

Retroreflectors



Sensor Mounting Brackets



Sensor Accessory—AC Sensor Tester/Demonstrator



Pilot Device—E65 Control Unit



8.1	Retroreflectors and Retroreflective Tape	
	Product Description	V8-T8-2
	Application Description	V8-T8-2
	Product Selection	V8-T8-3
	Dimensions	V8-T8-4
8.2	Sensor Mounting Brackets	
	Product Description	V8-T8-5
	Product Selection Guide	V8-T8-5
	Product Selection	V8-T8-6
	Dimensions	V8-T8-8
8.3	Sensor Accessories	
	Product Description	V8-T8-10
	Product Selection	V8-T8-10
	Dimensions	V8-T8-12
8.4	Pilot Devices	
	Product Description	V8-T8-13
	Product Selection	V8-T8-13
	Technical Data and Specifications	V8-T8-14
	Wiring Diagrams	V8-T8-14
	Dimensions	V8-T8-14



Unless otherwise noted, the products contained in this section should not be used for functional safety applications. These products were not designed or tested to IEC 60947-5-3 or recommended for functional safety.



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Retroreflectors and Retroreflective Tape



Contents

<i>Description</i>	<i>Page</i>
Retroreflectors and Retroreflective Tape	
Product Selection	
Retroreflectors	V8-T8-3
Retroreflective Tape	V8-T8-3
Dimensions	V8-T8-4

Retroreflectors and Retroreflective Tape

Product Description

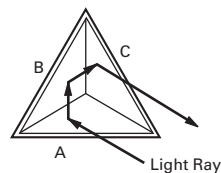
Retroreflectors from Eaton's Electrical Sector are used with reflex-type sensors. Two types of retroreflective target material are available: corner cube and embedded glass bead.

Application Description

Corner Cube Retroreflectors

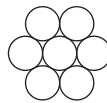
This type provides the highest signal return to the sensor, typically 2000 to 3000 times the reflectivity of white paper. Three adjoining sides are arranged at right angles to each other. When a ray of light strikes one of these sides (A), it is reflected to the second (B), then the third (C), and then 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.

Corner Cube



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 the most current information on this product, visit our Web site: www.eaton.com

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