

Superior Fluororesin Finish Protects Against Oil and Chemicals

- Fluororesin coated cable and case.
- Rounded tip lens resists water drops.
- Small built-in Amplifier Unit.



Be sure to read *Safety Precautions* on page 3.

Ordering Information

Infrared light

| Sensing method | Appearance | Connection method | Sensing distance | | | Operation mode | Model |
|--|------------|-------------------|---|--|--------|----------------|---------------------|
| Through-beam (Emitter + Receiver) * | | Pre-wired (2 m) | | | 800 mm | Light-ON | E3HQ-CT11 2M |
| | | | | | | Dark-ON | E3HQ-CT12 2M |

* The model number of the Emitter is E3HQ-CT-L 2M for all models. The model number of the Receiver is E3HQ-CT11-D 2M for Light-ON models and E3HQ-CT12-D 2M for Dark-ON models.
Orders for individual Emitters and Receivers are accepted.

Ratings and Specifications

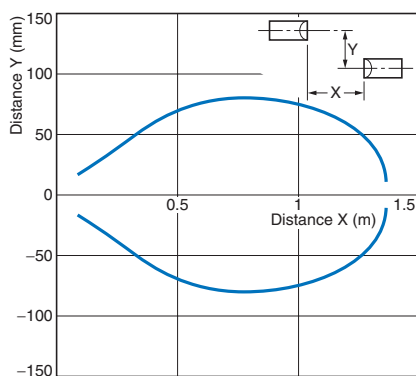
| Sensing method | | Through-beam |
|--------------------------------------|------------------|--|
| Item | Model | E3HQ-CT1□ |
| Sensing distance | | 800 mm |
| Standard sensing object | | Opaque: 6.25-mm dia. min. |
| Directional angle | | Both Emitter and Receiver 10° to 25° |
| Light source (wavelength) | | Infrared LED (950 nm) |
| Power supply voltage | | 12 to 24 VDC±10% including 10% (p-p) max. ripple |
| Current consumption | | 40 mA max. (Emitter: 25 mA max., Receiver: 15 mA max.) |
| Control output | | Load power supply voltage: 24 VDC max., Load current: 80 mA max. (residual voltage: 1 V max.) NPN voltage output configuration Light-ON/Dark-ON (depends on model) |
| Protection circuits | | Power supply reverse polarity protection, Output short-circuit protection |
| Response time | | Operate or reset: 5 ms max. |
| Ambient illumination (Receiver side) | | Incandescent lamp: 3,000 lx max. |
| Ambient temperature range | | Operating: -25 to 55°C, Storage: -30 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 | | 500 VAC, 50/60 Hz for 1 min |
| Vibration resistance | | Destruction: 10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions |
| Shock resistance | | Destruction: 500 m/s ² 3 times each in X, Y, and Z directions |
| Degree of protection | | IP67 (IEC 60529) |
| Connection method | | Pre-wired cable (standard length: 2 m) |
| Weight (packed state) | | Approx. 100 g |
| Material | Case | Fluororesin |
| | Cable | Fluororesin |
| | Mounting Bracket | Stainless steel (SUS304) |
| Accessories | | Mounting Bracket, 10 Phillips and flat-blade M3 screws, Instruction manual |

Engineering Data (Typical)

Parallel Operating Range

Through-beam

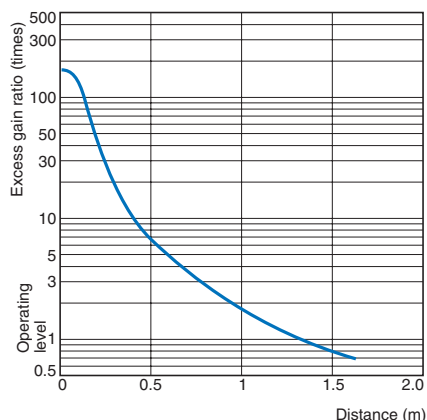
E3HQ-CT1□



Excess Gain vs. Set Distance

Through-beam

E3HQ-CT1□



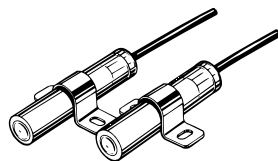
I/O Circuit Diagrams

NPN Output

| Model | Operation mode | Timing charts | Output circuits |
|-----------|----------------|----------------------------|---|
| E3HQ-CT11 | Light-ON | <div>Incident light </div> | <div>Through-beam Model Receivers</div> |

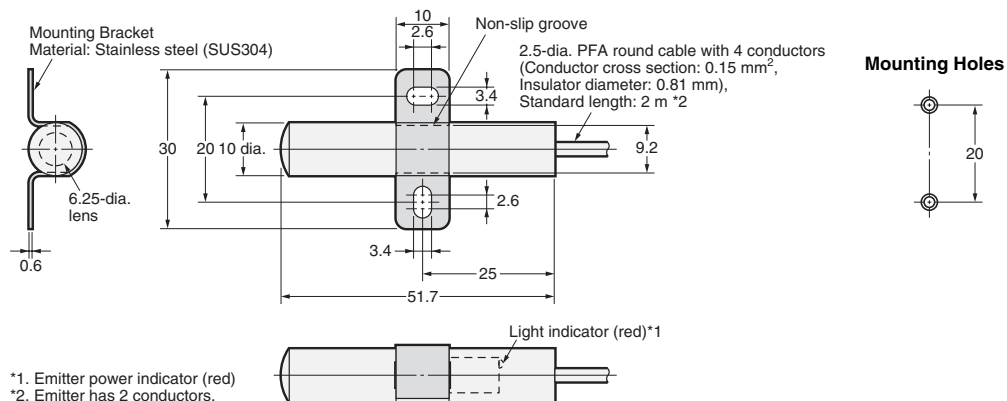
Dimensions

E3HQ-CT1□



Emitter: E3HQ-CT-L
Receiver E3HQ-CT1□-D

With Mounting Bracket Attachment



Read and Understand This Catalog

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

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DIMENSIONS AND WEIGHTS

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

PERFORMANCE DATA

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