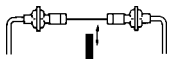
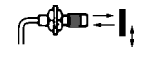






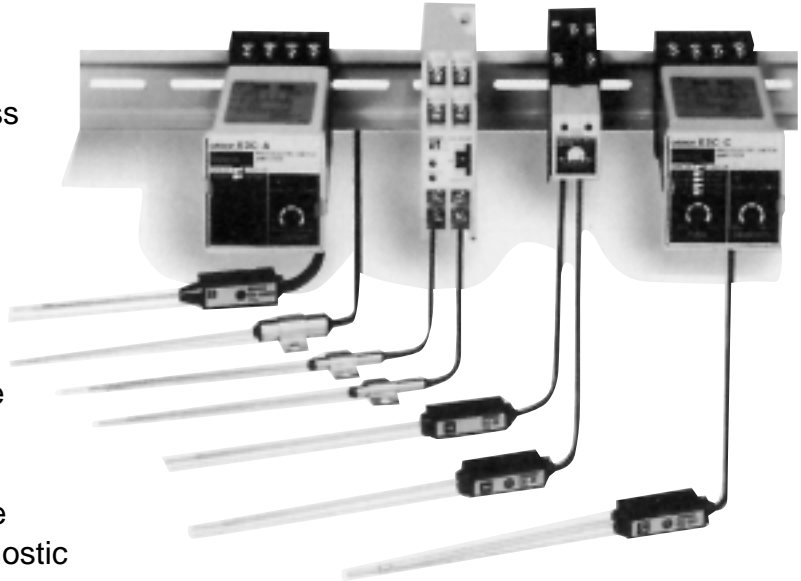
| Sensing | | Supply voltage | Output | |
|--|--|---|---|--|
|  50 mm |  2, 5, 10 mm | 12 to 24 VDC amplifiers on 100 to 240 VAC, 50/60 Hz amplifiers |  1 A, 240 VAC |  80 mA, 24 VDC 100 mA, 40 VDC |

Special Purpose Fiber-Optic Sensors

E3C

Miniature Sensors With Separate Amplifiers Fit Tight Spaces

- Fast, 1 ms response time
- Plastic fiber in bendable stainless steel tube lets you shape the sensor for an exact fit
- Choose cylindrical sensors with mounting strap included or rectangular sensors that accept optional brackets
- Prewired with 2 m (6.56 ft) cable
- Amplifier with built-in ON-, OFF- and one-shot delays available
- Prewired DC amplifiers offer fine sensitivity adjustment and diagnostic alarm output







Ordering Information

■ SENSORS

| Method of detection | | Separate | Diffuse reflective | | |
|---------------------|------------------|-----------------|--------------------|-----------------|-----------------|
| Sensing distance | | 50 mm (1.97 in) | 2 mm (0.08 in) | 5 mm (0.20 in) | 10 mm (0.40 in) |
| Part number | Rectangular body | E3C-S5 | E3C-DM2R | E3C-DM5 | E3C-DS1 |
| | Cylindrical body | E3C-S5A | — | E3C-DM5A | E3C-DS1A |

■ AMPLIFIERS

| Shape |  Fits 1/16 DIN panel cutout |  For S3D8 controller |  Miniature |  Slim, prewired | | | |
|-----------------|--|---|--|--|-----------------|-----------------|-----------------|
| Supply voltage | 100 to 240 VAC, 50/60 Hz | | 12 to 24 VDC | | | | |
| Output | Relay and NPN solid-state | | NPN and PNP solid-state | NPN | PNP solid-state | NPN solid-state | PNP |
| Timer functions | — | ON-delay OFF-delay One-shot | — | — | 40 ms OFF-delay | | |
| Mounting style | Socket (included) | | Track | Socket Track (order separately) | | — | |
| Part number | E3C-A | E3C-C | E3C-WH4F | E3C-GE4 | E3C-GF4 | E3C-JC4P | E3C-JB4P |

NOTE: For specifications, connections and operation information about E3C amplifiers, refer to the E3C data sheet in the Special-Purpose Photoelectric Sensors section.

■ ACCESSORIES

| Description | | Part number |
|--|--|-------------|
| Mounting brackets | Fits rectangular sensors E3C-S5, E3C-DM2R, and E3C-DM5 | E39-L41 |
| | Fits rectangular sensor E3C-DS1 | E39-L42 |
| Sockets required for E3C-GE4 amplifier | Bottom surface mount socket | PYF08M |
| | Combination bottom surface and track-mount socket | PYF08A-E |
| Mounting track | DIN rail, 50 cm (1.64 ft) length | PFP-50N |
| | DIN rail, 1 m (3.28 ft) length | PFP-100N |
| | End plate | PFP-M |
| | Spacer | PFP-S |

■ REPLACEMENT PARTS

| Description | Part number |
|--|-------------|
| Combination bottom surface and track-mount socket for E3C-A and E3C-C amplifiers | PF113A-E |
| Mounting bracket for E3C-J□4P amplifier | E39-L48 |

Specifications

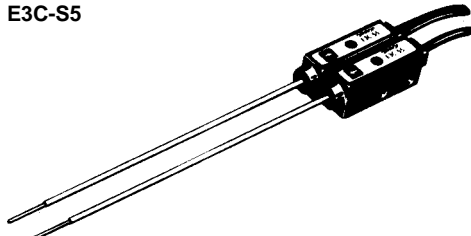
| Part number | E3C-S5 | E3C-S5A | E3C-DM2R | E3C-DM5 | E3C-DM5A | E3C-DS1 | E3C-DS1A | |
|--------------------------------|---|---|---|---|--|--|------------------------------------|---------------------|
| Method of detection | Through-beam | | Diffuse reflective | | | | | |
| Sensing distance | 50 mm (1.97 in) | | 2 mm (0.08 in) with 1 x 1 cm (0.39 x 0.39 in) 90% reflectance white mat paper | 5 mm (0.20 in) with 1 x 1 cm (0.39 x 0.39 in) 90% reflectance white mat paper | 10 mm (0.40 in) with 2 x 2 cm (0.79 x 0.79 in) 90% reflectance white mat paper | | | |
| Light source | Pulse modulated infrared LED | | Pulse modulated red LED (680 nm) | Pulse modulated infrared LED | | | | |
| Detectable object type | Opaque materials 2 mm (0.079 in) minimum dimension | | Opaque and transparent material | | | | | |
| Mutual interference protection | Provided | | | | | | | |
| Required amplifier | E3C-A, E3C-C, E3C-GE4, E3C-JB4P, E3C-JC4P, or E3C-WH4F | | | | | | | |
| Indicators | Emitter: None Receiver: Light Incident (red LED) | None | Light Incident (red LED) | Light Incident (red LED) | None | Light Incident (red LED) | None | |
| Materials | Fiber-optics | Sheath: 304 stainless steel Filament: Plastic | | | | | | |
| | Case | Plastic, polycarbonate | 304 stainless steel | Plastic, polycarbonate | | 304 stainless steel | Plastic, polycarbonate | 304 stainless steel |
| | Cable | Plastic sheath, vinyl | | | | | | |
| Mounting | Side surface with two through holes; Bracket E39-41 optional. | Surface with metal strap included. | Side surface with two through holes; Bracket E39-L41 optional. | | Surface with metal strap included. | Side surface with two through holes; Bracket E39-L42 optional. | Surface with metal strap included. | |
| Connections | Prewired | Emitter: 2-conductor cable, 2 m (6.56 ft) length Receiver: 2-conductor cable, 2 m (6.56 ft) length | | 4-conductor cable, 2 m (6.56 ft) length | | | | |
| Weight | Emitter | 25 g (0.9 oz.) | | 50 g (1.8 oz.) | | | | |
| | Receiver | 25 g (0.9 oz.) | | | | | | |
| Enclosure | UL | - | | | | | | |
| | CSA | 1, 2, 12 | 1, 2, 4, 4X, 12 | 1, 2, 12 | | 1, 2, 4, 4X, 12 | 1, 2, 12 | 1, 2, 4, 4X, 12 |
| | IEC | IP64 | IP66 | IP64 | | IP66 | IP64 | IP66 |
| Approvals | UL | - | | | | | | |
| | CSA | - | | | | | | |
| Ambient | Operating | -25° to 70°C (-13° to 158°F) | | | | | | |
| | Storage | -25° to 70°C (-13° to 158°F) | | | | | | |

Dimensions

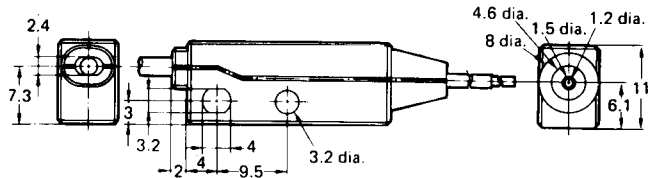
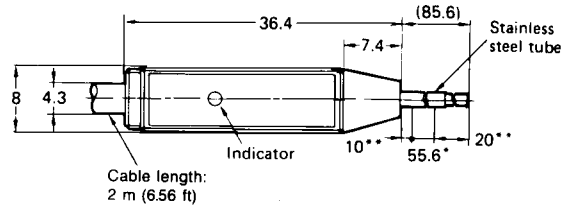
Unit: mm

■ SENSORS

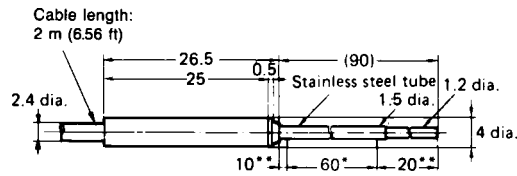
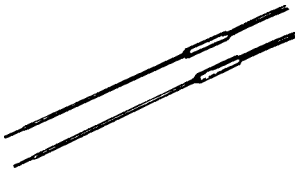
E3C-S5



NOTE: * The curvature of the bend must be greater than 10 mm in radius.
 ** Do not bend here.

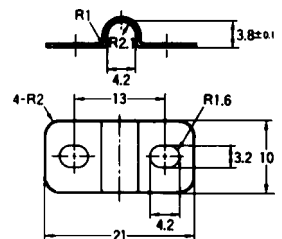


E3C-S5A

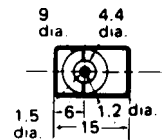
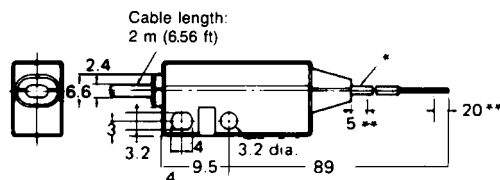
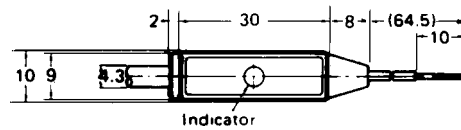
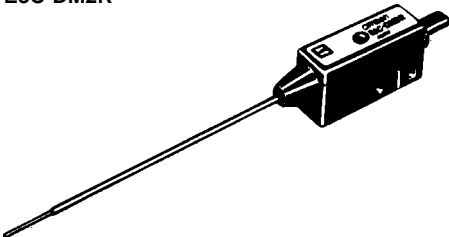


NOTE: * The curvature of the bend must be greater than 10 mm in radius.
 ** Do not bend here.

Mounting strap (included)

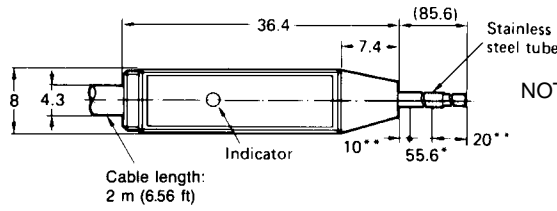
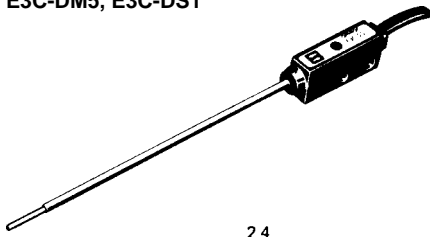


E3C-DM2R

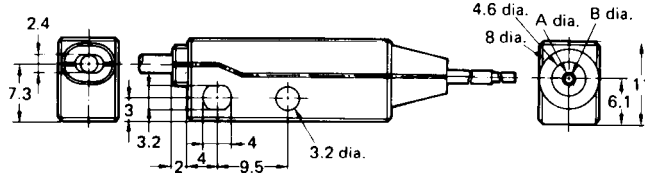


NOTE: * The curvature of the bend must be greater than 10 mm in radius. If vibration is expected, fasten the fiber tip to assure reliable sensing.
 ** Do not bend here.

E3C-DM5, E3C-DS1

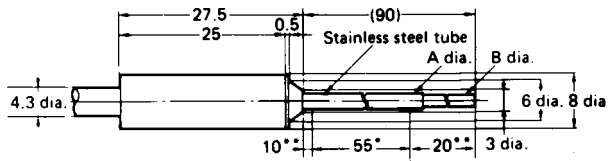
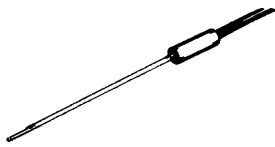


NOTE: * The curvature of the bend must be greater than 10 mm in radius.
** Do not bend here.

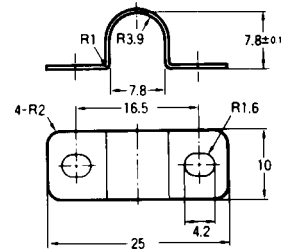


| Part number | Diameter | |
|-------------|----------|--------|
| | A | B |
| E3C-DM5 | 1.5 mm | 1.2 mm |
| E3C-DS1 | 2.0 mm | 1.5 mm |

E3C-DM5A, E3C-DS1A



Mounting strap (included)



NOTE: * The curvature of the bend must be greater than 10 mm in radius.
** Do not bend here.

| Part number | Diameter | |
|-------------|----------|--------|
| | A | B |
| E3C-DM5 | 1.5 mm | 1.2 mm |
| E3C-DS1 | 2.0 mm | 1.5 mm |

NOTE: DIMENSIONS ARE IN MILLIMETERS. TO CONVERT MILLIMETERS TO INCHES, DIVIDE BY 25.4.



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