

Retroreflectors

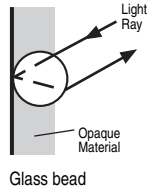
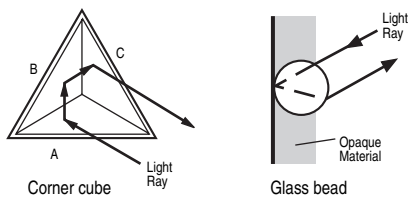
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Cutler-Hammer® Retroreflectors from Eaton's electrical business are used with reflex-type sensors. Two types of retroreflective target material are available: corner cube and embedded glass bead.

Corner Cube Retroreflectors

This type provides the highest signal return to the sensor, typically 2000 to 3000 times the reflectivity of white paper. Three adjoining sides are arranged at right angles to each other. When a ray of light strikes one of these sides (A), it is reflected to the second (B), then the third (C), and then back to the source parallel to its original course. Thousands of these cube shapes are molded into a rugged plastic reflector or vinyl tape material. Corner cube retroreflectors are suitable for use with both standard reflex and polarized reflex sensors.



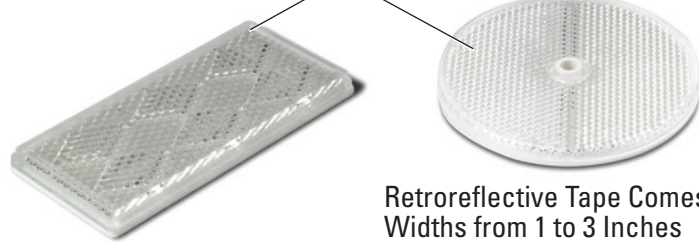
Glass Bead Retroreflectors

Glass bead retroreflectors are available in tape form with an adhesive backing. The bead style surface is typically rated at 200 to 900 times the reflectivity of white paper — much lower than corner cube reflectors. Glass bead retroreflectors are not suitable for use with polarized reflex sensors.

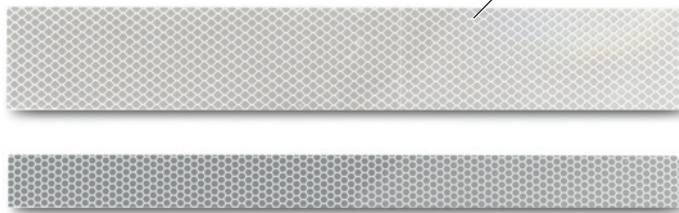
For the most current information on this product, visit our web site: www.EatonElectrical.com

High Quality Retroreflectors and Retroreflective Tape in a Wide Variety of Sizes to Meet Your Needs

Retroreflectors Available in Both Rectangular and Round Form Factors

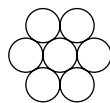


Retroreflective Tape Comes in Widths from 1 to 3 Inches



Retroreflector Size

The size of the retroreflective target has a significant effect on the excess gain and range of a reflex sensor. In general, we recommend you use the largest possible reflector in every reflex sensing application to maximize performance of the sensor and simplify alignment. To provide an even larger reflective area, multiple retroreflectors can be grouped together as shown.



7 Retroreflectors Grouped Together

Using Retroreflectors with Polarized Reflex Sensors

Only corner cube retroreflective material can be used with polarized reflex sensors. When polarized light from the sensor's light source strikes a corner cube retroreflector, it is returned to the sensor in a depolarized state. This allows some of the light to pass through the detector's polarizer, which is positioned at 90° to the source polarizer, to allow the sensor to operate.

Glass bead retroreflectors do not depolarize light and will not work with polarized reflex sensors.

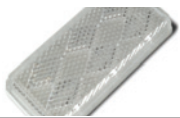





Molded plastic corner cube retroreflectors are always recommended as they provide the highest signal return to the sensor.

Corner cube tape works with polarized reflex sensors but returns less light to the sensor. In all cases, Eaton recommends testing sensor and tape prior to final installation.



For Customer Service in the U.S. call 1-877-ETN CARE (386-2273), in Canada call 1-800-268-3578. For Application Assistance in the U.S. and Canada call 1-800-426-9184.

August 2007

Model Selection — Retroreflectors

	Description	Catalog Number
Corner Cube Retroreflector		
	1.5 x 3.25 inch, adhesive backed, one per package	6200A-6507
	3 inch diameter, with mounting hole, two per package	6200A-6501
	Bulk packaged version of above (ordered quantity will be bulk packaged)	6200AS6501
	3 inch diameter, with mounting hole, one per package	E51KR84
	3 inch diameter, metal backed, with mounting hole, one per package	6200A-6506
	2.18 inch diameter, with mounting hole, one per package	6200A-6505
	2.18 inch diameter, adhesive backed, one per package	6200A-6502
	1.25 inch diameter, adhesive backed, one per package	6200A-6504
	Bulk packaged version of above (ordered quantity will be sent bulk packaged)	6200AS6504
	1.25 inch diameter, no adhesive, one per package	E51KR32

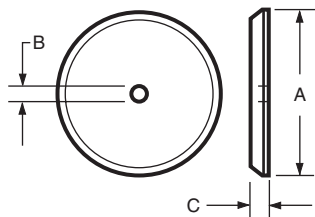
Retroreflective Tape

	Corner Cube Style ①	
	2 inch wide, 1 piece, quantity is length in feet	6201A-XXXX
	3 inch wide, 1 piece, quantity is length in feet	6203A-XXXX
	Glass Bead Style (Not for use with polarized reflex sensors)	
	1 inch wide, 1 piece, quantity is length in feet	6200A-XXXX
	2 inch wide, 1 piece, quantity is length in feet	6202A-XXXX

① Although corner cube tape works with polarized reflex sensors, we recommend testing sensor and tape prior to installation.

- Fast turn product with typical one business day lead-time to shipment.
- Stocked product, typical order quantities guaranteed in stock.

Approximate Dimensions in Inches (mm)



Round Retroreflectors

Catalog Number	Approximate Dimensions in Inches (mm)		
	A — Diameter	B — Hole Size	C — Thickness
6200A-6501	3.30 (84)	0.20 (5)	0.35 (9)
6200A-6502	2.40 (61)	None	0.30 (7.5)
6200A-6504	1.30 (33)	None	0.25 (6)
6200A-6505	2.40 (61)	0.25 (6)	0.30 (7.5)
6200A-6506	3.30 (84)	0.20 (5)	0.30 (7.5)
E51KR32	1.25 (32)	None	0.35 (9)
E51KR84	3.30 (84)	0.20 (5)	0.35 (9)

Sensor Mounting Brackets

Contents

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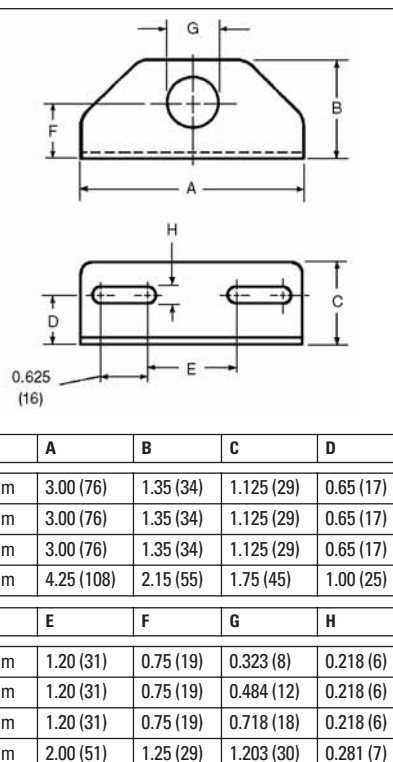

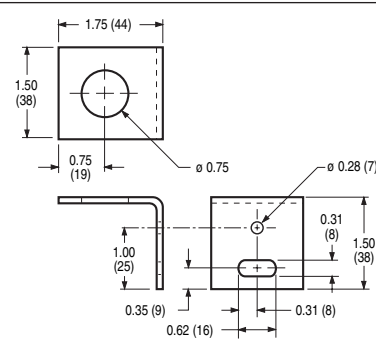
For the most current information on this product, visit our web site: www.EatonElectrical.com

The Cutler-Hammer® Mounting Brackets by Eaton’s electrical business found in this section are suited for use with 8 mm to 30 mm diameter tubular sensors only. Cutler-Hammer Mounting Brackets designed to specifically fit other types of sensors are found in the respective “Accessories” sections for those sensor families.

When choosing a bracket, consider:

- Adjustability — Do you need minimal alignment capability (mounting an inductive proximity sensor), or a high level of alignment precision (mounting a long range photoelectric thru-beam sensor)?
- Material of Construction — This can be dictated by the sensing environment or the type of sensor you are using.

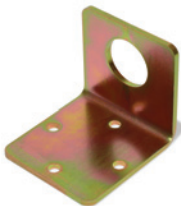
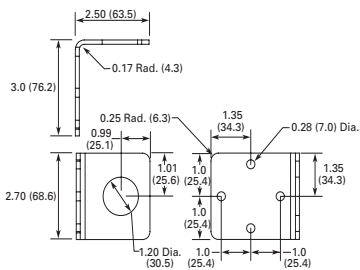

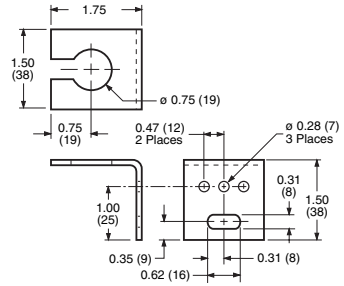

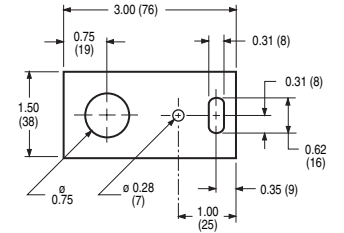

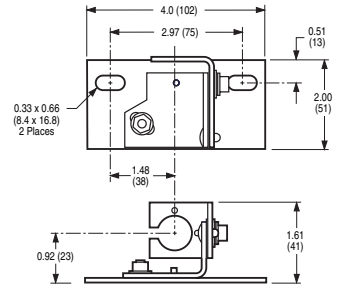

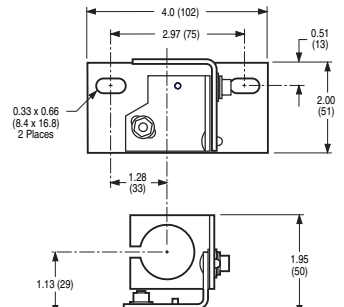
Model Selection — Mounting Brackets for Tubular Sensors

	Description	Size	Catalog Number	Approximate Dimensions in Inches (mm)																																																		
	Adjustability: Allows some adjustment in two axes Sensor Mounting: Sensor mounts with two jam nuts and washers (included with sensor) Material of Construction: Stainless steel Packaging: One per package	8 mm	E57KM8	 <table border="1"> <thead> <tr> <th>Size</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>8 mm</td> <td>3.00 (76)</td> <td>1.35 (34)</td> <td>1.125 (29)</td> <td>0.65 (17)</td> </tr> <tr> <td>12 mm</td> <td>3.00 (76)</td> <td>1.35 (34)</td> <td>1.125 (29)</td> <td>0.65 (17)</td> </tr> <tr> <td>18 mm</td> <td>3.00 (76)</td> <td>1.35 (34)</td> <td>1.125 (29)</td> <td>0.65 (17)</td> </tr> <tr> <td>30 mm</td> <td>4.25 (108)</td> <td>2.15 (55)</td> <td>1.75 (45)</td> <td>1.00 (25)</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Size</th> <th>E</th> <th>F</th> <th>G</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>8 mm</td> <td>1.20 (31)</td> <td>0.75 (19)</td> <td>0.323 (8)</td> <td>0.218 (6)</td> </tr> <tr> <td>12 mm</td> <td>1.20 (31)</td> <td>0.75 (19)</td> <td>0.484 (12)</td> <td>0.218 (6)</td> </tr> <tr> <td>18 mm</td> <td>1.20 (31)</td> <td>0.75 (19)</td> <td>0.718 (18)</td> <td>0.218 (6)</td> </tr> <tr> <td>30 mm</td> <td>2.00 (51)</td> <td>1.25 (29)</td> <td>1.203 (30)</td> <td>0.281 (7)</td> </tr> </tbody> </table>	Size	A	B	C	D	8 mm	3.00 (76)	1.35 (34)	1.125 (29)	0.65 (17)	12 mm	3.00 (76)	1.35 (34)	1.125 (29)	0.65 (17)	18 mm	3.00 (76)	1.35 (34)	1.125 (29)	0.65 (17)	30 mm	4.25 (108)	2.15 (55)	1.75 (45)	1.00 (25)	Size	E	F	G	H	8 mm	1.20 (31)	0.75 (19)	0.323 (8)	0.218 (6)	12 mm	1.20 (31)	0.75 (19)	0.484 (12)	0.218 (6)	18 mm	1.20 (31)	0.75 (19)	0.718 (18)	0.218 (6)	30 mm	2.00 (51)	1.25 (29)	1.203 (30)	0.281 (7)
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Stocked product, typical order quantities guaranteed in stock.


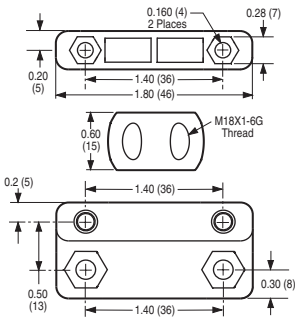

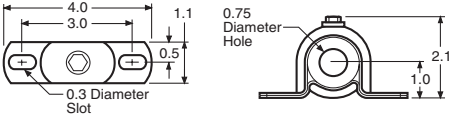

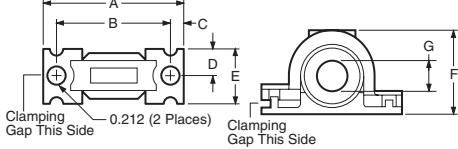


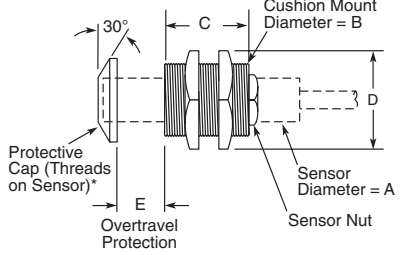
For Customer Service in the U.S. call **1-877-ETN CARE (386-2273)**, in Canada call **1-800-268-3578**.
For Application Assistance in the U.S. and Canada call **1-800-426-9184**.

Model Selection — Mounting Brackets for Tubular Sensors (Continued)

	Description	Size	Catalog Number	Approximate Dimensions in Inches (mm)
	<p>Allows a minimum range. Suitable for 30 mm sensors.</p> <p>Adjustability: Allows some adjustment in one axis</p> <p>Sensor Mounting: Sensor mounts with two jam nuts (included with sensor)</p> <p>Material of Construction: Zinc dichromate</p> <p>Packaging: One per package</p>	30 mm	6167A-6501	
	<p>Adjustability: Allows some adjustment in one axis and allows for aiming of the sensor through a short arc</p> <p>Sensor Mounting: Sensor mounts with two jam nuts and washers (included with sensor)</p> <p>Material of Construction: Aluminum with chromate finish</p> <p>Packaging: Bulk packaged (ordered quantity will be sent bulk packed)</p> <p>Note: Allows installation of sensor with jam nuts already in place on Sensor Body (Comet and Prism Sensors only).</p>	18 mm	6161AS7050	
	<p>Adjustability: Allows some adjustment in one axis and allows for aiming of the sensor through a short arc</p> <p>Sensor Mounting: Sensor mounts with two jam nuts and washers (included with sensor)</p> <p>Material of Construction: Aluminum with chromate finish</p> <p>Packaging: Bulk packaged (ordered quantity will be sent bulk packed)</p>	18 mm	6161AS5295	
	<p>Adjustability: Locking vertical and horizontal adjustments for independent adjustments in each axis</p> <p>Sensor Mounting: Sensor mounts with two jam nuts and washers (included with sensor)</p> <p>Material of Construction: 304 stainless steel</p> <p>Packaging: One per package</p> <p>Note: Sensor is electrically isolated from mounting surface.</p>	18 mm	E58KAM18	
	<p>Same as E58KAM18, except not electrically isolated from mounting surface.</p>	18 mm	E58KAM18U	
	<p>Adjustability: Locking vertical and horizontal adjustments for independent adjustment in each axis</p> <p>Sensor Mounting: Sensor mounts with two jam nuts (included with sensor)</p> <p>Material of Construction: 304 stainless steel</p> <p>Packaging: One per package</p> <p>Note: Sensor is electrically isolated from mounting surface.</p>	30 mm	E58KAM30	
	<p>Same as E58KAM30, except not electrically isolated from mounting surface.</p>	30 mm	E58KAM30U	

Stocked product, typical order quantities guaranteed in stock.

Model Selection — Mounting Brackets for Tubular Sensors (Continued)

	Description	Size	Catalog Number	Approximate Dimensions in Inches (mm) Except Where Noted																														
	Adjustability: Allows 360° rotation and 10° vertical tilt Sensor Mounting: Mounts directly to any 18 mm threaded sensor Material of Construction: 5% glass filled Valox® Packaging: One per package	18 mm	E58KAM18B																															
	Adjustability: Allows 5.5° rotation with screw lock to fix final position Sensor Mounting: Mounts directly to any 18 mm tubular sensor Material of Construction: Extremely rugged, made from zinc plated steel/Celenex® Packaging: One per package Note: Electrically isolates the sensor to prevent noise pick-up caused by poor grounding.	0.75 inch (18 mm)	6168A-6501	Note: Dimensions in Inches 																														
	Adjustability: Allows 10° rotation on X and Y axes with a clamping action to hold adjustment Sensor Mounting: Mounts directly to any 8 mm tubular sensor Material of Construction: Noryl (avoid exposing to chlorinated halogenated or aromatic hydrocarbons). Operating temperature: -40° to 160°F. Packaging: One per package	0.375 inch (8 mm)	6143A-6501																															
	Same as 6143A-6501 (above), except: Sensor Mounting: Mounts directly to any 18 mm tubular sensor	0.75 inch (18 mm)	6142A-6501	<table border="1"> <thead> <tr> <th>Size</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>8 mm</td> <td>1.96 (49.8)</td> <td>1.56 (39.6)</td> <td>0.20 (5.1)</td> <td>0.40 (10.2)</td> </tr> <tr> <td>18 mm</td> <td>2.80 (71.1)</td> <td>2.25 (57.2)</td> <td>0.275 (7.0)</td> <td>0.50 (12.7)</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Size</th> <th>E</th> <th>F</th> <th>G</th> </tr> </thead> <tbody> <tr> <td>8 mm</td> <td>0.80 (20.3)</td> <td>1.05 (26.7)</td> <td>0.375 (9.5)</td> </tr> <tr> <td>18 mm</td> <td>1.00 (25.4)</td> <td>1.64 (41.7)</td> <td>0.75 (19.1)</td> </tr> </tbody> </table>	Size	A	B	C	D	8 mm	1.96 (49.8)	1.56 (39.6)	0.20 (5.1)	0.40 (10.2)	18 mm	2.80 (71.1)	2.25 (57.2)	0.275 (7.0)	0.50 (12.7)	Size	E	F	G	8 mm	0.80 (20.3)	1.05 (26.7)	0.375 (9.5)	18 mm	1.00 (25.4)	1.64 (41.7)	0.75 (19.1)			
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	Precision machined, spring-loaded sleeves that hold tubular sensors to protect them from accidental impact due to overtravel of the target being sensed. Used for inductive proximity sensors only.	8 mm 12 mm 18 mm 30 mm	E57KNZ8 E57KNZ12 E57KNZ18 E57KNZ30	 <p>*NOTE: Sensing Range Will Be Reduced by Thickness of Cap's Wear Surface: 0.030 inch (0.76 mm) max.</p> <table border="1"> <thead> <tr> <th>Size</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> </tr> </thead> <tbody> <tr> <td>8 mm</td> <td>M8 x 1</td> <td>M16 x 1.5</td> <td>0.87 (22)</td> <td>0.87 (22)</td> <td>0.35 (9)</td> </tr> <tr> <td>12 mm</td> <td>M12 x 1</td> <td>M22 x 1.5</td> <td>0.87 (22)</td> <td>1.12 (29)</td> <td>0.41 (10)</td> </tr> <tr> <td>18 mm</td> <td>M18 x 1</td> <td>M30 x 1.5</td> <td>1.17 (30)</td> <td>1.41 (36)</td> <td>0.49 (12)</td> </tr> <tr> <td>30 mm</td> <td>M30 x 1.5</td> <td>M47 x 1.5</td> <td>1.47 (37)</td> <td>1.72 (51)</td> <td>0.57 (15)</td> </tr> </tbody> </table>	Size	A	B	C	D	E	8 mm	M8 x 1	M16 x 1.5	0.87 (22)	0.87 (22)	0.35 (9)	12 mm	M12 x 1	M22 x 1.5	0.87 (22)	1.12 (29)	0.41 (10)	18 mm	M18 x 1	M30 x 1.5	1.17 (30)	1.41 (36)	0.49 (12)	30 mm	M30 x 1.5	M47 x 1.5	1.47 (37)	1.72 (51)	0.57 (15)
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Stocked product, typical order quantities guaranteed in stock.

August 2007

Sensor Accessories

A Variety of Items for Replacement, Testing or Additional Functionality

Contents

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Cutler-Hammer® Accessories from Eaton's electrical business include Portable Power Supplies for testing or demonstrating DC sensors, a variety of Replacement Mounting Nuts, Protective End Caps for tubular proximity sensors, and Conduit Adapters for tubular sensors.

For the most current information on this product, visit our web site: www.EatonElectrical.com



DC Sensor Testers / Demonstrators



Replacement Mounting Nuts

And More...

Model Selection — Sensor Accessories

	Description	Sensor Diameter	Catalog Number	Approximate Dimensions in Inches (mm) Except Where Noted																							
	DC Sensor Tester/Demonstrator For 2-, 3- and 4-wire DC sensors Provides 27V DC power from three 9V batteries (included) Test output connections for both NPN and PNP outputs	—	9902A-6501	W x H x D 2.5 x 4.75 x 2.1 inches (65 x 120 x 55 mm)																							
	AC Sensor Tester/Demonstrator For AC sensors Provides AC power from wall mount Includes AC adapter	—	9902A-6502	W x H x D 2.5 x 4.5 x 1.5 inches (65 x 114 x 38 mm)																							
	Replacement Mounting Nuts — Stainless Steel Where Used: Harsh environment for tubular sensors Material of Construction: Stainless Steel Packaging: Two per package	8 mm 12 mm 18 mm 30 mm	E57KNM8 E57KNS12 E57KNS18 E57KNS30	<table border="1"> <thead> <tr> <th rowspan="2">Size</th> <th colspan="3">Dimensions in Inches (mm) Except Where Noted</th> </tr> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>8 mm</td> <td>0.5 (13)</td> <td>0.16 (4)</td> <td>M8 x 1</td> </tr> <tr> <td>12 mm</td> <td>0.7 (17)</td> <td>0.16 (4)</td> <td>M12 x 1</td> </tr> <tr> <td>18 mm</td> <td>0.94 (24)</td> <td>0.16 (4)</td> <td>M18 x 1</td> </tr> <tr> <td>30 mm</td> <td>1.4 (36)</td> <td>0.16 (4)</td> <td>M30 x 1.5</td> </tr> </tbody> </table>	Size	Dimensions in Inches (mm) Except Where Noted			A	B	C	8 mm	0.5 (13)	0.16 (4)	M8 x 1	12 mm	0.7 (17)	0.16 (4)	M12 x 1	18 mm	0.94 (24)	0.16 (4)	M18 x 1	30 mm	1.4 (36)	0.16 (4)	M30 x 1.5
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8 mm	0.5 (13)	0.16 (4)	M8 x 1																								
12 mm	0.7 (17)	0.16 (4)	M12 x 1																								
18 mm	0.94 (24)	0.16 (4)	M18 x 1																								
30 mm	1.4 (36)	0.16 (4)	M30 x 1.5																								
	Replacement Mounting Nuts — Brass Where Used: General purpose for tubular sensors. These are the standard mounting nuts shipped with the Comet, Prism and OEM Prism Photoelectric Sensors. Material of Construction: Brass Packaging: Two nuts and two wave washers per package	18 mm	E60KNS18																								
	Replacement Mounting Nuts — Stainless Steel Where Used: Harsh environment for tubular sensors Material of Construction: Stainless Steel Packaging: Two per package	18 mm 30 mm	E58KNS18 E58KNS30																								


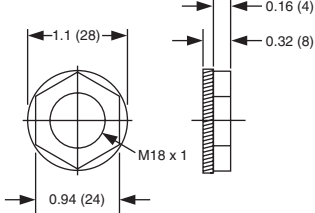

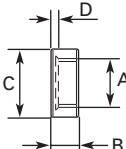

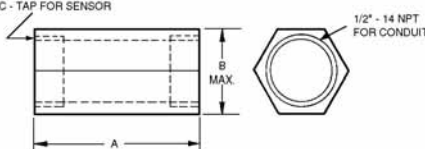
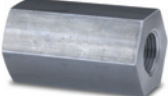
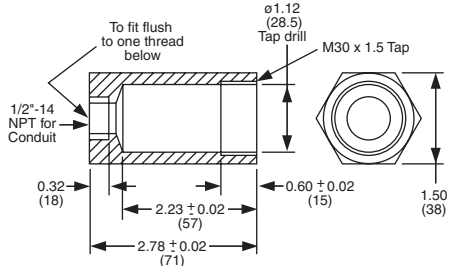
Stocked product, typical order quantities guaranteed in stock.

For Customer Service in the U.S. call **1-877-ETN CARE (386-2273)**,
 in Canada call **1-800-268-3578**.
 For Application Assistance in the U.S. and Canada
 call **1-800-426-9184**.

SENSOR ACCESSORIES

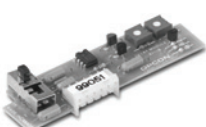

8

Model Selection — Sensor Accessories (Continued)

	Description	Sensor Diameter	Catalog Number	Approximate Dimensions in Inches (mm) Except Where Noted																								
	<p>Replacement Mounting Nuts — Plastic</p> <p>Where Used: Harsh environment for tubular and SM Series sensors</p> <p>Material of Construction: Plastic</p> <p>Packaging: Two per package</p>	18 mm	E57KNC18																									
	<p>Protective Caps</p> <p>Where Used: Tubular Proximity Sensors</p> <p>Material of Construction: Delrin</p> <p>Packaging: One per package</p>	12 mm 18 mm 30 mm	E57KP12 E57KP18 E57KP30	 <table border="1" data-bbox="1136 598 1445 829"> <thead> <tr> <th rowspan="2">Size in mm</th> <th colspan="4">Dimensions in Inches (mm)</th> </tr> <tr> <th>A (Switch Size)</th> <th>B</th> <th>C</th> <th>D (Thickness)</th> </tr> </thead> <tbody> <tr> <td>12 (12)</td> <td>0.47 (10)</td> <td>0.39 (10)</td> <td>0.63 (16)</td> <td>0.04 (1.0)</td> </tr> <tr> <td>18 (18)</td> <td>0.71 (18)</td> <td>0.36 (9.2)</td> <td>0.83 (21.2)</td> <td>0.04 (0.9)</td> </tr> <tr> <td>30 (30)</td> <td>1.18 (30)</td> <td>0.59 (15)</td> <td>1.42 (36)</td> <td>0.07 (1.7)</td> </tr> </tbody> </table>	Size in mm	Dimensions in Inches (mm)				A (Switch Size)	B	C	D (Thickness)	12 (12)	0.47 (10)	0.39 (10)	0.63 (16)	0.04 (1.0)	18 (18)	0.71 (18)	0.36 (9.2)	0.83 (21.2)	0.04 (0.9)	30 (30)	1.18 (30)	0.59 (15)	1.42 (36)	0.07 (1.7)
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	<p>Conduit Adapters</p> <p>Where Used: To attach electrical conduit to rear of tubular sensors</p> <p>Material of Construction: Die cast steel</p> <p>Packaging: One adapter and nut per package</p>	8 mm 12 mm 18 mm 30 mm	E57KC8 E57KC12 E57KC18 E57KC30	 <table border="1" data-bbox="1031 1039 1412 1207"> <thead> <tr> <th rowspan="2">Size</th> <th colspan="3">Dimensions in Inches (mm) Except Where Noted</th> </tr> <tr> <th>A-Length</th> <th>B-Hex</th> <th>C-Tap</th> </tr> </thead> <tbody> <tr> <td>8 mm</td> <td>1.0 (25)</td> <td>1.0 (25)</td> <td>M8 x 1</td> </tr> <tr> <td>12 mm</td> <td>1.5 (38)</td> <td>1.0 (25)</td> <td>M12 x 1</td> </tr> <tr> <td>18 mm</td> <td>1.5 (38)</td> <td>1.0 (25)</td> <td>M18 x 1</td> </tr> <tr> <td>30 mm</td> <td>1.9 (48)</td> <td>1.5 (38)</td> <td>M30 x 1.5</td> </tr> </tbody> </table>	Size	Dimensions in Inches (mm) Except Where Noted			A-Length	B-Hex	C-Tap	8 mm	1.0 (25)	1.0 (25)	M8 x 1	12 mm	1.5 (38)	1.0 (25)	M12 x 1	18 mm	1.5 (38)	1.0 (25)	M18 x 1	30 mm	1.9 (48)	1.5 (38)	M30 x 1.5	
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	<p>Conduit Adapters</p> <p>Where Used: To attach E58 Harsh Duty 30 mm sensors to half-inch conduit fittings</p> <p>Material of Construction: Stainless steel</p> <p>Packaging: One per package</p>	30 mm	E58KC30																									

Stocked product, typical order quantities guaranteed in stock.


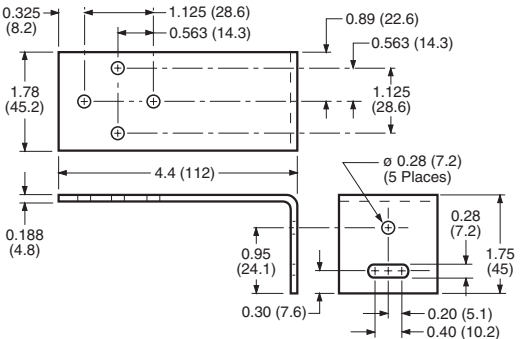

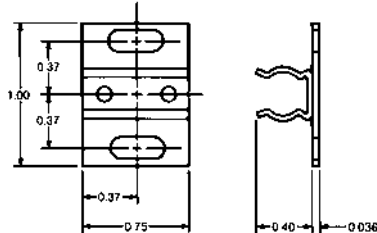

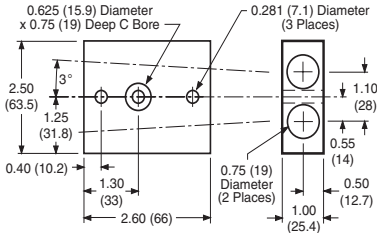

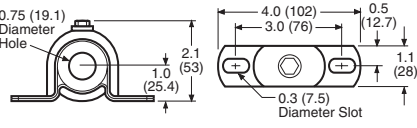
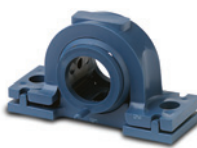
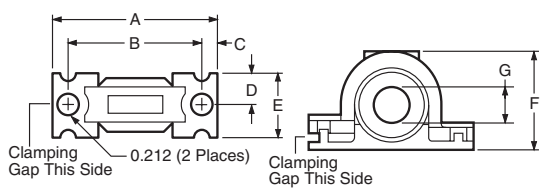
Model Selection — Logic Modules (Optional, not used with analog control units)

	Description	For Control Units	Selectable Ranges	Signal Input Voltage		Input Power	Output Type and Ratings	Catalog Number
				HI	LO			
<p>Logic Modules for Self-Contained Control Units 8171B & 8170A (Modules mount to circuit board within control unit enclosure)</p> 	<p>Time Delay ON and OFF time delays from 0.01 to 35 seconds. Independent adjustment of ON-delay and OFF-delay.</p>	8170A 8171B 9072A	Timing Ranges: ① 0.01 to 0.2 seconds 0.1 to 2.0 seconds 1.0 to 15.0 seconds 2.0 to 35.0 seconds	—	—	Provided by Control Unit	See Specifications for Selected Output Device	8212B-6501
	<p>One-Shot Produces a pulse of preset time when triggered. Switch-select to trigger on leading or trailing edge of object.</p>	8170A 8171B 9072A	Pulse Width: ① 0.02 to 0.5 seconds 0.3 to 2.0 seconds 1.0 to 18.0 seconds 10.0 to 30.0 seconds	—	—	Provided by Control Unit	See Specifications for Selected Output Device	8213B-6501
	<p>Stopped Motion Retriggerable one-shot. Start-up delay adjusts from 0.1 to 11 seconds to allow machine to come up to speed. Control can be reset from remote location.</p>	8170A 8171B 9072A	Retrigger Interval: ① 30 to 430 RPM 430 to 5,000 RPM	—	—	Provided by Control Unit	See Specifications for Selected Output Device	8216A-6501
	<p>Low Contrast Responds to slight but abrupt signal variation while ignoring slower changes. Response Time: 0.1 mS.</p>	8171B	Output one-shot time: 20 mS to 2.5 seconds (After this point it becomes a latch function.)	—	—	Provided by Control Unit	See Specifications for Selected Output Device	8215A-6501
<p>Logic Modules for Modular Control Units (Lexan® cover with phenolic base, rated NEMA 1)</p>  <p>(Requires 11-pin panel mount socket 8905A-6501 for installation, See Page 5-124)</p>	<p>Time Delay Provides ON and OFF delay timing, with independent adjustment of ON-delay and OFF-delay.</p>	8771A 8772A	Timing Range: 0.5 to 15 seconds	V supply 4V min.	0.4V max.	9 – 18V DC, 13.3 mA max.	Open Collector, 110 mA sink, 30V DC maximum protected for load spikes above 35V	8712A-6501
	<p>One-Shot ③ Produces a pulse of preset time when triggered. Jumper-selected retriggerable mode for stopped motion detection.</p>	8771A 8772A	Pulse Width: ① 0.02 to 0.325 seconds 0.2 to 6.5 seconds	V supply 3.5V min.	3V max. ②	11 – 15.5V DC, 40 mA max.	Open Collector, 110 mA sink, 30V DC maximum protected for load spikes above 35V	8713A-6501
	<p>Shift Register ③ ④ Delays the response to a beam break (or beam completion) by a preset number of clock pulses, usually generated by a pulse generator on a conveyor.</p>	8771A 8772A	Register Length: 1 to 64 clock pulses	—	—	10 – 15.5V DC, 60 mA max.	Complementary open collector NPN transistor; On-state: 150 mA max. with 1V max. drop Off-state: 1 µA max. leakage at 30V DC	8730A-6501

- ① Once range is selected, exact value is adjusted via potentiometer.
 - ② Driving device must be capable of sinking 1.6 mA maximum to ground.
 - ③ Clear pin input (allows outputs to be cleared or held, in untriggered state, independent of input).
One-Shot — Voltage HI: 1.0V minimum; Voltage LO: 0.4V maximum.
Shift Register — Voltage HI: 2/3 input voltage minimum; Voltage LO: 1/3 input voltage maximum.
Pulse width: 20 mS (voltage must not exceed input voltage).
 - ④ Clock and date inputs
Shift Register — Rate: 600 Hz maximum fast mode, 30 Hz maximum slow mode; Pulse Width (data): 0.75 mS minimum fast mode, 15 mS minimum slow mode (voltage must not exceed input voltage); Logic level 1 (HI): 2/3 input voltage minimum; Logic level 0 (LO): 1/3 input voltage maximum.
- Fast turn product with typical one business day lead-time to shipment.

August 2007

Model Selection — Accessories




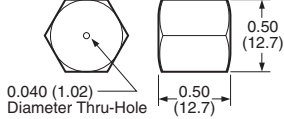
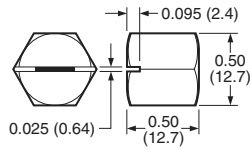

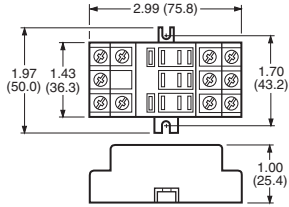
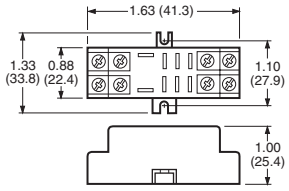
	Description	Catalog Number	Approximate Dimensions in Inches (mm) Except Where Noted																								
	For a selection of mounting brackets for use with tubular sensor heads	See Section 8																									
	For horizontal or vertical mounting of Catalog Number 1370A and 1470A reflex sensor heads	6177A-6501																									
	Stainless steel, for Catalog Number 1170A and 1270A sensor heads, two per package	6170A-6501	<p>NOTE: Dimensions in Inches</p> 																								
	Converts 70 Series 3/4 inch thru-beam heads to high gain diffuse reflective sensor. Chromate finished aluminum	6162A-6501																									
	Allows 5.5° rotation with screw lock to fix final position. Extremely rugged, made from zinc plated steel/Celenex®. Electrically isolates the sensor to prevent noise pick-up caused by poor grounding.	6168A-6501																									
	Allows 10° rotation on X and Y axes with a clamping action to hold adjustment. Noryl — avoid exposing to chlorinated halogenated or aromatic hydrocarbons. Operating temperature: -40° to 160°F.	<p>18 mm (3/4 inch) 6142A-6501</p> <p>8 mm (3/8 inch) 6143A-6501</p> <p>(11/1273A-300)</p>	 <table border="1"> <thead> <tr> <th>Size</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> <th>G</th> </tr> </thead> <tbody> <tr> <td>8 mm</td> <td>1.96 (49.8)</td> <td>1.56 (39.6)</td> <td>0.20 (5.1)</td> <td>0.40 (10.2)</td> <td>0.80 (20.3)</td> <td>1.05 (26.7)</td> <td>0.375 (9.5)</td> </tr> <tr> <td>18 mm</td> <td>2.80 (71.1)</td> <td>2.25 (57.2)</td> <td>0.275 (7.0)</td> <td>0.50 (12.7)</td> <td>1.00 (25.4)</td> <td>1.64 (41.7)</td> <td>0.75 (19.1)</td> </tr> </tbody> </table>	Size	A	B	C	D	E	F	G	8 mm	1.96 (49.8)	1.56 (39.6)	0.20 (5.1)	0.40 (10.2)	0.80 (20.3)	1.05 (26.7)	0.375 (9.5)	18 mm	2.80 (71.1)	2.25 (57.2)	0.275 (7.0)	0.50 (12.7)	1.00 (25.4)	1.64 (41.7)	0.75 (19.1)
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Stocked product, typical order quantities guaranteed in stock.

PHOTOELECTRIC SENSORS

5

Model Selection — Accessories (Continued)

	Description	Catalog Number	Approximate Dimensions in Inches (mm)
Retroreflectors	Retroreflectors and retroreflective tape	See Section 8	
 (see control unit specifications for maximum extended cable length)	Source extension cable Order quantity = Length in feet i.e. Qty. 20 of model 6503-xxx = One 20 foot length extension cable	6503A-XXX	
	Detector extension cable Order quantity = Length in feet i.e. Qty. 20 of model 6503-xxx = One 20 foot length extension cable	6507A-XXX	
	Brass compression fitting for connecting Catalog Number 8903A-6501 flexible conduit to control unit	8904A-6501	
5 PHOTOELECTRIC SENSORS 	With 0.04 inch hole for small parts detection. Used with Catalog Number 1173A-300 and 1273A-300 sensor heads.	6271A-6501	
	With 0.025 inch slot for small parts detection. Used with Catalog Number 1173A-300 and 1273A-300 sensor heads.	6271A-6502	
Fiber Optic Cables	Glass fiber optic cables (for use with 6221A-7501 fiber optic adapters)	See Section 9	
	11-pin panel mount socket for Catalog Number 8712, 8713 and 8730 Logic Modules, and 8771 and 8772 Modular Control Units	8905A-6501	
	8-pin panel mount socket for Catalog Number 8530, 8572, 8573 and 8586 Output Devices	8907A-6501	

 Stocked product, typical order quantities guaranteed in stock.