

## Outdoor Wave-to-Open Sensors

### Installation Manual



SD-9263-KSVQ  
shown



SD-9163-KSVQ  
shown



SD-9463-KSVQ  
shown



Intertek  
5024193  
Conforms to  
UL294

Language	Slimline	Single-Gang	European Plate*	Double-Gang
English	SD-9163-KSQ	SD-9263-KSQ	SD-9363-KSQ	
Spanish	SD-9163-KS1Q	SD-9263-KS1Q	SD-9363-KS1Q	
French	SD-9163-KS2Q	SD-9263-KS2Q	SD-9363-KS2Q	
English w/ mechanical override button	SD-9163-KSVQ	SD-9263-KSVQ	SD-9363-KSVQ†	SD-9463-KSVQ†

\*European plate versions are not ETL certified.

†Spanish and French faceplates also available for these models by special order.

The ENFORCER Outdoor Wave-to-Open Sensor is a full-featured exit plate using IR technology to allow egress from a protected area or activate a device with the simple wave of a hand. Since no touch is required, this sensor is suitable for use in hospitals, clinics, labs, cleanrooms (to reduce the risk of contamination), schools, factories, or offices.

- Adjustable sensor range up to 7" (18cm)
- 1.2A relay, adjustable trigger duration 0.5~30 seconds or toggle
- LED illuminated sensor are for easy identification
- Selectable LED colors turns from red to green (or green to red) when the sensor is activated
- Stainless steel plate
- IP65 Weather-resistant for outdoor use
- 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)

**Parts List**

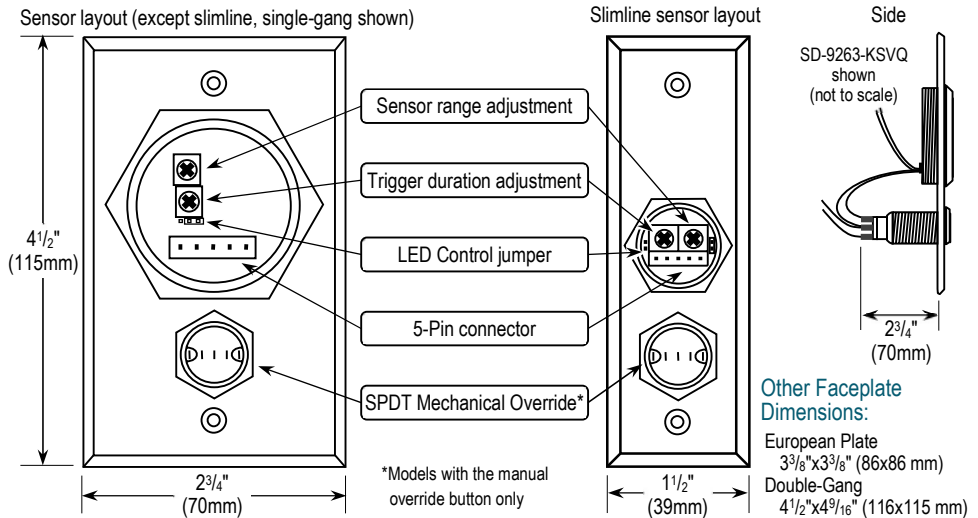
1x Wave-to-Open Sensor      2x Faceplate screws      1x Wiring harness      1x Manual

**Specifications**

Model	Slimline	Single-gang	European plate	Double-gang	
Operating voltage	12-24 VDC				
Current draw (max. ±10%)	Standby red (12/24 VDC)	13mA / 15mA	18mA / 23mA		
	Triggered green (12/24 VDC)	21mA / 25mA	23mA / 29mA		
	Standby green (12/24 VDC)	12mA / 14mA	14mA / 18mA		
	Triggered red (12/24 VDC)	23mA / 28mA	28mA / 35mA		
Relay type	SPDT dry contact, 1.2A@24VDC				
Response time	10ms				
LEDs	Standby	Red*			
	Triggered	Green*			
Output duration	0.5-30 s, toggle				
Range	2"-7" (5-18 cm)				
Destructive attack level	Level I				
Line security	Level I				
Endurance level	Level IV				
Standby power	Level I				
IP Rating	Weatherproof, IP65†				
Operating temperature	-4°~131° F (-20°~55° C)				
Weight	Without override button	2.2-oz (61g)	3.8-oz (108g)	2.7-oz (77g)	N/A
	With override button	2.7-oz (77g)	4.4-oz (125g)	N/A	5.6-oz (160g)

\*Color function reversible    †When properly installed

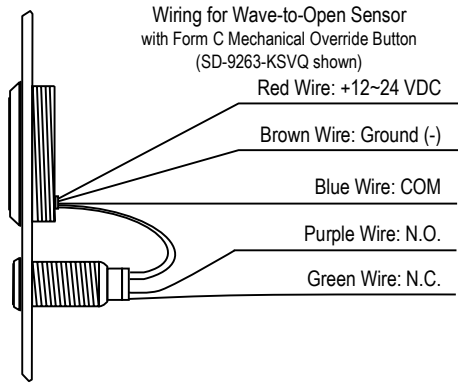
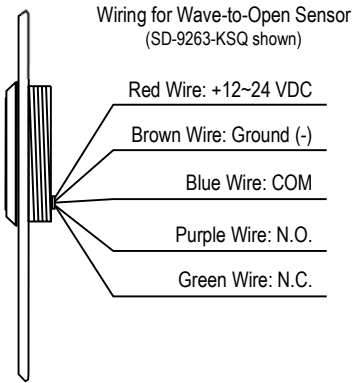
**Overview**



**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. Therefore, in some locations it may be necessary to install a hood or other barrier to shield the sensor from direct light sources.

## Wiring Diagram



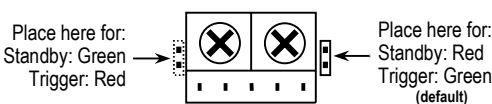
## Installation

1. Run four wires through the wall to a corresponding 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 4 wires from the back box to the sensor according to the *Wiring Diagram* above.
3. For weatherproof installation, use a waterproof back box and apply a bead of silicone sealant (not included) around the rim of the back box and faceplate edge. Apply a small amount of sealant below each screw head.
4. Screw the plate into the back box, taking care not to crimp the wires and ensuring a good seal.
5. Remove clear protective film from the sensor before use.

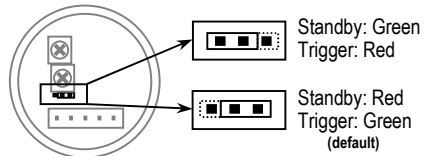
**WARNING:** Do not connect any device that will exceed 1.2A@24VDC.

## Changing the LED Color

### Slimline Models



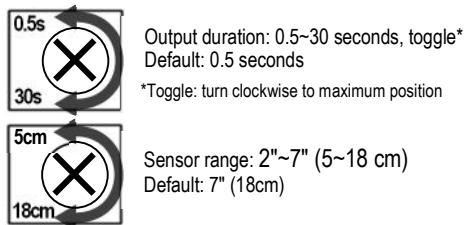
### Other Models



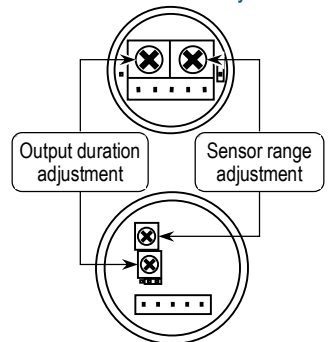
## Adjusting the Sensor Range and Output Duration

1. The sensor range can be adjusted from 2"~7" (5~18 cm).
2. Output duration can be adjusted from 0.5~30 seconds or toggle.\*

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

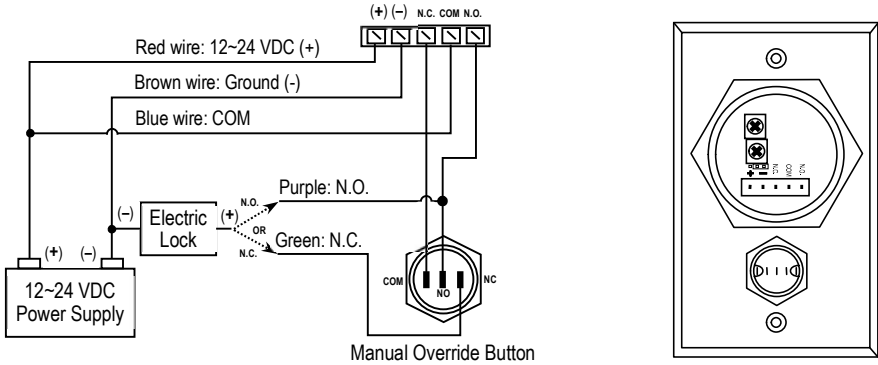


### Slimline Sensor Layout



### Other Sensors' Layout

## Sample Installation



Override button is pre-wired at the factory. No further wiring is necessary.

## Troubleshooting

Sensor triggers unexpectedly	<ul style="list-style-type: none"><li>• Ensure that no strong direct or reflected light source is reaching the sensor.</li><li>• Ensure that sensor is sheltered from direct sunlight.</li></ul>
Sensor remains triggered	<ul style="list-style-type: none"><li>• Check that nothing is remaining in range of the sensor including a cone of 60° from the centerline.</li><li>• Reduce the IR range of the sensor.</li><li>• Ensure that the sensor's output duration potentiometer is not turned to maximum</li><li>• Check that the power voltage is within the sensor's specifications.</li></ul>
Sensor will not trigger	<ul style="list-style-type: none"><li>• Increase the IR range of the sensor.</li><li>• Check that the power voltage is within the sensor's specifications.</li></ul>

## 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.

**IMPORTANT WARNING:** For a weather-resistant installation, ensure that the unit is installed in a waterproof back box, and that the faceplate and faceplate screws are properly sealed. Incorrect mounting may lead to exposure to rain or moisture inside which 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](http://www.P65Warnings.ca.gov).

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