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**CROW SCIENTIFIC RESEARCH™**

# SRP-100

**PASSIVE INFRARED  
INTRUSION DETECTOR**

**N345**



**ELECTRONIC ENGINEERING LTD.**

**INSTALLATION INSTRUCTIONS  
P/N 7101172 Rev. F A.Y.**

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### SRP - 100 FEATURES

- \* Dual element pyrosensor.
- \* Hard type full pattern spherical lens and diffractive mirror for creep zones.
- \* Variable pulse width adjustment.
- \* Sensitivity adjustment.
- \* Automatic temperature compensation.
- \* Height installation calibration free from 1.5m to 3.6m (5 ft to 12 ft).
- \* Environmental immunity.
- \* High - tech design.

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### SELECTING MOUNTING LOCATION

Choose a location most likely to intercept an intruder. See detection patterns in figures 5 - 8. The dual-element high quality sensor detects motion across the beam. It is slightly less sensitive when detecting motion toward the detector. The SRP-100 performs best when provided with a constant and stable environment.

### AVOID THE FOLLOWING LOCATIONS

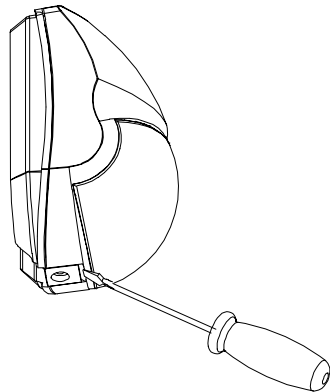
- Facing direct sunlight.
- Facing areas subject to rapid quick temperature changes.
- Areas with air ducts or substantial air flows.

### MOUNTING THE DETECTOR

The detector can either be wall, corner or ceiling mounted. Refer to swivel bracket description. NOTE: recommended installation height 1.5m - 3.6m (5 ft to 12 ft).

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### FIG. 1 - REMOVAL OF FRONT COVER

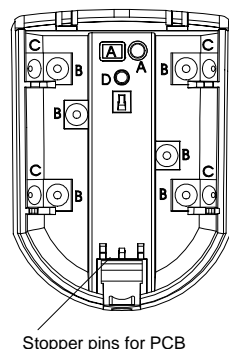


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1. To remove the front cover, insert a flat screwdriver in the slot between the front and the bottom, above the holding screw hole and push gently, until the front cover is disengaged and the opening click is heard.(Fig 1.)
2. To remove the PC board, carefully unscrew the holding screw located on the PC board.
3. Break out the desired holes for proper wiring as per fig 2.
4. Insert the wire through the wire access hole, and mount the detector base to the wall, corner or ceiling with the necessary number of screws and the suitable bracket.
5. Reinstall the PC board, set it as low as possible - till stopper (see fig.2). Tight the holding screw.
6. Access for wiring connections is very easy via the terminal block located on the PCB. See fig 3.
7. Replace the cover by inserting it back in the appropriate closing pin until the closing click is heard.

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### FIG. 2 - KNOCKOUT HOLES



A. WIRE ACCESS HOLES (2)

B. USE FOR FLAT WALL MOUNTING (2)

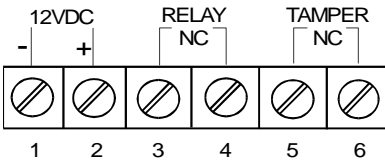
C. CORNER MOUNTING - USE ALL 4 HOLES. SHARP LEFT OR RIGHT ANGLE MOUNTING - USE 2 HOLES (TOP AND BOTTOM)

D. FOR BRACKET MOUNTING

Stopper pins for PCB

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### FIG. 3 - TERMINAL BLOCK



1    2    3    4    5    6

### NOTES for UL referring countries

1. Connect the SRP-100 to a "U.L." listed burglar alarm Power Supply or control panel capable of providing standby power for at least four (4) hours.
2. Refer to national electric code, NFPA-70 for wiring methods.
3. The SRP-100 production batch can be identified by the 4 digits printed on the terminal strip side of the PC board.

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### TERMINAL BLOCK CONNECTIONS

Run the cable through the cable entry hole and connect the wires in accordance with the following instructions:

**Terminal 1 - Marked " - " ( GND )**  
Connect to ground of the control panel.

**Terminal 2 - Marked " + " (+ 12V )**  
Connect to a positive Voltage output of 7.8-16 Vdc source (usually from the alarm control unit)

**Terminals 3 & 4 - Marked " RELAY "**  
These are the output relay contacts of the detector. Connect to a normally closed zone in the control panel.

**Terminals 5 & 6 - Marked " TAMPER "**  
If a Tamper function is required connect these terminals to a 24 hour normally closed protective zone in the control unit. If the front cover of the detector is opened, an immediate alarm signal will be sent to the control unit.

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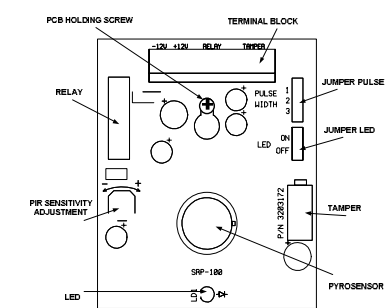
### WIRE SIZE REQUIREMENTS

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

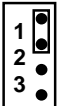
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### FIG. 4 - PCB LAYOUT

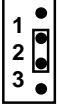


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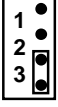
### PULSE WIDTH JUMPER SETTINGS



Normal low risk situation - jumper on no. 1  
Pulse - width (interruption time)= 50ms.



Moderate nuisance stimuli - jumper on no. 2  
Pulse - width (interruption time)= 150ms




Relative high chance of false alarm - jumper on no. 3  
Pulse - width (interruption time) = 300ms


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### LED ENABLE JUMPER SETTING

Connect a jumper between the marked terminals to enable or disable the LED (ON or OFF).



LED ON



LED OFF

### SENSITIVITY ADJUSTMENT

The sensitivity potentiometer should be adjusted according to the security risk level at the installation site. For high risk locations, the sensitivity should be adjusted close to MIN (9%). In low risk situations, the sensitivity should be adjusted closer to MAX (100%) factory set to 54%. Always walk test and re-adjust if required.

**LENSES-INTERCHANGEABLE HARD TYPE SPHERICAL LENSES PATTERNS**

COVERAGE	WIDE ANGLE	LONG RANGE CURTAIN	ANIMAL ALLEY, 105°	CURTAIN
18m x 18m (60ft x 60ft)	30m x 2m (100ft x 6.3ft)	18m x 18m (60ft x 60ft)	15m x 1m (50ft x 3.3ft)	

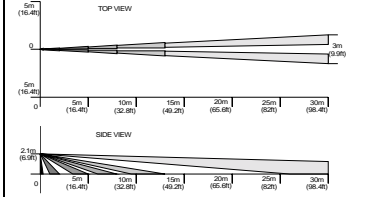
TOTAL DETECTION ZONES	52°	12	18	22
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18 long range, 16 intermediate, 10 short range, nearest range, 2 creep zones.

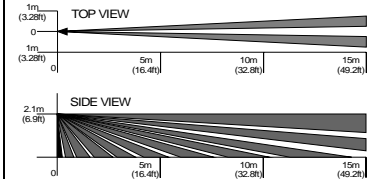
**N345**

**NOTE:**  
SELECT LENS ACCORDING TO INSTALLATION AREA REQUIREMENTS.  
DETECTION RANGES ARE SPECIFIED AT 20° C (68° F) AMBIENT TEMPERATURE.

**FIG. 8 - LONG RANGE CURTAIN LENS**



**FIG. 7 - CURTAIN LENS**



**SWIVEL MOUNTING BRACKETS (OPTIONAL)**

The SRB1 is a swivel bracket adjustable from 0° to 20° downward, 0° to 5° upward, and 0° to 45° horizontally to the left or to the right.  
The SRB2 is a bracket kit for ceiling mount installation. It consists of a SRB1 and a ceiling mount adapter.  
The SRB3 is a bracket kit for corner installation. It consists of a SRB1 and a corner mount adapter.

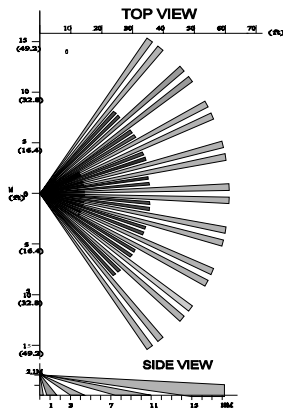
Swivel kit for wall, ceiling and corner mount installation includes SRB1, SRB2 and SRB3.

**TECHNICAL SPECIFICATIONS**

MODEL	SRP-100
Detection Method	Dual element PIR
Sensitivity	Δ1.1°C (Δ2°F) at 0.9 m/sec (3 ft/sec)
Detection Speed	0.15 - 3.6 m/sec (0.5 - 12 ft/sec)
Power Input	7.8 to 16 VDC
Current Draw	Standby: 14mA Active with LED: 8mA Active w/ LED: 5mA
Temperature Compensation	YES
Pulse Width	Adjustable
Alarm Period	2 1/4 - 1 sec
Alarm Output	N.C 28VDC 0.1 A with 10 Ohm series protection resistor
Tamper Switch	N.C 28VDC 0.1 A with 10 Ohm series protection resistor - open when cover is removed
Warm Up Period	~ 60 sec
LED Indicator	LED is ON during alarm
Operating Temperature	-20°C to +60°C (-4°F to +140°F)
RFI Protection	30V/m 10 - 1000MHz
EMI Protection	50,000V of electrical interference from lightning or power through
Dimensions	95mm x 70mm x 58mm (3.8" x 2.8" x 2.3")
Weight	85 gr ( 3 oz )

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

**FIG. 5 - WIDE ANGLE LENS**



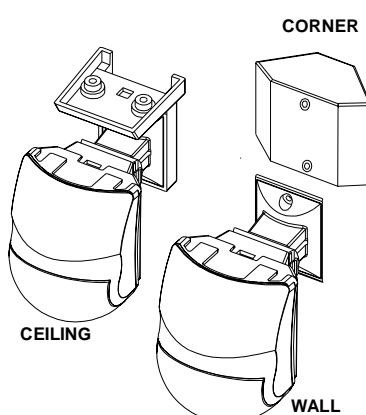
**REPLACING THE LENS**

1. Remove the front cover by inserting a flat screw driver in the appropriate slot.
2. Using a small flat screw driver, press on left or right side of the installed lens which will then pop out from its side right and left holding pins.
3. Select the desired lens and hold it while making sure its upper holding pin is pointed upwards.
4. Snap the lens to its place by pressing again from outside of the front cover until a click is heard, confirming the new lens is tightly inserted. See fig 9.
5. Replace front cover.

**IMPORTANT**

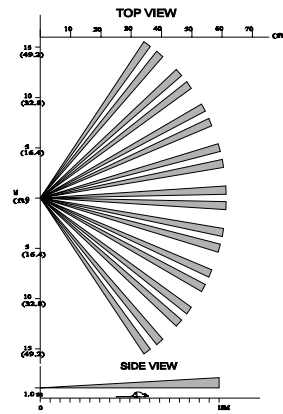
When using animal alley lens, the mirror should be removed with a flat screw driver and replaced by a black dummy mirror (supplied with animal alley lens).

**FIG. 10 - MOUNTING BRACKETS**

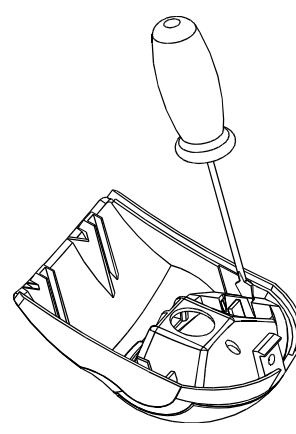


**CROW ELECTRONIC ENGINEERING LTD. - WARRANTY POLICY CERTIFICATE**  
This Warranty Certificate is given in favor of the purchaser (hereunder the "Purchaser") purchasing the products directly from Crow or from its authorized distributor.  
Crow warrants these products to be free from defects in materials and workmanship under normal use and service for a period of 24 months from the last day of the week and year whose numbers are printed on the printed circuit board inside these products (hereunder the "Warranty Period").  
Subject to the provisions of this Warranty Certificate, during the Warranty Period, Crow undertakes, at its sole discretion and subject to Crow's procedures, as such procedures are from time to time, to repair or replace, free of charge for materials and/or labor, products proved to be defective in materials or workmanship under normal use and service. Repaired products shall be warranted for the remainder of the original Warranty Period.  
All transportation costs and in-transit risk of loss or damage related, directly or indirectly, to products returned to Crow for repair or replacement shall be borne solely by the Purchaser.  
Crow's warranty under this Warranty Certificate does not cover products that is defective (or shall become defective) due to: (a) alteration of the products (or any part thereof) by anyone other than Crow; (b) accident, abuse, negligence, or improper maintenance; (c) failure caused by a product which Crow did not provide; (d) failure caused by software or hardware which Crow did not provide; (e) use or storage other than in accordance with Crow's specified operating and storage instructions.  
There are no warranties, expressed or implied, of merchantability or fitness of the products for a particular purpose or otherwise, which extend beyond the description on the face hereof.  
This limited Warranty Certificate is the Purchaser's sole and exclusive remedy against Crow and Crow's sole and exclusive liability toward the Purchaser in connection with the products, including without limitation - for defects or malfunctions of the products. This Warranty Certificate replaces all other warranties and liabilities, whether oral, written, (non-mandatory) statutory, contractual, in tort or otherwise.  
In no case shall Crow be liable to anyone for any consequential or incidental damages (inclusive of loss of profit, and whether occasioned by negligence of the Crow or any third party on its behalf) for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever. Crow does not represent that these products can not be compromised or circumvented; that these products will prevent any person injury or property loss or damage by burglary, robbery, fire or otherwise; or that these products will in all cases provide adequate warning or protection.  
Purchaser understands that a properly installed and maintained product may in some cases reduce the risk of burglary, fire, 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 these products failed to give any warning.  
If Crow is held liable, whether directly or indirectly, for any loss or damage with regards to these products, regardless of cause or origin, Crow's maximum liability shall not in any case exceed the purchase price of these products, which shall be the complete and exclusive remedy against Crow.

**FIG. 6 - ANIMAL (PET) ALLEY LENS**



**FIG. 9 - REPLACING THE LENS**



**TEST PROCEDURES.**

WAIT ONE MINUTE WARM-UP TIME AFTER APPLYING 12 VDC POWER. CONDUCT TESTING WITH THE PROTECTED AREA CLEARED OF ALL PEOPLE.

**Walk test**

1. Remove front cover.  
The pulse jumper must be in position 1. The LED must be enabled.
2. Replace the front cover.
3. Start walking slowly across the detection zone.
4. Observe that the detector's LED lights whenever motion is detected.
5. After the walk test is completed, the LED may be disabled.
6. Allow 5 sec. between each test for the detector to stabilize.

**NOTE:**

walk tests should be conducted, at least once a year, to confirm proper operation and coverage of the detector.

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These instructions supersede all previous issues in circulation prior to June 2005.