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# IG-028

Sensor Head

CE

*Please note that accessories depicted in the image are for illustrative purposes only and may not be included with the product.

## Specifications

| | | |
|---|---|---|
| Model | | IG-028 |
| Operation principle | | CCD method |
| Light source | Wavelength | 660 nm (Visible light semiconductor laser) |
| | FDA | Class 1*1 |
| | IEC/JIS | Class 1 |
| Mounting distance | | 0 to 1500 mm 59.06" |
| Measurement range | | 28 mm 1.10" |
| Sampling cycle | | 980 µs (When the number of times for averaging is set to [hsp]: 490 µs) |
| Minimum detectable object | High sensitivity mode | ø0.1 mm ø0.003" (Setting distance: 100 mm 3.94")*2 |
| | Standard mode | ø0.2 mm ø0.007" (Setting distance: 50 mm 1.97" or less),<br>ø0.5 mm ø0.02" (Setting distance: 500 mm 19.68")*2 |
| Repeatability | | 5 µm 0.20 Mil (Setting distance: 100 mm 3.94")<br>10 µm 0.39 Mil (Setting distance: 500 mm 19.68")<br>80 µm 3.15 Mil (Setting distance: 1,000 mm 39.37")<br>140 µm 5.51 Mil (Setting distance: 1,500 mm 59.06")*3 |
| Linearity | | ±0.1 % of F.S. (±28 µm ±1.10 Mil)*4 |
| Temperature characteristics | | ±0.01 % of F.S./°C (±3 µm ±0.12 Mil/°C)*5 |
| Operation indicator | Transmitter | Optical axis alignment indicator: Green LED, Power indicator: Green LED |
| | Receiver | Optical axis alignment indicator: Green LED, Position monitor: Dual bar LED (Red, Green) |
| Environmental resistance | Enclosure rating | IP67 |
| | Ambient light | Incandescent lamp: 5,000 lux, Sunlight: 5,000 lux*6 |
| | Ambient temperature | -10 to +45 °C 14 to 113 °F (No freezing) |
| | Relative humidity | 35 to 85 % RH (No condensation) |
| | Vibration resistance | 10 to 55 Hz, Double amplitude 1.5 mm 0.06", 2 hours in each of the X, Y, and Z axis |
| Material | Case | Zinc die-cast (Lower case), PBT (Upper case), Polyarylate (PAR) (Display part), SUS304 (Metallic part) |
| | Lens cover | Glass |
| | Cable | PVC |
| Accessories | | Transmitter × 1, Receiver × 1, Sensor head cables (2 m 6.56') × 2 |
| Weight | | Approx. 500 g (including supplied items) |

*1 The classification for FDA (CDRH) is implemented based on IEC60825-1 in accordance with the requirements of Laser Notice.
*2 When the measurement target object is measured at the center position of the setting distance. When the measurement mode is set to the glass edge mode, a glass edge of C0.1 mm 0.003" or more can be detected (Setting distance: 500 mm 19.69").
*3 When the light is shielded by half at the center position of the setting distance. Vibration width when the average number of times is set to 16 and sampling is performed for 30 seconds. (When the analog output is used, the margin of error of analog output is added.)
*4 When the setting distance is 100 mm 3.94" and light is shielded at 50 mm 1.96"position from the receiver. Margin of error to the ideal line.
*5 When the setting distance is 100 mm 3.94" and light is shielded by half at 50 mm 1.96" position from the receiver.

*6 Excluding when the average number of times is set to [hsp].

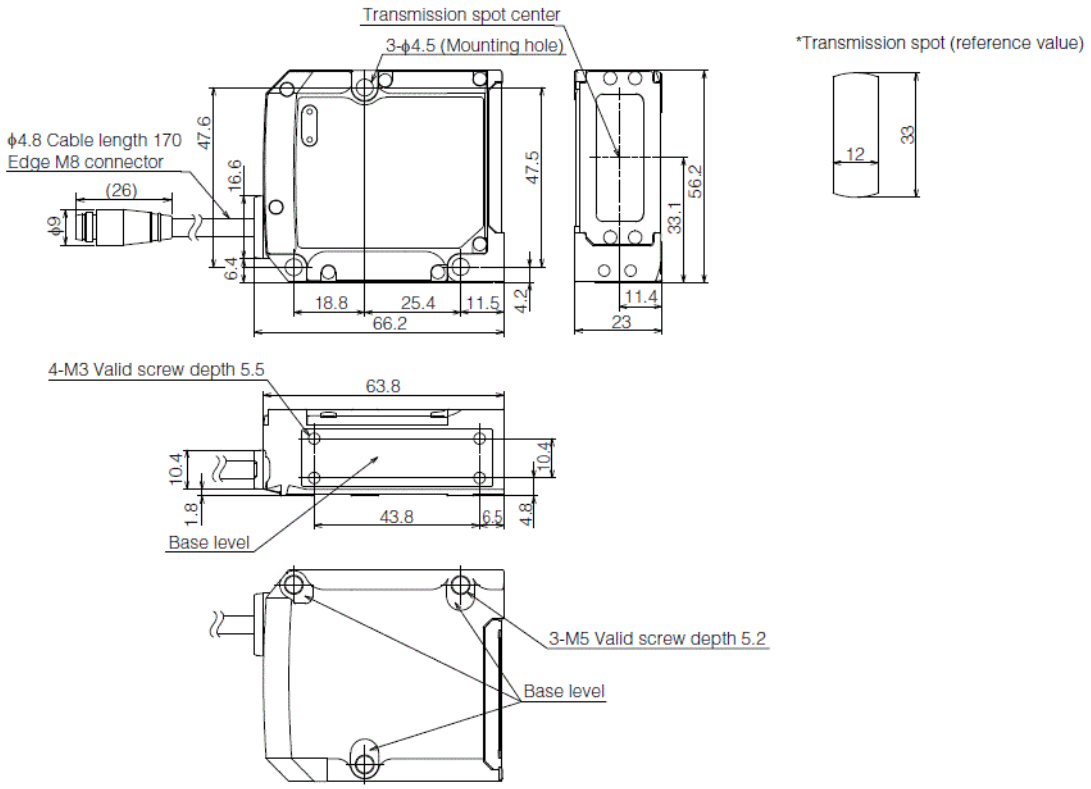
# Dimensions

* Download CAD file or product manual for larger image/text and more detail.

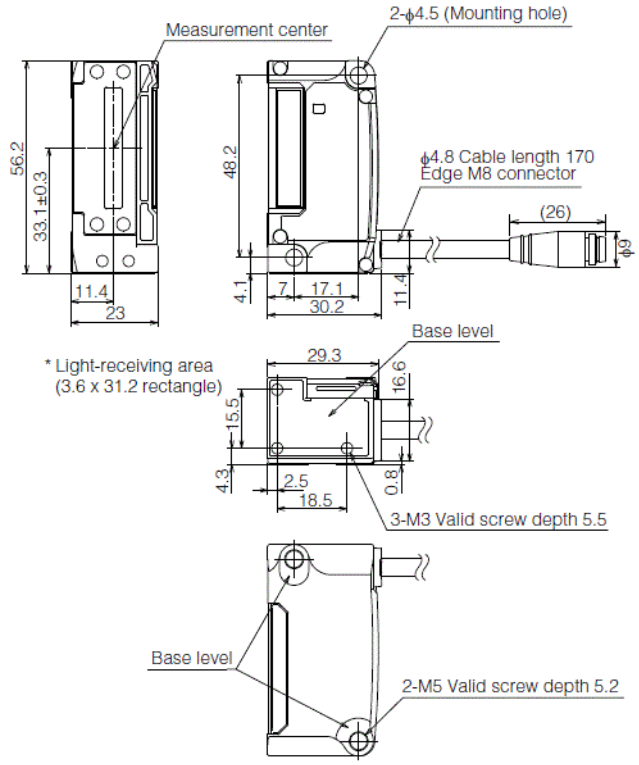
## IG-028

unit: mm

### ■ Transmitter



## ■ Receiver


Measurement center
2-ϕ4.5 (Mounting hole)
56.2
33.1±0.3
48.2
ϕ4.8 Cable length 170
Edge M8 connector
(26)
ϕ9
11.4
23
4.1
7
17.1
30.2
11.4
Base level
* Light-receiving area
(3.6 x 31.2 rectangle)
29.3
16.6
15.5
4.3
2.5
18.5
0.8
3-M3 Valid screw depth 5.5
Base level
2-M5 Valid screw depth 5.2

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