

CROW SCIENTIFIC RESEARCH™

# SRP-360

CEILING MOUNT  
PASSIVE INFRARED  
DETECTORINSTALLATION INSTRUCTIONS  
P/N 7101191 Rev. B A.Y.

## SRP-360 FEATURES

- \* VLSI Technology (Very Large Scale Integration).
- \* High RFI & EMI Immunity.
- \* Four Element Pyro Sensor.
- \* Pulse count.
- \* Sophisticated signal processing.
- \* Memory function.
- \* Hard Spherical Lens 360° coverage.
- \* Bidirectional temperature compensation.

## INTRODUCTION

The SRP-360 is a 4-element passive infrared intrusion detector for use in electronic security systems in ceiling mount.

The SRP-360 detects intrusion by determining changes in infrared energy patterns. It emits no radiation and is harmless to humans & animals.

You will obtain optimum performance from your SRP-360 PIR detector by following this manual.

The SRP-360 reduces false alarms to an unprecedented minimal level due to its effective elimination of background noises and nuisance stimuli. The SRP-360 employs automatic intelligent pulse count making it extremely adaptable to various environments. The unique VLSI, using sophisticated signal processing developed at CROW, makes this detector virtually free of false alarms.

The SRP-360 integrates a VLSI based & SMD technology to full advantage.

The detector is easy to install, with no necessary adjustments.

## HARD SPHERICAL LENS

The SRP-360 is equipped with a special hard lens. This lens is the latest development in the security field and complies with all the new standards requirements. It gives the ideal coverage pattern for a ceiling mounted installation, and is especially immune to sunlight and halogen light.

## MOUNTING THE DETECTOR

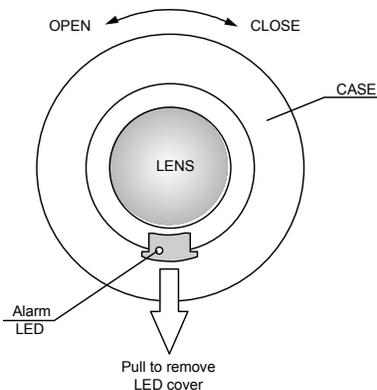
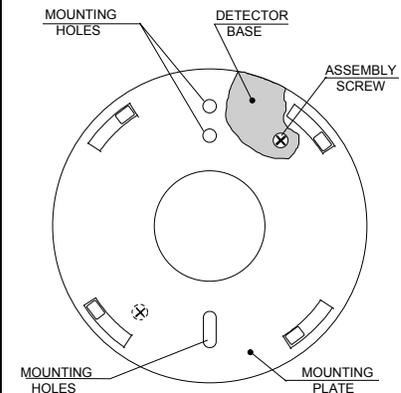
Chose location most likely to intercept an intruder. Refer to the detection pattern.

1. Hold the detector in your hand and release the mounting plate by turning it counter-clock-wise, and separate it from the case (Fig. 1).
2. Insert the wires through the hole in the center of the mounting plate (Fig. 2).
3. Mount the plate using the holes marked mounting holes.

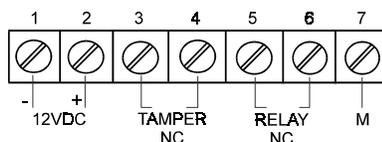
## WIRE SIZE REQUIREMENTS

Use #22 AWG (0.5 mm) or wires with a larger diameter. Use the following table to determine required wire gauge (diameter) and length of wire between the detector and the control panel.

Wire Length	m	200	300	400	800
Wire Diameter	mm	.5	.75	1.0	1.5
Wire Length	ft.	800	1200	2000	3400
Wire Gauge	#	22	20	18	16

**FIG. 1 - SRP-360 TOP VIEW****FIG. 2 - SRP-360 BOTTOM SIDE**

## TERMINAL BLOCK CONNECTIONS



**Terminal 1 Marked - (GND).** Connect to the negative DC output of the control panel.

**Terminal 2 Marked + (+12V).** Connect to the positive DC output (8.7 - 16Vdc).

**Terminal 3 & 4 Marked TAMP (tamper).** Connect these terminals to a 24 Hr. zone, NC in the control panel. Opening the front cover at any time will trigger an alarm.

**Terminal 5 & 6 Marked RELAY.** This is a normally closed (N.C.) relay output. Connect to the control panel at zone input.

**Terminal 7 Marked M (Memory).** See memory function.

## THE MEMORY FUNCTION

The alarm memory function allows the identification of an alerting detector out of multiple detectors connected to one (or the same) zone of the control panel.

To enable this function, connect (switch on) the M terminal to a switched +12 to +16V<sub>DC</sub> source (e.g. Arm / Disarm voltage output from the control panel.)

- In case of an alarm, the memory function stores the alarm event in the detector.
- To identify the detector that alarmed, disconnect (switch off) (grounded) the voltage from M terminal.
- The LED of the detector with the alarm event in memory will light constantly until memory function is reset.

To reset the memory function, switch on and switch off the M terminal.

## PULSE COUNT SETTING

The slide provides control for normal or high risk operating environments.

### Position 1 (to left) (Factory Setting)

This setting is for a stable environment without air drafts.

## Position AUTO (to right) – automatic pulse count.

The SRP-360 will automatically select the appropriate pulse count level (2 or 3) according to the strength of the incoming signals.

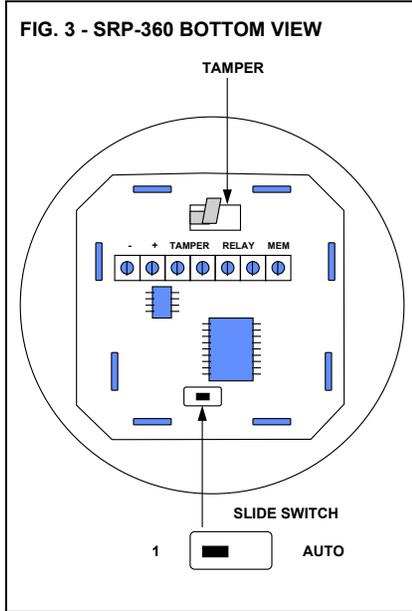
This setting is for operation within a harsh environment.

To change position of the slide switch you have to open the detector:

1. Turn the detector counter-clock wise and separate it from the case.
2. Unscrew two assembly screws on the backside and open the detector.
3. Change position of the slide switch.
4. Close the detector and reinstall assembly screws.

When an intrusion is detected, the led will light, and the relay contacts change to N.O for 1.6 sec.

**Notice!**  
When re-assembling assure  
LED covers opening face  
PCB LED



**IMPORTANT:**

1. Do not install the detector where it may be affected by water, steam or oil.
2. Do not aim the detector at sources of rapid heating or cooling such as: forced air ducts, heaters, direct sunlight and strong halogen light.
3. Be sure to locate the detector so that valu- ables are well within its coverage pattern.
4. Range may vary in accordance with ambient temperature.

**LED COVER**

The detector is equipped with two covers.

1. The transparent LED cover makes it possible to observe the LED operation.
2. The opaque LED cover is used to mechanically "disable" the LED operation.

**WALK TEST**

After the installation, perform a walk test to check that the detector operates properly. During the walk test, if the opaque LED cover is used, you must remove it to see the LED (See Fig. 1)

**TECHNICAL SPECIFICATIONS (CONT.)**

Warm Up Period	20 sec
LED Indicator	Led is blinking during warm up period
Operating Temperature	-20°C to+50°C (-4°F to +122°F)
RFI Protection	≥ 30V/m
EMI Protection	50,000V of electrical interference from lighting or power through
Visible Light Protection	stable against halogen light 2.4m
Dimensions	(8 ft) or reflected light ∅ 110mm x 45mm (∅ 4.33" x 1.77")
Weight	123 gr. ( 4.37 oz )

**Crow reserves the rights to change specifications without prior notice**

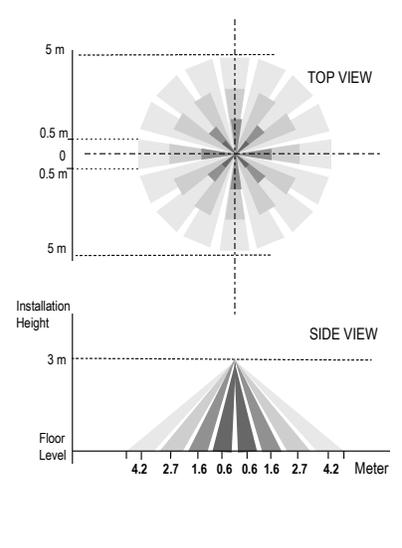
**DETECTION PATTERN FOR SRP-360**

Installation Height	Detection Diameter (Effective Range)	
2.1m	7 ft	5m
2.4m	8 ft	6m
2.7m	9 ft	7m
3m	10ft	8m
3.3m	11ft	9m
3.6m	12ft	10m

**Example:** (See Fig. 4). If install at a height of 3 m (12 ft) the detector will cover a circle of 10m (33 ft) at floor level, with an effective detection range of 8m (26.4 ft) in diameter.

**Note:** The detection range is the circle pattern at floor level. The effective range is the range at which an intruder will trigger an alarm.

**FIG. 5 - LENS PATTERN**



**CROW LIMITED WARRANTY**

(Crow) warrants this product to be free from defects in materials and workmanship under normal use and service for a period of one year from the last day of the week and year whose numbers are printed on the printed circuit board inside this product. Crow's obligation is limited to repairing or replacing this product, at its option, free of charge for materials or labor, if it is proved to be defective in materials or workmanship under normal use and service. Crow shall have no obligation under this Limited Warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than Crow.

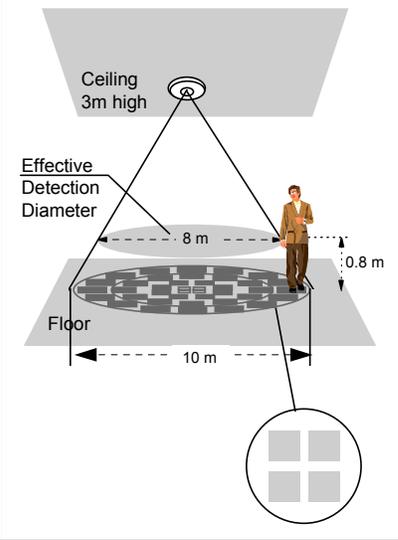
There are no warranties, expressed or implied, of merchantability or fitness for a particular purpose or otherwise, which extend beyond the description on the face hereof. In no case shall Crow be liable to anyone for any consequential or incidental damages for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever, even if the loss or damage is caused by Crow's own negligence or fault.

Crow does not represent that this product can not be compromised or circumvented; that this product will prevent any person injury or proppos or damage by burglary, robbery, fire or otherwise; or that this product will in all cases provide adequate warning or protection. Purchaser understands that a properly installed and maintained product can only reduce the risk of burglary, robbery or other events occurring without providing an alarm, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss or damage as a result. Consequently, Crow shall have no liability for any personal injury, property damage or any other loss based on claim that this product failed to give any warning. However, if Crow is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, Crow's maximum liability shall not in any case exceed the purchase price of this product, which shall be the complete and exclusive remedy against Crow.



**N345**

**FIG. 4 - SRP-360 DETECTION AREA**



**TECHNICAL SPECIFICATIONS**

Power Input	8.7 - 16 Vdc
Current Draw	Active / Standby: 9 mA
Detection Method	4 (Four) element PIR
Sensitivity	Δ2°C (Δ3.6°F) at
	0.6 m/sec (2 ft/sec)
Detection Speed	0.5 - 1.5 m/sec (1.5 - 5 ft/sec)
Bi Directional	
Temperature	YES
Pulse Count	1,2-automatic switch from 2 to 3 depending on
Alarm Period	1.6 sec
Alarm Output	N.C 28VDC 0.1 A with 10 Ohm series protection resistor
Tamper Switch	N.C 28VDC 0.1A with
	10 Ohm series protection resistor - open when cover is removed

**CROW ELECTRONIC ENGINEERING LTD.**

**ISRAEL:** 57 Hamelacha St., Holon  
Tel: 972-3-5569937 /8 /9  
Fax: 972-3-5592981  
E-MAIL: support@crow.co.il

**USA:** 2160 North Central Road,  
Fort Lee, N.J. 07024  
Tel: 1-800-GET CROW  
or (201) 944 0005  
Fax: (201) 944 1199

**AUSTRALIA:** 429 Nepean HWY Brighton East Vic 3187  
Tel: 61-3-9596 7222  
Fax: 61-3-9596 0888

**UK:** Unit 5, Bradford on Avon Marina  
Widbrook Bradford on Avon  
Wiltshire BA15 1UD  
Tel: 01225 863 138  
Fax: 01225 863 171

**POLAND:** VIDICON 01-231 Warszawa  
Ul. Plocka 17  
Tel: 48 22 6325543  
Fax: 48 22 6313808

These instructions supersede all previous issues in circulation prior to May 2001.