

INSTRUCTION SHEET

Surface Mount Indicator LH1D-D3 Series

Confirm that the delivered product is what you have ordered.
Read this instruction sheet to make sure of correct operation.
Make sure that the instruction sheet is kept by the end user.

Safety Precautions

In this operation instruction sheet, safety precautions are categorized in order of importance to Warning and Caution:

WARNING

Warning notices are used to emphasize that improper operation may cause severe personal injury or death.

CAUTION

Caution notices are used where inattention might cause personal injury or damage to equipment.

WARNING

- Before operating the LH1D-D3 indicator, read the instruction sheet carefully, and ensure that the environment conforms to the requirements of the LH1D-D3 specifications.
- Before designing the final equipment and powering up the LH1D-D3 indicator, confirm the specifications described on this sheet. If there is any uncertainty in the description, contact IDEC before powering up the LH1D-D3 indicator.
- Do not disassemble, repair, or modify the LH1D-D3 indicator, otherwise severe accidents may result, such as electric shocks, damage, fire, or malfunction.
- Turn off the power to the LH1D-D3 indicator before wiring. Make sure of correct wiring, otherwise electric shocks or damage may result.
- Make sure that the LH1D-D3 indicator does not fall during transportation, installation, and operation, otherwise damage may result.
- Do not pull out or push in the cable of the LH1D-D3 indicator, otherwise damage may result. Give a slack to the cable while wiring.
- The LH1D-D3 indicator is a general-purpose and industrial electronic device. Do not use the LH1D-D3 indicator for electronic equipment which may damage a human body or threaten a life in case a malfunction or failure occurs.

CAUTION

- LED modules and indicator may vary in illumination colors and illuminance.
- Apply a voltage within the rated value, otherwise the LED elements may be damaged.
- The LH1D-D3 indicator is vulnerable to static electricity. Take a sufficient measure for protection against static electricity and surge voltages.
- Do not apply an excessive force to the LH1D-D3 indicator. Do not leave a damaged LH1D-D3 indicator unattended or use a damaged LH1D-D3.
- Make sure of the correct operating temperature, which is the temperature around the LH1D-D3 indicator. Otherwise internal temperature rise may result in damage.
- Do not use or store the LH1D-D3 indicator in a place subjected to vibrations and shocks.
- Do not use the LH1D-D3 indicator in the following places:
 - Exposed to direct sunlight, near heaters, and at high temperatures
 - Subjected to chemicals, and corrosive gases
 - Basements, greenhouses, and other humid places

1 Types

Type No.	Connection	Illumination
LH1D-D3HQ4C□①	Cable	One color
LH1D-D3HQ4C□①②	Cable	Two-color alternate
LH1D-D3HQ4C□①②③	Cable	Three-color alternate
LH1D-D3HQ4CN1①	Connector	One color
LH1D-D3HQ4CN1①②	Connector	Two-color alternate
LH1D-D3HQ4CN1①②③	Connector	Three-color alternate

□ : Cable length (10: 1m, 30: 3m, 50: 5m) ①②③: Illumination color

2 Specification

Rated Insulation Voltage (Ui)	32V
Rated Voltage	Cable Connection: 24V AC/DC
	Connector Connection: 24V DC
Operating Voltage Range	Cable Connection: 24V AC/DC±10%
	Connector Connection: 24V DC±10%
Rated Current	17 mA
Maximum Current Draw	0.6W

Note: Use Class 2 power supply when using the LH1D as UL compliant product.

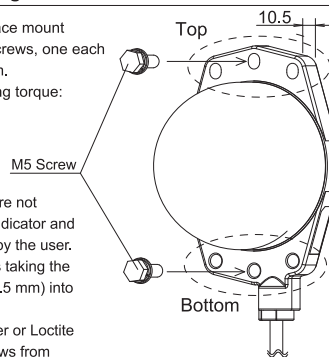
Use Class III circuit when using the LH1D as EN compliant product.

Note: 24V AC, 50/60Hz

3 Panel Mounting

Install the LH1D-D3 surface mount indicator using two M5 screws, one each on the top and the bottom.

Recommended tightening torque:
1.0 to 1.4 N·m

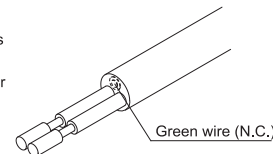


Note: Mounting screws are not supplied with the indicator and must be prepared by the user. Choose the screws taking the base thickness (10.5 mm) into consideration.

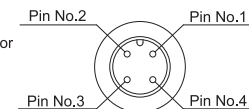
Note: Apply spring washer or Loctite to prevent the screws from loosening.

4 Notes for installation

- For one-color illumination of cable connection type, the green wire is cut short because it is not used. When cutting the cable for shorter wiring, cut the green wire shorter or make sure that the green wire is not used.



- The pin layout of sensor connector for connector connection type is shown at the right.



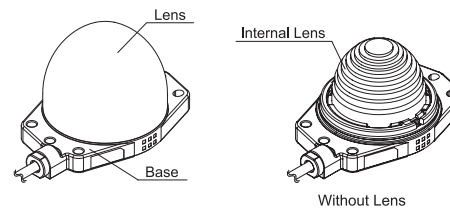
- Excessive shock to the LH1D may cause damage or failure, and the internal lens might have come off even if no detects are found externally. The internal lens may have come off when:

- The illumination varies greatly depending on the orientation when viewed from the side.
- The indicator makes rattling sound when shaken lightly.

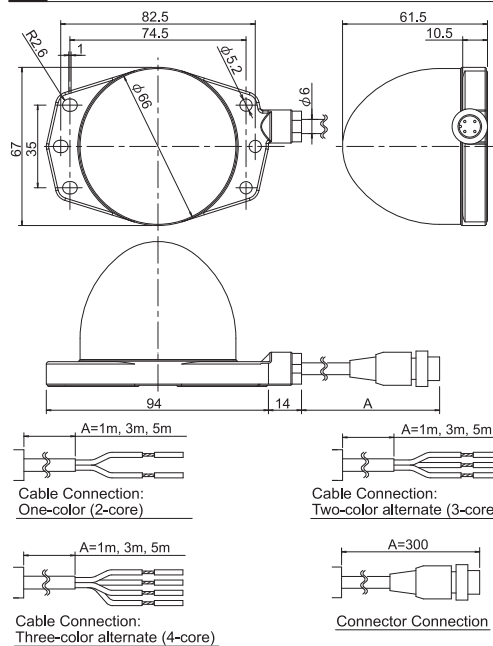
When any of these phenomena is observed, contact IDEC.

Note: Do not remove the lens.

The specified degree of protection cannot be assured when the lens is removed.



5 Dimensions

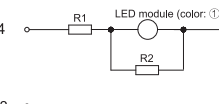


6 Internal Circuit

Cable : cable color / Connector : Pin No.

One-color illumination

Cable : White / Connector : Pin No. 4



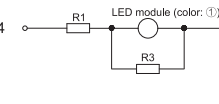
Cable : Brown / Connector : Pin No. 3

Cable : Green / Connector : Pin No. 2

Connector : Pin No. 1

Two-color alternate illumination

Cable : White / Connector : Pin No. 4



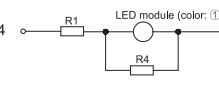
Cable : Brown / Connector : Pin No. 3

Cable : Green / Connector : Pin No. 2

Connector : Pin No. 1

Three-color alternate illumination

Cable : White / Connector : Pin No. 4



Cable : Brown / Connector : Pin No. 3

Cable : Yellow / Connector : Pin No. 1

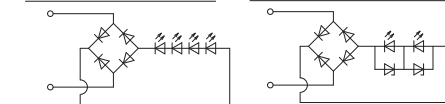
Connector : Pin No. 2

LED module internal circuit

Internal circuit of LED module differs depending on the illumination color.

Illumination color: R, A, W

Illumination color: G, S, PW



LED chip Rectifying diode Zener diode

Illumination color: R(red), A(amber), W(white), G(Green), S(Blue), PW(Pure white)

•PW (pure white) LED is used for Y (yellow) illumination.

7 Precautions for Disposal

- Dispose of the LH1D-D3 LED indicator as an industrial waste.