

DS453Q/DS455Q Quad Beam Indoor/Outdoor Photoelectric Detectors



The Detector Series consists of the DS453Q and DS455Q Detectors with separate transmitters and receivers each. The transmitter emits an invisible infrared beam to the receiver. If the beam is broken, the receiver signals an alarm. The DS453Q and DS455Q use four pulsed infrared beams that are designed to activate an alarm only when all four beams are simultaneously blocked. The DS453Q and DS455Q also feature interlocked upper and lower beams, signal voltage LED, and selectable environmental discrimination circuitry.

■ Features

- Quad beam detection
- 4 mounting options
- Environmental discrimination circuit
- Beam power control to reduce cross-talk

■ Basic Functions

Environmental discrimination circuit

- Monitors gradual loss of signal due to dust, fog, rain, snow, etc. Normally closed output opens when signal loss reaches 90%. May be field configured to bypass alarm relay when activated.
- Field adjustable sensitivity, normally closed relay contacts rated 0.2 A, 30 VDC.

Test features

Externally visible alarm LED. Internal transmitter operation LEDs. Flashing LED and voltage output at receiver for alignment purposes.

■ Certifications

UL Standard UL639, Intrusion Detection Units

■ Patents and Trademarks

Lexan® is a registered trademark of General Electric Corporation, USA, in the United States and/or other countries.

■ Planning

DS453Q: 720 ft. (220 m) indoors, 360 ft. (110 m) outdoors

DS455Q: 800 ft. (250 m) indoors, 530 ft. (160 m) outdoors



■ Technical Specifications

Alarm Output	Form "C" relay rated at 0.2 A @ 30 VDC.
Beam Interrupt Time	Adjustable from 50 to 500 milliseconds
Enclosure Design	
Material:	High impact Lexan® enclosure.
Dimensions (HxWxD):	15.5 in. x 4.25 in. x 4.25 in. (39.4 cm x 10.8 cm x 10.8 cm)
Environmental Considerations	
Operating Temperature:	-13°F to +140°F (-25°C to +60°C)
Mounting	
Location:	Surface or pole mount to 1-5/8 in. to 1-3/4 in. (4.11 cm to 4.45 cm) O. D. pole.
Pattern Pointability	±90° horizontal, ±10° vertical.
Radio Frequency Interference (RFI) Immunity	No alarm or setup on critical frequencies in the range from 26 to 950 Megahertz at 50 v/m.
Tamper Output	Normally Closed tamper switch rated 0.1 A @ 30 VDC.

■ Hardware Options

MP1 3 ft. Metal Pole



Shipped in packages of 2.
For DS422, DS424, DS426, DS453Q, DS455Q,
DS474, DS474Qi, DS476, DS476Qi, DS484Q,
and DS486Q.

MP2 4 ft. Metal Pole



Shipped in packages of 2.
For DS422, DS424, DS426, DS453Q, DS455Q,
DS474, DS474Qi, DS476, DS476Qi, DS484Q,
and DS486Q.

MP3 L-Curved Metal Pole



Shipped in packages of 2.
For DS422, DS424, DS426, DS453Q, DS455Q,
DS474, DS474Qi, DS476, DS476Qi, DS484Q,
and DS486Q.

PC1A Water Resistant Enclosure



For DS453Q and DS455Q.

PC3A Back to Back Box



Allows back to back mounting of DS453Q,
DS455Q on pole.

PEH2 Heater



Shipped in packages of 4 (2 for transmitter and 2
for receiver).
Reduces the effects of frost or intense fog and cold
and/or damp conditions.
For DS453Q and DS455Q.

DS453Q 720 ft. (220 m) Detector

Prod. ID	DS453Q
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The surface or pole mount DS453Q Quad Beam Photoelectric Detector provides a coverage of 720 ft. (220 m) indoors and 360 ft. (110 m) outdoors. Its power requirements are 10.5 to 28 VDC and 120 mA.

DS455Q 800 ft. (240 m) Detector

Prod. ID	DS455Q
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The surface or pole mount DS455Q Quad Beam Photoelectric Detector provides a coverage of 800 ft. (250 m) indoors and 530 ft. (160 m) outdoors. Its power requirements are 10.5 to 28 VDC and 160 mA.