

August 2007

**E64 Terminal Base Series  
Photoelectric Sensors****Contents**

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The Cutler-Hammer® E64 Terminal Base Series from Eaton's electrical business offers unique features well suited to a variety of applications including conveyor control. The sensors are available in thru-beam, reflex, polarized reflex and diffuse reflective sensing modes, and offer 1 – 2 Amp output current switching capacity.

Time delay functionality provides built-in control capability with settings for normal operation, on delay, off delay, on-off delay, or one-shot delay. The timing range can be adjusted from 0.6 to 16 seconds for each.

Each model incorporates a universal voltage design to allow use with 16 to 240V AC or DC power. Wiring, sensitivity adjustment, timing adjustment and light/dark selection are all easily accessed by removing a sealed cover. A unique guard shields the user from electrical connections when making these adjustments, and flips up to allow access to the terminal screws. The cover fastening screw is held captive to prevent loss.

**Approvals**

CE

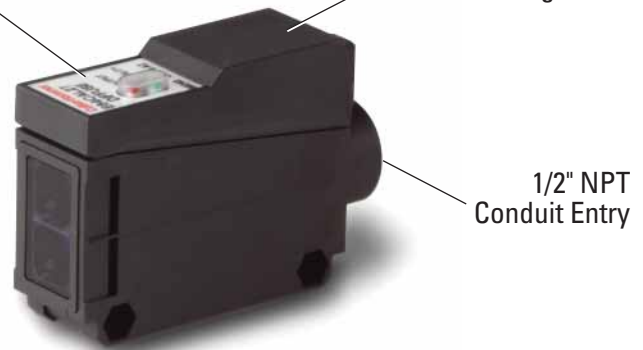


Unless otherwise noted, the products contained in this document are not designed or intended for use in human safety applications.

**Flexible Wiring, Stability Indication and  
High Current Relay Output**

Easy to See  
Output and  
Stability Indicators

Rugged ABS  
Housing



1/2" NPT  
Conduit Entry




Adjustable Mounting  
Bracket Included

**Product Features**

- Universal voltage operation — 16 to 240V AC or DC
- SPST relay output handles up to 1A AC and 2A DC
- Screw-terminal connections with 1/2 inch NPT conduit entry
- Output and stability indicators
- PLC compatible output
- Sensitivity adjustment
- Selectable light or dark operation
- Mounting brackets and retroreflector included (for polarized reflex models)
- Rugged ABS housing rated NEMA 1, 3, 4, 12 and 13 (IP66)
- Polarized reflex models allow reliable detection of shiny targets that could reflect light back to the sensor and falsely trigger a non-polarized sensor
- Time delay can be set for normal operation, on-delay, off-delay, on/off-delay, or one-shot delay, with an adjustable timing range from 0.6 to 16 seconds

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 — Sensors — Includes Mounting Bracket**

	Type	Sensing Range	Field of View	Light Source	With Time Delay	Catalog Number
 <p>Source      Detector</p> <p>For a complete system, order One Source and One Detector</p>	Thru-Beam Source	164 feet (50m)	30 inch diameter at 33 feet	Infrared	—	<b>E64CAL4T</b>
	Thru-Beam Detector	164 feet (50m)	30 inch diameter at 33 feet	—	Yes	<b>E64CAT3T</b>
 <p>Retroreflector (Included)      Sensor</p>	Polarized Reflex ①	0.5 – 11.5 feet (0.15 – 3.5m) ②	5 inch diameter at 22 inches	Visible Red	Yes	<b>E64CAT5T</b>
	Diffuse Reflective	6.6 feet (2m) ③	0.8 inch diameter at 22 inches	Infrared	Yes	<b>E64CAT2T</b>

① Supplied with retroreflector, Catalog Number E65KR55.

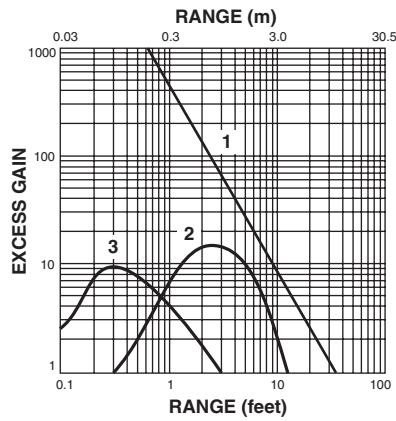
② Measured to supplied 2-inch retroreflector, E65KR55.

③ Measured to a 90% reflective white card.

■ Stocked product, typical order quantities guaranteed in stock.



**Excess Gain**

- 1. Thru-Beam
- 2. Polarized Reflex
- 3. Diffuse Reflective

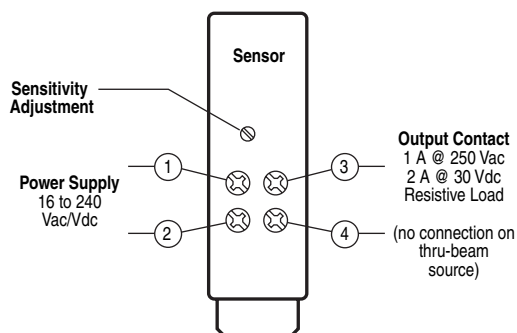


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**Model Selection — Accessories**

	Description	Catalog Number
	2 inch retroreflector Supplied with reflex and polarized reflex sensors Additional retroreflectors, see <b>PG.05E.17.T.E</b>	<b>E65KR55</b>
	Mounting Bracket Supplied with all thru-beam, polarized reflex, clear object, diffuse reflective and fiber optic sensors	<b>E64KH3</b>

 Stocked product, typical order quantities guaranteed in stock.

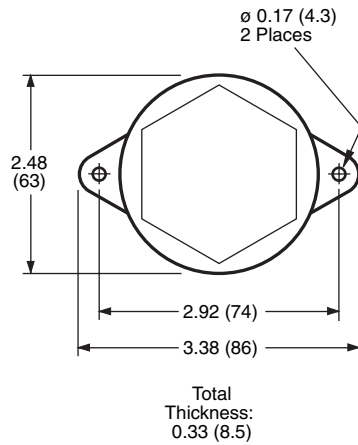
**Wiring Diagram****Specifications**

Description	Specification
Input Voltage	16 – 240V AC/DC; 50/60 Hz
Power Dissipation	3 VA maximum
Output Type	SPST relay
Current Switching Capacity	1A @ 250V AC (resistive load) 2A @ 30V DC (resistive load)
Response Time	20 mS maximum
Operating Temperature	+14° to +140°F (-10° to +60°C)
Storage Temperature	-4° to +158°F (-20° to +70°C)
Light/Dark Operation	Switch selectable
Sensitivity Control	Included on all models
Indicators	Red output LED; Green stability LED
Enclosure Rating	NEMA 1, 3, 4, 12, and 13; IP66 ①
Humidity	35% to 85% RH, non-condensing
Material of Construction	Housing: P.B.T. ; Lenses: PMMA Methacrylate
Vibration	10 to 55 Hz, amplitude 0.06 inch (1.5 mm) p-p, 2 hours each in axis X, Y, Z
Sunlight Immunity	1,000 foot-candles
Timing Functions	Switch selectable for normal, on delay, off delay, on-off delay, one-shot delay. 0.6 to 16 second adjustable timing range

① NOTE: Our products conform to NEMA tests as indicated, however, some severe washdown applications can exceed these NEMA test specifications. If you have questions about a specific application, contact Eaton's Cutler-Hammer Sensor Applications Department at 1-800-426-9184.

Approximate Dimensions in Inches (mm)

E65KR55  
Retroreflector



Sensor

