CD1 series

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

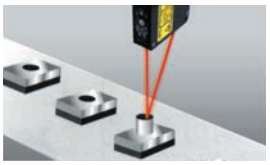
LINEUP

CD1-30

30mm distance type

Sorting of mechanical parts

Measurement range : 30 ±4mm
Resolution : 1 μm (Responce speed 100msec)
Linearity : ±2% F.S.

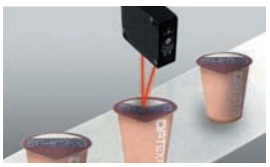


CD1-50

50mm distance type

Level check of food package

Measurement range : 50 ±10mm
Resolution : 3 μm (Responce speed 100msec)
Linearity : ±1% F.S.

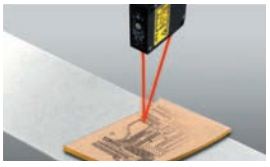


CD1-100

100mm distance type

Height of components on the board

Measurement range : 100 ±35mm
Resolution : 15 μm (Responce speed 100msec)
Linearity : ±2% F.S.



CD1-130

130mm distance type

Cap of bottled beverage

Measurement range : 130 ±50mm
Resolution : 20 μm (Responce speed 100msec)
Linearity : ±3.5% F.S.

CD1-250

250mm distance type

Doubled part of black rubber sheet

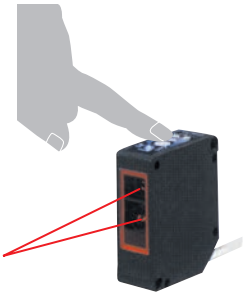
Measurement range : 250 ±150mm
Resolution : 150 μm (Responce speed 100msec)
Linearity : ±5% F.S.

CD1 ADVANCED TECHNOLOGY

All the basic functions packed in a half-plam size, ideal for OEM use.

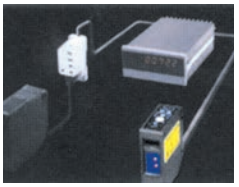
Teach-in system

The CD1 is simple to setup and easy to operate.
It is not necessary to make manual adjustments to the sensor, just push the button.



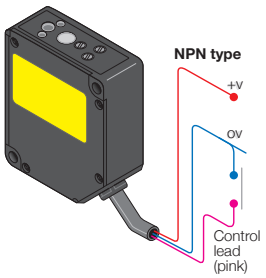
All-in-one solution

The amplifier and sensor are built-in, the CD1 is a complete self-contained sensor.



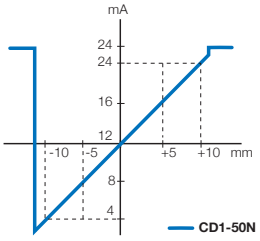
Remote teaching input

The teaching procedure can be carried out remotely by using the remote teach input. There is no need to perform this step at the sensor.
This feature is good for OEM machine builders.



Dual output - Digital On/Off and analog

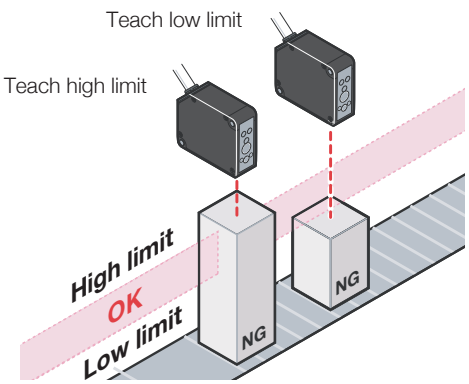
There is a choice of NPN or PNP transistor for the control output, choose the model number based on the desired type.
The 4 to 20 mA analog output is standard on both types.



Easy set-up and measuring

The high and low limit of the measuring range can be set.

1: Go to the SET mode.
2: Teach the high and low limit using the workpiece.
3: Return to RUN mode.



Class 2 laser product

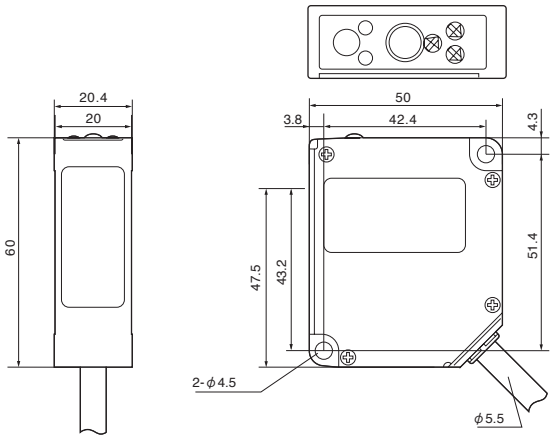
Classified to Class 2 laser, 650mm, max 1mW.

IP67 rating

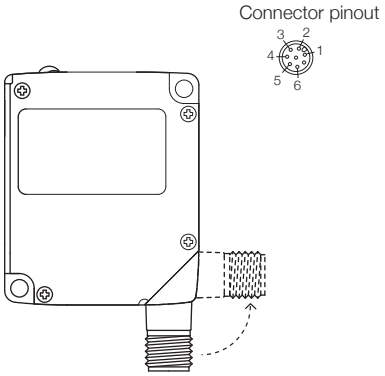
This stand-alone unit is protected with IP67 design.

Dimensions

Cable type



M12 Connector type



(mm)

Specifications

Model	Cable / M12 Connector	CD1-30N / P / CD1-30CN / CP	CD1-50N / P / CD1-50CN / CP	CD1-100N / P / CD1-100CN / CP	CD1-130N / P / CD1-130CN / CP	CD1-250N / P / CD1-250CN / CP
Transistor output		N = NPN output, P = PNP output				
Measurement range		30 ±4mm	50 ±10mm	100 ±35mm	130 ±50mm	250 ±150mm
Full scale		8mm	20mm	70mm	100mm	300mm
Light source		Class 2 laser, 650nm, max 3.3mW				
Spot size		ϕ0.1mm	ϕ0.5mm	0.5×1.2 mm	0.5×1.5 mm	0.8×1.2 mm
Supply voltage		12 - 24VDC (–5 to +10%)				
Power consumption		Max 120mA (12VDC), 75mA (24VDC), including analog output current				
Resolution (typical value)		(Unit : Micron. Under AUTO sensitivity. White ceramic as an object)				
(Response speed 100msec)		1	3	15	20	150
(Response speed 10msec)		3	10	50	70	500
(Response speed 1msec)		10	30	150	200	1500
Linearity		±2% F.S.	±1% F.S.	±2% F.S.	±3.5% F.S.	±5% F.S.
Temp drift		±0.02% F.S. / Celsius				
Response time		100msec / 10msec / 1msec selectable				
Sensitivity adjustment		SET / FIX / AUTO				
Analogue output		4-20mA				
Control output		NPN or PNP, Max 100mA / 30VDC, Residual voltage max 1.8V				
Distance indicator		Red = Near, Orange = Middle, Green = Far, Red / Green = Error *Remark : Errors as "out of measuring range", "Too high reflection", etc				
Stability indicator		Green = Stable, Red = Error, No light = Unstable, need adjustment				
Output indicator		Orange = Output				
Teach-in indicator		Green = Input, Red = Error				
Blanking input		NPN = Gray wire to 0V, PNP = Gray wire to +V				
Delay function		Off delay 40msec				
Environmental illuminance		Sun light : Max 10,000 lux, Incandescent Lamp = Max 3,000 lux				
Ambient temp		–10°C to +40°C				
Ambient humidity		35% to 95% RH				
Material		Zinc diecast				
Protection category		IP67				
Conformity		CE				
Warm-up time		30 minutes				
Weight		Approx.130g (Without cable)				