

# FW2-NEO CRT

## TWO WAY WIRELESS CURTAIN PIR DETECTOR



ELECTRONIC ENGINEERING LTD.

### INSTALLATION INSTRUCTIONS

P/N 7102327 REV. A (DZ)

#### OPERATION

This FW2 Curtain PIR detector transmits the following events data:

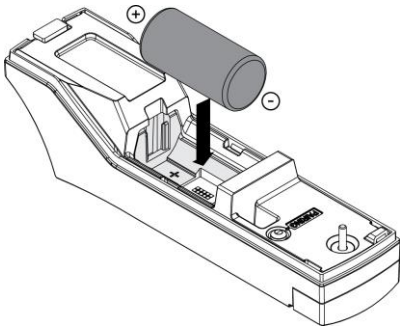
**SUPERVISION** – A periodical transmission (configurable) indicating detector's presence.

**ALARM** – Alarm transmission triggered by the device indicating Motion detection. The Red LED will blink once.

**LOW BAT** – Whenever the battery reaches the low level (2.5V), a Battery Low signal will be sent. When Battery level drops below Cut Off level (2.3V) the device will stop functioning and the Red LED will blink for 10 seconds and then turned Off.

**TAMPER** – Whenever the cover is removed from Bracket or the device is tear off from the wall, a message will be transmitted with "Tamper ON" signal. When cover will be returned a "Tamper OFF" signal will be transmitted.

#### FIGURE 2 - BATTERY PLACEMENT



#### MOUNTING THE DETECTOR

There are 2 options for mounting this detector:

- Option 1:** Using a 90° bracket.  
**Option 2:** Direct on wall using screws.

- In all installation options the device shall be opened by opening the screw cover as shown in Figure 1, unscrew the holding screw and separate the device from the bracket by tilting the front cover.
- Mount the Bracket to the wall using 1 out of the 2 options as shown in Figures 4 to 10.
- Make sure the device is paired.
- Place the device in the bracket by inserting it back into its appropriate position as shown in Figure 10.
- Fasten the holding screw and close the screw cover.

#### INTRODUCTION

This FW2 Curtain PIR detector is an advanced, fully supervised low-current wireless detector that includes a FW2 transceiver for reliable system operation combined with the most advanced Mirror Optics detection method.

This FW2 Curtain PIR detector includes APS mechanism for extending the battery lives.

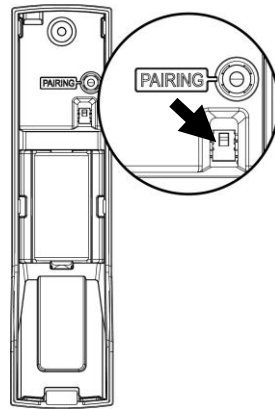
This FW2 Curtain PIR detector includes series of messages for full communication administration (Keep Alive, Tamper Status, Battery Status, Alert, Configuration, etc.) as well as test transmission signals.

This product require professional installation.

#### LEARNING PROCESS

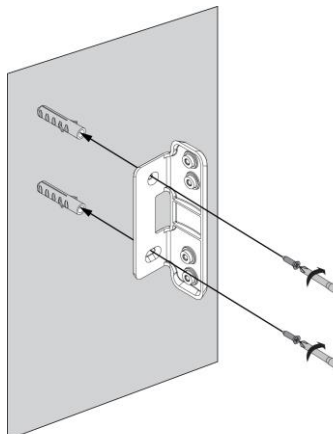
- Open the screw cover as shown in Figure 1.
- Unscrew the holding screw and separate the device from the Bracket by tilting the front cover.
- Place a battery as instructed in Figure 2 and wait until the Red LED stops blinking.
- Initiate the Base Station pairing process.
- Initiate the PIR learning process by pressing the pairing button for 5 seconds – the pairing button is shown in Figure 3. The Green LED will constantly turn On. When the Green LED starts blinking release the pairing button.
- The device should register to the CP.
- When registration process is successfully completed the Green LED will constantly light On for 3 seconds and then turn Off.
- If registration process failed the Red LED will blink. Remove the battery, wait for few seconds (~10sec) and repeat the learning process.

#### FIGURE 3 – TAMPER PAIRING BUTTON



Press Tamper switch to learn the device

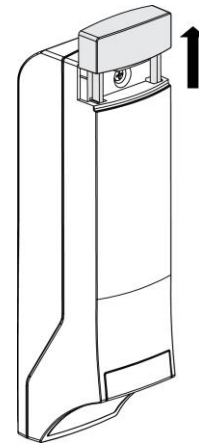
#### FIGURE 6 – Option 1 (Bracket) – Step A



#### FEATURES

- FW2 GFSK protocol.
- Low current Technology.
- Powered by a single 3V Lithium battery.
- Battery life: up to 5 years.
- Frequency Band: 868.35MHz / 916MHz.
- Tamper Open/Close transmission.
- Supervision transmission.
- Battery status transmission.
- Bi-Color LED indications
- Range up to 500m on open space.
- Remotely configurable.
- Motion Detection 4-6M or 6-8m

#### FIGURE 1 – COVER OPENING



#### SELECT MOUNTING LOCATION

Choose a location most likely to intercept an intruder. (See Figure 4 - Detection Pattern).

Recommended mounting height – 1.9m-2.3m.

Avoid the following locations:

- Facing direct sunlight.
- Facing areas that may change temperature rapidly.
- Areas where there are air ducts or substantial airflows.

This device detect or performs better when provided with a constant and stable environment.

#### FIGURE 7 – Option 1 (Bracket) – Step B

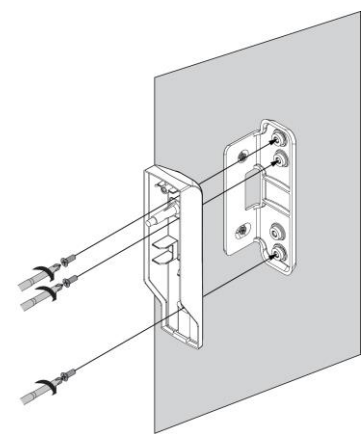
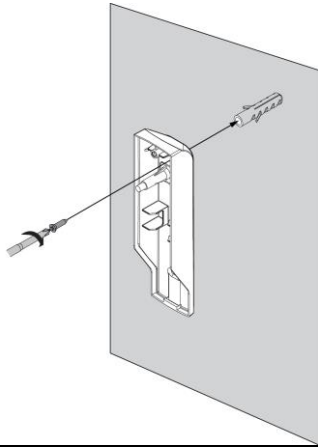
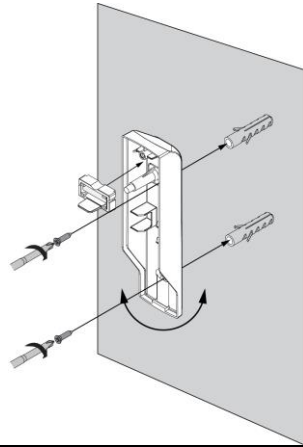


FIGURE 8 – Option 2 (On Wall) – Step A



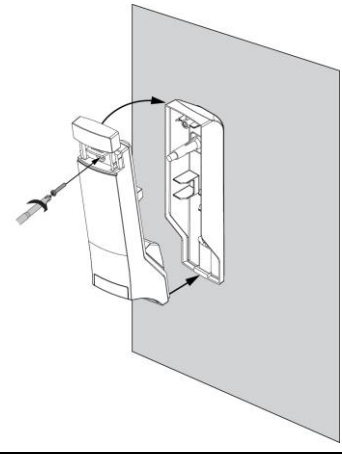
16

FIGURE 9 – Option 2 (On Wall) – Step B



17

FIGURE 10 – All Options – Final Step



18

## TRANSMISSION TESTS

After pairing and installing the detector we recommend to perform walk and transmission tests.

## Tamper Transmission Test

Changing the tamper switch state (by attaching / removing the device to / from the Bracket) will cause tamper transmissions.

## Motion Transmission Test

Walk crossing in front of the detector from one side to the other will cause motion alert transmissions. Verify receiving the indication on your control panel. Pay attention that due to APS feature it is required waiting 2 minutes between 2 consecutive indications.

19

## BATTERY REPLACEMENT

1. Open the screw cover as shown in Figure 1.
2. Unscrew the holding screw and separate the device from the Bracket by tilting the front cover.
3. Remove the in use battery from the device.
4. Install the new battery in the correct polarity as shown in Figure 2.
5. Wait until the Red LED stops blinking.
6. In case the device was paired to a control panel the device should automatically register again to the same control panel.
7. Place the device in the Bracket by inserting it back into appropriate position and validate receiving the Tamper Alert Off indication on your control panel.
8. Fasten the holding screw and close the screw cover.

20

## !!! CAUTION !!!

**RISK OF EXPLOSION IF BATTERY IS REPLACED BY DIFFERENT TYPE / MODEL.**

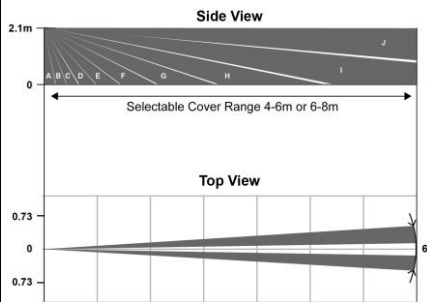
**DISPOSE USED BATTERIES ACCORDING TO ITS INSTRUCTIONS**

*The battery must be replaced by 3V Lithium battery Size 2/3A Models such as:*

1. VARTA CR123A
2. GP CR123A

21

FIGURE 11 - DETECTION PATTERN



22

## REGULATORY APPROVALS

The FW2-PIR-CRT conforms to the essential requirements set out by:

- RTTE directive:1999/5/EC
- EMC directive: 2004/108/EC
- Low Voltage directive: 2006/95/EC

Harmonized Standards applicable to this products are:

- EN300220-2
- EN301489-3
- EN301489-1
- EN50130-4:1995+A1(1998)+A2(2003)
- EN61000-6-3
- EN60950-1

Additional Standards and Directives applicable to this product are:

- RoHS directive: 2002/95/EC
- EN50131-1
- EN50131-2-2
- EN50131-5-3
- EN50130-5



Security Grade2, Environmental Class II

23

## TECHNICAL SPECIFICATIONS

Detection Method	PYRO Element with Mirror Optics
Data Protocol	FreeWave2
Modulation Type	GFSK (2 frequencies)
Frequency	868-869MHz / 916-917MHz
Identification	Unique ID serial number – 24 bit
Events Transmission	Alarm, Tamper, Supervision, Low Bat, Keep Alive.
Supervision Time	7 min by default (configurable between 1 to 30 minutes)
Range in open space	500m
Battery	Lithium. 3V Type: CR123A - Size: 2/3AA
Battery life	Up to 5 years
Current	Standby ~11 µA
Consumptions	Receive mode ~24 mA Transmit mode ~45 mA Transmit power ~14dBm
Tamper Switch	Front Cover Removal
Operating temperature	-10°C to +55°C
Dimensions	123mm x 31mm x 37mm
Weight (inc. battery)	120 gr.

## CROW ELECTRONIC ENGINEERING LTD. ("Crow") - 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.



12 Kineret Street.  
Airport City, 70100 Israel

Tel. +972 3 9726000  
Fax. +972 3 9726001

sales@crow.co.il  
support@crow.co.il

[www.thecrowgroup.com](http://www.thecrowgroup.com)

These instructions supersede all previous issues in circulation prior to January 2016