Compact Laser Displacement Sensor

HL-G1 SERIES

Related Information
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■ Sensor selection guide ..... P.967~
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NEW

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CE Conforming to EMC Directive

FDA Conforming to FDA regulations

This product is classified as a Class 2 Laser Product in IEC / JIS standards and in FDA regulations 21 CFR 1040.10. Do not look at the laser beam directly or through optical system such as a lens.

Introducing the new standard in CMOS laser displacement sensors

This single instrument delivers both high-precision measurement and computer-driven data analysis.

HL-G112
- Measurement center distance: 120 mm 4.724 in
- Measurement range: ±60 mm ±2.362 in
- Resolution: 8 µm 0.315 mil

HL-G108
- Measurement center distance: 85 mm 3.346 in
- Measurement range: ±20 mm ±0.787 in
- Resolution: 2.5 µm 0.098 mil

High resolution of 0.5 µm 0.02 mil

Thanks to high-precision measurement at a resolution of 0.5 µm 0.02 mil and an LED digital display that provides exceptional ease of use, the **HL-G1** series will see use in a variety of applications on production lines worldwide.

HL-G105
- Measurement center distance: 50 mm 1.969 in
- Measurement range: ±10 mm ±0.394 in
- Resolution: 1.5 µm 0.059 mil

HL-G103
- Measurement center distance: 30 mm 1.181 in
- Measurement range: ±4 mm ±0.157 in
- Resolution: 0.5 µm 0.02 mil

Fast

Setup is fast and efficient by using the built-in digital display to set measurement parameters such as sampling cycle and output options.

Compact

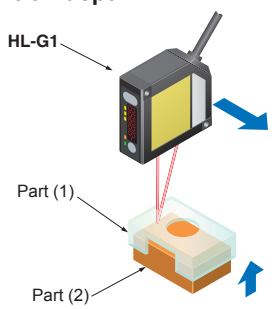
The **HL-G1** series features a compact design despite its built-in controller and digital readout. Thanks to our miniaturization technology, it can easily be installed on robot arms and in confined spaces.

User-friendly

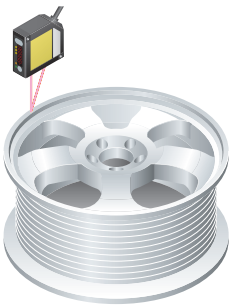
The **HL-G1** series now features a user-friendly interface that offers improved ease of use when operating via computer software or HMI unit for more sophisticated operation and analysis.

APPLICATIONS

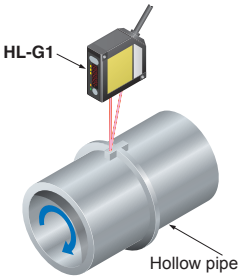
Measurement of actuator part insertion depth



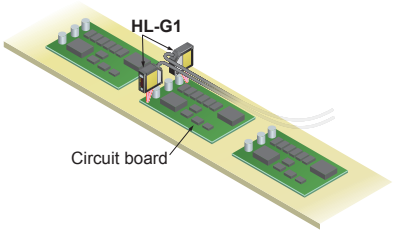
Detection of aluminum wheel grooves



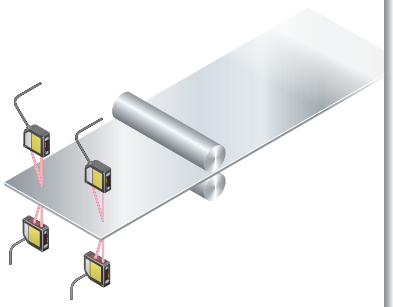
Control of hollow pipe positioning



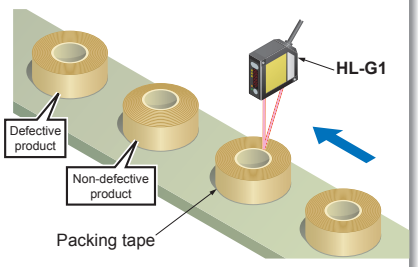
Detection of circuit board warpage



Measurement of sheet thickness



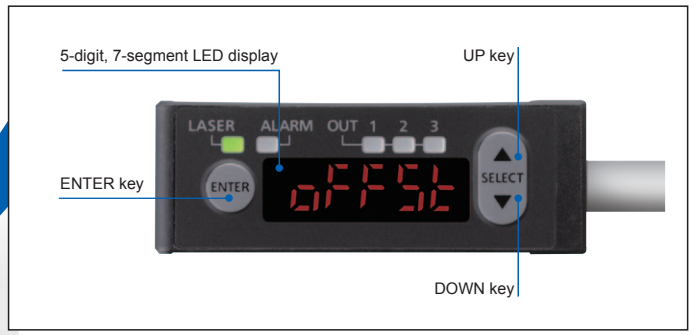
Measurement of packing tape thickness

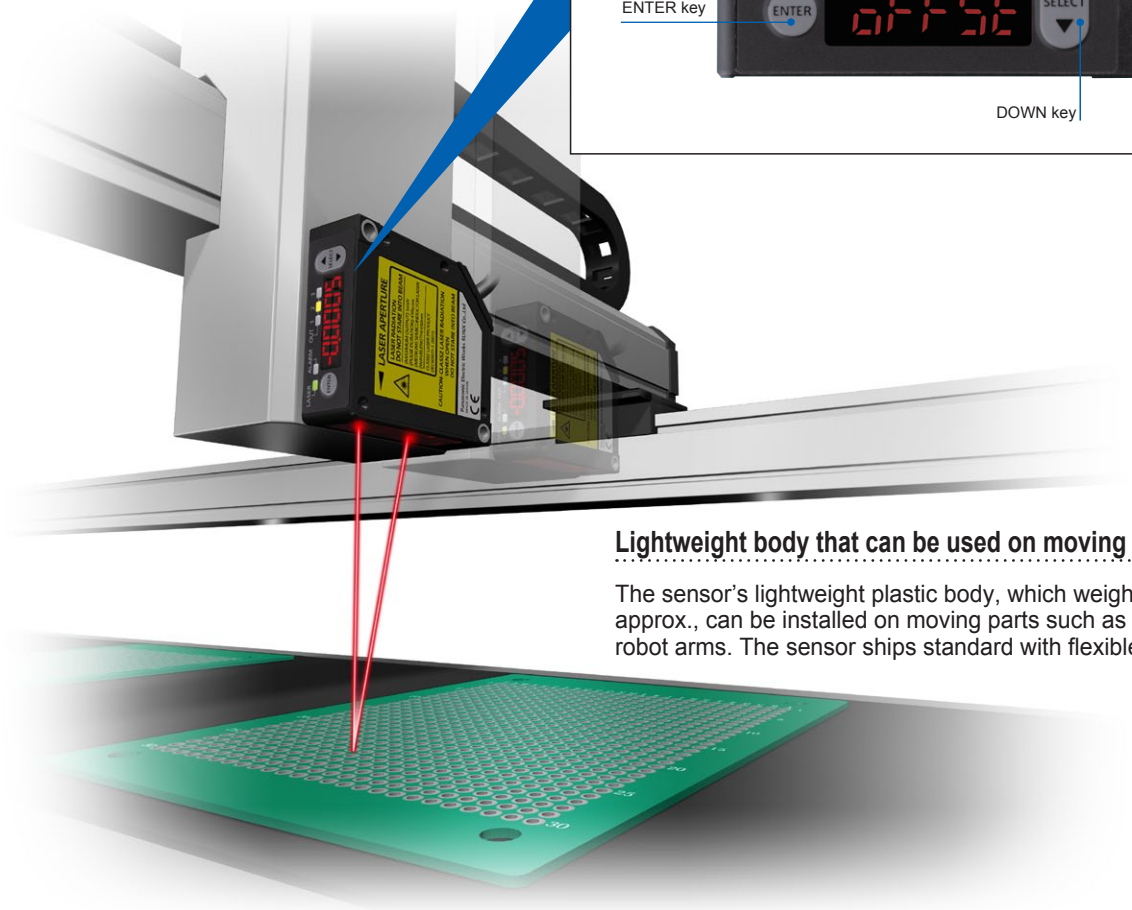


BASIC PERFORMANCE

Easy configuration using the digital display

The built-in digital display makes it easy to configure sensor operation while checking displacement values.





Lightweight body that can be used on moving machinery

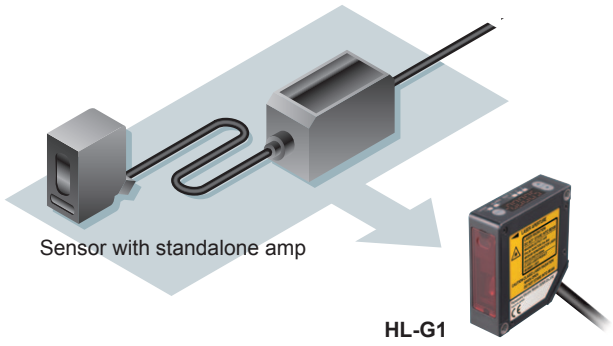
The sensor's lightweight plastic body, which weighs 70 g approx., can be installed on moving parts such as sliders and robot arms. The sensor ships standard with flexible cables.

Compact

Compact size despite the built-in controller and digital readout.

Easy to embed in machines and production lines

As a self contained sensor, the **HL-G1** series offers a space saving configuration by removing the need for an external controller.



IP67 dust- and water-proof protective enclosure

Thanks to its IP67-rated protective enclosure, the **HL-G1** can be used in the presence of water and dust. Mounting holes are lined with metal sleeves, allowing the instrument to be tightened securely in place with up to 0.8 N·m of torque.

FUNCTIONS

Timing input and multi input

Inaddition to timing input select the desired input according to your application:

- Zero set on/off
- Reset
- Memory switching
- Laser control
- Teaching
- Saving

Featuring 3 outputs and an analog 2 outputs

With three outputs, the **HL-G1** can be used to generate HI/GO/LOW judgment output or alarm output. The analog output can be used in both current and voltage modes.

Support for both NPN and PNP polarity GLOBAL SUPPORT

A single model number accommodates both NPN and PNP wiring polarity, reducing the number of model numbers that must be registered for maintenance purposes.

Memory switching function

Up to four groups of sensor settings can be stored for fast recall. Easy switching among setting groups allows smooth setup changes.

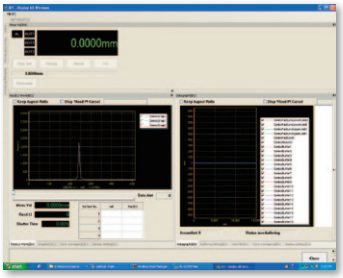
HIGH FUNCTIONALITY TYPE

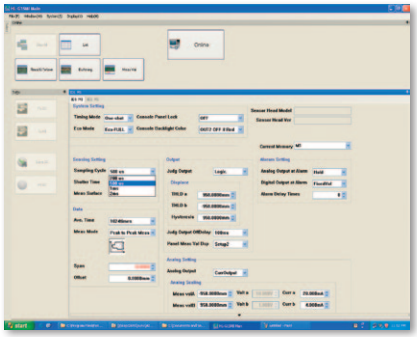
Software tool for sensor configuration and evaluation

FREE DOWNLOAD

In addition to configuring up to 16 sensors at once, this free tool makes it easy to gather data needed for analysis, including received light waveform monitoring and data buffering. The interface language can be selected at the time of installation.

- Data buffering
  Stores and displays measurement data. Data can be superimposed on past measurement data and displayed for easy comparison and analysis.
- Received light waveform display
  Displays the amount of light received across all cells of the detector element.
- Measured value display
  Displays measured values as well as the output state for all terminals.





HMI screen

FREE DOWNLOAD

The **GT02** / **GT12** HMI operator pannel can be used in combination with the **HL-G1** to allow easy confirmation of sensor status and configuration of sensor settings from a remote location. Japanese, English, Chinese, and Korean are supported.

Select from the following HMI operator panels:

Power supply: 24 V
Communications port: RS422 (RS485)

- AIG02GQ 14D
- AIG02MQ 15D
- AIG12GQ 14D/15D
- AIG12MQ 14D/15D

Refer to the programable display **GT** series pages.

Multilingualization

GLOBAL SUPPORT

Software tool and HMI screen data support not only Japanese and English, but also Chinese and Korean, providing a new level of support for devices and equipment in use worldwide.

Terms of use

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