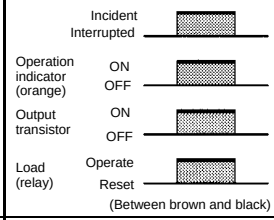
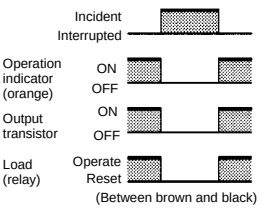
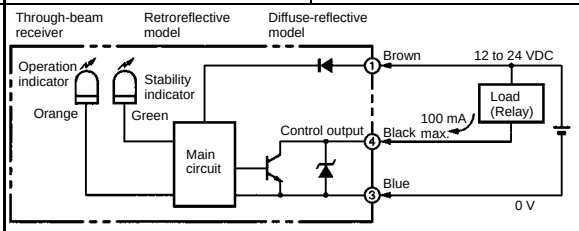
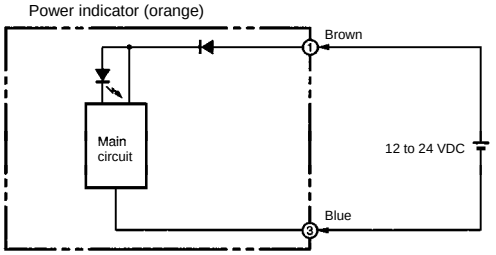
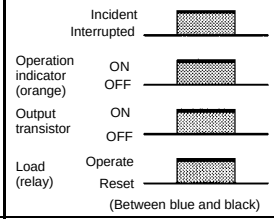
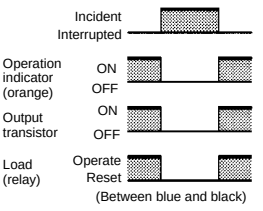
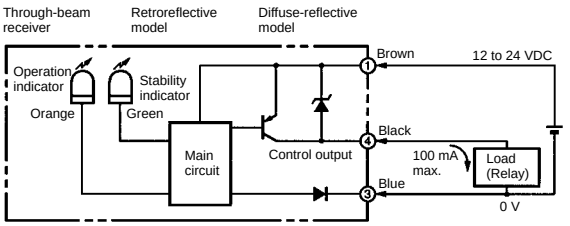
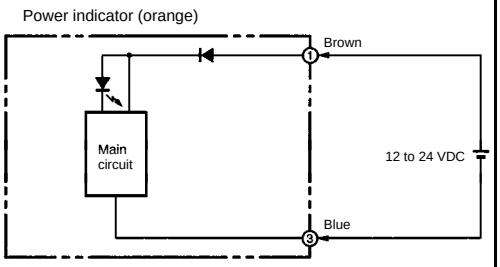
Operation

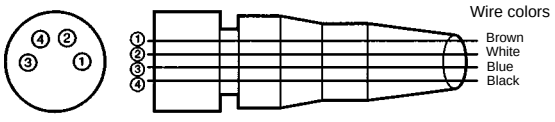
NPN Output

Model	E3Z-T61/-T66/-R61/-R66/-D61/-D66/-D62/-D67		
Output transistor status	Light ON	Dark ON	Through-beam emitter
Timing chart			
Mode selector	Light ON (L/ON)	Dark ON (D/ON)	
Output circuit	 **Connector Pin Arrangement**  Pin 2 is open.		 **Connector Pin Arrangement**  Pins 2, 4 are open.

PNP Output

Model	E3Z-T81/-T86/-R81/-R86/-D81/-D86/-D82/-D87		
Output transistor status	Light ON	Dark ON	Through-beam emitter
Timing chart			
Mode selector	Light ON (L/ON)	Dark ON (D/ON)	
Output circuit	 **Connector Pin Arrangement**  Pin 2 is open.		 **Connector Pin Arrangement**  Pins 2, 4 are open.

Structure of Sensor I/O Connector



XS3F-M421-402-A XS3F-M421-405-A
XS3F-M422-402-A XS3F-M422-405-A

Classification	Wire color	Connector pin No.	Use
DC	Brown	①	Power supply (+V)
	White	②	---
	Blue	③	Power supply (0 V)
	Black	④	Output

Note: Pin 2 is not used.

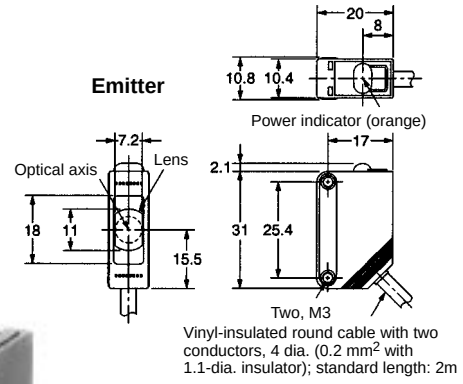
Dimensions

Note: All units are in millimeters unless otherwise indicated.

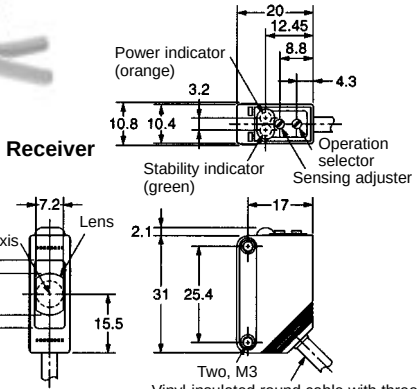
■ Sensors

Through-beam (Pre-wired Models)
E3Z-T61
E3Z-T81





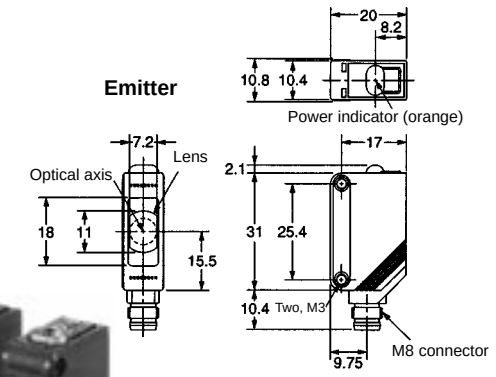
Vinyl-insulated round cable with two conductors, 4 dia. (0.2 mm^2 with 1.1-dia. insulator); standard length: 2m

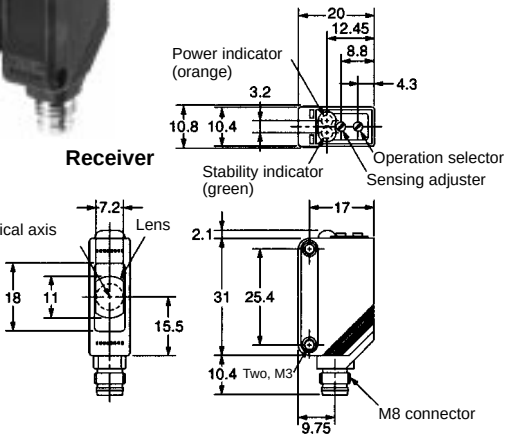


Vinyl-insulated round cable with three conductors, 4 dia. (0.2 mm^2 with 1.1-dia. insulator); standard length: 2m

Through-beam (Connector Models)
E3Z-T66
E3Z-T86

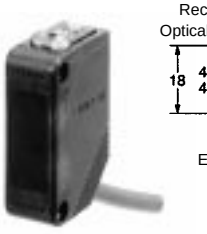


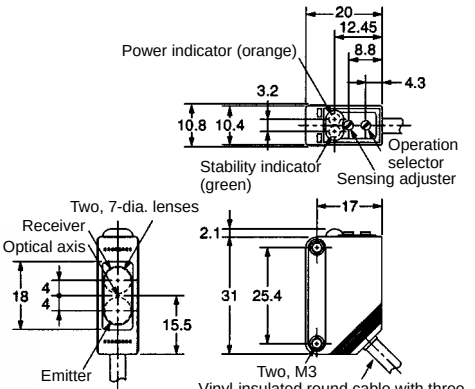




Retroreflective Models (Pre-wired Models)
E3Z-R61
E3Z-R81

Diffuse-reflective Models
E3Z-D61
E3Z-D62
E3Z-D81
E3Z-D82



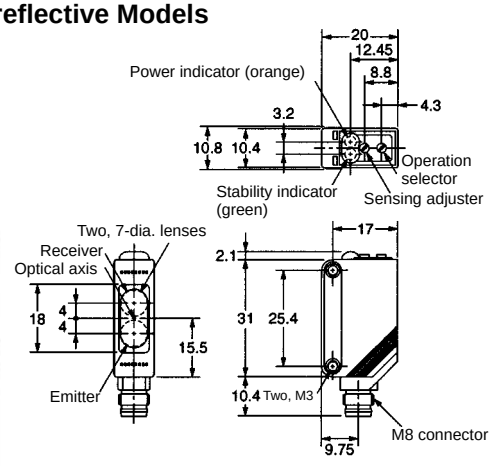


Vinyl-insulated round cable with three conductors, 4 dia. (0.2 mm^2 with 1.1-dia. insulator); standard length: 2m

Retroreflective Models (Connector Models)
E3Z-R66
E3Z-R86

Diffuse-reflective Models
E3Z-D66
E3Z-D67
E3Z-D86
E3Z-D87



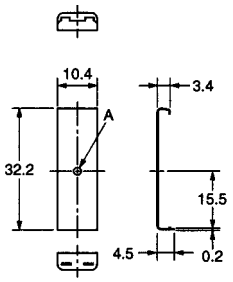


■ Accessories (Order Separately)

Slits

E39-S65A
E39-S65B
E39-S65C

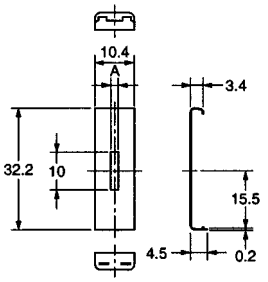




Model	Side A	Material
E39-S65A	0.5 dia.	SUS301 stainless steel
E39-S65B	1.0 dia.	
E39-S65C	2.0 dia.	

E39-S65D
E39-S65E
E39-S65F

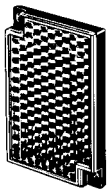


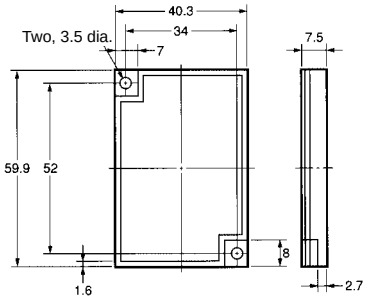


Model	Side A	Material
E39-S65D	0.5	SUS301 stainless steel
E39-S65E	1.0	
E39-S65F	2.0	

Reflectors

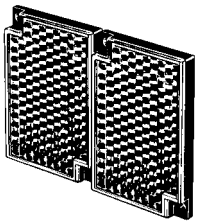
E39-R1
E39-R1S

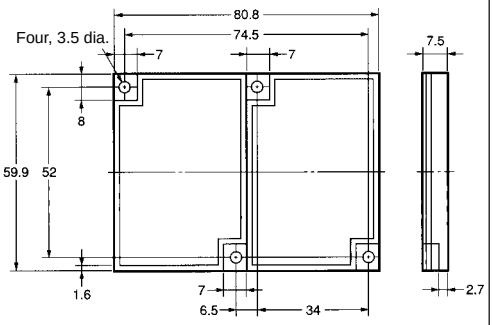




Material
Surface: Acrylic resin
Backside: ABS resin

E39-R2





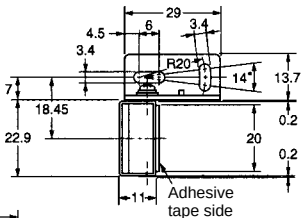
Material
Surface: Acrylic resin
Backside: ABS resin

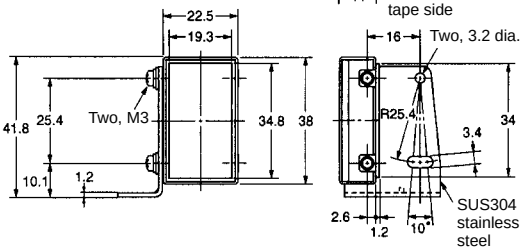
Miniature Reflector

E39-R3



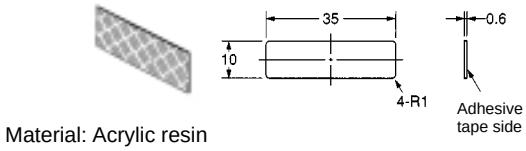
Material
Surface: Acrylic resin
Backside: ABS resin





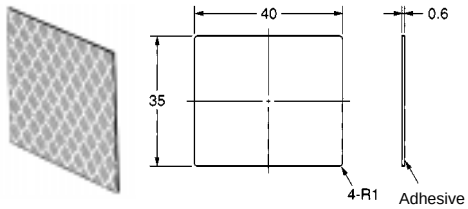
Tape Reflectors

E39-RS1



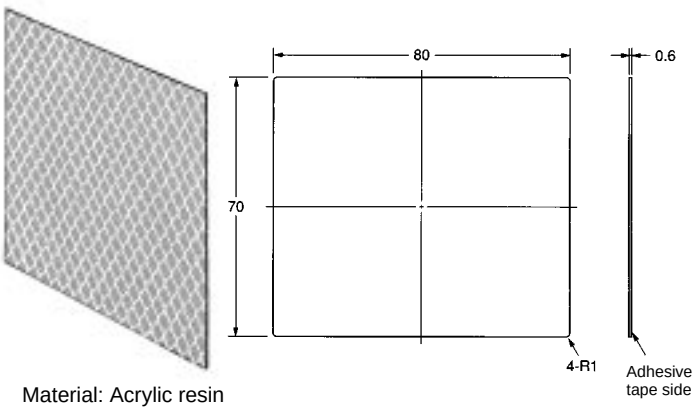
Material: Acrylic resin

E39-RS2



Material: Acrylic resin

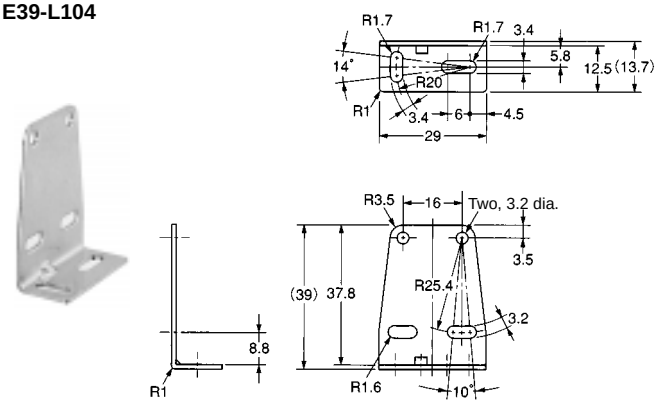
E39-RS3

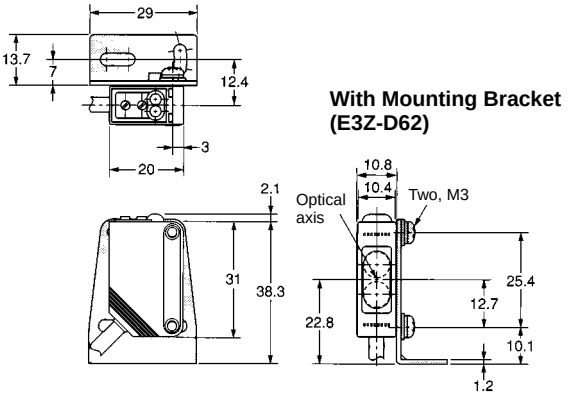


Material: Acrylic resin

Mounting Brackets

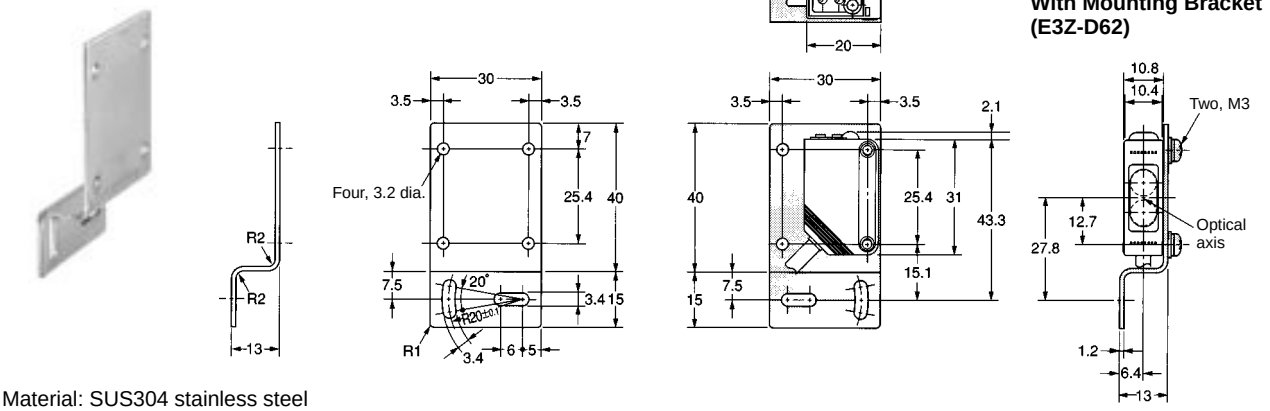
E39-L104





Material: SUS304 stainless steel

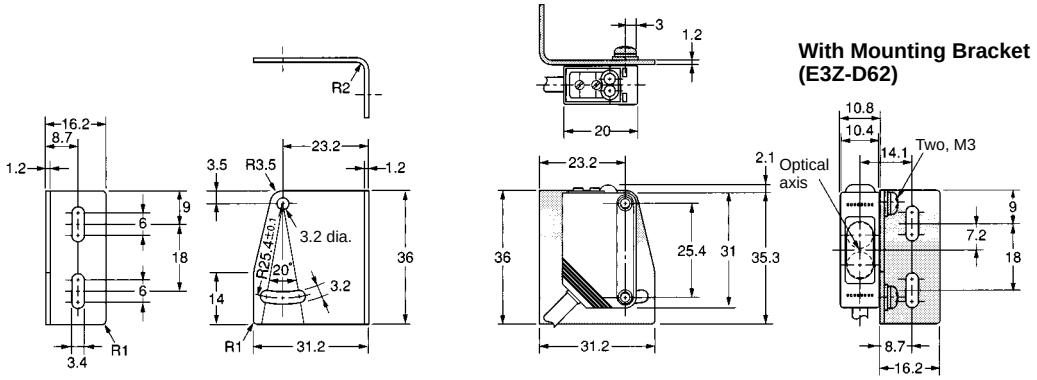
E39-L43



Material: SUS304 stainless steel

E39-L44

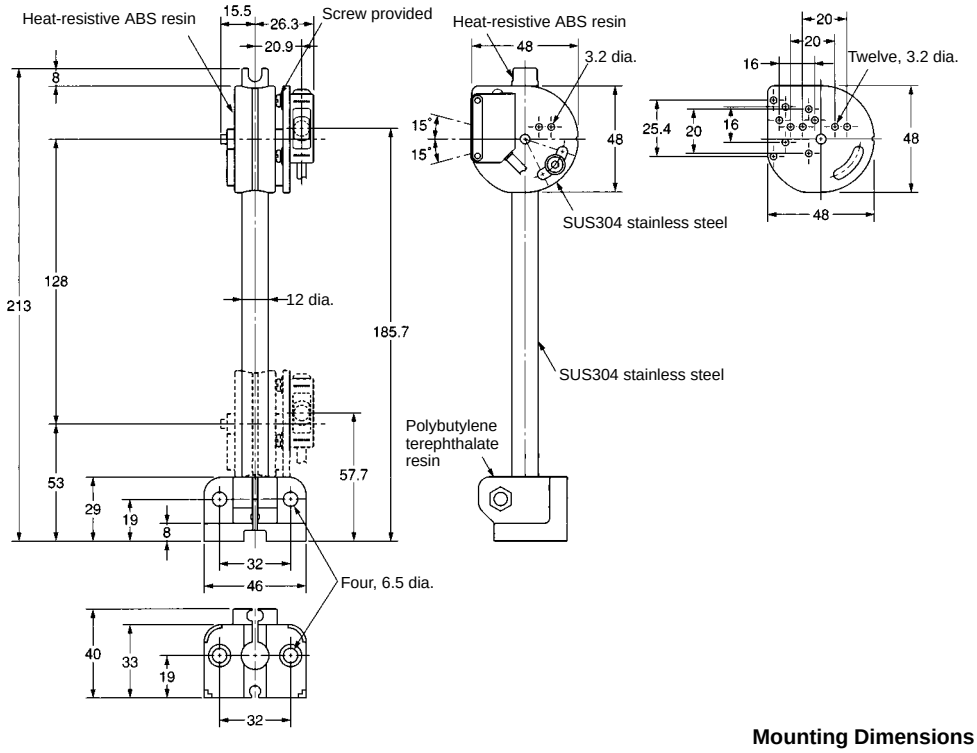




Material: SUS304 stainless steel

E39-L93

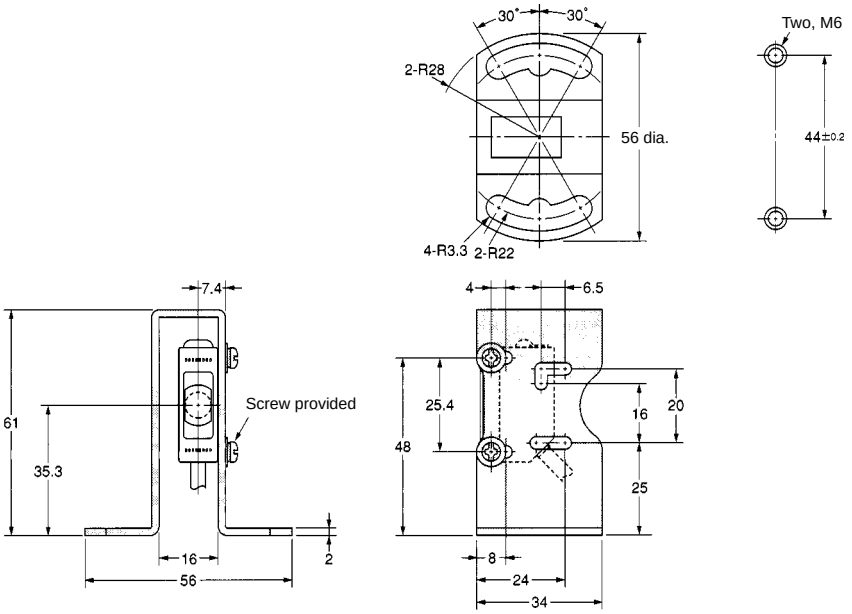




E39-L98



Mounting Dimensions

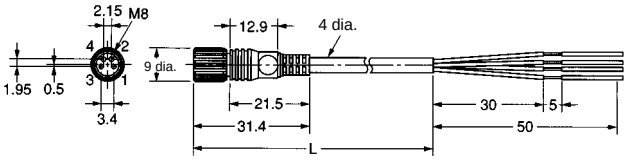


Material: SUS304 stainless steel

Sensor I/O Connectors

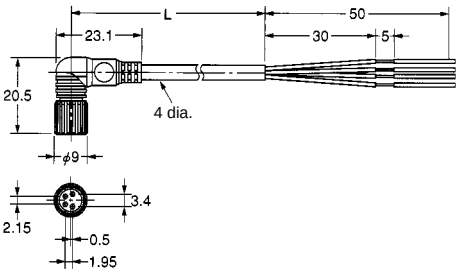
Straight
XS3F-M421-402-A (L=2 m)
XS3F-M421-405-A (L=5 m)





L-shaped
XS3F-M422-402-A (L=2 m)
XS3F-M422-405-A (L=5 m)





Precautions

Be sure to abide by the following precautions for the safe operation of the Sensor.

Wiring

Power Supply Voltage

Make sure that the power supply to the Sensor is within the rated voltage range and do not apply 100 VAC or more if the Sensor is a DC model, or otherwise the Sensor may explode or burn.

Load Short-circuiting

Do not short-circuit the load, otherwise the Sensor may be damaged.

■ Correct Use

Settings

Power Reset Time

The Sensor is ready to operate 100 ms after the Sensor is turned ON. If the load and Sensor are connected to independent power supplies respectively, be sure to turn ON the Sensor before turning the load ON.

Connections

M8 Metal Connector

- Be sure to connect or disconnect the metal connector after turning OFF the Sensor.
- Hold the connector cover to connect or disconnect the metal connector.
- Secure the connector cover by hand. Do not use any pliers, otherwise the connector may be damaged.
- The proper tightening torque range is between 0.3 and 0.4 N • m. Be sure to tighten the connector securely, otherwise the specified degree of protection may not be maintained or the connector may be disconnected due to vibration.

Wiring Mistakes

Do not make mistakes in wiring, such as mistakes in polarity, otherwise the Sensor may be damaged.

Connection without Load

Do not connect power supply to the Sensor with no load connected, otherwise the internal elements may explode or burn.

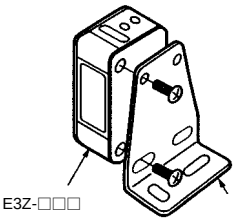
Operating Environment

Do not use the Sensor in locations with explosive or flammable gas.

Mounting

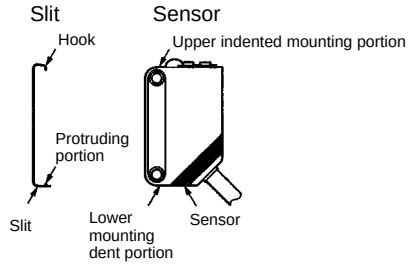
Sensor Mounting

Use M3 screws to mount the sensor and tighten each screw to a maximum torque of 0.53 N • m.



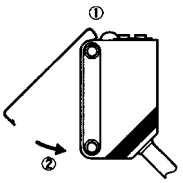
Adjustment

Slits for Through-beam Models (E39-S65A/B/C/D/E/F (Sold Separately))

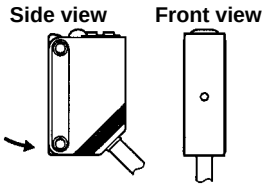


Mounting method

1. Hook the upper protruding portion of the Slit to the upper indented mounting portion of the Sensor and adjust the position of the Slit so that the Slit will be in parallel to the lens side of the Sensor.
2. Press the lower protruding portion of the Slit onto the indented mounting portion of the Sensor until the Slit snaps in.

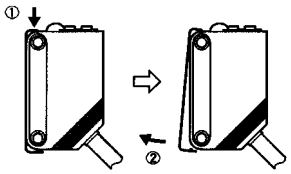


Mounting condition



Removal method

1. Press the upper portion of the Slit.
2. Disconnect the lower protruding portion of the Slit from the Sensor and remove the Slit.



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. E308-E1-1 **In the interest of product improvement, specifications are subject to change without notice.**

OMRON Corporation
Industrial Automation Company

Industrial Sensors Division
Sensing Devices and Components Division H.Q.
28th Fl., Crystal Tower Bldg.,
1-2-27, Shiromi, Chuo-ku,
Osaka 540-6028 Japan
Phone: (81)6-6949-6012 Fax: (81)6-6949-6021

Printed in Japan
0799-5M (0799) Ⓐ