



SH-MAG

TWO WAY WIRELESS
MAGNETIC DOOR/WINDOW CONTACT



INSTRUCTION MANUAL

PRODUCT FEATURES

The SH-MAG is an advanced, fully supervised low-current wireless magnetic door/window contact that includes a FW2 transceiver for reliable system operation.

- Freewave2™ Two Way ISM
- GFSK with 5 frequencies & LBT
- Ultra Low current consumption
- Immunity to attenuation feature
- Powered by 2 Lithium batteries 1.5V Size AAA
- Contact Open/Close transmission
- Tamper Open/Close transmission
- Battery life up to 5 years
- Operating Frequencies: 868-869MHz / 916-917MHz
- Event Transmission:
 - Alarm
 - Tamper Open/Close
 - Supervision
 - Battery status
- Bi-Color LED indications
- Up to 500m transmission range in open space
- Remotely configurable

DETECTOR OPENING

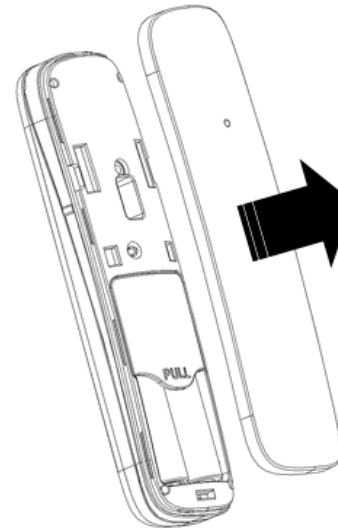


Figure 1
Pull out the detector cover

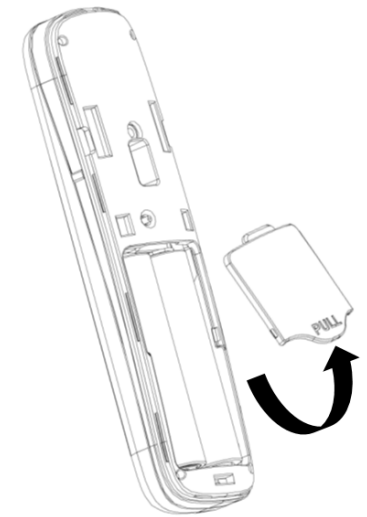


Figure 2
Remove the batteries cover

BATTERIES INSERTION

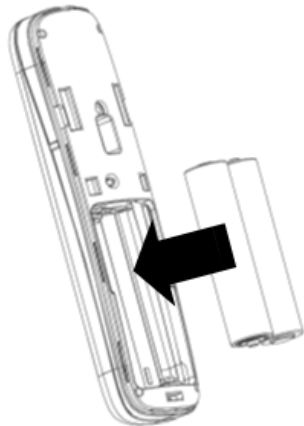


Figure 3

Batteries can be replaced by the user
Battery type: 1.5V Size AAA Lithium battery

DETECTOR MOUNTING

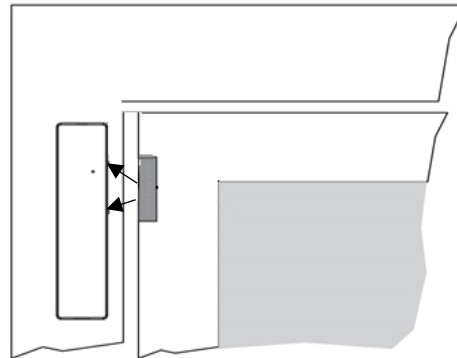


Figure 4

Place the Magnet unit near this marking

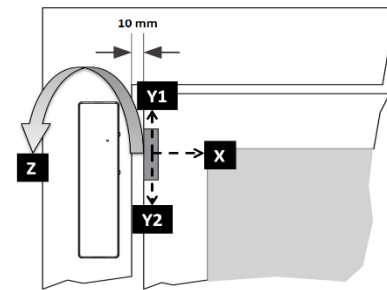


Figure 5
Basic installation at 10mm between FW2-Mag and Magnet Unit.

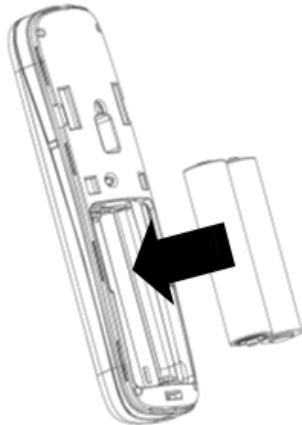
Configurations	Axis	Removal Distance (cm)	Approach Distance (cm)
Wood	X	1.5	1.5
	Y	1	1.4
	Z	3	2.9
Iron	X	1	1
	Y	2	1.8
	Z	2.3	2.2

LEARNING PROCESS

For pairing process, please refer to your control panel instructions.

To pair your device with Shepherd™ panel, please proceed as follows:

1. Enter in installing mode via the "Installer Webpage"
2. Go to "Zones" and select the zone you want to learn
3. Enter the unique radio device ID, and then send the configuration to the control panel
4. Place a battery as instructed in Figure 3 and wait until the Red LED stops blinking.
5. The device should register to the Control Panel.
6. When registration process is successfully completed, the Green LED will constantly light ON for 3 seconds and then turn OFF.
7. If registration process failed, the Red LED will blink. Remove the battery, wait for few seconds (~10sec) and repeat the learning process.

DETECTOR TESTING	BATTERY REPLACEMENT	SPECIFICATION	STANDARDS APPROVALS																												
Motion Transmission Test Removing and placing of magnet unit enables the alarm transmission test feature. Check that the transceiver unit indicates at least 2 events – one for removing and one for placing the magnet. To check this function it is necessary to verify that the FREEWAVE2 control panel displays the following massage: Zone # X Open Tamper Transmission Test Pressing and releasing the tamper (push button) enables the TAMPER transmission test feature. Verify the Control Panel indicates "Zone Tamper open" and Red LED is ON.	 Figure 5 The battery must be replaced by 2 Lithium batteries AAA 1.5V Lithium Models such as Energizer L92 CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY DIFFERENT TYPE / MODEL. DISPOSE USED BATTERY ACCORDING TO ITS INSTRUCTIONS	<table><tr><td>Detection Method</td><td>Magnetic Field Sensor</td></tr><tr><td>Communication Protocol</td><td>Freewave2™ Two Way ISM GFSK with 5 frequencies & LBT</td></tr><tr><td>Operating Frequencies</td><td>868-869MHz / 916-917MHz</td></tr><tr><td>Identification</td><td>Unique ID serial number – 24 bit</td></tr><tr><td>Events Transmission</td><td>Alarm, Tamper, Supervision, Low Bat, Keep Alive.</td></tr><tr><td>Supervision Time</td><td>7 min by default (configurable between 1 to 30 min)</td></tr><tr><td>Transmission Range</td><td>500m in open space</td></tr><tr><td>Battery</td><td>2 Lithium batteries AAA 1.5V Type L92</td></tr><tr><td>Battery life</td><td>Up to 5 years</td></tr><tr><td>Current Consumptions</td><td>Standby ~5 µA Receive mode ~24 mA Transmit mode ~50 mA Transmit power ~12dBm Low Bat 3V Cut Off 2.7V</td></tr><tr><td>Tamper Switch</td><td>Front Cover Removal</td></tr><tr><td>Operating temperature</td><td>-10°C to +55°C</td></tr><tr><td>Dimensions</td><td>100mm x 26mm x 16mm</td></tr><tr><td>Weight (incl. battery)</td><td>50gr.</td></tr></table>	Detection Method	Magnetic Field Sensor	Communication Protocol	Freewave2™ Two Way ISM GFSK with 5 frequencies & LBT	Operating Frequencies	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 min)	Transmission Range	500m in open space	Battery	2 Lithium batteries AAA 1.5V Type L92	Battery life	Up to 5 years	Current Consumptions	Standby ~5 µA Receive mode ~24 mA Transmit mode ~50 mA Transmit power ~12dBm Low Bat 3V Cut Off 2.7V	Tamper Switch	Front Cover Removal	Operating temperature	-10°C to +55°C	Dimensions	100mm x 26mm x 16mm	Weight (incl. battery)	50gr.	The SH-MAG conforms to the essential requirements set out by: - RED directive:2014/53/EU - EMC directive: 2014/30/EU - Low Voltage directive: 2014/35/EU Harmonized Standards applicable to this products are: - EN300220-2 - EN300220-1 - EN301489-3 - EN301489-1 - EN50130-4 - EN61000-6-3 - EN60950-1 - EN50131-6 - EN50130-5 - EN50131-5-3 Security Grade 2 Environmental Class II Additional Standards and Directives applicable to this product are: - RoHS directive: 2002/95/EC - EN50131-2-6 Security Grade2, Environmental Class II Power supply Type C CE ⓘ 
Detection Method	Magnetic Field Sensor																														
Communication Protocol	Freewave2™ Two Way ISM GFSK with 5 frequencies & LBT																														
Operating Frequencies	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 min)																														
Transmission Range	500m in open space																														
Battery	2 Lithium batteries AAA 1.5V Type L92																														
Battery life	Up to 5 years																														
Current Consumptions	Standby ~5 µA Receive mode ~24 mA Transmit mode ~50 mA Transmit power ~12dBm Low Bat 3V Cut Off 2.7V																														
Tamper Switch	Front Cover Removal																														
Operating temperature	-10°C to +55°C																														
Dimensions	100mm x 26mm x 16mm																														
Weight (incl. battery)	50gr.																														
WARRANTY POLICY CERTIFICATE 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. 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 form 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. 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.		 sales@crow.co.il support@crow.co.il www.thecrowgroup.com These instructions supersede all previous issues in circulation prior to December 2017																													