

55 Series Photoelectric Sensors

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Cutler-Hammer® 55 Series Photoelectric Sensors are identical to Eaton's 50 Series except without the interchangeable outputs or logic functions. They offer durability and high optical performance in a cost-effective, self-contained package. The 55 Series features sensors with AC and DC operation in a single unit. A relay option is available on these models that provides a 3 Amp SPDT relay output for high current switching.

Sensors are available that in thru-beam, reflex, polarized reflex, diffuse reflective and fiber optic sensing modes. Each sensor features a built-in swivel bracket for easy mounting and to allow precise adjustment of the sensor alignment.

Approvals

- UL Listed
- CSA Certified



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

High Optical Performance and a Built-In Swivel Bracket for Easy and Precise Alignment






Product Features

- High optical performance includes 100-foot (30.5m) thru-beam range and 6-foot (1.8m) diffuse reflective range
- Both AC and DC operation in a single unit
- Short circuit protected solid-state outputs on AC/DC and DC-only versions (except thru-beam)
- Relay output option provides 3 Amp current switching on AC/DC models
- Thru-beam models feature an infrared sensing beam along with a visible red LED behind the lens in the source unit to aid in sensor alignment
- Fiber optic sensors operate in thru-beam or diffuse reflective mode depending on the fiber optic cable selected
- Glass fiber optic cables plug into NEMA 4 rated sockets on the front of the sensor. Sockets are leakproof even when the fiber optic cables are not plugged in
- Fully potted construction for use in areas subject to washdown, high shock and/or vibration
- Choice of pre-wired power cable or built-in mini-connector versions. Standard pre-wired cable length is 6 feet (1.8m)
- Built-in, patented, 360° rotation 10° tilt ball-swivel base

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 (Continued)

	Operating Voltage	Sensing Range ①	Optimum Range ②	Field of View	Sensing Beam	Connection Type	Catalog Number	
							Light Operate	Dark Operate
Polarized Reflex ③  Retroreflector (Not Included) Sensor For a complete system, order Sensor and Retroreflector (See PG.05E.17.T.E)	20–264V AC or 15–30V DC	15 feet (4.6m)	0.5–6 feet (0.2–1.8m)	2 inch (51 mm) diameter at 100 inches (2540 mm)	Visible Red	6-foot Cable	1456A-6513	1456AD6513
						6-foot Cable Relay Output	1456R-6513	1456RD6513
						3-pin Mini-Connector	1456A-6503 Ⓢ	1456AD6503 Ⓢ
						5-pin Mini-Connector Relay Output	1456R-6503 Ⓢ	1456RD6503 Ⓢ
	10–30V DC	15 feet (4.6m)	0.5–6 feet (0.2–1.8m)	2 inch (51 mm) diameter at 100 inches (2540 mm)		6-foot Cable	1456A-6517	1456AD6517
						4-pin Mini-Connector	1456A-6507 Ⓢ	1456AD6507 Ⓢ
Diffuse Reflective 	20–264V AC or 15–30V DC	10 inches (254 mm)	0.25–5 inches (6–127 mm)	1 inch (25 mm) diameter at 10 inches (254 mm)	Infrared	6-foot Cable	1355A-6513	1355AD6513
						6-foot Cable Relay Output	1355R-6513	1355RD6513
						3-pin Mini-Connector	1355A-6503 Ⓢ	1355AD6503 Ⓢ
						5-pin Mini-Connector Relay Output	1355R-6503 Ⓢ	1355RD6503 Ⓢ
		24 inches (610 mm)	1–8 inches (25–203 mm)	1 inch (25 mm) diameter at 10 inches (254 mm)		6-foot Cable	1356A-6513	1356AD6513
						6-foot Cable Relay Output	1356R-6513	1356RD6513
						3-pin Mini-Connector	1356A-6503 Ⓢ	1356AD6503 Ⓢ
						5-pin Mini-Connector Relay Output	1356R-6503 Ⓢ	1356RD6503 Ⓢ
		72 inches (1828 mm)	1–36 inches (25–914 mm)	5.5 inch (140 mm) diameter at 24 inches (610 mm)		6-foot Cable	1357A-6513	1357AD6513
						6-foot Cable Relay Output	1357R-6513	1357RD6513
						3-pin Mini-Connector	1357A-6503 Ⓢ	1357AD6503 Ⓢ
						5-pin Mini-Connector Relay Output	1357R-6503 Ⓢ	1357RD6503 Ⓢ
	10–30V DC	10 inches (254 mm)	0.25–5 inches (6–127 mm)	1 inch (25 mm) diameter at 10 inches (254 mm)		6-foot Cable	1355A-6517	1355AD6517
						4-pin Mini-Connector	1355A-6507 Ⓢ	1355AD6507 Ⓢ
		24 inches (610 mm)	1–8 inches (25–203 mm)	1 inch (25 mm) diameter at 10 inches (254 mm)		6-foot Cable	1356A-6517	1356AD6517
						4-pin Mini-Connector	1356A-6507 Ⓢ	1356AD6507 Ⓢ
		72 inches (1828 mm)	1–36 inches (25–914 mm)	5.5 inch (140 mm) diameter at 24 inches (610 mm)		6-foot Cable	1357A-6517	1357AD6517
						4-pin Mini-Connector	1357A-6507 Ⓢ	1357AD6507 Ⓢ
Fiber Optic  Glass Fiber Optic Cables Not Included (See PG.05E.15.T.E)	20–264V AC or 15–30V DC	Thru-Beam: 12 inches (305 mm) Diffuse Reflective: 2.25 inches (57 mm) ④	—	Depends on Fiber Selected	Infrared	6-foot Cable	1555A-6513	1555AD6513
						6-foot Cable Relay Output	1555R-6513	1555RD6513
						3-pin Mini-Connector	1555A-6503 Ⓢ	1555AD6503 Ⓢ
						5-pin Mini-Connector Relay Output	1555R-6503 Ⓢ	1555RD6503 Ⓢ
	10–30V DC	Thru-Beam: 12 inches (305 mm) Diffuse Reflective: 2.25 inches (57 mm) ④	—	Depends on Fiber Selected		6-foot Cable	1555A-6517	1555AD6517
						4-pin Mini-Connector	1555A-6507 Ⓢ	1555AD6507 Ⓢ

① Ranges based on 3-inch retroreflector for reflex sensors, 90% reflectance white card for diffuse reflective sensors.

② See Excess Gain graphs on **Page 4**.

③ Polarized sensors may not operate with retroreflective tape. Test selected tape before installation.

④ Ranges using standard 0.125-inch diameter fiber optic cable.

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

■ Stocked product, typical order quantities guaranteed in stock.

ⓈⓈⓈ See listing of compatible connector cables on **Page 4**.

Relay output option for AC/DC Models only (built-to-order, contact factory for delivery lead times). For a 3 Amp, SPDT relay output replace **A** in Catalog Number with **R**. (AC/DC Models only — not available in Thru-Beam).