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Sensors

Photoelectric Sensors / Laser Sensors

CMOS type Micro Laser Distance Sensor HG-C

HG-C1050-P

Fiber Sensors

Light Curtains / Safety Components

Area Sensors

Micro Photoelectric Sensors

Inductive Proximity Sensors

Particular Use Sensors

Sensor Options

Wire-Saving Systems

Configuration examples of IO-Link compatible devices

HG-C1050-P | CMOS type
Micro Laser Distance
Sensor HG-C

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Catalog/
Datasheet CAD Manual



*Photo may vary from actual product.



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Contact Us

Technical inquiries,
Purchase Support &
Additional Assistance

Technical inquiry

Business inquiry

Other inquiry

| | |
|----------------|--|
| Product Number | HG-C1050-P |
| Part Number | HG-C1050-P |
| Product | CMOS type Micro Laser Distance Sensor |
| Details | Measurement center 50mm 1.969 in type |
| Product Name | CMOS type Micro Laser Distance Sensor HG-C |

Contact Us

Technical inquiry

Business inquiry

Other inquiry

Spec
Detail



Accessories
(Option)



As of April 26, 2025 (JST)
*Specifications and design of the products are subject to change without notice for the product improvement.

Spec Detail

Specifications and design of the products are subject to change without notice for the product improvement.

| Item | Specifications |
|----------------|---------------------------------------|
| Product Number | HG-C1050-P |
| Part Number | HG-C1050-P |
| Products Name | CMOS type Micro Laser Distance Sensor |




| Item | Specifications |
|---|--|
| Product details | Measurement center 50mm 1.969 in type |
| The price of the product | Please contact our office |
| Applicable regulations and certifications | CE Marking (EMC Directive, RoHS Directive), UKCA Marking (EMC Regulations, RoHS Regulations), FDA Regulations, UL/c-UL Certification (Note) : The UL/c-UL certified products have been shipped since April, 2017. |
| Measurement center distance | 50mm 1.969 in |
| Measuring range | ±15mm 0.591 in |
| Repeatability | 30 μm 1.181 mil |
| Linearity | ±0.1%F.S. |
| Temprerature characteristics | 0.03% F.S. /°C |
| Light source | Red semiconductor laser Class 2 (IEC / EN/ JIS / GB / KS / FDA) / Class II (FDA)(Note) Max. output: 1mW emission peak wavelength: 655nm 0.026 mil (Note) This product complies with the FDA regulations (FDA 21 CFR 1040.10 and 1040.11) in |



| Item | Specifications |
|---------------------|---|
| | accordance with FDA Laser Notice No. 56, except for complying with IEC 60825-1 Ed. 3. |
| Beam diameter | $\varnothing 70\text{ }\mu\text{m}$ 1.1811 mil approx. (Note) This is the size in the measurement center distance. These values were defined by using 1 / e^2 (13.5% approx.) of the center light intensity. Due to leak light outside the specified area, the reflectance around the detecting point may be higher than at the point and this may affect the measurement value. |
| Supply voltage | 12 to 24V DCplus or minus 10% Ripple P-P 10% |
| Current consumption | 40 mA or less (at 24V DC supply voltage) 65 mA or less (at 12V DC supply voltage) Note : Specifications have been changed from shipment in August, 2016. For shipment before July 2016 : 40 or less (at 24 V |



| Item | Specifications |
|---|---|
| | supply voltage), 60 mA or less (at 12 V DC supply voltage) |
| Control output | PNP open-collector transistor - Maximum source current: 50mA - Applied voltage: 30V DC or less (Between control output to +V) - Residual voltage: 1.5V or less (At 50mA source current) - Leakage current: 0.1 mA or less |
| Control output:Output operation | Either Light-ON or Dark-ON |
| Control output:Short-circuit protection | Incorporated (Auto reset type) |
| Analogue output : Analog voltage output | <ul style="list-style-type: none"> • Output range: 0 to 5 V (at alarm: +5.2 V) • Output impedance: 100Ω |
| Analogue output : Analog current output | <ul style="list-style-type: none"> • Output range: 4 to 20mA (at alarm: 0mA) • Output impedance: 300Ω or less Note : Analog current output has been added from shipment in August 2016. |
| Response time | Switchable between 1.5 ms / 5 ms / 10 ms  |

| Item | Specifications |
|----------------------|--|
| External input | PNP non-contact input - Input conditions Invalid: 0 to +0.6V DC or Open Valid: +4 to +V DC - Input impedance: 10kΩ approx. |
| Pollution degree | 2 |
| Operating altitude | 2,000 m 6561.680 ft or less |
| Protection | IP67 (IEC) |
| Ambient temperature | -10 to +45 °C -14 to 113 °F (No dew condensation or icing allowed), Storage: -20 to +60 °C -4 to 140 °F |
| Ambient humidity | 35 to 85% RH, Storage: 35 to 85% RH |
| Ambient illuminance | Incandescent light: 3,000 lx or less at the light-receiving face |
| Vibration resistance | 10 to 55 Hz (period: 1 min.) frequency, 1.5 mm 0.059 in double amplitude in X, Y and Z directions for two hours each |
| Shock resistance | 500 m/s ² acceleration (50 G approx.) in X, Y and Z directions three times each |



| Item | Specifications |
|-----------------|--|
| Cable | 5-core composite cable, 2 m 6.5617 ft long |
| Cable extension | Extension up to total 10 m 393.701 ft is possible with 0.3 mm ² , or more, cable. |
| Material | Enclosure: Aluminum die-cast Front cover: Acrylic |
| Weight | Net weight: 35 g approx. (without cable), 85 g approx. (including cable) |

Accessories (Option)

| | Product number | Part number | Product | D |
|---------------------|--------------------------|-------------|---------|---|
| <div>No image</div> | MS-HG-01 | MS-HG-01 | - | - |

Recently checked products

Recently checked product numbers

- HG-C1030-P | CMOS type Micro Laser Distance Sensor HG-C

>
- GX-F8B-P | Rectangular-shaped Inductive Proximity Sensor GX-F/H

>
- GX-F8B | Rectangular-shaped Inductive Proximity Sensor GX-F/H

>



- GX-F8A-P | Rectangular-shaped Inductive Proximity Sensor GX-F/H >
- GX-F8A | Rectangular-shaped Inductive Proximity Sensor GX-F/H >

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Motors for FA & Industrial Application, Motors for Appliance & Automotive

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Guidelines for Ordering and Usage

Requests to customers (FA Sensors & Components [Excluding motors])

Requests to customers (Dedicated to industrial motors)



Components & Devices

Relays / Couplers
Connectors
Switches
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Transparent Conductive Film
Cooling Fan

FA Sensors & Components

| | | |
|---------------------------------------|--|---------------------------------|
| Fiber Sensors | Sensor Options | Static Control Devices |
| Photoelectric Sensors / Laser Sensors | Wire-Saving Systems | Laser Markers / 2D Code Readers |
| Micro Photoelectric Sensors | Programmable Controllers / Motion Controller | Machine Vision System |
| Light Curtains / Safety Components | Human Machine Interface | Energy Management Solutions |
| Area Sensors | Pressure Sensors / Flow Sensors | |
| Inductive Proximity Sensors | Measurement Sensors | |
| Particular Use Sensors | | |

Motors for FA & Industrial Application

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