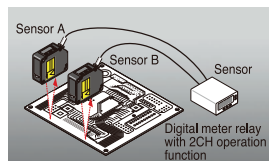
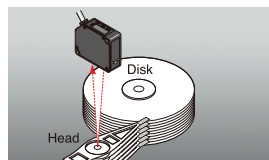


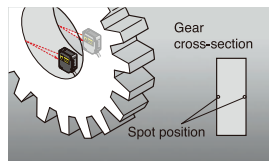
e sensor for high accuracy displacement laser.  
 ent and offset functions for flexible control of analogue output.  
 for Peak / Bottom limit of analogue value.  
 ection of dark colored targets.



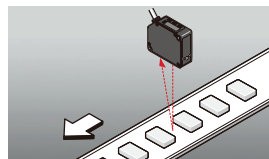
d  
 4mm  
 veraging of 256 times)



y and actuator  
 0mm  
 veraging of 256 times)



5mm  
 veraging of 256 times)



ickness  
 40mm  
 veraging of 256 time)



## Simple pushbutton teach, and easy-to-view

## Simple pushbutton teach, and easy-to-view digital panel

**stability indicator**

- Green — Stable operation
- Dark — Unstable operation
- Red — No operation due to low light or too much light

**distance indicator**

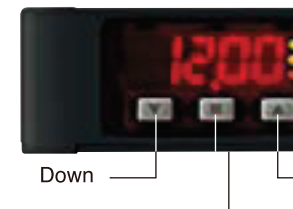
Actual distance between sensor and object as below.

|                      |                                 |
|----------------------|---------------------------------|
| green / red blinking | Out of range                    |
| red                  | Near limit                      |
| orange               | $\pm 5\%$ of reference distance |
| green                | Far limit                       |
| red / green blinking | Out of range                    |

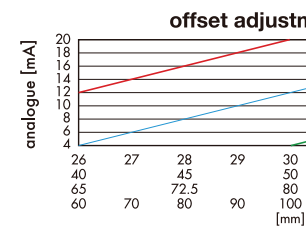
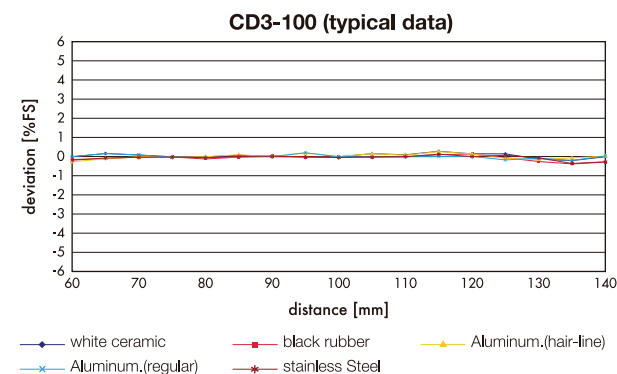
Remarks : The border between the near / far limit and out of range depends upon the sensor model.

**output indicator**

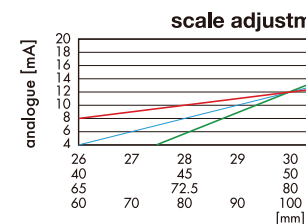
(operation panel)



Stable measurement of both highly  
 reflective polished surfaces as well  
 as non reflective material such as  
 black rubber.



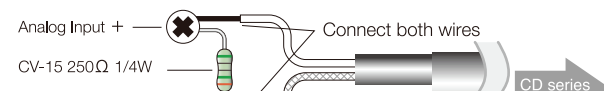
Span adjustment change  
 value (displacement) to the  
 within  $\pm 50\%$  against rated



## Voltage output converter CV-15

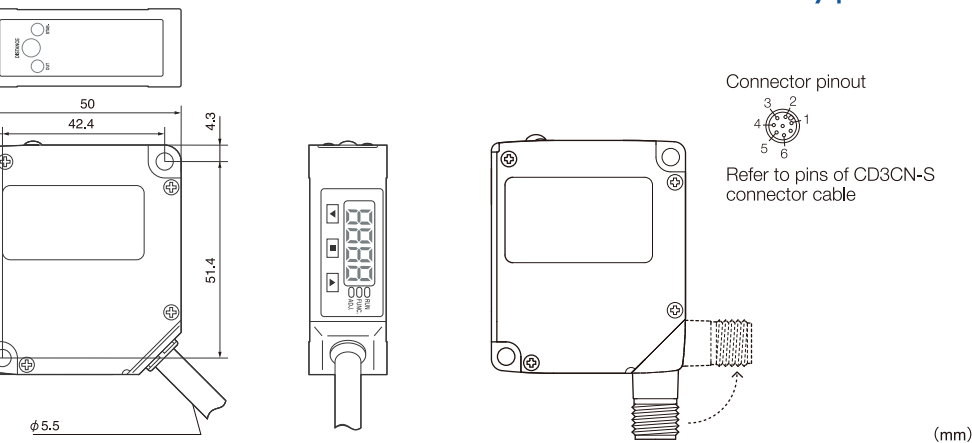
If you need to convert 4-20mA analogue output into  
 1-5V voltage output connect the resistor CV-15.

Digital Meter, etc



Analogue restro

## M12 Connector type



## APPLICATIONS

| CD3-30N/P   | CD3-50N/P   | CD3-80N/P   | CD3-100N/P   | CD3-250N/P   |
|-------------|-------------|-------------|--------------|--------------|
| CD3-30CN/CP | CD3-50CN/CP | CD3-80CN/CP | CD3-100CN/CP | CD3-250CN/CP |

N = NPN output, P = PNP output

|         |          |          |           |            |
|---------|----------|----------|-----------|------------|
| 30 ±4mm | 50 ±10mm | 80 ±15mm | 100 ±40mm | 250 ±150mm |
| 3mm     | 20mm     | 30mm     | 80mm      | 300mm      |

Class 2 Laser, 650nm, max 1mW

|         |         |           |           |           |
|---------|---------|-----------|-----------|-----------|
| φ0.5 mm | φ0.8 mm | 1 × 1.5mm | 1 × 1.5mm | 3 × 1.5mm |
|---------|---------|-----------|-----------|-----------|

12 - 24V DC (−5 to +10%)

Nominal value 1-20, or AUTO

Max 120mA (DC12V), 80mA (DC24V), including analog output current

(Unit : Micron. Under AUTO sensitivity. White ceramic as an object)

|         |         |         |          |     |
|---------|---------|---------|----------|-----|
| 4       | 10      | 10      | 30       | 150 |
| 12      | 30      | 40      | 80       | 2mm |
| 3       | 20      | 30      | 60       | 800 |
| 6       | 12      | 20      | 40       | 400 |
| 2       | 8       | 8       | 20       | 100 |
| below 2 | below 8 | below 8 | below 10 | 50  |

|          |                         |
|----------|-------------------------|
| ±1% F.S. | ±1.5%F.S. (up to 250mm) |
|          | ±2.5%F.S. (up to 400mm) |

±0.08% F.S. / Celsius

Max 2.2ms (at fixed sensitivity between 1-20 ),Max 15ms (at auto sensitivity)

500μs

4-20 mA

NPN or PNP, Max 100mA/DC24V, Residual voltage max 1.8V

On delay / Off delay / Oneshot (1msec increment for 0-999ms, 1sec for 0-10 sec)

Red = Near, Orange = Middle, Green = Far, Red/Green = Error

Remark : Errors as "out of measuring range", "Too high reflection", etc

Green = Stable, Red = Error, No light = Unstable, need adjustment

Orange = Output (NPN or PNP)

Sun light : Max 10,000 lux, Incandescent Lamp = Max 3,000 lux

−10 to 40°C, 35 to 95% RH

- Compact design ideal for built-in use with OEM machine
- Versatility from 30 ±4mm to 250 ±150mm distance.
- If a display and signal control is needed both the digital output of the CD1 can be connected to a digital panel

## LINEUP

### CD1-30

#### 30mm distance type

Sorting of mechanical parts

Measurement range : 30 ±4mm

Resolution : 1 μm (Response speed 100msec)

Linearity : ±2% F.S.



### CD1-50

#### 50mm distance type

Level check of food package

Measurement range : 50 ±10mm

Resolution : 3 μm (Response speed 100msec)

Linearity : ±1% F.S.



### CD1-100

#### 100mm distance type

Height of components on the board

Measurement range : 100 ±35mm

Resolution : 15 μm (Response speed 100msec)

Linearity : ±2% F.S.



### CD1-130

#### 130mm distance type

Cap of bottled beverage

Measurement range : 130 ±50mm

Resolution : 20 μm (Response speed 100msec)

Linearity : ±3.5% F.S.



### CD1-250