



**FW2-RLY4**

**TWO WAY WIRELESS  
OUTPUT RELAY MODULE**

**ELECTRONIC ENGINEERING LTD.**

**INSTALLATION INSTRUCTIONS**  
P/N 7102374 REV.A Y.N

**INTRODUCTION**

The FW2-RLY4 is an external two way wireless relay output module with 4 Relays. It is supported by Crow's Serenity™ control panels and RF-Tx/Rx UART Modules.

**OPERATION MODES**

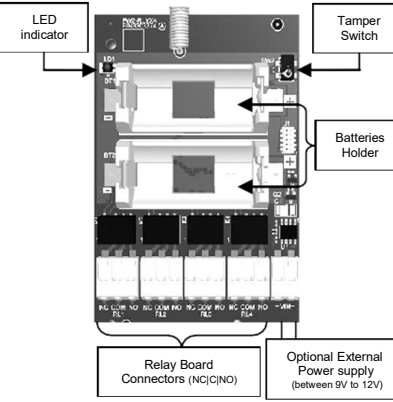
The FW2-RLY4 operates in 2 different modes:

- Operated by 2xCR-123 batteries
- Optional external power (from 9V to 12V)

**FEATURES**

- 4 Relays control (ON/OFF state only)
- Push-In wire terminals for easy installation
- Bi-Color LED indication
- Fit in a Universal external plastic box
- Sending Alert/Restore events
- Sending Open/Close Tamper events
- Monitor battery level
- Indicates AC fail if module is connected to an external power supply unit.

**THE FW2-RLY4 BOARD**



**LEARNING PROCESS**

We suggest you to refer to the "Outputs Learning" section of your control panel installation manual.

Learning process in Serenity™ control panel:

1. Insert one battery CR123 into the FW2-RLY4 and wait until the end of the power-up process during which LEDs Red and green are blinking alternately.
2. Enter into installer mode from control panel, then go to Output Radio learn menu (P64E, E) and Select the Radio Output number to be learnt from #6 to #16\*. You can reach this number directly with P64E "#Output" E. Enter manually the serial number (S/N) indicated on the device sticker and press Enter to save.  
**The S/N is the ID of the first relay; The S/N must be learned firstly. The FW2-RLY4 offers 4 different outputs which have to be learned separately.**
3. The next three outputs should be learned as follow:  
**Example:** if the first relay is output #8 with ID 2151217, Then Output #9 ID will be 2151218, Output #10 ID will be 2151219 / Output #11 will be 2121220.

*Default Outputs on Serenity™ panel	Output 1 = Internal Siren Output 2 = (-) Alarm Output 3 = (-) Arm/Disarm Output 4 & 5 = Wireless Siren
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**TESTING THE FW2-RLY4**

After learning the FW2-RLY4 into your control panel, proceed with manual testing to check functioning. This test can be manually performed from the control panel by activating related Output(s). On Serenity™ control panel, you can use the digit key located on LCD display.

Activate / Deactivate outputs to check good functioning of the FW2-RLY4

**SETTING TO DEFAULT**

It is recommended to set the FW2-RLY4 to default state "OFF" (all relays normally closed) before using the device.  
You can force "OFF" state as follow:

1. Press and Hold tamper switch of the FW2-RLY4
2. Insert one battery.
3. LEDs start blinking alternately Red and Green several seconds and go off.
4. Release tamper switch.

**Note:**  
For this procedure, the FW2-RLY4 must be powered by battery only.

**DELETE THE FW2-RLY4**

If all 4 relays are learned into control panel, **deleting the first relay #1** (S/N of the first output – the serial number labelled on the device) **will automatically delete all 4 relays.**

If you want to delete a specific relay (besides the first relay), go to the control panel installer mode and select the output number you want to delete #2, #3 or #4#.

**To delete an Output on Serenity™ control panel, use the Programming command shortcut:** P66E "#Output" E

**To Delete ALL outputs:**

- Go to "Radio Output" level in installer mode
- Select the Output where the Relay #1 is learned
- Delete the Radio Output device
- Exit and save the configuration

**To Delete a SPECIFIC output:**

- Go to "Radio Output" level in installer mode
- Select the Output you want to delete
- Delete the Radio Output device
- Exit and save the configuration

**LED INDICATION**

UNIT STATE	GREEN LED	RED LED
<b>Power Up</b>	Green and Red blinking alternately for 500ms during device initialization until device is ready for learning.	
<b>Initialization Failure</b>	OFF	Blinking 250ms during 10 sec after power up.
<b>Registration Process</b>	Blinking 250ms during learning process	OFF
<b>Registration Success</b>	Constant ON during 3 sec	OFF
<b>Registration Failure</b>	Blinking ON 250ms and OFF 750ms during 10 seconds	OFF
<b>Cut Off</b>	OFF	ON for 10 sec
<b>Reset Process</b>	Green and Red blinking alternately for 500ms during device initialization until the device is ready for learning.	

**TECHNICAL SPECIFICATIONS**

Data Protocol	FW2 Protocol
Modulation Type	GFSK (2 frequencies)
Frequency band	8F – 868.35MHz 9F – 916.5MHz
Identification	Unique ID serial number – 24 bit
Event Transmission	Output State, Tamper, Supervision, Low battery, Keep alive
Supervision Time	7 min (by default) Configurable between 1 to 30 min
Range (open space)	500m
Operation	2 CR 123A Lithium batteries 3V Battery life up to 5 years Optional External P.S 9V to 12V
Current Consumption	Average <50 µA Transmission ~60 mA Transmit Power <14dBm
Max Contact Capacity	1A / 24V
Operating temperature	-10°C to +55°C
Dimensions	89mm x 60mm x 19.4 including battery holder
Weight (inc. battery)	120 gr.

**REGULATORY APPROVALS**

The FW2-RLY4 conforms to essential requirements set out by:




- RTTE directive: 1999/5/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 & Directives applicable to this product are:

- Security Grade 2 Environmental Class II
- RoHS directive: 2002/95/EC
- EN50131-1
- EN50131-3
- EN50131-6
- EN50131-5-3
- EN50130-5

**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 cannot 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.

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These instructions supersede all previous issues in circulation prior to February 2017

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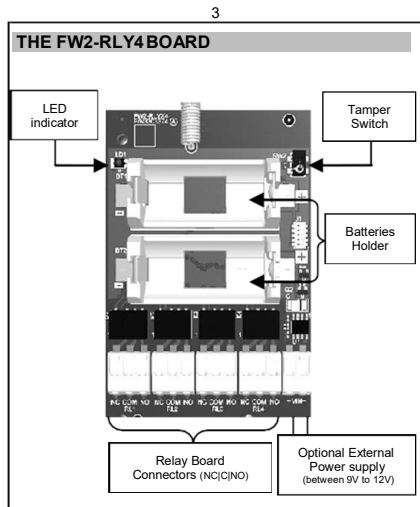
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