

Wave-to-Open Sensors

Installation Manual



Model	Size	Operating Voltage	Override Button
SD-927PKC-NEQ	Single-gang	12~24 VAC/VDC	No
SD-927PKC-NEVQ	Single-gang	12~24 VAC/VDC	Yes

*Spanish and French faceplates also available.

The ENFORCER Wave-To-Open Sensors use IR technology to request egress from a protected area or activate a device with the simple wave of a hand. Since no touch is required, they are suitable for use in hospitals, clinics, labs, cleanrooms (to reduce the risk of contamination), schools, factories, or offices. The SD-927PKC-NEVQ adds a manual override button as a backup to the sensor. Also available with Spanish (SD-927PKC-NSQ, SD-927PKC-NSVQ) or French (SD-927PKC-NFQ, SD-927PKC-NFVQ) faceplates.

- Operating voltage, 12~24 VAC/VDC
- Range adjustable from 2³/₈"~8" (6~20 cm)
- Stainless steel single-gang plate
- 3A relay, adjustable from 0.5~30 sec, toggle, or as long as hand is near the sensor
- LED illuminated sensor area for easy identification
- Selectable LED colors (turns from red to green or green to red) when activated
- Quick connect screw-less terminal block
- Power must be provided by low-voltage power-limited/Class 2 power supply
- Use only low-voltage field wiring and do not exceed 98.5ft (30m)

Parts List

- 1x Wave-to-open sensor
- 2x Mounting screws
- 3x 6" (5cm) Wire connectors*
- 1x Manual

*For override button, SD-927PKC-NEVQ only

Specifications

Model		SD-927PKC-NEQ	SD-927PKC-NEVQ
Operating voltage		12-24 VAC/VDC	
Current		120mA@12VDC	
Relay type		Form C dry contact, 3A@24VDC	
Override button	Switching capacity	N/A	3A@24VDC
	Mechanical life	N/A	500,000 cycles
Response time		10ms	
LEDs	Standby	Red	
	Triggered	Green*	
Output duration		Adjustable, 0.5~30 sec., toggle, or as long as sensor is triggered	
Sensing range		Adjustable, 2 3/8"~8" (6-20 cm)	
Destructive attack level		Level I	
Line security		Level I	
Endurance level		Level IV	
Standby power		Level I	
Operating temperature		-4°~131° F (-20°~55° C)	
Weight		3-oz (85g)	3.9-oz (110g)

*Default, reversible by jumper

Installation

1. Run 4 wires through the wall to a single-gang back box. 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. Connect the four wires from the back box to the quick connect screw-less terminal according to Fig. 1.
3. Attach the plate to the back box, taking care not to crimp wires.
4. Remove clear protective film from the sensor before use.

INSTALLATION NOTES:

- 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.
- 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. Consider how to protect as needed.

Adjusting the Sensor Range and Output Timer (Fig. 2)

1. To adjust the sensor's range, turn its trimpot counterclockwise (decrease) or clockwise (increase).
2. To adjust the output duration, turn its trimpot counterclockwise (decrease) or clockwise (increase). To toggle, turn to minimum.

Adjusting the LED Color

1. The LED color factory default setting is red (standby) and green (triggered).
2. To reverse the LED color visual indicator to green (standby) and red triggered), remove the jumper located at the right side of the terminal block as shown in Fig. 3.

Fig.1 Connections (under back cover)

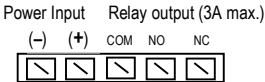


Fig.2 Output Duration / Sensor Range Potentiometers

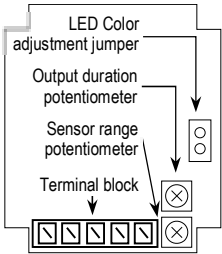
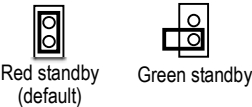
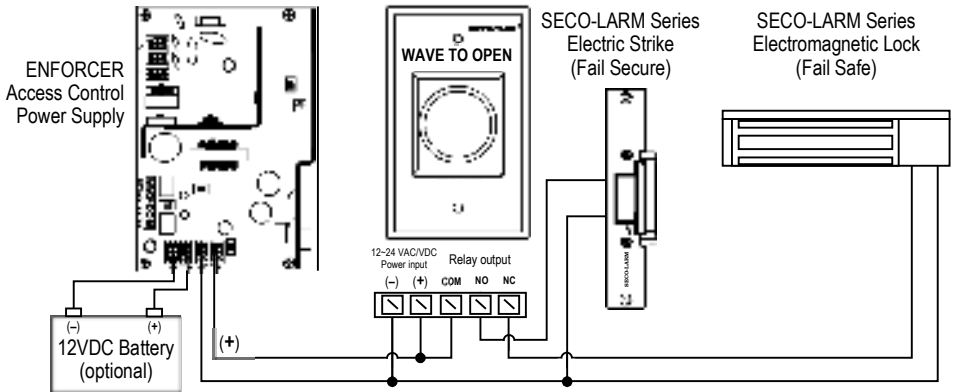


Fig.3 LED Jumper Settings

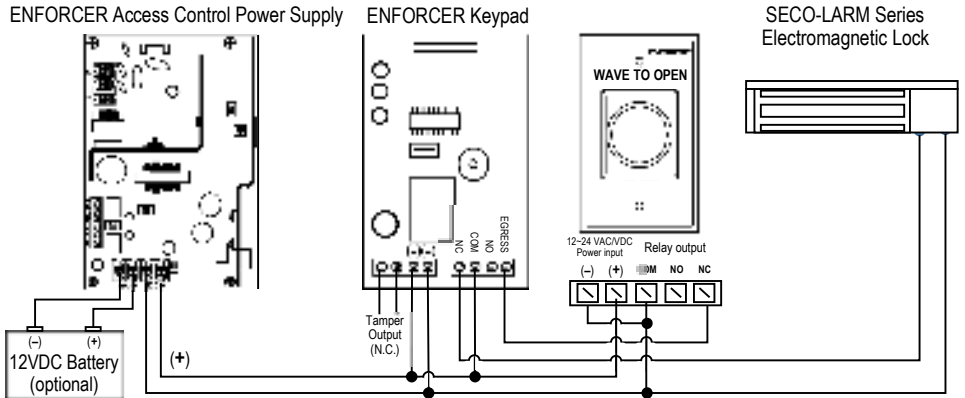


Sample Installations

Installation with Electromagnetic Lock

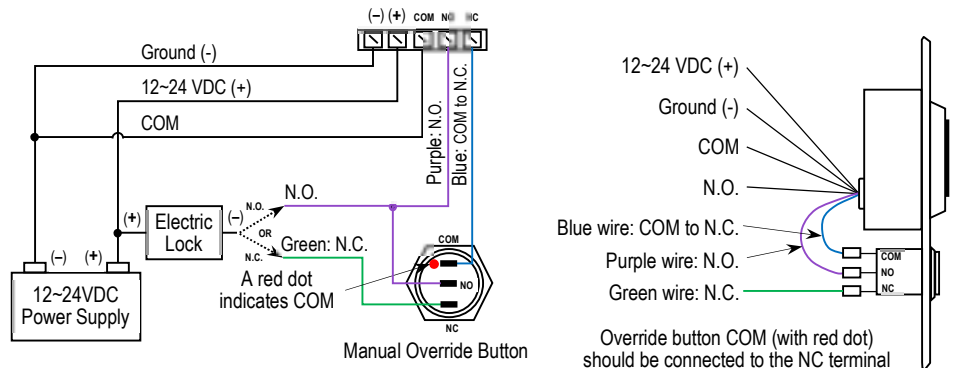


Installation with Electromagnetic Lock and Keypad



Override Button Wiring (SD-927PKC-NEVQ only)

The manual override button serves as a backup to the sensor.



Care and Cleaning

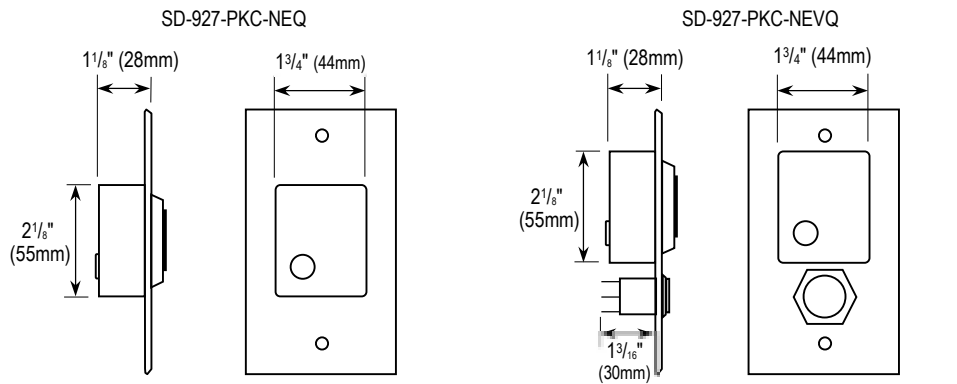
The sensor requires special care to ensure reliability and a long operating life.

1. Use a soft, clean cloth, preferably a microfiber cloth, to avoid scratching the sensor.
2. Use the mildest cleaner available. Strong cleaning chemicals may damage the sensor.
3. When cleaning, spray the cleaning solution onto the cleaning cloth instead of the unit.
4. Wipe 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.
Sensor remains triggered	• Check that nothing is remaining in range of the sensor including a cone of 60° from the centerline. • Reduce the IR range of the sensor. • Ensure that the sensor's output duration potentiometer is not turned to maximum • Check that the power voltage is within the sensor's specifications.
Sensor will not trigger	• Increase the IR range of the sensor. • Check that the power voltage is within the sensor's specifications.

Overview



IMPORTANT WARNING: Incorrect mounting which leads to exposure to rain or moisture inside the enclosure 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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SECO-LARM® U.S.A., Inc.

16842 Millikan Avenue, Irvine, CA 92606
Phone: (949) 261-2999 | (800) 662-0800

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