

Smart Sensor

OMRON

Model ZX2-LD

Laser Displacement Sensor CMOS type
Sensor head unit For Model ZX2-LDA

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

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

Table with 2 columns: Symbol and Description. Includes Laser beam hazard and Resolution prohibition.

Alert Statements

WARNING

Do not expose your eyes to the laser radiation either directly (i.e., after reflection from a mirror or shiny surface).

Do not disassemble the product. Doing so may cause the laser beam to leak, resulting in the danger of visual impairment.

SAFETY PRECAUTIONS FOR USING LASER EQUIPMENT

The ZX2-LD use a laser as the light source. Lasers are classified based on EN standard (EN 60825-1)

Table with 2 columns: Parameter and Value. Includes Wavelength (660nm), Peak power (1mW max), and Classification (Class 2).

Labeling on Laser Use

The ZX2-LD has the following WARNING label on the side of the sensors.

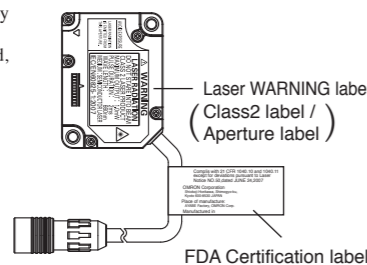
Using in a country other than U.S.

For countries other than Japan and U.S., warning labels must be replaced by English ones (supplied with the product).

The ZX2-LD is categorized as a Class 2 device as stipulated in EN60825-1:2007.

When using devices in which ZX2-LD is installed in the U.S., the devices are subjected to the U.S. FDA (Food and Drug Administration) laser regulations.

Replace the WARNING label with the corresponding English label and put the FDA Certification label. Please make sure that the label are affixed at the correct locations as indicated.



PRECAUTIONS FOR SAFE USE

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

- (1) Installation Environment
(2) Power Supply and Wiring
(3) Installation
(4) Other Rules

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:
(2) Power Supply and Wiring
(3) Warning Up
(4) Maintenance and inspection

- (5) Sensing Object For Reflective Type Sensor Head
(6) Mutual interference

Summary of manufacturer's requirements (EN60825-1:2007)

Table with 8 columns: Requirements subclause, Class 1, Class 1M, Class 2, Class 2M, Class 3R, Class 3B, Class 4. Includes rows for Description of hazard class, Protective housing, Safety interlock, Remote Interlock, Manual Reset, Key control, Emission warning device, Attenuator, Location controls, Viewing optics, and Scanning.

Checking the package contents

- Sensor head x1
· Ferrite core x1
· Laser WARNING label x1
· FDA Certification label x1
· Manual (this paper) x1

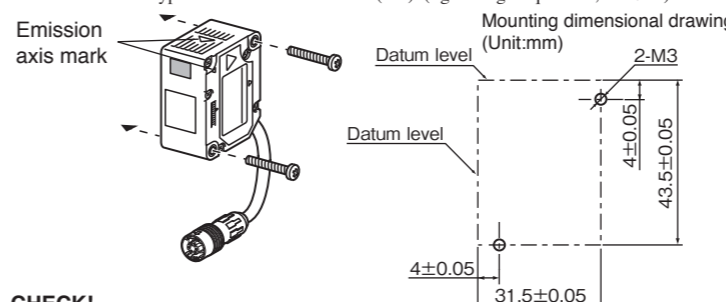
1. Specifications

Table with 4 columns: Model (ZX2-LD50L, ZX2-LD50, ZX2-LD100L, ZX2-LD100) and rows for Item, Applicable Amplifier Units, Measuring center distance, Measuring range, Light source, Beam diameter, Resolution, Linearity, Temperature characteristic, Surrounding air temperature, Ambient humidity, Operating ambient illumination, Dielectric strength, Vibration resistance, Shock resistance, Degree of protection, Materials, and Weight.

- F.S.: Full scale of measurement
(*1) Beam diameter: Value of minimum diameter in measuring range.
(*2) Resolution: Fluctuation width of linear outputs when connected to Amplifier Unit.
(*3) Linearity: The error in relation to the ideal displacement output straight line.
(*4) Temperature characteristic: Value obtained when the sensor and object (standard work) are fixed with an aluminum jig.

2. Installing Sensor Heads

Fix the Reflective type sensor head with screws (M3). (tightening torque: M3, 0.5N·m)

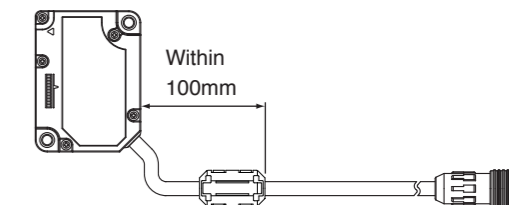


CHECK!

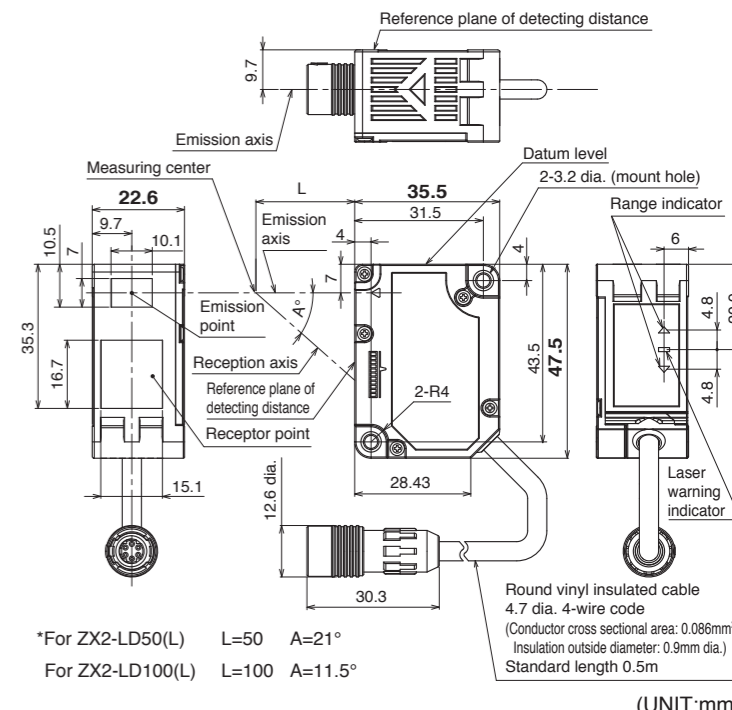
When mounting a Sensor Head, take care not to touch the emitter and receiver. Adhesion of finger marks may hinder correct measurements.

3. Sensor connections

A ferrite core (supplied with the sensor head) must be attached to the sensor cable. The ferrite cores can be connected within 100 mm from the sensor.



4. Dimensions



*For ZX2-LD50(L) L=50 A=21°
For ZX2-LD100(L) L=100 A=11.5°

Suitability for Use

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product.

NEVER USE THE PRODUCT 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(S) 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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