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Sensors

Photoelectric Sensors / Laser Sensors >

Compact Photoelectric Sensor CX-400 Ver.2 >

CX-412

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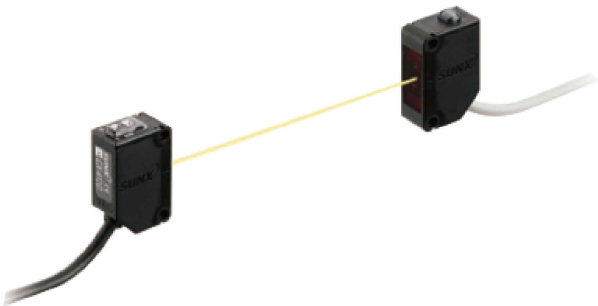
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CX-412 | Compact  
Photoelectric Sensor CX-400 Ver.2

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Catalog/  
Datasheet      CAD      Manual



\*Photo may vary from actual product.



Contact Us

Technical Inquiries,  
Purchase Support &  
Additional Assistance

Technical inquiry

Business inquiry

Other inquiry

|                |   |
|----------------|---|
| Product Number | CX-412  |
| Part Number    | CX-412  |
| Product        | Compact Photoelectric Sensor                              |
| Details        | Thru-beam(Long sensing range)                             |
| Product Name   | <a href="#">Compact Photoelectric Sensor CX-400 Ver.2</a> |

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 | CX-412                       |
| Part Number    | CX-412                       |
| Products Name  | Compact Photoelectric Sensor |



| Item   | Specifications   |
|--|--|
| Product details                              | Thru-beam(Long sensing range)  |
| 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), UL Recognition Certification                                 |
| Sensing range                                | 15 m 49.213 ft   |
| Sensing object                               | Ø12 mm Ø0.472 in or more opaque object (Note) If slit masks (optional) are fitted, an object of Ø0.5 mm Ø0.020 in (using round slit mask) can be detected. |
| Hysteresis                                   | -  |
| Repeatability(perpendicular to sensing axis) | 0.5 mm 0.020 in or less  |
| Supply voltage                               | 12 to 24 V DC plus or minus 10 % Ripple P-P 10 % or less   |
| Current consumption                          | Emitter: 20 mA or less<br>Receiver: 10 mA or less  |
| Output                                       | NPN open-collector transistor<br>- Maximum sink current: 100 mA<br>- Applied voltage: 20 V DC or less (between output and 0 V)                             |



| Item                                       | Specifications   |
|--|--|
|  | - Residual voltage: 2 V or less (at 100 mA sink current), 1 V or less (at 16 mA sink current)  |
| Output:Output operation                    | Switchable either Light-ON or Dark-ON  |
| Output:Short-circuit protection            | Incorporated   |
| Response time                              | 1 ms or less   |
| Operation indicator                        | Orange LED(lights up when the output is ON)<br>(incorporated on the receiver for thru-beam type)   |
| Stability indicator                        | Green LED(lights up under stable light received condition or stable dark condition)<br>(incorporated on the receiver for thru-beam type) |
| Power indicator                            | Green LED(lights up when the power is ON)<br>(incorporated on the emitter)   |
| Sensitivity adjuster                       | Continuously variable adjuster(incorporated on the receiver for thru-beam type)  |
| Automatic interference prevention function | -  |
| Protection                                 | IP67 (IEC)   |
| Ambient temperature                        | - 25 to +55°C -13 to +131°C °F (No de<br>condensation or   |


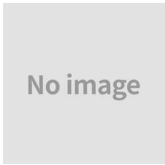
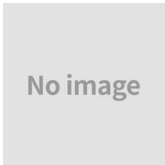


| Item  | Specifications  |
|---|---|
|   | allowed ), Storage:<br>-30 to +70°C -22 to +158°C °F  |
| Ambient humidity                                      | 35 to 85 % RH,<br>Storage: 35 to 85 % RH  |
| Ambient illuminance                                   | Incandescent light:<br>3,000 lx or less at the light-receiving face                                       |
| Voltage withstandability                              | 1,000 V AC for one min. between all supply terminals connected together and enclosure                     |
| Insulation resistance                                 | 20 MOhm , or more, with 250 V DC megger between all supply terminals connected together and enclosure     |
| Vibration resistance                                  | 10 to 500 Hz frequency, 1.5 mm 0.059 in amplitude (10 G max.) in X, Y and Z directions for two hours each |
| Shock resistance                                      | 500 m/s <sup>2</sup> acceleration (50 G approx.) in X, Y and Z directions three times each                |
| Emitting element (modulated)                          | Infrared LED  |
| Emitting element (modulated):Peak emission wavelength | 870 nm 0.034 mil  |
| Material  | Enclosure: PBT (polybutylene terephthalate)<br>Lens: acrylic  |



| Item            | Specifications   |
|-----------------|--|
|                 | Indicator cover:<br>acrylic  |
| Cable           | 0.2 mm <sup>2</sup> 3-core<br>(emitter: 2-core)<br>cabtyre cable, 2 m<br><a href="#">6.562 ft</a> long   |
| Cable extension | Extension up to total<br>100 m <a href="#">328.084 ft</a> is<br>possible with 0.3<br>mm <sup>2</sup> , or more, cable<br>(both emitter and<br>receiver). |
| Weight          | Net weight: 95 g<br>approx.<br>Gross weight: 100 g<br>approx.  |
| Accessory       | -  |

## Accessories (Option)

|   | Product number           | Part number | Product | D |
|---|--------------------------|-------------|---------|---|
|  | <a href="#">MS-AJ1</a>   | MS-AJ1      | -       | - |
|  | <a href="#">MS-AJ1-A</a> | MS-AJ1-A    | -       | - |
|  | <a href="#">MS-AJ1-M</a> | MS-AJ1-M    | -       | - |



|                     | Product number         | Part number | Product | Discontinued |
|---------------------|------------------------|-------------|---------|--------------|
| <div>No image</div> | <a href="#">MS-AJ2</a> | MS-AJ2      | -       | -            |

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



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Contact Us

Contact Us

# 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  
Encoders / Potentiometers  
Transparent Conductive Film  
Cooling Fan

## FA Sensors & Components

Fiber Sensors  
Photoelectric Sensors / Laser Sensors  
Micro Photoelectric Sensors  
Light Curtains / Safety Components  
Area Sensors  
Inductive Proximity Sensors  
Particular Use Sensors  
Sensor Options  
Wire-Saving Systems  
Programmable Controllers / Motion Controller  
Human Machine Interface  
Pressure Sensors / Flow Sensors  
Measurement Sensors

Static Control Devices  
Laser Markers / 2D Code Readers  
Machine Vision System  
Energy Management Solutions

## Motors for FA & Industrial Application

AC Servo  
Motors for HVAC & Automotive

