor for specific applications.

Step 5: Resetting to Factory Settings (Optional)



SICK fiber optic sensor adjustment method

If calibration issues persist, reset the sensor to factory settings: press the Mode key for 2 seconds to enter configuration mode, navigate to "Reset," select "YES," and confirm. This restores all operating modes to their default state .

Step 6: Testing and Verification

After adjustment, test the sensor under normal operating conditions to ensure consistent detection. Make minor alignment or sensitivity tweaks as needed to optimize performance. By following these steps--mounting, alignment, teach-in, sensitivity adjustment, and optional reset--you can effectively calibrate a SICK fiber optic sensor for accurate and reliable operation .

Dust, particularly shavings, make wood-processing machines a particular challenge for opto

The 2-point Teach-in function on the SICK WLL180T sensor allows for exact adjustment of the switching

Brief theory of sensing principle, fabrication method, applications, advantages and

Get instant answers about your SICK WLL80 Analog fiber-optic sensor! AI Chat & PDF Access for setup, troubleshooting, and

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This document provides instructions for configuring the settings of the WLL180T photoelectric sensor for fiber-optic cables for

Cross-talk is eliminated when utilizing bus configuration option Quick, easy setup and adjustment due to an intuitive operating menu

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Proximity fiber: When using the WLL80 fiber-optic sensor with a proximity fiber, align the fiber to the object. Select the position so that

Optimal sensor settings depend on the surface reflectivity and sensor type. Adjust parameters like the switching threshold and

With our version with two switching outputs. It replaces a trigger photoelectric sensor. And records even more information - with just

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

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