Specifications:

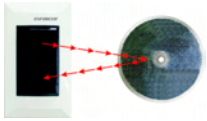
Sensing range	0.5' to 33' (0.1 - 10 m)		
Voltage supply	12~250 VAC/DC		
Current drain (max.)		Stand by	Active
	12 VDC	20 mA	40 mA
	24 VDC	10 mA	20 mA
Response time	10 ms (max.)		
Tx LED element	Infrared - 740 nm		
LEDs	Green LED (Alignment), Red LED (trigger)		
Trigger output	SPDT relay output, 1 A @ 125 VAC, 2 A @ 30 VDC		
Tamper switch	N.C., 500 mA @ 30 VAC		
Enclosure	IP 66 weatherproof		
Ambient temperature	-4^0~131^0 F (-20^0~55^0 C)		

Also available from SECO-LARM:

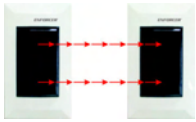
Quad and Twin Photobeam Detectors Up to 660' (200 m)

E-964-Q660Q
(Shown)

Flush-Mount Photobeam Sensors Up to 33' (10 m)



E-932-D33TBQ



E-932-S16RRQ

Entry Alert System Photobeam Sensors Up to 22' (7 m)

E-931CS22RRCQ

SECO-LARM® U.S.A., Inc.
16842 Millikan Avenue, Irvine, CA 92606
Tel: 800-662-0800 / 949-261-2999 Fax: 949-261-7326
Website: www.seco-larm.com
E-mail: info@seco-larm.com

PITSW3
MiE931-S33PROQ_1012.PMD

ENFORCER® Sensor

Polarized Retro-Reflective Photoelectric Sensor

E-931-S33PRQ

Range: 33 ft. (10 m)

INSTALLATION MANUAL

Features:

- Polarized sensor is immune to shiny objects: Triggers only when correctly reflected light is detected.
- Weatherproof (IP 66) design with cable gasket for indoor/outdoor use.
- Anti-condensation case.
- Dark ON operation.
- Round reflector, Dia.: 80 mm.
- Input volt.: 12-250 VDC/VAC.
- Form "C" relay, 2A @ 30 VDC.
- LED alignment system.
- Tamper switch: N.C. 500 mA @ 30 VDC.

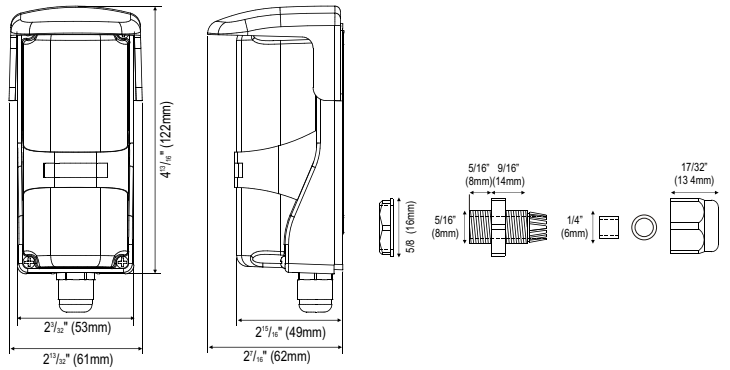
Typical Applications:

- Safety sensor for garage doors, outdoor gates, or sliding doors.
- Overhead door security sensor.
- Industrial automation — Detect small objects on a manufacturing line.
- Assist in measuring parking distance.
- Alarm sensor for windows, terraces, parking lot, etc.

Includes:

- Reflector
- Sensor
- Sensor mounting plate
- Weather-resistant gasket
- Sensor hood

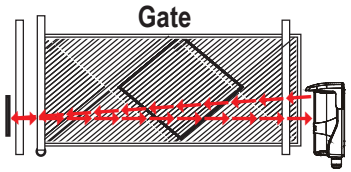
Dimensions:

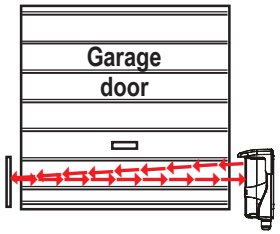


Caution:

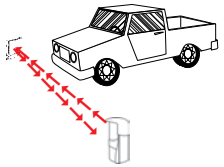
- This sensor was not designed to prevent bodily injury or loss of life.
- This sensor was not designed for use in environments where there is the possibility of explosive gasses present.
- Use of this sensor in certain security applications may be regulated by local laws or codes. SECO-LARM is not responsible for compliance with such laws or codes.

Sample Installations:

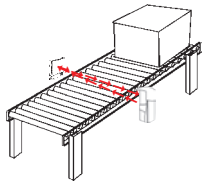




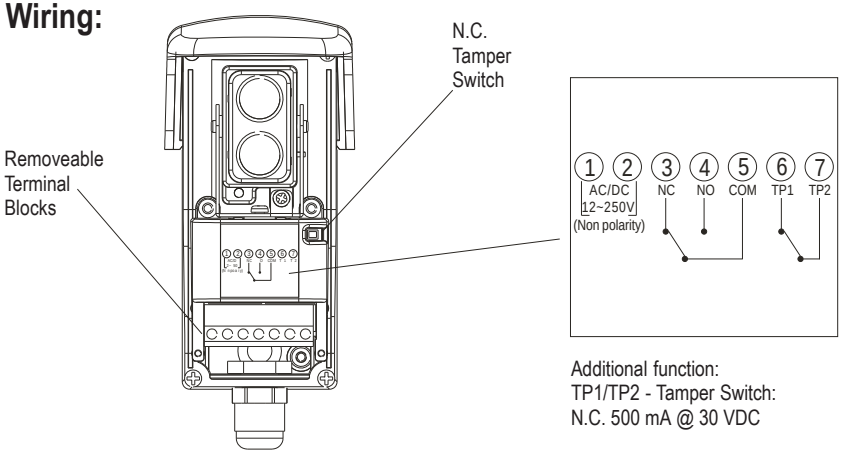
Vehicle detection



Factory assembly line

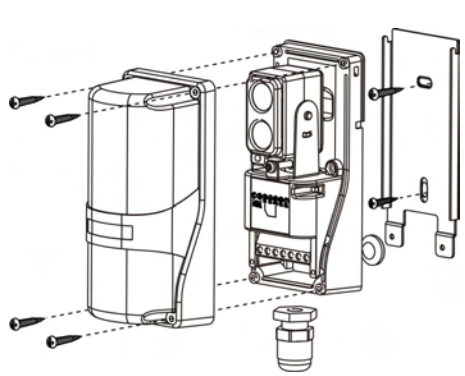


Wiring:



Additional function:
TP1/TP2 - Tamper Switch:
N.C. 500 mA @ 30 VDC

Mounting the Sensor:



1. Unscrew the 4 screws and remove the cover.
2. Loosen the captive screw to free the sensor from the mounting plate.
3. Using the included screws, mount the mounting plate to the wall.
4. If the wires come from inside the wall, use the breakout and rubber gasket on the back of the sensor to run the wires. If not, use the breakout and cable gland at the bottom of the sensor to run the wires.
5. Remove the terminal block using long-nose pliers and wire the unit according to the wiring diagram above.
6. Hang the sensor back on to the plate, and use the captive screw to secure it in place.
7. Re-attach the cover, and use the included small screws to secure it.
8. Attach the hood to the top of the sensor.

Installation and Adjustment:

Dual-Color LED Functions:

- Red LED – When ON, it indicates the sensor is triggered.
- Green LED – When ON, it indicates that the sensor is properly aligned with the reflector, and the sensor is not triggered.
- LED alternately flashes red and green – Sensor beam signal is weak (not triggered).

Installation:

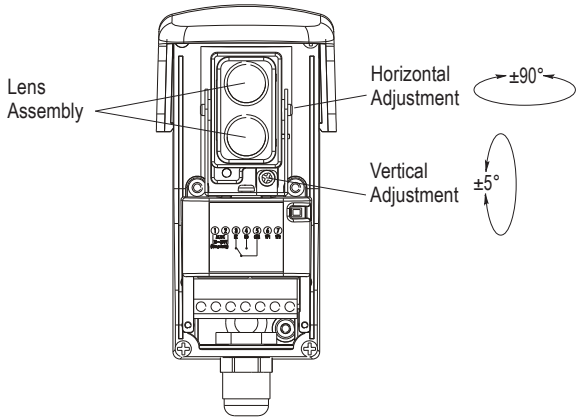
1. Mount the reflector and the sensor so they face each other.
2. Connect power to the sensor. Typically the red LED will turn ON indicating that the sensor and reflector are not yet properly aligned. If the Green LED is ON (red LED OFF), it indicates that the sensor and reflector are aligned (although it still may be necessary to slightly adjust the alignment).
3. To find the correct alignment, slowly turn the lens assembly left and right, and use the vertical adjustment screw to tilt the sensor up and down.

   NOTE 1: Correct alignment is reached when the red LED turns OFF and the Green LED turns ON.

   NOTE 2: If the LED alternately flashes green and red, the sensor is at the edge of sensing the signal, and may not work properly.
4. Put the object to be detected between the sensor and reflector (in about the place where the object would normally be detected by the sensor). The green LED should turn OFF and the red LED will turn ON).

Testing:

1. Power up the sensor. The green LED should be ON; the red LED should be OFF.
2. Pass the object to be detected between the sensor and reflector. The red LED should turn ON and the green LED should turn OFF. This indicates that the object has been detected.



Troubleshooting:

Trouble	Possible Origin(s)	Remedy(s)
Sensor does not detect the object.	1) Sensor sensitivity is not properly set. 2) Object may have a reflective surface which confuses sensor.	Change the angle of the sensor or readjust the sensitivity setting.
Green LED does not turn on.	1) Dirty sensor and/or reflector. 2) Reflector and/or sensor is misaligned.	1) Clean the sensor and reflector with a damp (not wet) cloth. 2) Adjust the reflector and/or sensor for proper alignment.
Red LED lights when object is detected, but no output.	No continuity between sensor and alarm device.	Check cable from sensor to alarm device. Test sensor.