Wiring Diagrams (Pin numbers are for reference, rely on pin location when wiring)

Photoelectric Sensors

E51 Limit Switch Style, Modular

Operating Voltage	Output ①	Terminal and Cable Models	Mini-Connector Models (Face View Male Shown)		
2-Wire Sensors					
20 – 264V AC or DC 50/60 Hz	N.O. or N.C.	White 1 Black Load L2 or (-)	L2 or (1) L1 or +V		
4-Wire Sensors					
120V AC 50/60 Hz	N.O. and N.C.	Red 1 Coad Corange Coad White Coad White Coad L2 Corange Coad White Coad L2 Corange Coad Coad Coad Coad Coad Coad Coad Coad	L2 Load (1) (5) L1 N.C. Load N.O. ±		
10 – 30V DC	N.O. and N.C. NPN	Load Red Orange White (-)	(-) (1) (5) Load +V N.C. Load		
	N.O. and N.C. PNP	Red 1 Coad White Load White Green (-)	(-) Load (2) (4) +V N.C. Load N.O.		

① Changing light/dark switch on sensor head will reverse output function (N.O. becomes N.C., and N.C. becomes N.O.).

Model Selection — Accessories

	Description	Catalog Number	Approximate Dimensions in Inches [mm]
Universal Mounting Bracket	1 hole, includes mounting hardware, stainless steel	E51KH2	0.84 [21.4] DIA. 0.28 [7.1] SLOTS 0.28 [57.2] 0.28 [57.2]
Universal Mounting Bracket	2 hole, includes mounting hardware, steel	E51KH4	0.84 [21.4] DIA

Stocked product, typical order quantities guaranteed in stock.

Specifications

Description	Specification	
Output Ratings (NEMA D150) AC/DC Models AC Models DC Models	0.5A continuous 1A continuous 0.6A continuous	
Protection	Latching short circuit protection on 2-wire AC/DC and 4-wire DC models	
Indicator LEDs	Lights when output is ON. One LED for each output	
Enclosure Material	Zinc die cast	
Gasket Material	Viton	
Enclosure Ratings	NEMA 3, 3S, 4, 4X, 6, 6P, 12 and 13 (IP67) E51SCN Sensor Body only: NEMA 4, 4X and 13 ①	
Hazardous Locations Ratings Class I Class II Class III	Division II — GRPS ABCD Division II — GRPS F and G Division 2	
Temperature Range	-13° to 158°F (-25° to 70°C)	
Torque Requirements	Switch Body Screws: 25 – 30 in-lb; Sensing Head Screws: 14 – 18 in-lb	
Vibration	10 – 55 Hz, 1 mm amplitude	
Shock	30g, 11 mS, 1/2 sine wave	
Humidity	95% non-condensing	

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 mm [Inches]

Standard Sensor

Sensor with Logic Module



