Sunx Through-beam Fiber Optic Sensor Adjustment Method



Overview

2-level teaching is a method of setting the threshold value by teaching the amplifier unit two different status conditions - sensing object present and sensing object absent.

Key Takeaways

Proper adjustment of Sunx through-beam fiber optic sensors involves aligning the emitter and receiver, setting the threshold value, and fine-tuning the light output for optimal detection. Step 1: Physical AlignmentPosition the emitter and receiver fibers directly opposite each other along the intended sensing path. Ensure the beam is unobstructed and the fibers are securely mounted ( ).

For fibers with expansion lenses or multiple cores, carefully adjust the alignment to avoid beam narrowing or misalignment, especially for long-distance sensing ( ). Avoid sharp bends in the fiber sleeve, as this can reduce the sensing range and affect detection accuracy ( ). Step 2: Initial Power and Light OutputPower on the sensor amplifier and check the incident light intensity on the receiver.

If the intensity is too high (saturated), reduce the light-emitting amount using the amplifier's light output adjustment function ( ). Ensure the response time is not affected by light output adjustments ( ). Step 3: Threshold Value SettingEnter SET mode on the amplifier by pressing the MODE key for 2 seconds ( ).

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With no object in the beam path, press the ON key to set the background reference. The green digital display will indicate the incident light intensity ( ). Adjust the threshold value so that the sensor reliably detects objects while ignoring background light or reflections ( ).

For small or transparent objects, fine-tune the receiving sensitivity to one of the available levels for optimal detection ( ). Step 4: Verification and Fine-TuningTest the sensor with the actual target objects to ensure consistent detection. If multiple fibers are used side-by-side, set different emission frequencies to prevent interference ( ).

Check for reflective surfaces near the fiber head; if interference occurs, adjust the threshold value accordingly ( ). Step 5: Maintenance TipsPeriodically verify alignment and threshold settings, especially in environments with vibration or temperature fluctuations. Use the digital display to monitor the current light-receiving amount and adjust as needed for consistent performance ( ).

Avoid bending or stressing the fiber cables beyond their specified limits to maintain sensing range and accuracy ( ). By following these steps, Sunx through-beam fiber optic sensors can be accurately adjusted for reliable detection in industrial automation applications.

Article Content

SUNX FX-100 SERIES OPERATION MANUAL Pdf

Diagram of Functions and Settings The amplifier features and settings can be generally classified into three main modes: the ''RUN mode'' for normal sensing

PRO Mode Operation Guide

2-level teaching is a method of setting the threshold value by teaching the amplifier unit two different status conditions - sensing object present and sensing object absent.

SUNX FX-301 OPERATION MANUAL Pdf Download

Adjust Lock Setting Function This function allows the selection of Adjust Lock OFF or Adjust Lock ON to either permit or disallow operation of the ''threshold value

Sunx FX-301, FX-302, FX-303 Operation Manual | Manualzz

Teaches only the status condition in which no sensing object is within sensing range (status in which incident light intensity is stable). This method is used to set a ''threshold value'' for conducting sensing

SUNX Fiber Optic Sensors: AI Chat & PDF Access | Manualzz

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SUNX offers a complete line of over 180 different fiber heads to suit any of your detection needs, including diffuse-reflective (FD Series), retro-reflective (FR Series), and thru-beam (FT Series) types.

FD Fiber Optic Sensors

However, note that if there are any white or highly-reflective surfaces near the fiber head, reflected incident light may affect the fiber head. If this occurs, adjust the threshold value of the amplifier

High Speed Fiber Sensor FX2-A3R INSTRUCTIION MANUAL

For maximum sensitivity: Rotate the adjuster clockwise for more than 3 rotations. For minimum sensitivity: Rotate the adjuster counterclockwise for more than 3 rotations. Adjust the sensitivity

Panasonic Fiber Sensor Guide Book

As for lens compatible type fiber head, sensing range becomes longer when a lens is attached to the thru- beam type fiber, spot detection is achieved in case of the reflective type.

Slim Body Automatic Sensitivity Setting Fiber Sensor

Press the ON button followed by OFF button under the condition that beam is not received (or make the remote sensitivity ON input into Low as well as the OFF input).

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 (thru-beam, retroreflective, proximity and fiber optic) to fit virtually any

Fiber optic sensors and fiber optics | Baumer international

Unlike fiber optics with a single, point-shaped light beam, array fiber optics generate a broad, linear light band. Depending on the width of the array fiber optics and

SUNX FX-100 Series Digital Fiber Sensors

Notes: 1) Be careful when installing the thru-beam type fiber equipped with the expansion lens, as the beam envelope becomes narrow and alignment is dificult. Especially when installing a fiber with

Mastering Fiber Optic Photoelectric Sensor Adjustment: A

Learn professional techniques for adjusting fiber optic photoelectric sensors in industrial automation. This guide covers calibration steps, sensitivity fine-tuning, background interference

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Fiber Sensors

Detection Principles Optical fiber is comprised of a central core with a high refractive index surrounded by cladding with a low refractive index. When light enters the core, repetitive total internal reflection

4 CAUTIONS 1 SPECIFICATIONS

Digital fiber sensor FX-301(P) has been modified since production in June. 2004. Hence, this instruction manual has been changed to reflect the modifications.

SUNX Fiber Optic Sensors: AI Chat & PDF Access | Manualzz

Explore SUNX FX-301, FX-305 & other Fiber Optic Sensors: AI-powered Q&A, specs & PDF manual. Get instant answers for setup & maintenance. + AI Chat & PDF Download

EG-0005 Sunx Through Beam Sensor Pair

Sunx Through Beam Sensor Pair with CablesRequires Two Brackets EG-0006, Websaw and XL-Saw For XL-Saw, XL-Feeder and Most Websaw Models pare to existing sensors. Other sensors

SUNX Panasonic FX-311 Manually Set Fiber Sensor

Notes: 1) Be careful when installing the thru-beam type fiber equipped with the expansion lens, as the beam envelope becomes narrow and alignment is dificult. Especially when installing a fiber with

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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