Micro Laser Distance Sensor
HG-C SERIES

Large measuring range:
25-600mm
HG-C SERIES

Analog voltage output (0-5V) / current output (4-20mA)

The sensor not only indicates measured values in mm, but also outputs analog voltage / current. The data can be used for various calculations and storage (logging) when the output is sent to a PLC + analog unit.

Configurable external input

The external input can be configured to perform one of four functions: zero adjustment, teaching, Laser ON/OFF, trigger function selection.

Teaching & window comparator mode

1-point teaching

Perform 1-point teaching and the threshold range is set for the distance from the reference surface of the object to be detected.

2-point teaching

Press the button TEACH once for the lower (first point) and once for the upper limit (second point). This is useful for detecting objects at different distances.

3-point teaching

This is the method to set the threshold range by conducting the teaching at 3 points (detecting object A, B and C). After teaching, the reference points are automatically sorted in ascending order (reference point 1, 2 and 3). The thresholds are set at the midpoints between reference point 1 and 2, and 2 and 3, respectively. This is useful for detecting objects at different distances.

Measurement center distance: 400mm
Measuring range: ±200mm
Beam diameter: approx. 500μm
Repeatability: 200μm

Measurement center distance: 200mm
Measuring range: ±100mm
Beam diameter: approx. 300μm
Repeatability: 100μm

Measurement center distance: 100mm
Measuring range: ±35mm
Beam diameter: approx. 120μm
Repeatability: 70μm

Measurement center distance: 50mm
Measuring range: ±15mm
Beam diameter: approx. 70μm
Repeatability: 30μm

Measurement center distance: 30mm
Measuring range: ±5mm
Beam diameter: approx. 50μm
Repeatability: 10μm

Measurement center distance: 600mm
Measuring range: ±800mm
Beam diameter: approx. 3000μm
Repeatability: 2000μm
Measuring the hoop slack

Measuring the thickness of a panel

Controlling the dispenser head height

Checking for overlapped lead frames

Compact and light weight:
20 x 44 x 25mm (width x height x depth)

Excellent linearity:
±0.1% F.S.

Reliable detection and overwhelmingly stable:
Repeatability of 10μm
### SPECIFICATIONS

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#### Application standards
Conforming to EMC Directive and FDA Standard

#### Measurement center distance
- HG-C1030: 30mm
- HG-C1050: 50mm
- HG-C1100: 100mm
- HG-C1200: 200mm
- HG-C1400: 400mm

#### Measuring range
- HG-C1030: ±5mm
- HG-C1050: ±15mm
- HG-C1100: ±35mm
- HG-C1200: ±80mm
- HG-C1400: ±200mm

#### Repeatability
- HG-C1030: 10μm
- HG-C1050: 30μm
- HG-C1100: 70μm
- HG-C1200: 200μm
- HG-C1400: ±300μm (200-400mm), ±800μm (400-600mm)

#### Linearity
- ±0.1% of F.S.
- ±0.2% of F.S.
- ±0.2% of F.S. (200-400mm)
- ±0.3% of F.S. (400-600mm)

#### Beam diameter
- Approx. 50μm
- Approx. 70μm
- Approx. 120μm
- Approx. 300μm
- Approx. 500μm

#### Supply voltage
12 to 24V DC ±10% including ripple max. 10% (P-P)

#### Control output
PNP or NPN open-collector transistor

#### Output operation
Either Light-ON or Dark-ON

#### Short-circuit protection
Incorporated (auto-reset)

#### Analog output
- Voltage output: 0 to 5V (at alarm: ±5.2V) / Output impedance: 1000
- Current output: 4 to 20mA (at alarm: 0mA) / Load impedance: 300Ω or less
- Switchable via settings

#### Response time
Switchable between high speed (1.5ms), standard (5ms), and high precision (10ms)

#### Degree of protection
IP67 (IEC)

#### Ambient temperature
- -10 to +45°C (no dew condensation or icing allowed), storage: -20 to +60°C

#### Ambient humidity
35 to 85% RH, storage: 35 to 85% RH

#### Ambient illumination
3000xl max. (illumination level of light receiving surface under incandescent light)

#### Cable
5-core cable, 2m long

#### Material
Casing: aluminum die-cast, front cover: acrylic

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