

OMRON

Smart Laser Head(CMOS)

Model E3NC-SH Series

INSTRUCTION SHEET

Thank you for selecting OMRON product. This sheet primarily describes precautions required in installing and operating the product.

TRACEABILITY INFORMATION: Representative in EU: OMRON EUROPE B.V. ... Manufacturer: OMRON CORPORATION, SHIOKOJI HORIKAWA, KYOTO 600-8530 JAPAN

The following notice applies only to products that carry the CE mark: Notice: This is a class A product. In residential areas it may cause radio interference...

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PRECAUTIONS ON SAFETY

Keys to Warning Symbols

WARNING Indicates a potentially hazardous situation which, if not avoided, will result in minor or moderate injury, or may result in serious injury or death.

Explanation of signs

- Laser beam: Cautions to indicate potential Laser beam hazard. Resolution prohibition: Indicates prohibition when there is a risk of minor injury from electrical shock or other source if the product is disassembled.

SAFETY PRECAUTIONS FOR USING LASER EQUIPMENT

The E3NC-LH use a laser as the light source. Lasers are classified based on EN standard (EN 60825-1)

Alert Statements

E3NC-SH Sensor Head: Class 1

WARNING

Do not expose your eyes to the laser radiation either directly (i.e., after reflection from a mirror or shiny surface). Loss of sight may possibly occur in case of the exposure to laser high power density. Do not disassemble the product. Doing so may cause the laser beam to leak, resulting in the danger of visual impairment.

The E3NC-SH has the WARNING label regarding laser on the side of the Sensor Head as shown on the right figure.

When using devices in which E3NC-SH is installed in the U.S., the devices are subjected to the U.S. FDA (Food and Drug Administration) laser regulations. E3NC-SH series is classified into Class 1 by the standard of IEC/EN60825-1 according to deviations of Laser Notice NO.50 of this standard, and is scheduled to report to CDRH (Center for Devices and Radiological Health).

Using in Europe The E3NC-SH is categorized as a Class 1 device as stipulated in EN60825-1.

PRECAUTIONS FOR SAFE USE

Please observe the following precautions for safe use of the products.

- (1) Installation Environment: Do not use the product in environments where it can be exposed to inflammable/explosive gas. (2) Power Supply and Wiring: Be sure to use a dedicated amplifier unit (E3NC-SA/E3NC-SA0). Connecting the sensor to other amplifier unit may cause damage or fire.

- (3) Installation: Use screws for mounting and be sure to tighten screws with a specified torque. (4) Other Rules: Do not attempt to disassemble, deform by pressure, incinerate, repair, or modify this product.

PRECAUTIONS FOR CORRECT USE

Please observe the following precautions to prevent failure to operate, malfunctions, or undesirable effects on product performance.

- (1) Do not install the product in locations subjected to the following conditions: Surrounding air temperature outside the rating, Rapid temperature fluctuations, Relative humidity outside the range of 35 to 85%, Presence of corrosive or flammable gases, etc. (2) Warming Up: The circuitry is not stable immediately after turning the power ON...

Checking the package contents

· Sensor head x1 · Manual (this paper) x1

Shortening the connection cable for use

Shortening the connection cable for use

Push the operation lever at the operation slot with the slotted screwdriver and pull out the wire to adjust the cable length. The tip of the screwdriver must be 2 mm or less.

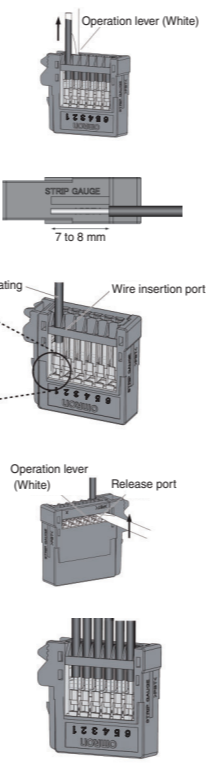
Procedure to connect the connector

(1) According to "STRIP GAUGE" shown on the side of the product, strip the coating of the shield for 20 mm or less, strip the coating of the core wire for 7 to 8 mm, and twist the wire for several times.

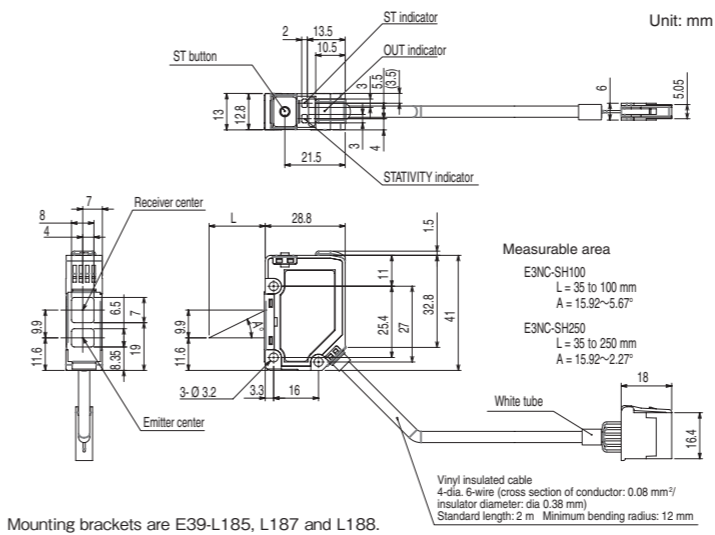
(2) Insert the wire all the way to the wire insertion slot. Make sure that the wire coating is located inside the wire insertion slot and the tip of the conductor passes through the connection part.

(3) Push the slotted screwdriver all the way to the releasing slot and pry the slotted screwdriver up and down lightly. When you feel a click on the slotted screwdriver, pry it to the reverse direction of the wire insertion direction.

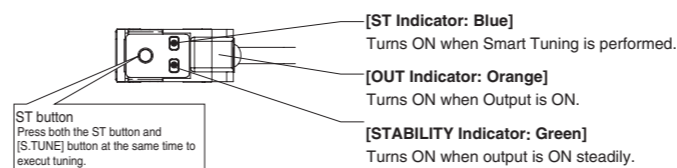
(4) Check that the operation lever recovers and the wire coating enters into the wire insertion slot. The shield wire cover must not be shorted circuited.



1. Dimensions

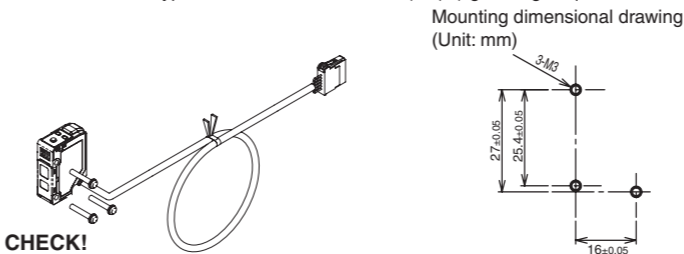


2. Sensor Head Display



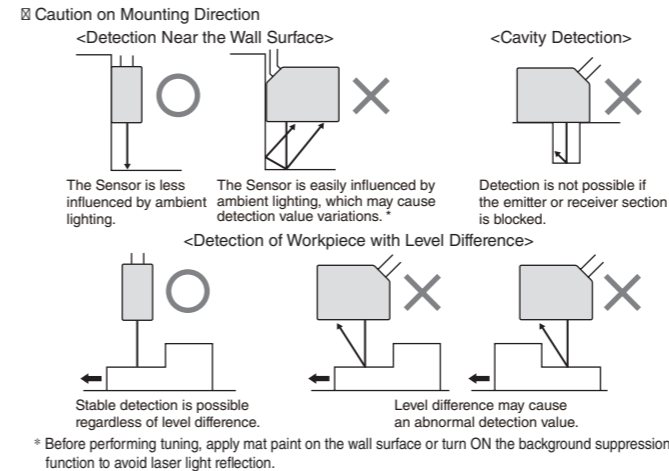
3. Installing Sensor Heads

Fix the Reflective type sensor head with screws (M3). (tightening torque: M3, 0.3 N · m)



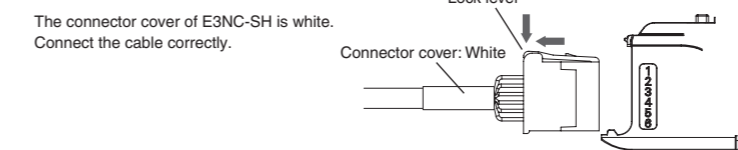
CHECK!

When mounting a Sensor Head, take care not to touch the emitter and receiver. Adhesion of finger marks may hinder correct measurements.



4. Mounting the sensor head

- 1. Open the protection cover. 2. Insert the sensor head, with the lock lever on its connector area facing upward, all the way into the connector port.



5. Specifications

Table with columns: Item, Detection method, Distance configuration model, Light source (wavelength) *1, Measurement range, Standard measurement gap *2, Spot size *3, Indicator, Ambient illumination, Ambient temperature, Ambient humidity, Insulation resistance, Dielectric strength, Vibration resistance, Shock resistance, Degree of protection, Connection method, Material (Case, Lens, Cable), Weight (packed state/main unit only), Accessories.

*1. The E3NC-SH is classified into Class 1 by the standard of EN60825-1 according to deviations of Laser Notice No.50 of FDA standard, and will be reported to CDRH (Center for Devices and Radiological Health).

Suitability for Use

THE PRODUCTS CONTAINED IN THIS SHEET ARE NOT SAFETY RATED. THEY ARE NOT DESIGNED OR RATED FOR ENSURING SAFETY OF PERSONS, AND SHOULD NOT BE RELIED UPON AS A SAFETY COMPONENT OR PROTECTIVE DEVICE FOR SUCH PURPOSES.

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of the products in the customer's application or use of the product.

Take all necessary steps to determine the suitability of the product for the systems, machines, and equipment with which it will be used. Know and observe all prohibitions of use applicable to this product.

NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

See also Product catalog for Warranty and Limitation of Liability.

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