

FW2-PIRCAM OUTDOOR



FREEWAVE™ TWO WAY WIRELESS OUTDOOR PIRCAM DETECTOR With ANTI-MASKING



INSTALLATION INSTRUCTIONS

7103155 Rev B D.Z

PRODUCT OVERVIEW



FW2-PIRCAM OUTDOOR FEATURES

- PIR Motion Sensor & CMOS camera
- VMD technology for reliable outdoor visual verification and surveillance
- IR LED for operating in low light conditions
- Anti-Masking
Upon an intrusion or on demand, the FW2-PIRCAM Outdoor sends an alarm and transmits a sequence of pictures to the Serenity™ control panel series through TCP/IP or GPRS and to the monitoring station or to your mobile phone via CrowCloud Connect™ mobile app
- Freewave2 advanced & secured RF protocol
- 2GFSK modulation type with AFA and LBT
- Supervision transmission
- Pet immunity up to 20kgs
- Double Tamper protection against detector opening and wall removal
- Batteries and Wall bracket supplied
- Battery status sent on every transmission
- Communication range up to 500m open space
- Red LED indicator for Alarm and Trouble state
- Operating Temperature -25°C to +55°C
- IP64 / IK-06 Rating protection

OPERATION

Events transmission:

- **SUPERVISION** – configurable (7-30 min).
- **ALARM** – Alarm transmission triggered by the device indicating motion detection.
- **LOW BAT** – A low battery signal will be sent when the battery reaches 2.5V level. When Battery level drops below Cut Off level (2.3V) the device will stop functioning.
- **TAMPER** – When the detector is opened or removed from the wall, a "Tamper ON" signal is transmitted. When detector is closed or fixed back to the wall a "Tamper OFF" signal is transmitted.
- **ANTI-MASKING** – Upon an attempt to mask the lens, a trouble alert will show as Zone Tamper on Serenity™ panels within 3 minutes after the masking event.

FIG. 1 – DETECTOR OPENING

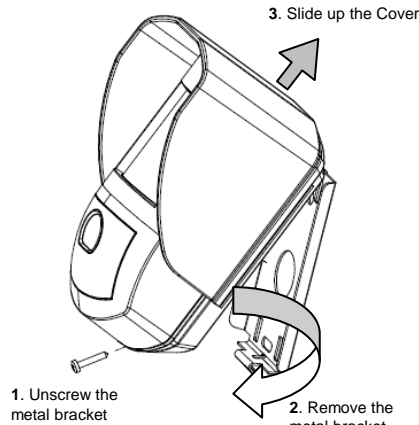
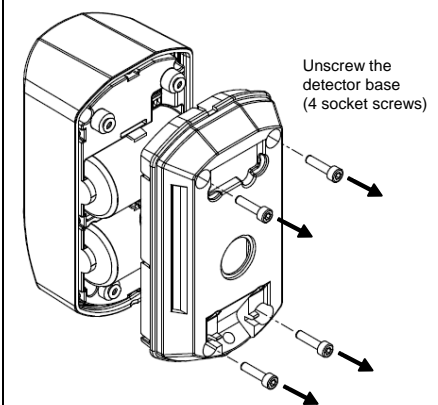


FIG. 2 – DETECTOR OPENING (CONT)



Note: Read the "Learning The Detector" part before inserting batteries.

LEARNING THE DETECTOR

This section describes and explains how to learn and configure the FW2-PIRCAM Outdoor with Serenity™ panels Series.

FW2-PIRCAM Outdoor learning options:

Option 1: By detector ID - the ID appears on the lower side of the barcode sticker attached to the product

Option 2: Via installer programming mode using the detector tamper switch for learn process

Option 3: Via EasySerenity™ PC application

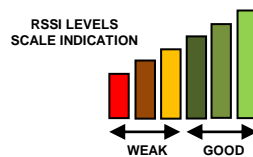
Please refer to the Serenity™ panels Series manual.

RSSI – RF SIGNAL INDICATION

All Serenity™ control panels have "Radio Frequency Signal Strength Indication" (RSSI) for each transceiver in order to help the installer to define the best location for the detector from RF range.

The RSSI level is indicated by scale bars between 1 and 6, where 6 is the best RF received signal.

If the RSSI indication value is less than 3, it is a sign for a weak RF link and it is recommended to find a better installation for the FW2-PIRCAM Outdoor.



SELECT MOUNTING LOCATION

The FW2-PIRCAM Outdoor should be mounted at 2.1m for optimal detection. The FW2-PIRCAM Outdoor can be installed with the back metal bracket or the wall bracket. Choose a location most likely to intercept an intruder. See detection pattern (see Fig 3).

The detector detects motion crossing the beam; it is more sensitive detecting motion crossing the beams then moving towards the detector.

AVOID THE FOLLOWING LOCATIONS to assure a better performance in a constant and stable environment:

- Facing direct sunlight
- Facing areas subject to rapid temperature changes
- Facing metal doors
- Close to direct source of heat or air gust
- Clear all physical obstacles from the detection area
- Clear all light reflecting surfaces from the detection area, as well as water puddles
- Avoid installation on the following types of ground: Thick vegetation, un-mown Grass, Water, Sand and Metal

CALIBRATING THE DETECTOR

The FW2-PIRCAM Outdoor needs to perform a self-calibration process during 3 min to verify the good functioning of the Anti-Masking feature.

Follow the following steps:

- Open the detector (Fig.1 & 2)
- Learn the detector into control panel
- Install the FW2-PIRCAM Outdoor by using the back metal bracket or the wall bracket
- Close the detector
- The detector starts calibration process during 3 min
- Keep 3 meters around the FW2-PIRCAM Outdoor free from human and any other obstacles
- After this period, the detector is ready for operation

Note: The AM calibration cannot be done under direct sunlight since the FW2-PIRCAM will postpone the calibration processes until the lightning conditions change. If lightning conditions are not optimal for calibration, the AM sensitivity is reduced.

TRANSMISSION TESTS

Tamper transmission test

Changing the tamper switch state will cause tamper transmissions to be indicated on the control panel.

Communication signal test

Follow RSSI section above to verify the RF Communication level.

Walk test

Make sure that the protected area is cleared of all people for at least 3 minutes before starting the walk test.

Initialize "Walk test" mode on your control panel. Start walking across the detection zone.

Listen to the Alarm sound when motion is detected (the Red LED turns ON when motion is detected).

Allow 5 sec. between each test for the detector to stabilize.

FIG 3 - DETECTION PATTERN

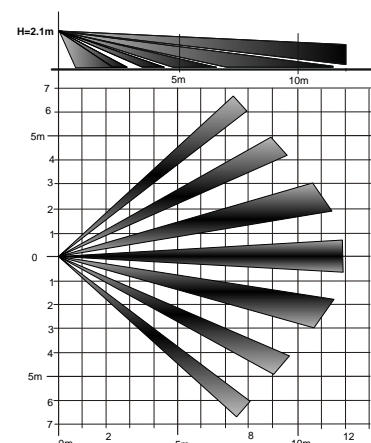
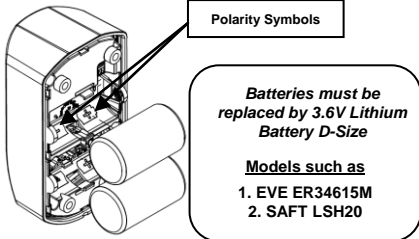


FIG 4 - BATTERIES REPLACEMENT**!!! CAUTION !!!**

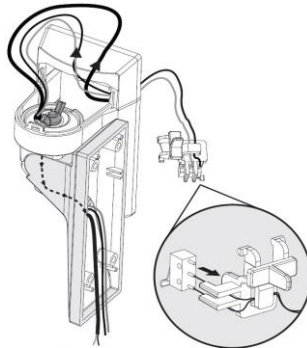
RISK OF EXPLOSION IF BATTERIES ARE REPLACED BY DIFFERENT TYPES / MODELS

DISPOSE USED BATTERIES ACCORDING TO THEIR INSTRUCTIONS

WALL BRACKET INSTALLATION

The bracket set is supplied with a tamper set to protect your device from wall removal.

1. Install the tamper set:

**WALL BRACKET INSTALLATION (CONT)**

Insert tamper cables to terminal block:



Connect tamper cables to terminal block



Note:
There is no polarity, this is a Normally Close (NC) dry contact.

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 12 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 are 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.

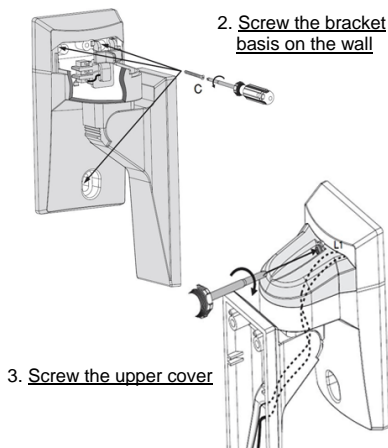
BATTERIES REPLACEMENT (CONT)

Note: the battery life of the device depends on its use.

1. Open the detector as described in (Fig. 1)
2. Unscrew the 4 socket screws and separate the device from its base (Fig. 2)
3. Remove the used batteries from the device
4. Install two new batteries in the correct polarity as shown in Fig.4
5. Wait until the Red LED stops blinking
6. If the device is already paired to the control panel it should automatically restore communication with battery replacement
7. Screw back the base and insert the device in the back metal bracket
8. Replace the detector to its installation, and fasten the holding screw

Note:

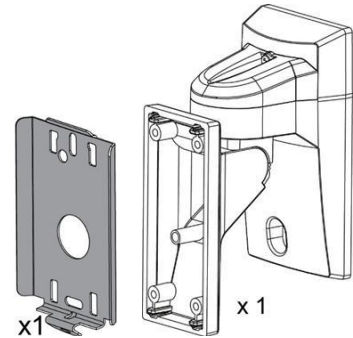
In case of detector tamper alarm, please restore the alarm with the user code (user code>>E).

WALL BRACKET INSTALLATION (CONT)**TECHNICAL SPECIFICATIONS**

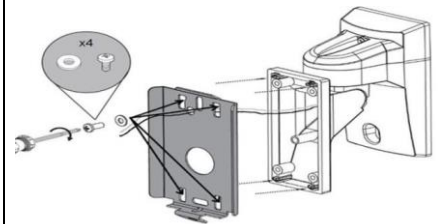
Detection Method	Quad Element PIR & CMOS Camera for visual verification
Data Protocol	Freewave2™ Two Way Protocol with AFA and LBT
Modulation Type	2GFSK
Frequency Band	868-869MHz or 916-917MHZ
Identification	Unique ID serial number (24 bit)
Event Transmission	Alarm, Tamper, Anti-Mask, Picture(s) Verification, Supervision, Low Bat
LED Indication	Red LED during Alarm and Trouble
Tamper Switch	Detector Opening and Wall Removal
Communication Range in open space	500m

WALL MOUNTING BRACKET SET

The FW2-PIRCAM Outdoor is supplied with a bracket set with tamper auto-protection for wall mounting installation.

**WALL BRACKET INSTALLATION (CONT)**

3. Install the back metal bracket of the FW2-PIRCAM Outdoor:



Use the 4 screws philips pan head and 4 flat washer

Note:

The metal bracket hole can damage tamper cables, use the supplied sealing rubber to protect them.

TECHNICAL SPECIFICATIONS (CONT)

Camera	CMOS camera with VGA or QVGA resolution
Picture Range	12m
CMOS Sensitivity	16VLux/sec
Picture Mode	Configurable B&W / Color
Resolution	Configurable VGA / QVGA
Current Draw	Standby mode: 22µA Receive mode: 24mA Transmit mode: 38mA
Battery	Two 3.6V Lithium batteries D-Size
Battery life expectancy	Up to 3 years
Low Battery	2.5V (Cut Off at 2.3V)
Operating Temperature	-25°C to +55°C
Dimensions	135mm x 75mm x 70mm
Weight (incl. battery)	400gr
IP/IK Rating	IP64 / IK-06

REGULATORY APPROVALS

The FW2-PIRCAM Outdoor is designed to comply with Standard regulation:

EN 50131-1
EN 50131-5-3
EN 50131-2-2 Grade 2

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