

## **ENFORCER Wave-to-Open Sensors FAQ**

For CS-PD115-PAQ, CS-PD419-PQ, CS-PD422-PQ, and CS-PD438-PQ

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## **Pre-Sale Questions**

### What is the maximum amperage for a connected device?

Do not connect any device that will exceed 1A@30VDC.

# The standby LED indicator default colors are red, changing to green when triggered. Can I change the standby color to green, with red indicating triggered?

You cannot reverse the standby/triggered LED colors on the 19mm sensors (CS-PD115-PAQ, CS-PD419-PQ), but you can on the larger sensors (CS-PD422-PQ, and CS-PD438-PQ).

To reverse the standby color on those models, move the jumper below the *Output Duration* and *IR Range Trimpots*. Place the jumper on the right two pins to set the standby color to red and the triggered color to green (default). Place the jumper on the left two pins to set the standby color to green and the triggered color to red.

### Can I adjust the sensor's triggering range?

The default range is set to the maximum distance of 7" (18cm). To decrease the range, turn the *IR Range Trimpot* counterclockwise until the desired range is attained. The minimum allowable range is 2" (5cm).

The trimpots are arranged horizontally below the terminal plug on the 19mm sensors (CS-PD115-PAQ, CS-PD419-PQ) and the *IR Range Trimpot* is on the left.

The trimpots are arranged vertically above the terminal plug on the larger sensors (CS-PD422-PQ, and CS-PD438-PQ) and the *IR Range Trimpot* is on the top.

**NOTE:** Do not force the trimpots. Only minimal force is needed to turn them.

### Can I adjust the trigger duration?

The default trigger duration is set to the minimum of 0.8 seconds from the factory. To increase the duration, turn the *Output Duration Trimpot* clockwise until the desired time is attained (up to 30 seconds). However, note that turning the *Output Duration* to its maximum position will set the trigger to *Toggle Mode* (toggling between ON and OFF).

The trimpots are arranged horizontally below the terminal plug on the 19mm sensors (CS-PD115-PAQ, CS-PD419-PQ) and the *Output Duration Trimpot* is on the right.

The trimpots are arranged vertically above the terminal plug on the larger sensors (CS-PD422-PQ, and CS-PD438-PQ) and the *Output Duration Trimpot* is on the bottom.

**NOTE:** Do not force the trimpots. Only minimal force is needed to turn them.

### Can I set the trigger to toggle ON/OFF?

Yes. To do so, simply adjust the output duration to the maximum setting using the *Output Duration Trimpot*. The trimpots are arranged horizontally below the terminal plug on the 19mm sensors (CS-PD115-PAQ, CS-PD419-PQ)

and the Output Duration Trimpot is on the right.

The trimpots are arranged vertically above the terminal plug on the larger sensors (CS-PD422-PQ, and CS-PD438-PQ) and the *Output Duration Trimpot* is on the bottom.

**NOTE:** Do not force the trimpots. Only minimal force is needed to turn them.

## SECO-LARM® U.S.A., Inc.

16842 Millikan Avenue, Irvine, CA 92606

**Phone:** (949) 261-2999 | (800) 662-0800 **Fax:** (949) 261-7326

Website: www.seco-larm.com Email: sales@seco-larm.com

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## Is it possible to use this sensor as an anti-theft sensor, triggering when an object is removed from the sensor's read range instead when an object enters the sensors read range?

Yes. To serve as an anti-theft sensor, use the sensor's N.C. output (green) instead of the N.O. output. Connect this to the alarm panel's N.C. input and the COM (blue) to the alarm panel's COM terminal.

### Can I connect the sensors directly to a door strike?

Yes, but we suggest connecting a metal oxide varistor (MOV) or diode (both not included) as close as possible and in parallel with the controlled output device. Make sure that the diode's cathode (striped end) is installed toward the strike's positive terminal. This absorbs possible electromagnetic interference to prevent damaging the IR proximity sensor. See manual for further detail.

## Are these sensors weatherproof?

Only the front is IP65 weatherproof. The sensor must be installed in a flat panel with a smooth surface so that the O-ring is able to make a good seal. The back side of the panel must be protected from any possible water entry.

## **General Installation Questions**

### I have a sensor that sometimes triggers unexpectedly. What could be the problem?

Due to the nature of IR technology, an IR sensor can be triggered by a direct light source such as sunlight, reflected light from a shiny object, or other direct light aimed at the sensor. If you install outdoors or indoors in some situations, consider any possible sources of reflected or direct light and how that may be avoided. Consider a hood or some other shield to protect the sensor from such a light source.

### My sensor remains triggered. What could be causing that?

To ensure proper operation, make sure no objects sit or come within 11<sup>3</sup>/<sub>4</sub>" (30cm) and within a cone of 60° to the left and right of the front of the IR proximity sensor to avoid interference.

Reduce the IR range of the sensor (see Can I adjust the sensor's triggering range?).

Ensure that your sensor's output duration is not adjusted to maximum. Turning the trimpot to maximum will set the trigger to toggle mode (see *Can I adjust the trigger duration?*).

Check that the power supply's voltage is correct (12~24 VDC).

#### My sensor will not trigger. What could be causing that?

Increase the IR range of the sensor (see Can I adjust the sensor's triggering range?).

Check that the power supply's voltage is correct (12~24 VDC).

#### How should I clean the sensor?

The sensor requires special care to ensure reliability and a long operating life. When cleaning is needed: 1) Use a soft, clean cloth (a microfiber cloth is recommended) and use the mildest cleaner available. 2) Spray the cleaning solution onto the cleaning cloth instead of the unit. 3) Wipe any excess liquid from the sensor. Wet spots may affect the sensor's performance and leave a dust ring when they dry.