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**E67 Long Range Perfect Prox®
Series Photoelectric Sensors****Contents**

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The Cutler-Hammer® E67 Long Range Perfect Prox® Series from Eaton's electrical business, the highest performing long-range sensor you can buy with background rejection, is ideal for your most difficult sensing applications.

The E67 Long Range Perfect Prox® Series reliably detects targets in range regardless of variations in color, reflectance, contrast or surface shape while ignoring objects just slightly outside the target range.

The standard E67 sensor is conveniently pre-set with a 6-foot range. Ranges of 3 – 8 feet are available pre-set from the factory.




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

Exceptional Background Rejection for Long Distance Sensing Applications**Product Features**

- Perfect Prox® technology provides exceptional background rejection and application problem solving
- Extended sensing ranges (up to 8 feet) available
- No user adjustments required
- Dual indicators communicate both output and power status from an easy-to-see location at the top of the sensor housing
- Models available with both AC and DC operation in a single unit — up to 132 volts AC and DC
- AC/DC models offer isolated contact output for wiring flexibility
- DC-only sensors offer both NPN and PNP outputs
- Two mounting options for maximum flexibility
- Fully sealed package

For Customer Service in the U.S. call **1-800-356-1243**,
in Canada call **1-800-268-3578**.
For Application Assistance in the U.S. and Canada
call **1-800-426-9184**.

Model Selection — Sensors

	Operating Voltage	Sensing Range ^①	Optimum Range ^②	Cutoff Range ^③	Field of View	Sensing Beam	Connection Type	Catalog Number	
								Light Operate	Dark Operate
	18–30V DC	79 inches (200 cm)	12 to 60 inches (30 to 150 cm)	91 inches (230 cm)	6 inch (15 cm) diameter at 79 inches (200 cm)	Infrared Beam	4-pin Micro DC Connector	E67-LRDP200-HLD [⊕]	E67-LRDP200-HDD [⊕]
		Custom ranges available ^④					Infrared Beam	4-pin Micro DC Connector	E67-LRDPXXX-HLD [⊕]
	20–132V AC 20–132V DC	79 inches (200 cm)	12 to 60 inches (30 to 150 cm)	91 inches (230 cm)	6 inch (15 cm) diameter at 79 inches (200 cm)	Infrared Beam	4-pin Micro AC Connector	E67-LRDP200-KLD [⊕]	E67-LRDP200-KDD [⊕]
		Custom ranges available ^④					Infrared Beam	4-pin Micro AC Connector	E67-LRDPXXX-KLD [⊕]

^① Ranges based on an 18 inch white card.

^② Sensor will detect a 90% reflectance card at this range.

^③ Sensor will ignore a 90% reflectance card at this range.




^④ **Sensor Options (Built-to-order, contact Eaton's Cutler-Hammer Sensor Applications Department at 1-800-426-9184 for delivery lead times).** The sensing range of this device can be set at the factory to between 60 cm and 240 cm in 10 cm increments. To order, substitute the range (in centimeters) in the model number in place of the standard 200 centimeters. For example, for a device that detects out to 4 feet (4 feet x 12 inches/foot x 2.54 centimeters/inch), that equates to 121.92 cm. Rounding up (or down, depending on your needs) to the nearest 10 cm yields a sensing range of 130 cm. Therefore, for a light-operate AC/DC device, you would order E67-LRDP130-KLD.

NOTE: Also consider the cutoff range when selecting a sensing range. Guaranteed cutoff will be approximately 12 inches (30 cm) beyond the sensing range. If a background is present within this zone, adjustments to the application or the sensing range will need to be made.

Fast turn product with typical one business day lead-time to shipment.

[⊕] See listing of compatible connector cables below.

Model Selection — Compatible Connector Cables ^⑤

	Voltage Style	Number of Pins	Gauge	Length	Catalog Number			Pin Configuration/Wire Colors (Face View Female Shown)
					PVC Jacket	PUR Jacket	IRR PUR Jacket	
	AC	4-pin 4-wire	22 AWG	6.0 feet (2m)	CSAS4F4CY2202	CSAS4F4RY2202	CSAS4F4IO2202	
	DC	4-pin 4-wire	22 AWG	6.0 feet (2m)	CSDS4A4CY2202	CSDS4A4RY2202	CSDS4A4IO2202	

^⑤ For a full selection of connector cables, see **PG.05.05.T.E.**

Stocked product, typical order quantities guaranteed in stock.

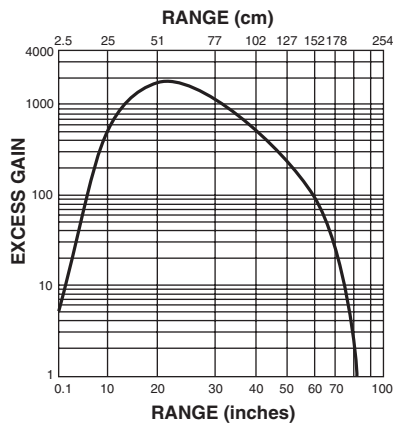
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Specifications

	AC/DC Models	DC Only Models
Input Voltage	20 to 132V AC, 50/60 Hz 20 to 132V DC	18 to 30V DC
Power Dissipation	2W maximum	0.5W maximum
Output Type	Solid-state relay, 1500 V isolation	NPN and PNP
Voltage Switching Capacity	400V AC/DC	30V DC
Current Switching Capacity	75 mA maximum	100 mA maximum
Off-State Leakage	100 µA maximum	50 µA maximum
On-State Characteristics	35 Ω maximum resistance	NPN: 1.5V drop at 100 mA, maximum PNP: 2.5V drop at 100 mA, maximum
Short Circuit Protection	Thermally current limited at approximately 200 mA IMPORTANT: Output will reset automatically when short is removed (there is no visual indication of a short circuit condition)	Protected against dead shorts only CAUTION: Will not protect against overloads between 100 mA and 250 mA IMPORTANT: Output will reset automatically when short is removed (there is no visual indication of a short circuit condition)
Response Time	50 mS	15 mS
Light/Dark Operation	Specified by Catalog Number	
Temperature Range	Operating: -31° to +131°F (-35° to +55°C); Storage: -40° to +158°F (-40° to +70°C)	
Material of Construction	Enclosure: Lexan® Polycarbonate; Back cover: Cyclopy® Polycarbonate/ABS; Indicator viewing window: Lexan® Polycarbonate; Jam nut and connector: 15% Glass-filled Nylon 6/6; Threaded inserts: Brass. IMPORTANT: Do not expose to concentrated acids, alcohols or ketones.	
Mounting	Jam-nut: Do not exceed 100 in-lbs mounting torque, minimum panel thickness 0.150" Side-mounting: Sensor includes 2 sets of #10-32 threaded inserts. Tighten to no more than 35 in-lbs. Use #10-32 x 0.250" fasteners with split-type washer for panel thickness between 0.048" and 0.080". For other panel thicknesses, choose fastener and washers to ensure minimum thread engagement of 0.120" and a maximum thread engagement of 0.155".	
Connector Models	Micro-Connector, 4-pin male	
Vibration and Shock	Vibrations: 10g over 10 Hz to 2 kHz; Shock: 30g for 6 mS 1/2 sine wave pulse	
Indicator LED	Red: Lights steady when output is on; Green: Lights steady when power is applied to sensor	
Sunlight Immunity	5,000 foot-candles	
Enclosure Ratings	NEMA 1, 2, 3, 4, 4X, 6, 12 and 13 ⑥	

⑥ These products conform to NEMA tests as indicated, however, some severe washdown applications can exceed these NEMA test specifications. For questions about a specific application, contact Eaton's Cutler-Hammer Sensor Applications Department at 1-800-426-9184.

Excess Gain — nominal unit with fixed 79" sensing range

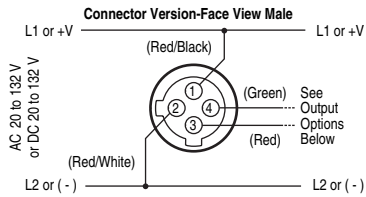


Model Selection — Accessories

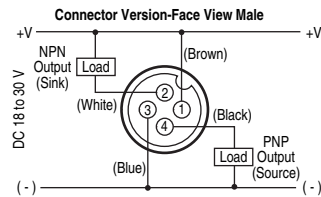
Description	Reference
Connector Cables	See PG.05.05.T.E
Mounting Brackets	See PG.05.03.T.E

Wiring Diagrams

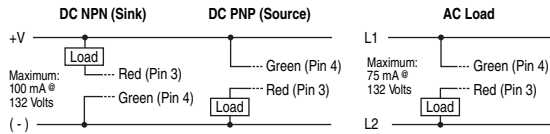
AC/DC Models ①②



DC-Only Models ①



Isolated Output Options



① Connector Versions: The pin numbering and wire colors are typical of several manufacturers, however, variations are possible.

NOTE: In case of discrepancies, rely on function indicated and pin location rather than pin number or wire color.

② Sensor operates on DC voltage, but isolated output can switch AC or DC loads.

Approximate Dimensions in Inches (mm)

