

Miniature Square Photoelectric Sensor in plastic housing

E3T

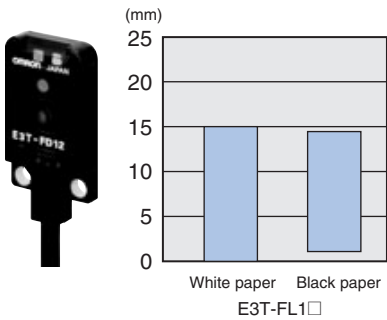
- Precision pinpoint LED
- 3.5 mm thin flat shape or 6.6 mm side view shape where space is crucial
- IP67
- Pulse synchronisation for high ambient light immunity



Features

3.5 mm flat model with background suppression (BGS) with highest repeatability even for differently coloured objects.

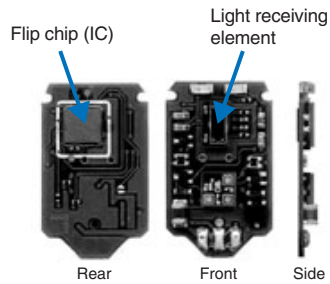
Minimal black/white error



Unique light receiving lens shape for high precision alignment



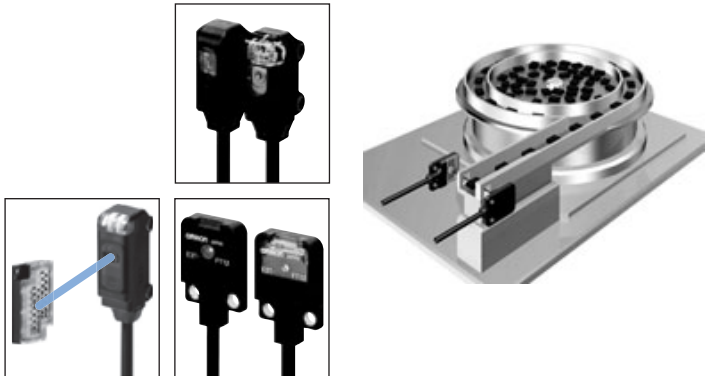
New mounting technology for reliable background suppression in 3.5 mm flat housing



Application

Object detection through small holes

- The precision pinpoint LED of the through-beam models provides appropriate sensing distances for very precise and reliable detection even through smallest slits and gaps with e.g. 0.5 mm dia.
- The coaxial optics and the small focal lens of the retro-reflective models allow the detection of small (dia 2 mm) objects or through small holes (dia 2 mm).



Application

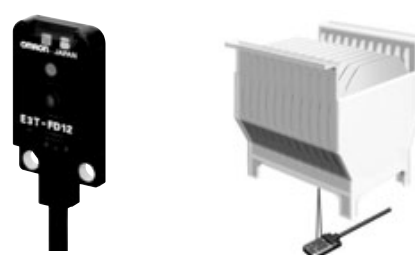
E3T-SL limited-reflective models (side view)

- Minimum detection object: 0.15 mm dia.
- Limited-reflective optics reduce the influence of changing backgrounds and surrounding metal for enhanced detection stability.



E3T-FD Diffuse-reflective Models (Flat)






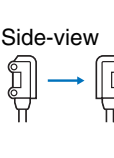


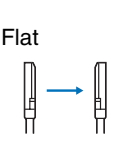


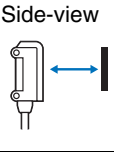


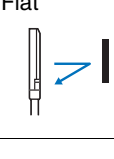


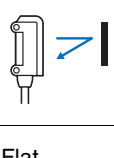



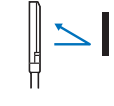


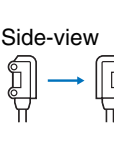


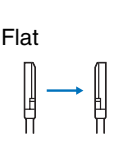


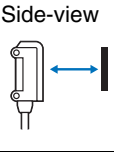


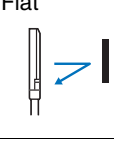

- Minimum detection object: 0.15 mm dia.
- 3.5 mm thickness for installations with limited space.



Ordering Information

Sensors

 Red light

| Sensing method | Appearance | | Connection method | | | | Sensing distance | Operation mode | Order code | | |
|---|---|--|---|---|---|---|---|--|-----------------|-----------------|-------------|
| | | |  |  |  |  | | | NPN output | PNP output | |
| Through-beam |  | Side-view  | | | | |  1 m (Sensitivity Adjustment Unit can be used.) | Light-ON | E3T-ST11 2M | E3T-ST13 2M | |
| | | | | | | | Dark-ON | E3T-ST12 2M | E3T-ST14 2M | | |
| | |  | | | | | Flat  |  300 mm | Light-ON | E3T-ST21 2M | E3T-ST23 2M |
| | | | | | | | | Dark-ON | E3T-ST22 2M | E3T-ST24 2M | |
| |  | Side-view  | | | | |  500mm | Light-ON | E3T-FT11 2M | E3T-FT13 2M | |
| | | | | | | | Dark-ON | E3T-FT12 2M | E3T-FT14 2M | | |
| | |  | | | | | Flat  |  300 mm | Light-ON | E3T-FT21 2M | E3T-FT23 2M |
| | | | | | | | | Dark-ON | E3T-FT22 2M | E3T-FT24 2M | |
| Retro-reflective |  | Side-view  | - | - | 2 m *1 | *2 |  200 mm [30 mm] | Light-ON | E3T-SR41-C 2M*4 | E3T-SR43-C 2M*4 | |
| | | | | | | |  100 mm [10 mm] | *3 Dark-ON | E3T-SR42-C 2M*4 | E3T-SR44-C 2M*4 | |
| Diffuse-reflective |  | Flat  | | | | |  5 to 30 mm | Light-ON | E3T-FD11 2M | E3T-FD13 2M | |
| | | | | | | | | Dark-ON | E3T-FD12 2M | E3T-FD14 2M | |
| Limited-reflective |  | Side-view  | | | | |  5 to 15 mm | Light-ON | E3T-SL11 2M | E3T-SL13 2M | |
| | | | | | | | | Dark-ON | E3T-SL12 2M | E3T-SL14 2M | |
| | |  | | | | | Flat  |  5 to 30 mm | Light-ON | E3T-SL21 2M | E3T-SL23 2M |
| | | | | | | | | | Dark-ON | E3T-SL22 2M | E3T-SL24 2M |
| Diffuse reflective (background suppression) |  | Side-view  | | | | |  1 to 15 mm | Light-ON | E3T-FL11 2M | E3T-FL13 2M | |
| | | | | | | | | Dark-ON | E3T-FL12 2M | E3T-FL14 2M | |
| | |  | | | | | Flat  |  1 to 30 mm | Light-ON | E3T-FL21 2M | E3T-FL23 2M |
| | | | | | | | | | Dark-ON | E3T-FL22 2M | E3T-FL24 2M |

*1. For pre-wired models with robotic cables add '-R' to the order code (example: E3T-FT21R 2M). For details on robotic cables refer to page 12.

*2. For pre-wired models with M8 connector plug or e-CON connector contact your OMRON representative.

*3. Values in parentheses indicate the minimum required sensing distance between the sensor and the reflector. For applications with shorter distances between the sensor and the reflector contact your OMRON representative.






*4. Order reflector separately. For ordering models with included reflectors contact your OMRON representative.

Accessories (Order Separately)

Slits


| Slit width | Sensing distance (typical) | Minimum detectable object (typical) | Order code | Quantity | Remarks |
|-------------|----------------------------|-------------------------------------|------------|--|---|
| 0.5 mm dia. | 100 mm | 0.5 mm dia. | E39-S63 | 2 (one each for emitter and receiver) | Plug-in type round slits Can be used with E3T-ST1□ Through-beam models. |
| 1 mm dia. | 300 mm | 1 mm dia. | | | |
| 0.5 mm dia. | 50 mm | 0.5 mm dia. | E39-S64 | | Plug-in type round slits Can be used with E3T-FT1□ Through-beam models. |
| 1 mm dia. | 100 mm | 1 mm dia. | | | |

Reflectors

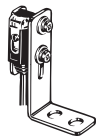
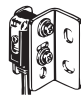
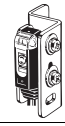


| Shape | Type | Sensing distance *1 | Minimum detectable object (typical) | Order code | Remarks |
|--|-----------------|---------------------|-------------------------------------|------------|---|
|  | Small reflector | 200 mm (30 mm) | 2 mm dia | E39-R4 | Reflectors E39-_-CA are optimised for operation with E3T-SR4. Please verify the performance when using other reflectors and reflective tapes. |
|  | | 100 mm (10 mm) | | E39-R37-CA | |
|  | Tape reflector | 100 mm (10 mm) | | E39-RS1-CA | |
|  | | 100 mm (10 mm) | | E39-RS2-CA | |
|  | | 100 mm (10 mm) | | E39-RS3-CA | |

*1. Values in parentheses indicate the minimum required distance between the Sensor and Reflector.

Sensitivity Adjustment Unit

| Appearance | Sensing distance (typical) | Model | Quantity | Remarks |
|---|----------------------------|---------|----------|---|
|  | 300 to 800 mm | E39-E10 | 1 | Can be used with the E3T-ST1□ Through-beam Models. |

Mounting Brackets

| Appearance | Model | Quantity | Remarks |
|---|----------|----------|---|
|  | E39-L116 | 1 | Can be used with the E3T-S□□□ Side-view Models. (A securing nut plate is provided with the Mounting Bracket.) |
|  | E39-L117 | | |
|  | E39-L118 | | |
|  | E39-L119 | | Can be used with the E3T-F□□□ Flat Models. |
|  | E39-L120 | | |

Note: When using Through-beam models, order one bracket for the Receiver and one for the Emitter.

Rating and Specifications

| Item | Through-beam | | | | Retro-reflective | | Diffuse-reflective | |
|-------------------------------------|--|--|--|--|--|----------------------|--|----------------------|
| | Side-view | | Flat | | Side-view | | Flat | |
| | NPN | PNP | NPN | PNP | NPN | PNP | NPN | PNP |
| | E3T-ST11 E3T-ST12 E3T-ST21 E3T-ST22 | E3T-ST13 E3T-ST14 E3T-ST23 E3T-ST24 | E3T-FT11 E3T-FT12 E3T-FT21 E3T-FT22 | E3T-FT13 E3T-FT14 E3T-FT23 E3T-FT24 | E3T-SR41 E3T-SR42 | E3T-SR43 E3T-SR44 | E3T-FD11 E3T-FD12 | E3T-FD13 E3T-FD14 |
| Sensing distance | E3T-ST1□ 1 m E3T-ST2□ 300 mm | E3T-FT1□ 500 mm E3T-FT2□ 300 mm | 200 mm (30 mm) with E39-R4 ^{*1} 100 mm (10 mm) with E39-R37-CA ^{*1} | | 5 to 30 mm (50 x 50 mm white paper) | | | |
| Standard sensing object | Opaque, 2 mm dia. min. | | Opaque, 1.3 mm dia. min. | | Opaque, 27 mm dia. min. | | --- | |
| Minimum detectable object (typical) | 2 mm dia opaque object | | 1.3 mm dia opaque object | | 2 mm dia. (sensing distance of 100 mm) | | 0.15 mm dia. (sensing distance of 10 mm) | |
| Hysteresis (white paper) | --- | | | | | | 6 mm max. | |
| Black/white error | --- | | | | | | | |
| Directional angle | Emitter: 2° to 20° Receiver: 2° to 70° | | Emitter: 3° to 25° Receiver: 3° min. | | 2° to 20° | | --- | |
| Light source (wavelength) | Red LED ("Pin-point" LED) λ = 650 nm | | | | | | | |
| Power supply voltage | 12 to 24 VDC ±10%, ripple (p-p) 10% max. | | | | | | | |
| Current consumption | Emitter: 10 mA max. Receiver: 20 mA max. | | | | 20 mA max. | | | |
| Control output | Load power supply voltage: 26.4 VDC max. Load current: 50 mA max. (residual voltage: 2 V max. for load current of 10 to 50 mA, 1 V max. for load current of less than 10 mA) Open collector output Light ON: E3T-□□□1 and E3T-□□□3 Dark ON: E3T-□□□2 and E3T-□□□4 | | | | | | | |
| Protection circuits | Power supply and control output reverse polarity protection Output short-circuit protection | | | | Power supply and control output reverse polarity protection Output short-circuit protection, Mutual interference prevention, surge suppressor | | Power supply and control output reverse polarity protection Output short-circuit protection, Mutual interference prevention | |
| Response time | Operate or reset: 1 ms max. | | | | | | | |
| Ambient illumination | Incandescent lamp: 5,000 lx max. Sunlight: 10,000 lx max. | | | | | | | |
| Ambient temperature range | Operating: -25 to 55 °C Storage: -40 to 70 °C (with no icing or condensation) | | | | | | | |
| Ambient humidity range | Operating: 35% to 85% Storage: 35% to 95% (with no condensation) | | | | | | | |
| Insulation resistance | 20 MΩ min. at 500 VDC | | | | | | | |
| Dielectric strength | 1,000 VAC, 50/60 Hz for 1 min | | | | | | | |
| Vibration resistance | Destruction: 10 to 2,000 Hz, 1.5 mm double amplitude or 300 m/s ² for 0.5 hrs each in X, Y, and Z directions | | | | | | | |
| Shock resistance | Destruction: 1,000 m/s ² 3 times each in X, Y, and Z directions | | | | | | | |
| Degree of protection | IP67 (IEC60529) | | | | | | | |
| Connection method | Pre-wired (standard length: 2 m) | | | | | | | |
| Weight | Approx. 40 g | | | | Approx. 20 g | | | |
| Materials | Case | PBT (polybutylene terephthalate) | | | | | | |
| | Display window | Denatured polyarylate | | | | | | |
| | Lens | Denatured polyarylate | | | Methacrylic resin | | Denatured polyarylate | |
| Accessories | Instruction manual, Installation screws (Side-view Models: M2 x 14, Flat Models: M2 x 8), Nuts, Spring washers, Flat washers | | | | | | | |

*1. Values in parentheses indicate the minimum required distance between Sensor and Reflector.

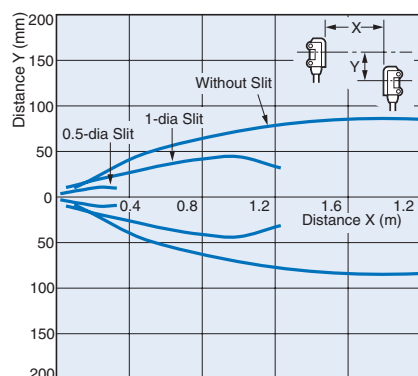
| Item | | Limited-reflective | | | | Diffuse-reflective (background suppression) | | | |
|-------------------------------------|----------------|---|----------------------|--|----------------------|--|----------------------|--|----------------------|
| | | Side-view | | | | Flat | | | |
| | | NPN | PNP | NPN | PNP | NPN | PNP | NPN | PNP |
| | | E3T-SL11 E3T-SL12 | E3T-SL13 E3T-SL14 | E3T-SL21 E3T-SL22 | E3T-SL23 E3T-SL24 | E3T-FL11 E3T-FL12 | E3T-FL13 E3T-FL14 | E3T-FL21 E3T-FL22 | E3T-FL23 E3T-FL24 |
| Sensing distance | | 5 to 15 mm (50 x 50 mm white paper) | | 5 to 30 mm (50 x 50 mm white paper) | | 1 to 15 mm (50 x 50 mm white paper) | | 1 to 30 mm (50 x 50 mm white paper) | |
| Standard sensing object | | --- | | | | | | | |
| Minimum detectable object (typical) | | 0.15 mm dia. (sensing distance of 10 mm) | | | | 0.15 mm dia non-glossy object (sensing distance of 10 mm) | | | |
| Hysteresis (white paper) | | 2 mm max. | | 6 mm max. | | 0.5 mm max. | | 2 mm max. | |
| Black/white error | | --- | | | | | | 15% max. | |
| Directional angle | | --- | | | | | | | |
| Light source (wavelength) | | Red LED (“Pin-point” LED) λ = 650 nm | | | | | | | |
| Power supply voltage | | 12 to 24 VDC ±10%, ripple (p-p) 10% max. | | | | | | | |
| Current consumption | | 20 mA max. | | | | | | | |
| Control output | | Load power supply voltage: 26.4 VDC max. Load current: 50 mA max. (residual voltage: 2 V max. for load current of 10 to 50 mA, 1 V max. for load current of less than 10 mA) Open-collector output Light ON: E3T-□□□1 and E3T-□□□3 Dark ON: E3T-□□□2 and E3T-□□□4 | | | | | | | |
| Protection circuits | | Power supply and control output reverse polarity protection Output short-circuit protection, Mutual interference prevention | | | | | | | |
| Response time | | Operate or reset: 1 ms max. | | | | | | | |
| Ambient illumination | | Incandescent lamp: 5,000 lx max. Sunlight: 10,000 lx max. | | | | | | | |
| Ambient temperature range | | Operating: -25 to 55 °C Storage: -40 to 70 °C (with no icing or condensation) | | | | | | | |
| Ambient humidity range | | Operating: 35% to 85% Storage: 35% to 95% (with no condensation) | | | | | | | |
| Insulation resistance | | 20 MΩ min. at 500 VDC | | | | | | | |
| Dielectric strength | | 1,000 VAC, 50/60 Hz for 1 min | | | | | | | |
| Vibration resistance | | Destruction: 10 to 2,000 Hz, 1.5 mm double amplitude or 300 m/s ² for 0.5 hrs each in X, Y, and Z directions | | | | | | | |
| Shock resistance | | Destruction: 1,000 m/s ² 3 times each in X, Y, and Z directions | | | | | | | |
| Degree of protection | | IP67 (IEC60529) | | | | | | | |
| Connection method | | Pre-wired (standard length: 2 m) | | | | | | | |
| Weight | | Approx. 20 g | | | | | | | |
| Materials | Case | PBT (polybutylene terephthalate) | | | | | | | |
| | Display window | Denatured polyarylate | | | | | | | |
| | Lens | Denatured polyarylate | | | | | | | |
| Accessories | | Instruction manual, Installation screws (Side-view Models: M2 x 14, Flat Models: M2 x 8), Nuts, Spring washers, Flat washers | | | | | | | |

Engineering Data (Typical)

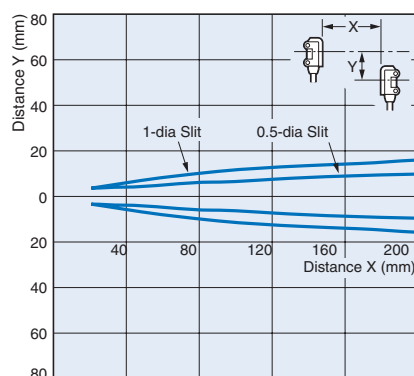
Parallel Operating Range

Through-beam

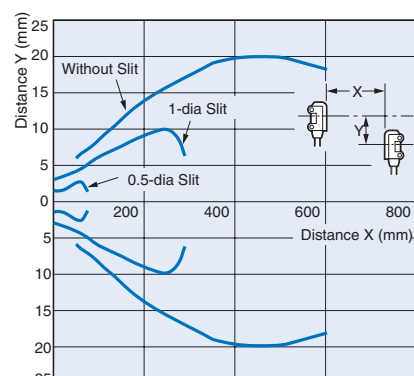
E3T-ST1□ + E39-S63 Slit
(Order Separately)



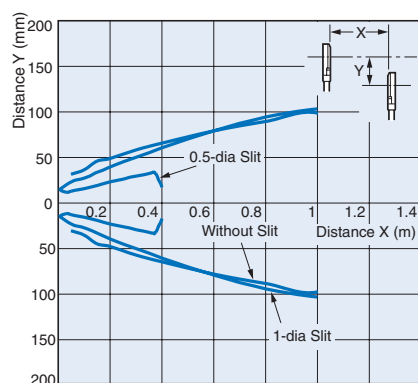
E3T-ST1□ + E39-S63 Slit
(Order Separately)(Enlarged graph)



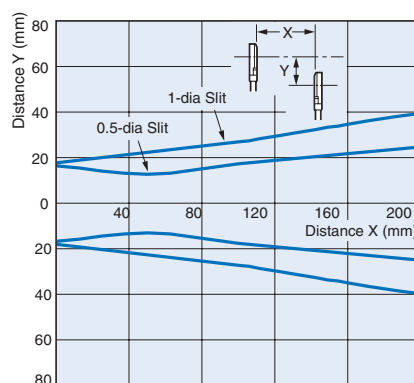
E3T-ST2□



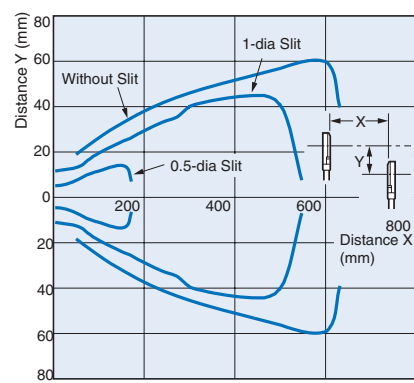
E3T-FT1□ + E39-S64 Slit
(Order Separately)



E3T-FT1□ + E39-S64 Slit
(Order Separately)(Enlarged graph)

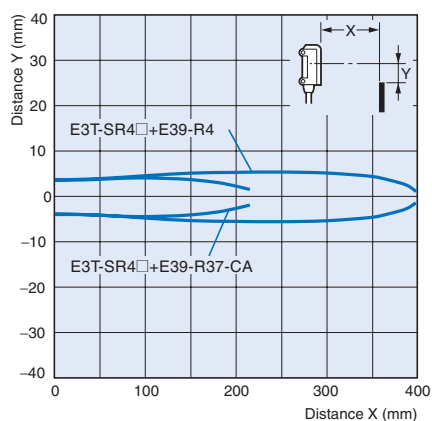


E3T-FT2□



Retro-reflective

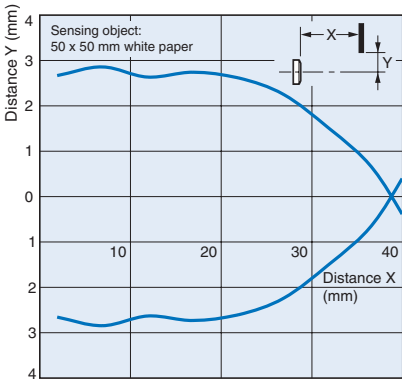
E3T-SR4□



Operating Range

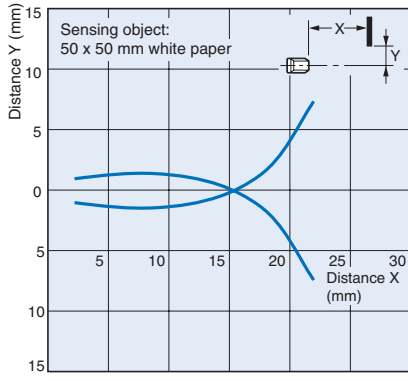
Diffuse-reflective

E3T-FD1□

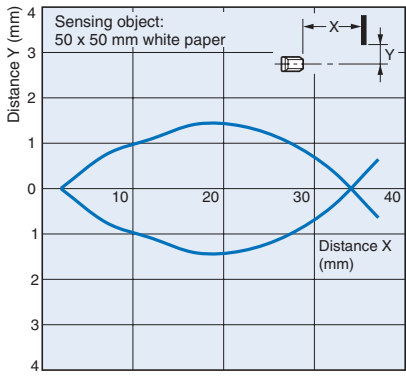


Limited-reflective

E3T-SL1□

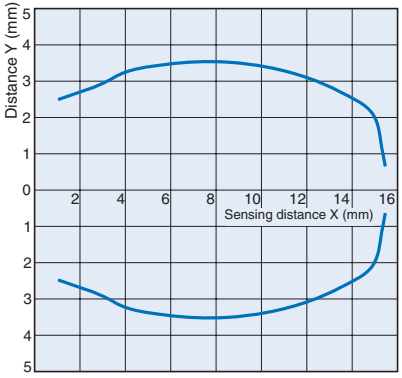


E3T-SL2□

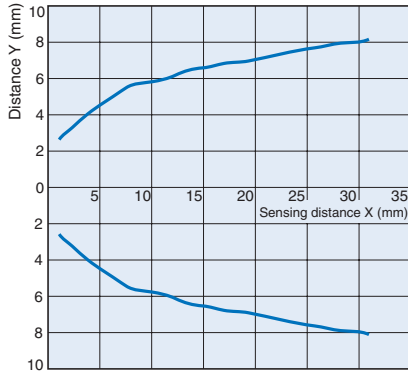


Diffuse-reflective (background suppression)

E3T-FL1□



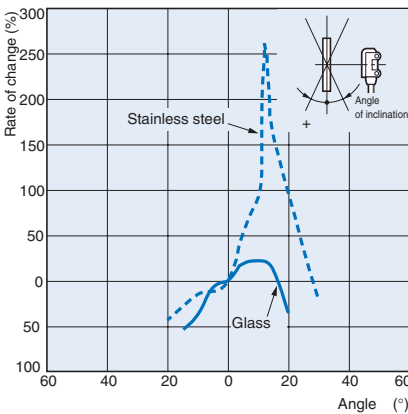
E3T-FL2□



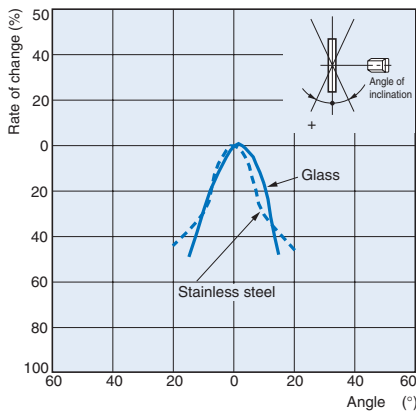
Inclination Characteristics

Limited-reflective

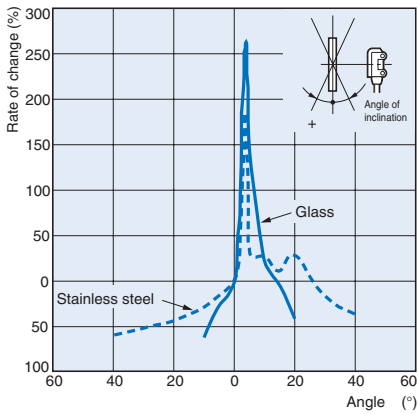
E3T-SL1□ (Top to Bottom)



E3T-SL1□ (Right to Left)

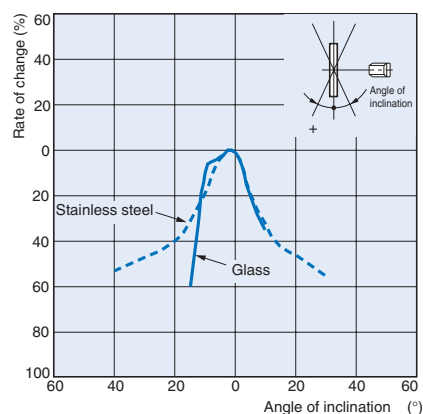


E3T-SL2□ (Top to Bottom)

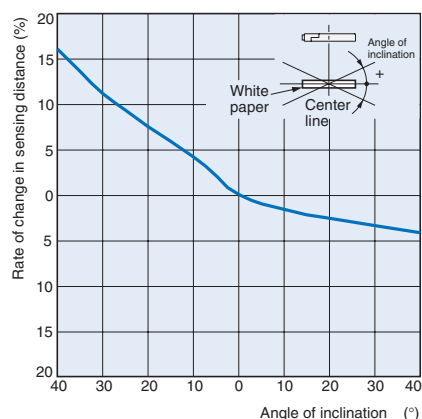


Diffuse-reflective (background suppression)

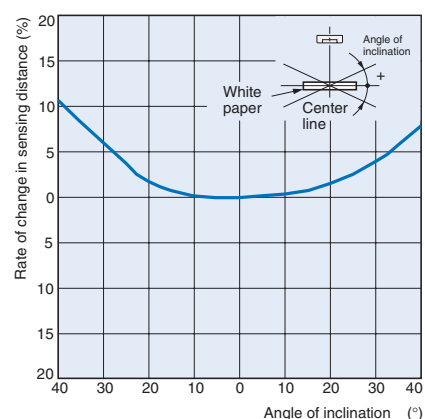
E3T-SL2□ (Right to Left)



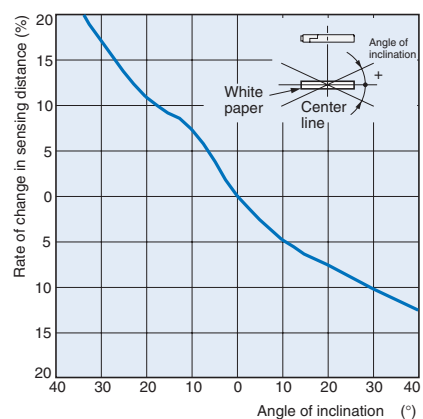
E3T-FL1□ (Top to Bottom)



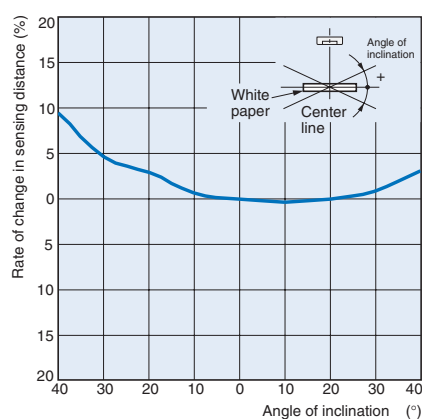
E3T-FL1□ (Right to Left)



E3T-FL2□ (Top to Bottom)



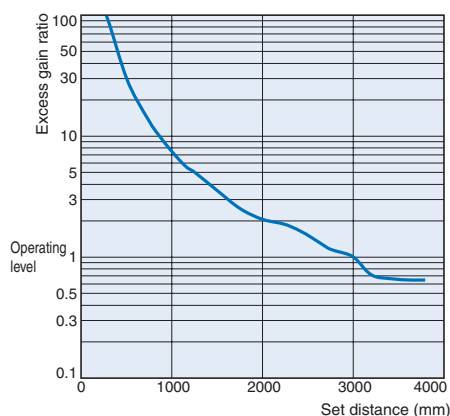
E3T-FL2□ (Right to Left)



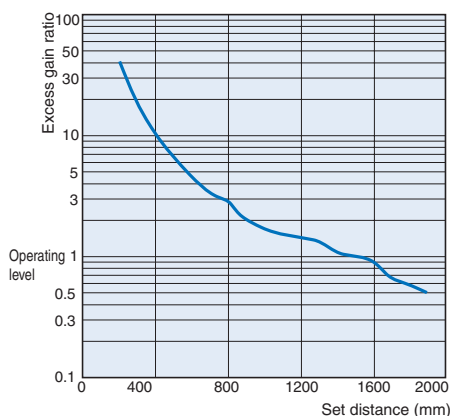
Excess Gain vs. Set Distance

Through-beam

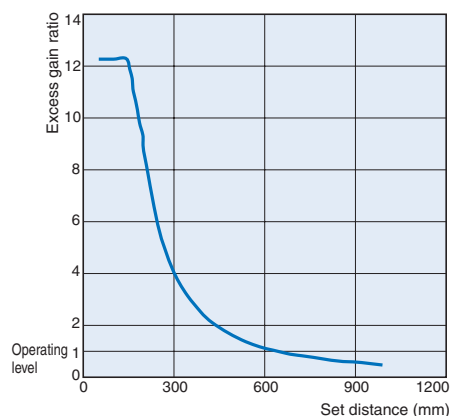
E3T-ST1□



E3T-FT1□

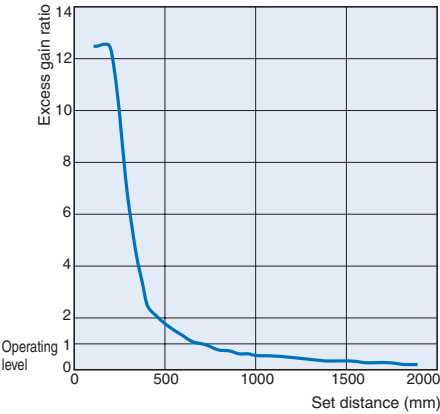


E3T-ST2□

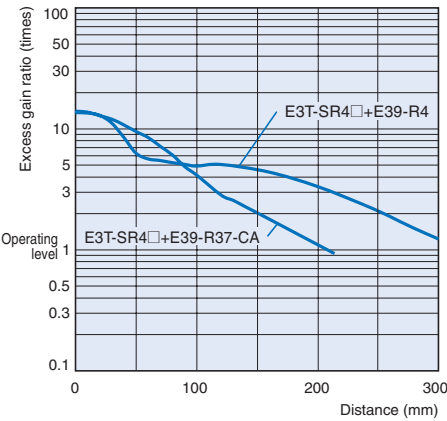


Retro-reflective

E3T-FT2□

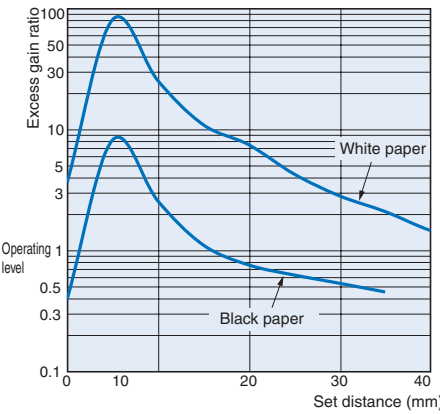


E3T-SR4□



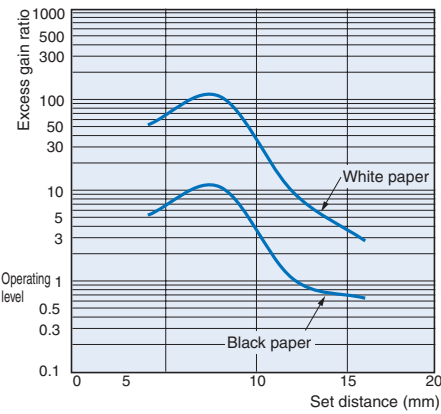
Diffuse-reflective

E3T-FD1□

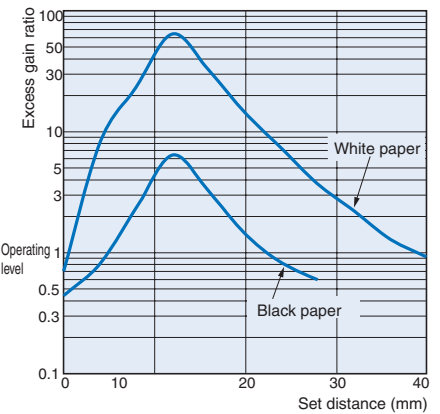


Limited-reflective

E3T-SL1□

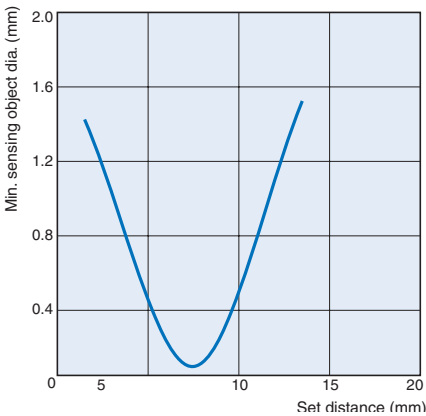


E3T-SL2□

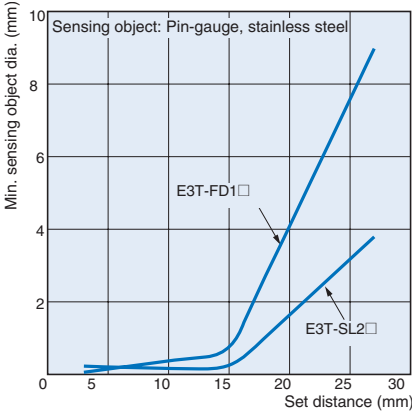


Sensing Object Size vs. Sensing Distance

E3T-SL1□



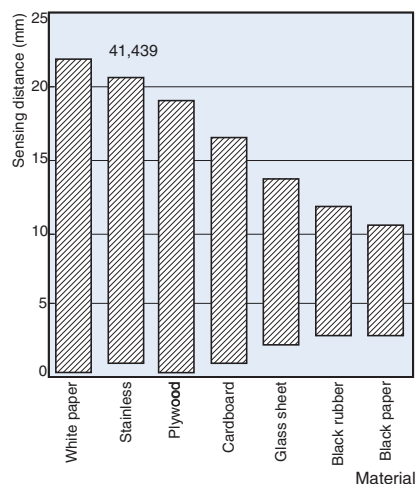
E3T-FD1□, E3T-SL2□



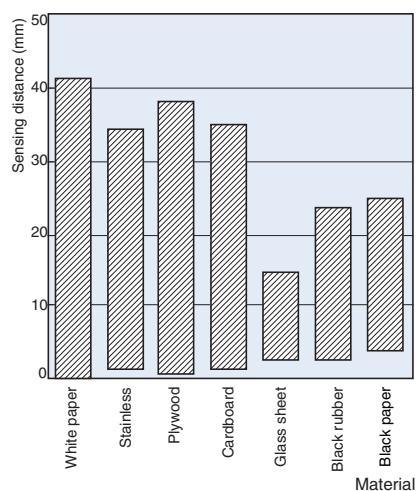
Sensing Distance vs. Material

Limited-reflective

E3T-SL1□

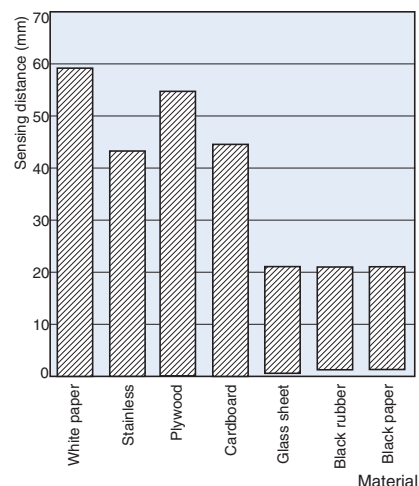


E3T-SL2□



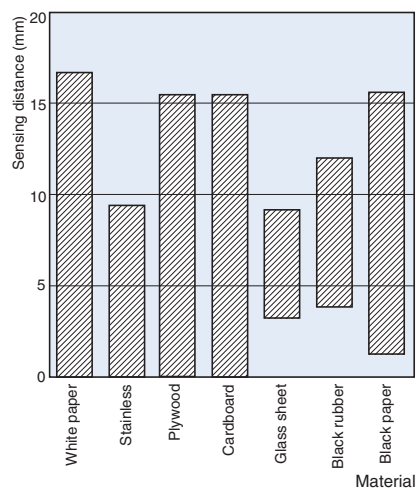
Diffuse-reflective

E3T-FD1□

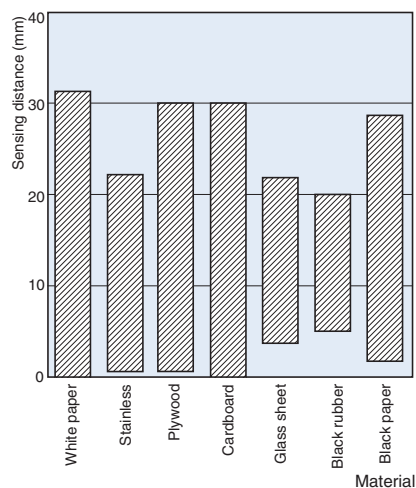


Diffuse-reflective (background suppression)

E3T-FL1□

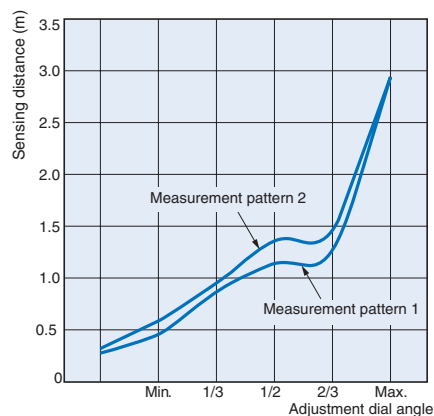


E3T-FL2□



Sensing Distance Characteristics of Sensitivity Adjustment Unit (when Completing Optical Axial Adjustment)

E3T-ST1□ + E39-E10 Sensitivity Adjustment Unit (Order Separately)



I/O Circuit Diagrams

NPN Output

| Model | Operation mode | Timing charts | Output circuit |
|----------|----------------|---|--|
| E3T-□□□1 | Light-ON | <p>Light incident Light interrupted</p> <p>Operation indicator (orange) ON OFF</p> <p>Output transistor ON OFF</p> <p>Load (e.g., relay) Operate Reset</p> <p>(Between brown and black)</p> | <p>Through-beam Receivers, Retroreflective and Reflective Models</p> |
| E3T-□□□2 | Dark-ON | <p>Light incident Light interrupted</p> <p>Operation indicator (orange) ON OFF</p> <p>Output transistor ON OFF</p> <p>Load (e.g., relay) Operate Reset</p> <p>(Between brown and black)</p> | <p>Through-beam Emitters</p> |

PNP Output

| Model | Operation mode | Timing charts | Output circuit |
|----------|----------------|--|--|
| E3T-□□□3 | Light-ON | <p>Light incident Light interrupted</p> <p>Operation indicator (orange) ON OFF</p> <p>Output transistor ON OFF</p> <p>Load (e.g., relay) Operate Reset</p> <p>(Between blue and black leads)</p> | <p>Through-beam Receivers, Retroreflective and Reflective Models</p> |
| E3T-□□□4 | Dark-ON | <p>Light incident Light interrupted</p> <p>Operation indicator (orange) ON OFF</p> <p>Output transistor ON OFF</p> <p>Load (e.g., relay) Operate Reset</p> <p>(Between blue and black leads)</p> | <p>Through-beam Emitters</p> |

Safety Precautions

Warning

This product is not designed or rated for ensuring safety of persons. Do not use it for such purpose.

Do not apply AC power to the E3T, otherwise the E3T may rupture.



Precautions for Correct Use

Do not use the product in atmospheres or environment that exceed product ratings.

Wiring

The maximum power supply voltage is 24 VDC +10%. Before turning the power ON, make sure that the power supply voltage is not more than maximum voltage.

Load short-circuit protection

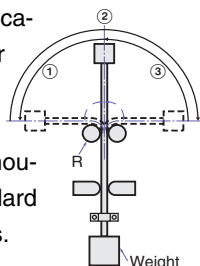
The E3T incorporates a load short-circuit protection function. If the load short-circuits, the output of the E3T will be turned OFF. Then, recheck the wiring and turn on the E3T again to reset the load short-circuit protection function. The load short-circuit protection function will work if there is a current flow that is 2.4 times larger than the rated load current. When using an inductance load, be sure that the inrush current will not exceed 2.4 times larger than the rated current.

Mounting

When mounting the Sensor, never strike it with a heavy object, such as a hammer. Doing so may reduce its watertight properties. Use M2 screws and flat or spring washers to secure the Sensor. (Tightening torque: 0.15 N·m max.)

Mounting the Sensor on Moving Parts

Consider models that use break resistant cables (e.g., Robotics Cables) if the Sensor will be mounted on a moving part, such as a robot hand. The flexing resistance of Robotics Cable at approximately 400 thousand times is far superior to that of standard cable at approximately 14 thousand times.



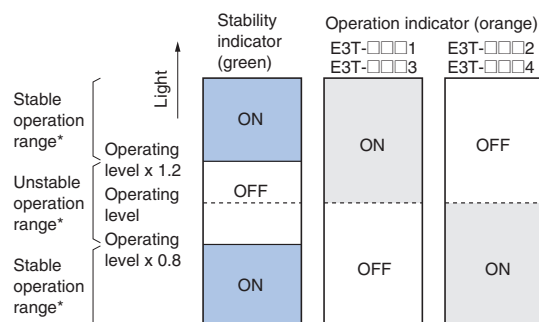
Cable Bending Rupture Test (Tough Cable Breaking Test)

The cable is repeatedly bent with power supplied to check the number of bends until the current is turned OFF

| Specimen | | Standard cable 2.4 mm dia. (7/ 0.127 mm dia.), 3 conductors | Robotics cable 2.4 mm (20/ 0.08 mm dia.), Test 3 conductors |
|-----------------------------------|---------------------------------------|--|--|
| Test | | | |
| Con- tents/ condi- tions | Bending angle (θ) | 90° each to the left and right | |
| | Bending speed | 50 times/min | |
| | Load | 200 g | |
| | Operation per bend | Once in 1 to 3 in the diagram | |
| | Curvature radius of support point (R) | 5 mm | |
| Result | | Approx. 14,000 times | Approx. 400,000 times |

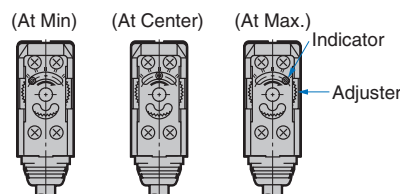
Adjusting Indicators

- The following graphs indicate the status of each operating level.
- Be sure to use the E3T within the stable operating range.



*If the E3T's operating level is set to the stable operation range, the E3T will be in most reliable operation without being influenced by temperature change, voltage fluctuation, dust, or setting change. If the operating level cannot be set to the stable operation range, pay attention to environmental changes while operating the E3T.

Use of E39-E10 Sensitivity Adjustment Unit (Dark-ON: E3T-ST12)



- Mount the Unit on the Receiver.
- Set the adjuster of the Sensitivity Adjustment Unit to Max. (Before shipping: Max.)
- After mounting on the Sensor, adjust the optical axis and secure the Sensor.
- Place a workpiece between the Emitter and Receiver and gradually turn the adjuster counterclockwise toward the Min. side. Stop turning the adjuster when the operation indicator and stability indicator (green) turn ON.
- Remove the workpiece and confirm that the operation indicator is OFF and the stability indicator (green) is ON. This completes the adjustment.

Note: If the light attenuation rate due to a workpiece is 40% or less, the stability indicator will not turn ON whether or not light is received. When the variation of light is small such as when sensing semi-transparent workpieces, carefully perform preliminary testing.

Others

Do not install the E3T in the following locations.

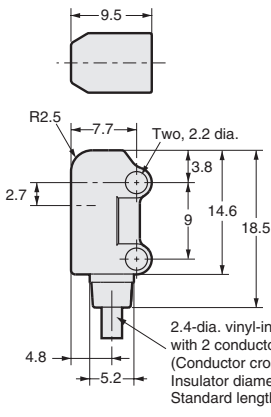
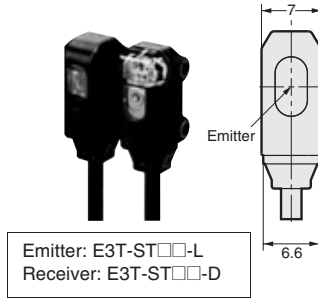
- Locations subject to excessive dust or dirt
- Locations subject to direct sunlight
- Locations subject to corrosive gas
- Locations subject to contact with organic solvents
- Locations subject to vibration and shock
- Locations subject to contact with water, oil, or chemicals
- Locations subject to high humidities that might result in condensation

Dimensions

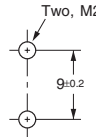
Sensors

Through-beam Models
(Side-view)

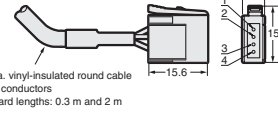
E3T-ST1□ (Emitter)
E3T-ST2□ (Emitter)



Mounting Holes

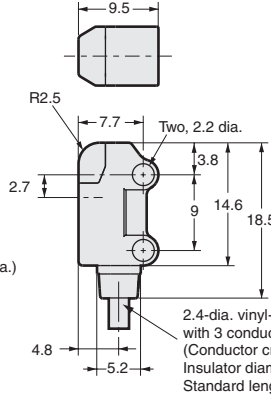
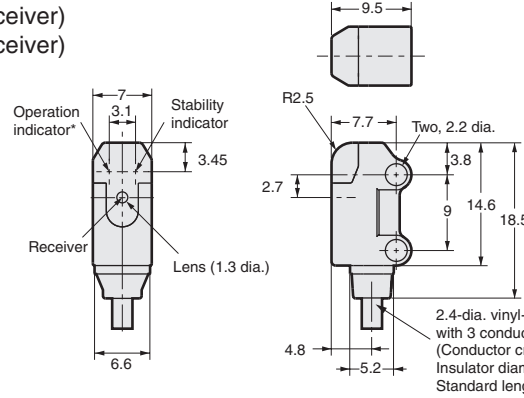


e-CON Pre-wired Connector Model
(E3T-ST□□-ECON)

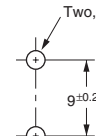


| Terminal No. | Specifications |
|--------------|----------------|
| 1 | +V |
| 2 | --- |
| 3 | 0 V |
| 4 | --- |

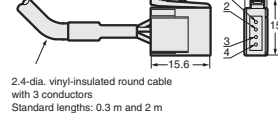
E3T-ST1□ (Receiver)
E3T-ST2□ (Receiver)



Mounting Holes



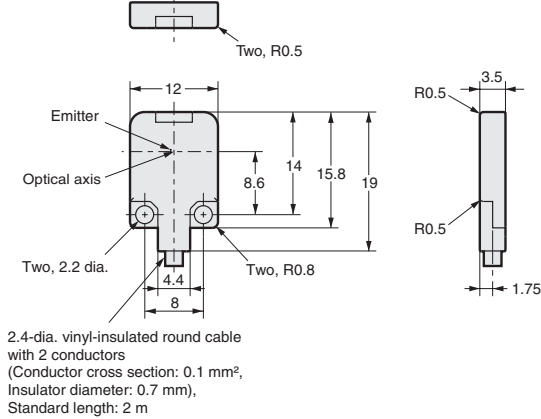
e-CON Pre-wired Connector Model
(E3T-ST□□-ECON)



| Terminal No. | Specifications |
|--------------|----------------|
| 1 | +V |
| 2 | --- |
| 3 | 0 V |
| 4 | Output |

Through-beam Models (Flat)

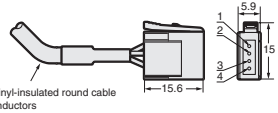
E3T-FT1□ (Emitter)
E3T-FT2□ (Emitter)



Mounting Holes

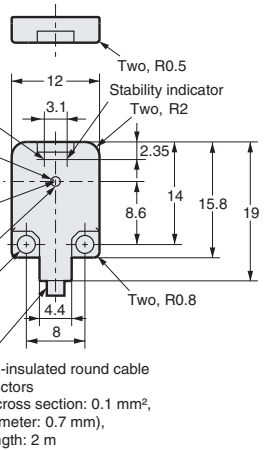
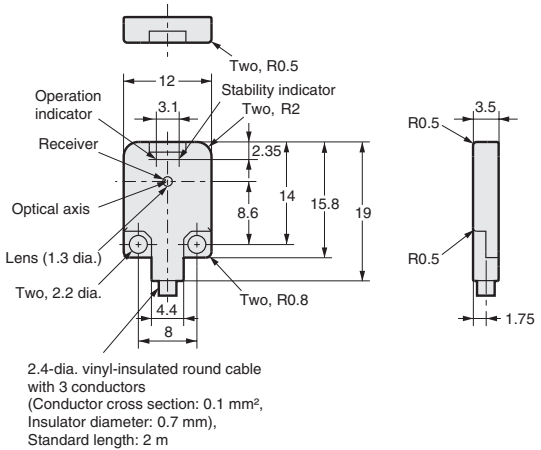


e-CON Pre-wired Connector
(E3T-FT□□-ECON)

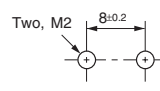


| Terminal No. | Specifications |
|--------------|----------------|
| 1 | +V |
| 2 | --- |
| 3 | 0 V |
| 4 | --- |

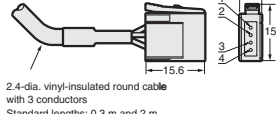
E3T-FT1□ (Receiver)
E3T-FT2□ (Receiver)



Mounting Holes



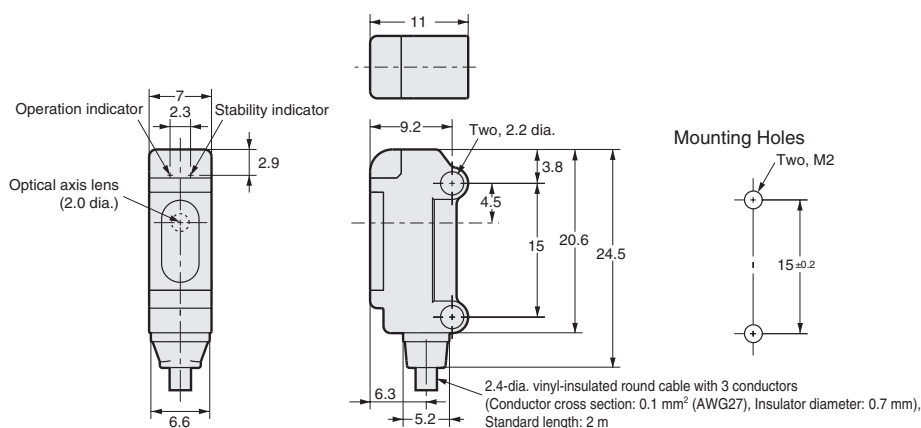
e-CON Pre-wired Connector
(E3T-FT□□-ECON)



| Terminal No. | Specifications |
|--------------|----------------|
| 1 | +V |
| 2 | --- |
| 3 | 0 V |
| 4 | Output |

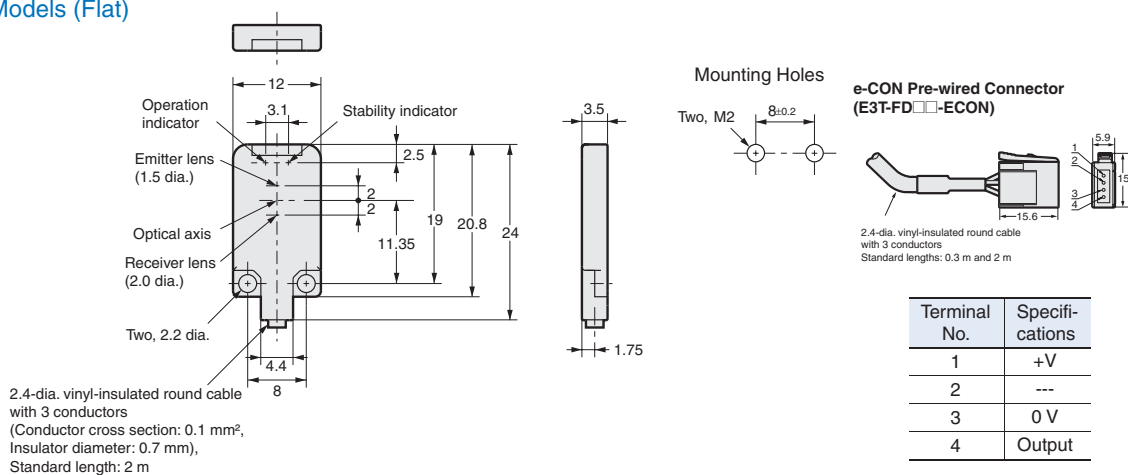
Retro-reflective Models (Side-view)

E3T-SR4□



Diffuse-reflective Models (Flat)

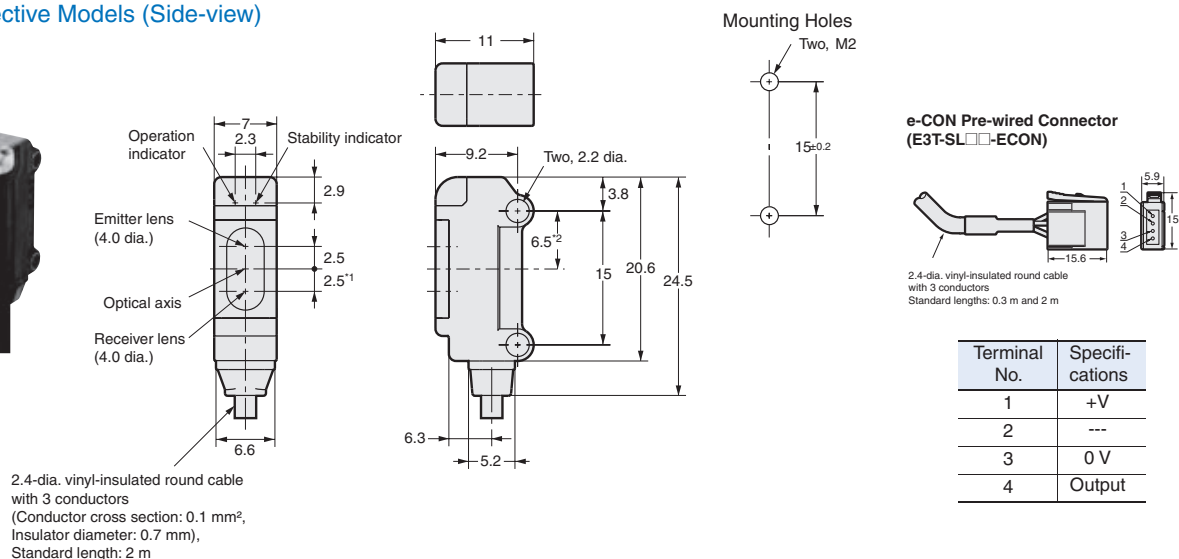
E3T-FD1□



Limited-reflective Models (Side-view)

E3T-SL1□

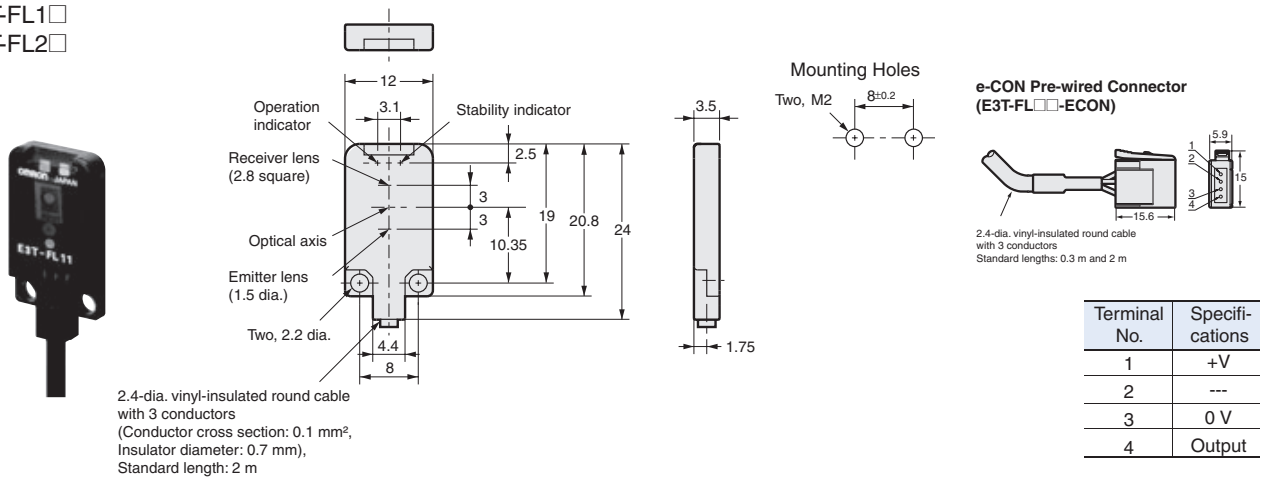
E3T-SL2□



Diffuse-reflective (background suppression)

E3T-FL1□

E3T-FL2□



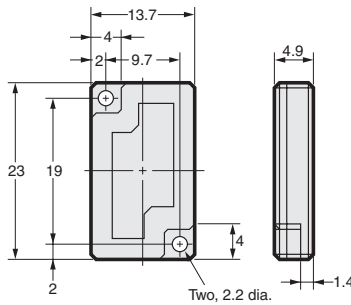
Accessories

Reflector

E39-R4



Material, reflective surface: acrylic
Rear surface: ABS

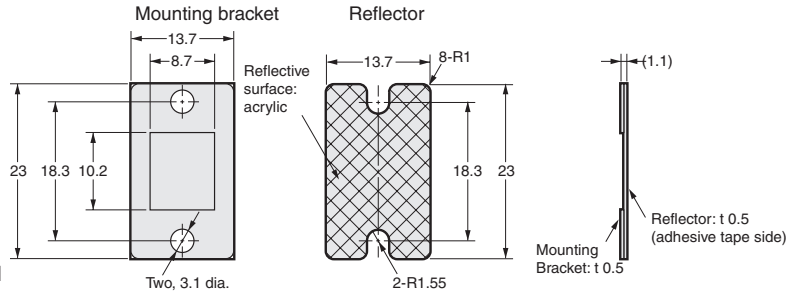


Reflector

E39-R37-CA



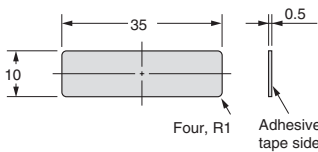
Material: Mounting plate: stainless steel (SUS301)
Reflective surface: acrylic



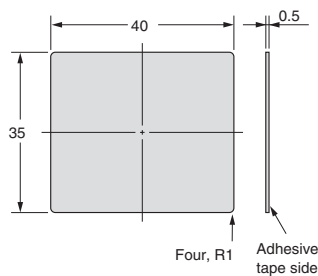
Note: The reflective plate and mounting plate (1) come as a set.

Reflector tapes

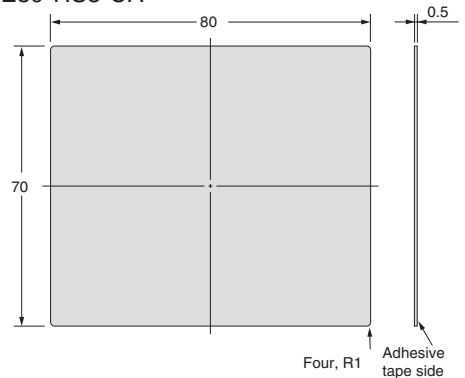
E39-RS1-CA



E39-RS2-CA

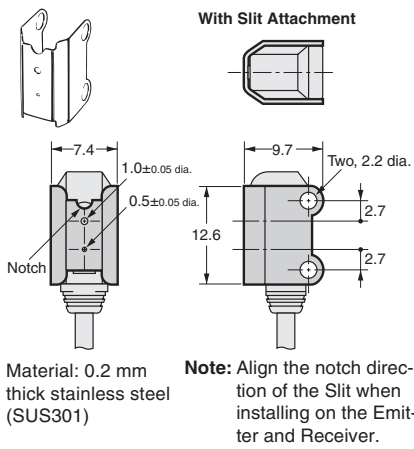


E39-RS3-CA

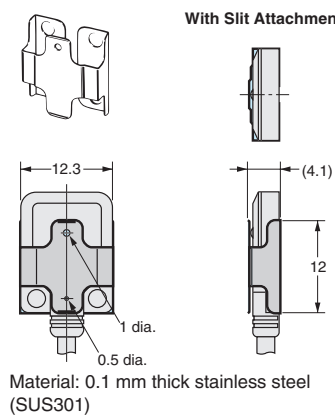


Accessories (Order Separately)

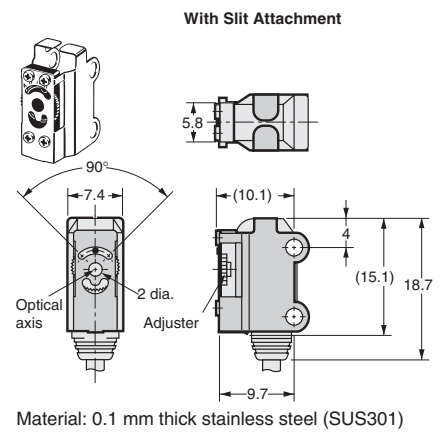
Slit for E3T-ST1□ Through-beam Models E39-S63



Slit for E3T-FT1□ Through-beam Models E39-S64

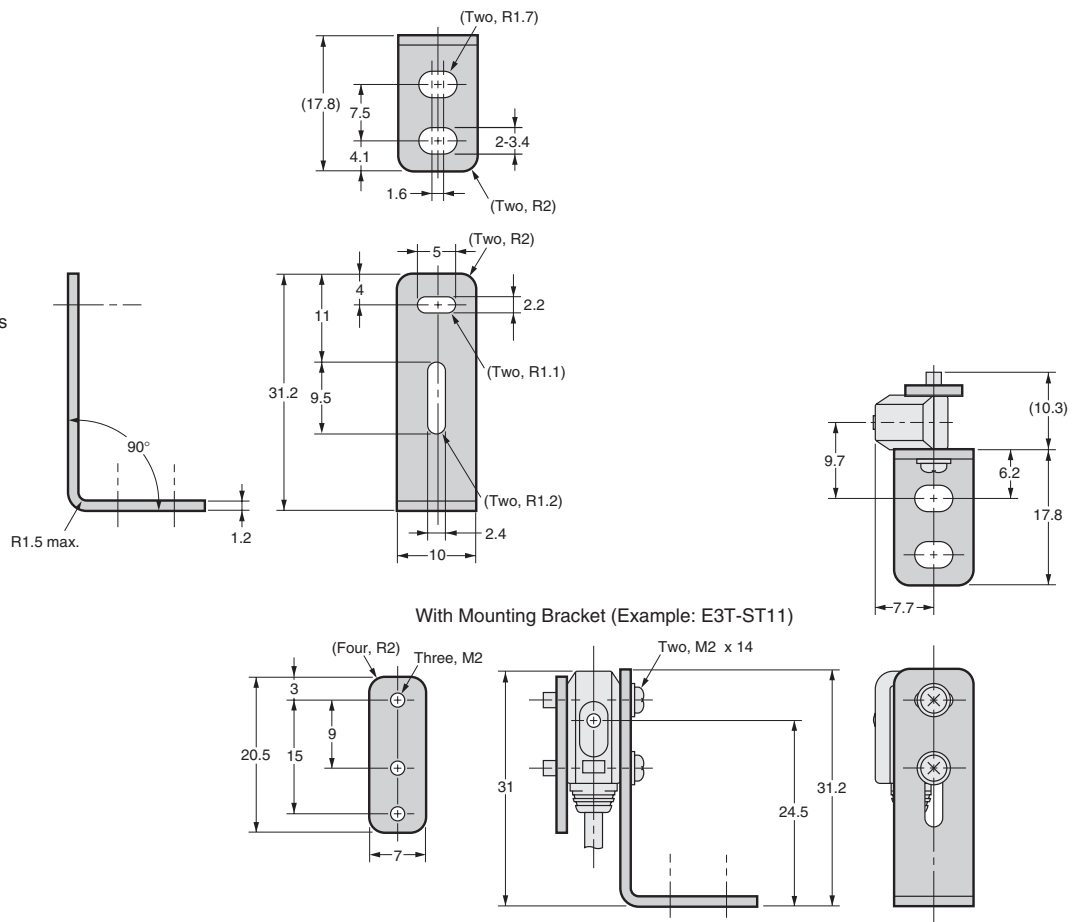


Sensitivity Adjustment Unit (for E3T-ST1□ Through-beam Models) E39-E10



Mounting Brackets for Side-view Models

E39-L116

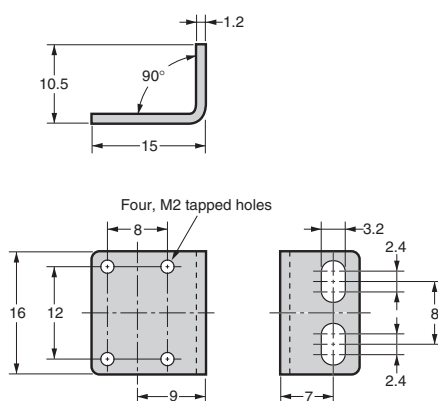


Mounting Brackets for Flat Models

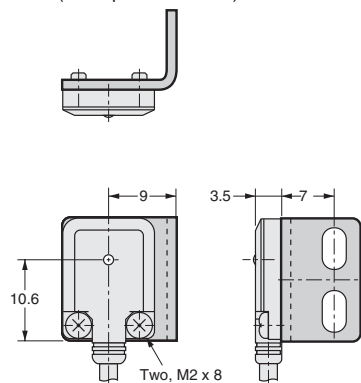
E39-L119



Material: 1.2 mm thick stainless steel (SUS304)



With Mounting Bracket
(Example: E3T-FT11)

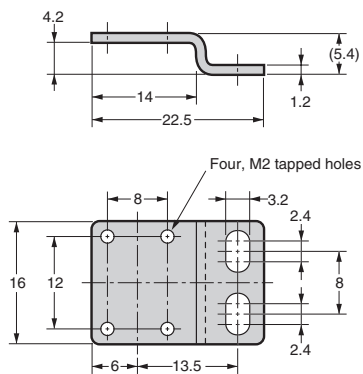


Mounting Brackets for Flat Models

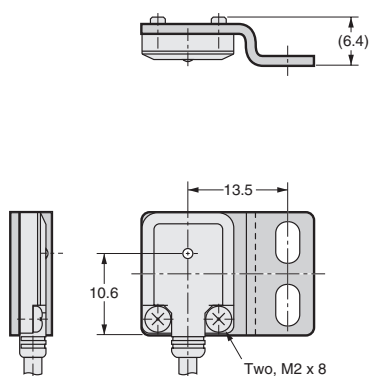
E39-L120



Material: 1.2 mm thick stainless steel (SUS304)



With Mounting Bracket
(Example: E3T-FT11)



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In the interest of product improvement, specifications are subject to change without notice.

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