

Infrared Proximity Sensors

Installation Manual



CS-PD115-PAQ



CS-PD419-PQ



CS-PD422-PQ



CS-PD438-PQ



intertek

5024193
Conforms to
UL Std. 294



Model	Size	Material
CS-PD115-PAQ	ø3/4" (ø19mm)	Polycarbonate
CS-PD419-PQ	ø3/4" (ø19mm)	Stainless steel and polycarbonate
CS-PD422-PQ	ø7/8" (ø22mm)	Stainless steel and polycarbonate
CS-PD438-PQ	ø1 1/2" (ø38mm)	Stainless steel and polycarbonate

ENFORCER IR Proximity Sensors are compact and can be programmed to unlock an electronic lock when an object (such as a hand) passes in range of the sensor or trigger an alarm when an object is removed from the sensing area making them useful for both anti-theft and access control.

- No-touch reduces the risk of spread of germs, viruses, etc., through cross-contamination
- Triggers a warning or locking device when the sensor is triggered
- Form C relay output (1A@30VDC), adjustable output duration (0.5~30 s) or toggle
- Adjustable sensor range, up to 7" (18cm)
- Selectable LED colors (turns from red to green or green to red on activation)*
- 12~24 VDC Operation
- Filters out interference from other infrared sources
- Weatherproof front panel (IP65)†
- Power must be provided by low-voltage power-limited/Class 2 power supply
- Use only low-voltage field wiring and do not exceed 98.5 ft (30m)

*CS-PD422-PQ and CS-PD438-PQ only † When properly installed, see pg. 2.

Parts List

1x IR Proximity sensor	4x Wiring harness	1x Hex nut	1x O-ring	1x Manual
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Specifications

Model		CS-PD438-PQ	CS-PD422-PQ	CS-PD419-PQ	CS-PD115-PAQ
Diameter		ø1½" (ø38mm)	ø7/8" (ø22mm)	ø¾" (ø19mm)	
Case material		Stainless steel and polycarbonate			Polycarbonate
Operating voltage		12~24 VDC			
Current draw (max. ±10%)	Standby red (12/24 VDC)	18mA / 23mA	13mA / 15mA	14mA / 18mA	12mA / 13mA
	Triggered green (12/24 VDC)	23mA / 29mA	21mA / 25mA	20mA / 26mA	21mA / 25mA
	Standby green (12/24 VDC)	14mA / 18mA	12mA / 14mA	n/a	n/a
	Triggered red (12/24 VDC)	28mA / 35mA	23mA / 28mA	n/a	n/a
Relay type		Form C dry contact, NO/NC/COM, 1A@30VDC			
Connectors		Wire terminals			
Response time		10ms			
Output duration		0.5~30 Seconds or toggle			
Sensing range		2"~7" (5~18 cm)			
LED Indicator (standby/triggered)		Selectable red/green or green/red		Red/green	
Operating life	Relay	1,000,000 cycles			
	Sensor	100,000 Hours			
IP Rating		IP65 (front panel only)			
Operating temperature		4°~131° F (-20°~55° C)			
Destructive attack level		Level I			
Line security		Level I			
Endurance level		Level IV			
Standby power		Level I			

Installation Notes

1. Power must be provided by a low-voltage, power-limited / Class 2 power supply and low-voltage field wiring not to exceed 98.5ft (30m).

2. This product must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with National Electric Code ANSI/NFPA 70-latest edition or the Canadian Electrical Code CSA C22.1.

3. Only the front is IP65 rated. For weatherproof installation, the O-ring must be used as shown and the area behind the mounting surface must be protected from moisture incursion.

4. Please note that direct light (sunlight, reflections from shiny objects, etc.) on the sensor may cause unintentional activation. Therefore, when installing outdoors and some indoor situations, a hood or shield may be required to prevent direct light from affecting the sensor.

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

Fig. 1

Hole size depends on the particular model

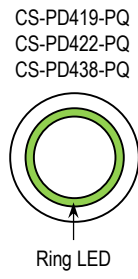
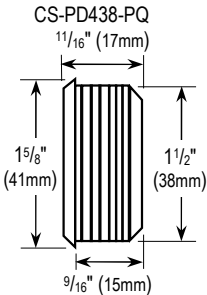
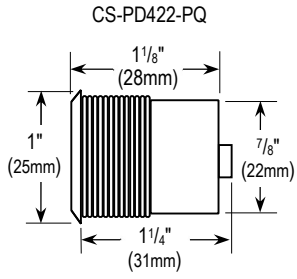
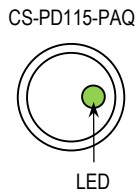
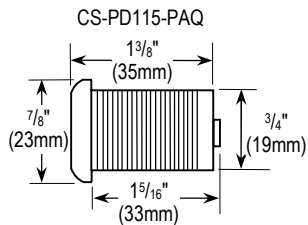
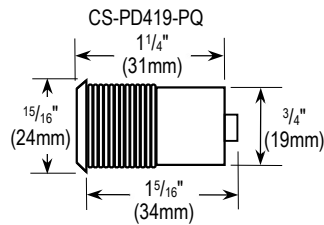
Hex nut

O-ring

Sensor

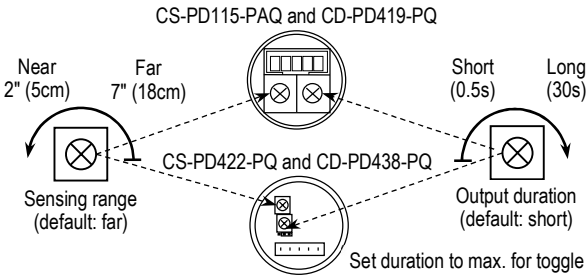
Mounting surface
- 2
- SECO-LARM U.S.A., Inc.

Overview

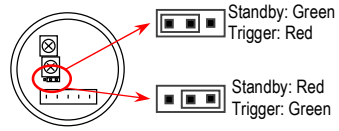


Sensor Settings

IR Range and Output Duration



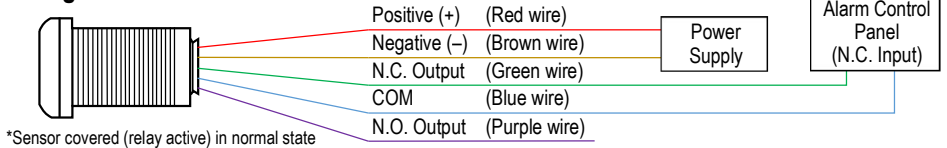
Changing the LED Color*



*CS-PD422-PQ and CS-PD438PQ only

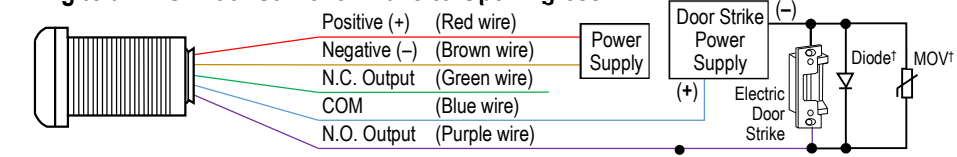
Sample Wiring

Wiring to an Alarm for Anti-Theft*



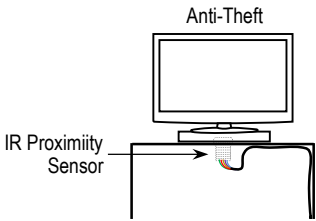
*Sensor covered (relay active) in normal state

Wiring to an N.O. Door Strike for Wave-to-Open Egress

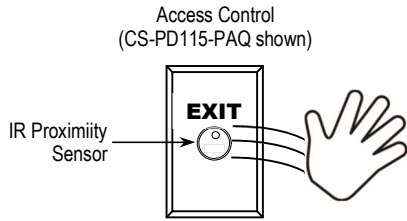


†Suggest connecting a metal oxide varistor (MOV) and diode (both not included) as close as possible and in parallel with the controlled output device. This absorbs possible electromagnetic interference to prevent damaging the IR proximity sensor.

Sample Applications



Place the sensor under or behind a valuable object. If the object is removed from the sensor, the sensor will trigger an alarm to alert the owner that the item is out of place.



Mount the sensor to a wall or plate in a protected area. A user can wave his or her hand in front of the sensor to unlock an electronic door lock, allowing germ-free, protected egress.

Care and Cleaning

The sensor requires special care to ensure reliability and a long operating life.

- 1. Use a soft, clean, preferably microfiber cloth for cleaning. Use the mildest type of cleaner available.
- 2. When cleaning, spray the cleaning solution onto the cleaning cloth instead of the unit.
- 3. Be sure to wipe off any excess liquid from the sensor. Wet spots may affect the sensor's performance.

Troubleshooting

Sensor triggers unexpectedly	• Ensure that no strong direct or reflected light source is reaching the sensor. • Ensure that sensor is sheltered from direct sunlight • Check that there are no objects in front of the sensor including a cone of 60° from the centerline.
Sensor remains triggered	• Adjust the sensor's range to be shorter (see <i>Sensor Settings</i> on pg. 3). • Check that the power supply's voltage is correct for your model. • Adjust the output duration setting – a long delay or enabling toggle mode could affect the sensor's operation (see <i>Sensor Settings</i> on pg. 3).
Sensor will not trigger	• Adjust the sensor's range to be longer (see <i>Sensor Settings</i> on pg. 3). • Check that the power supply's voltage is correct for your model.

IMPORTANT WARNING: Incorrect mounting which leads to exposure to rain or moisture to the back could cause a dangerous electric shock, damage the device, and void the warranty. Users and installers are responsible for ensuring that this product is properly installed and sealed.

IMPORTANT: Users and installers of this product are responsible for ensuring that the installation and configuration of this product complies with all national, state, and local laws and codes. SECO-LARM will not be held responsible for the use of this product in violation of any current laws or codes.

California Proposition 65 Warning: These products may contain chemicals which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

WARRANTY: This SECO-LARM product is warranted against defects in material and workmanship while used in normal service for one (1) year from the date of sale to the original customer. SECO-LARM's obligation is limited to the repair or replacement of any defective part if the unit is returned, transportation prepaid, to SECO-LARM. This Warranty is void if damage is caused by or attributed to acts of God, physical or electrical misuse or abuse, neglect, repair or alteration, improper or abnormal usage, or faulty installation, or if for any other reason SECO-LARM determines that such equipment is not operating properly as a result of causes other than defects in material and workmanship. The sole obligation of SECO-LARM and the purchaser's exclusive remedy, shall be limited to the replacement or repair only, at SECO-LARM's option. In no event shall SECO-LARM be liable for any special, collateral, incidental, or consequential personal or property damage of any kind to the purchaser or anyone else.

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