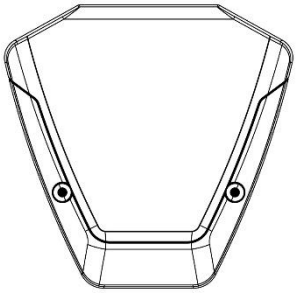
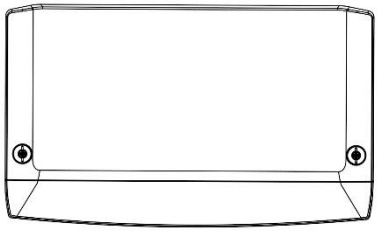
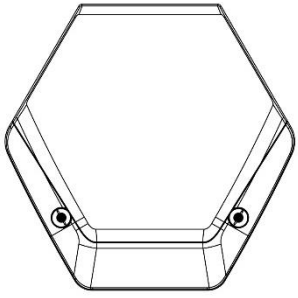
External Sounders (Wireless)
Installation Manual



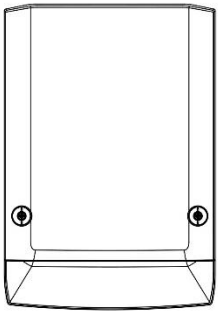
W-ES-120



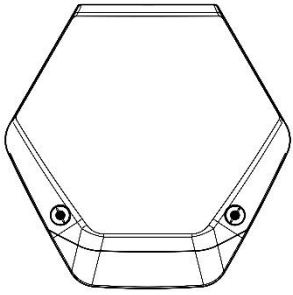
W-ES-220



W-ES-320



W-ES-420



W-ES-520

Designed and Manufactured
in the United Kingdom

www.orisec.co.uk

Contents

Introduction

The wireless Orisec external sounders have been designed with an exceptional array of features to meet the requirements of even the most challenging installations, with genuine PD6662:2017 and EN 50131-4 Grade 2 functionality.

The Orisec DLUX Backlights can be fitted to a range of front cover colours to provide adjustable back lit illumination either on installation or retrospectively. (Local power supply required.)

Features include:

EN 50131-4 Grade	2
EN 50131-4 Class	IV
EN 50131-5-3:2017 Grade	2
Optional Orisec DLUX Backlight †	✓
Adjustable Backlight Illumination (remote) †	✓
Long Life LED Strobe	✓
Sounder Volume	109 dB
Piezo	Single
Engineer Hold-Off Mode	✓
Twin Alternating LEDs	✓
Local Self Test	✓
Front Cover & Wall Tamper	✓
Screw Tamper	✓
Hinged Front Cover	✓
Hinged Terminal Block Cover	✓
Spirit Level	✓
Retained Front Cover Locking Screws †	✓
Polycarbonate Construction	✓
Sealed Electronics	IP67
Frequency Hopping Technology	✓
Acts a wireless repeater (if locally powered)	✓
Simple Enrolment	✓
True Battery Reading	✓
Average Battery Life	>2 years

† Patent No 2551491

External Sounder Setup

1. Choosing a Suitable Mounting Location

Choose a suitable mounting location for the external sounder, which meets the following criteria:

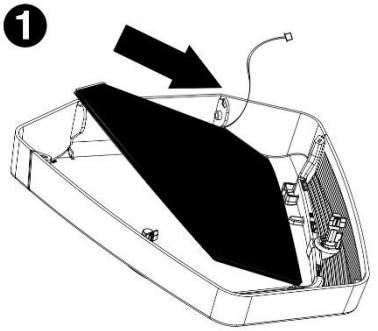
- Away from metal objects, structures or other RF systems which may cause interference
- A prominent position for maximum deterrence
- Suitable for easy cable access (if locally powered)
- Suitable for safe access by ladder for installation
- High enough to deter tampering and vandalism
- A flat and even mounting surface
- Allow at least 5cm above for hinged cover

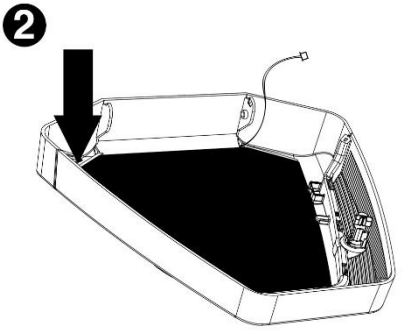
2. Fixing the Optional Orisec DLUX Backlight

When the Grade 2 External Sounders are locally powered it is possible to fit the optional DLUX backlight.

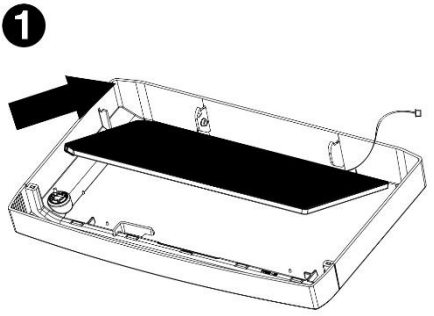
1. Insert the backlight at a 40-degree angle and position under the clips as shown on the following pages.
2. Push down the opposite side until the DLUX Backlight is located flat and in place.

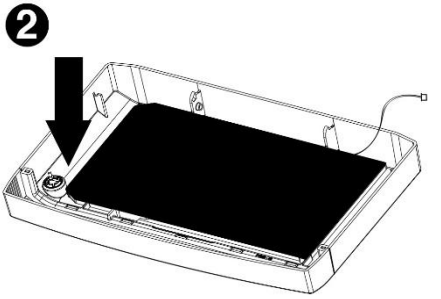
W-ES-120 DLUX Installation





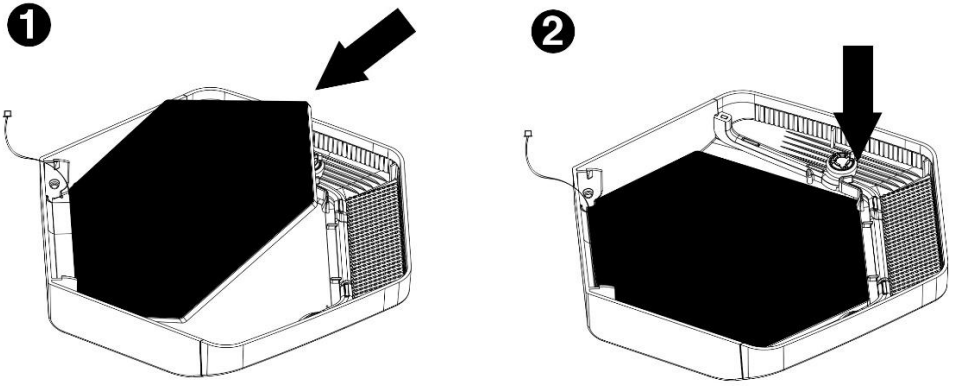
W-ES-220 DLUX Installation



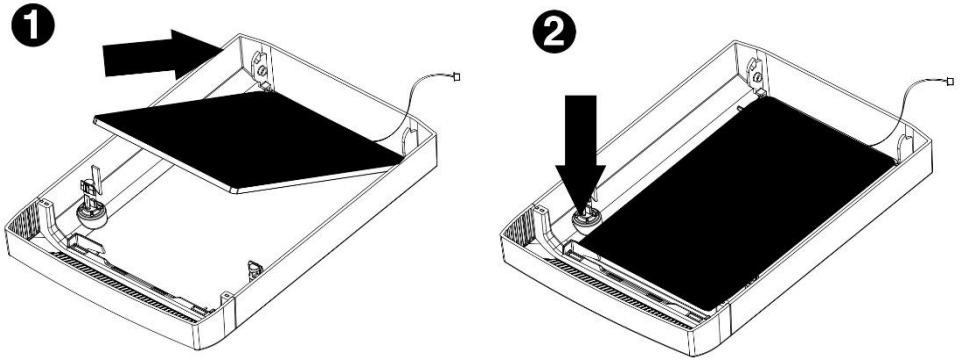


NOTE: Do not remove protective shrink wrap

W-ES-320 DLUX Installation

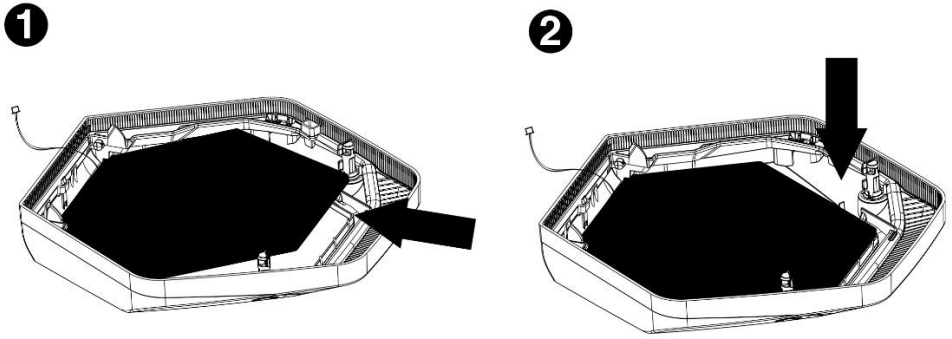


W-ES-420 DLUX Installation



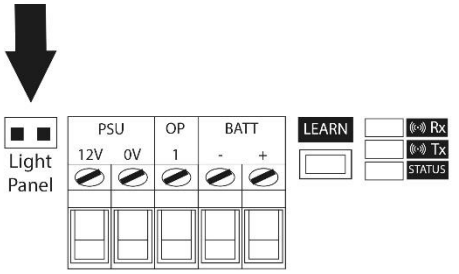
NOTE: Do not remove protective shrink wrap

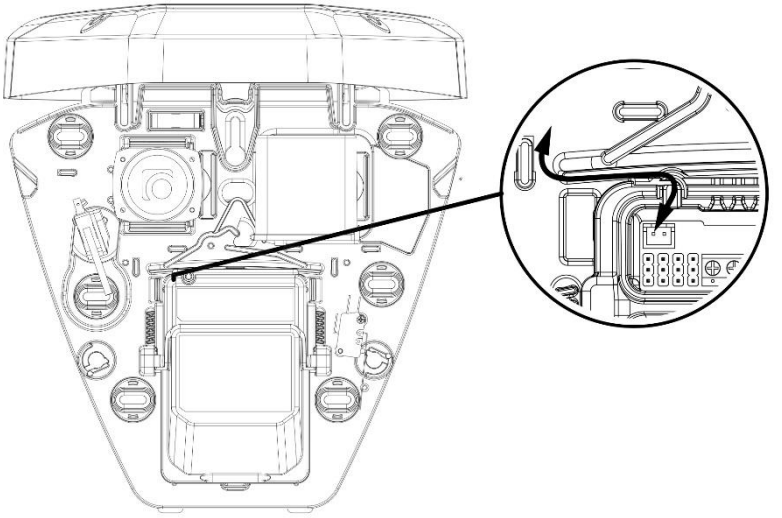
W-ES-520 DLUX Installation



NOTE: Do not remove protective shrink wrap

3. Connect the flying lead on the backlight to the JP1 connector on the PCB and route the cable through the exit hole and horizontally along the channel

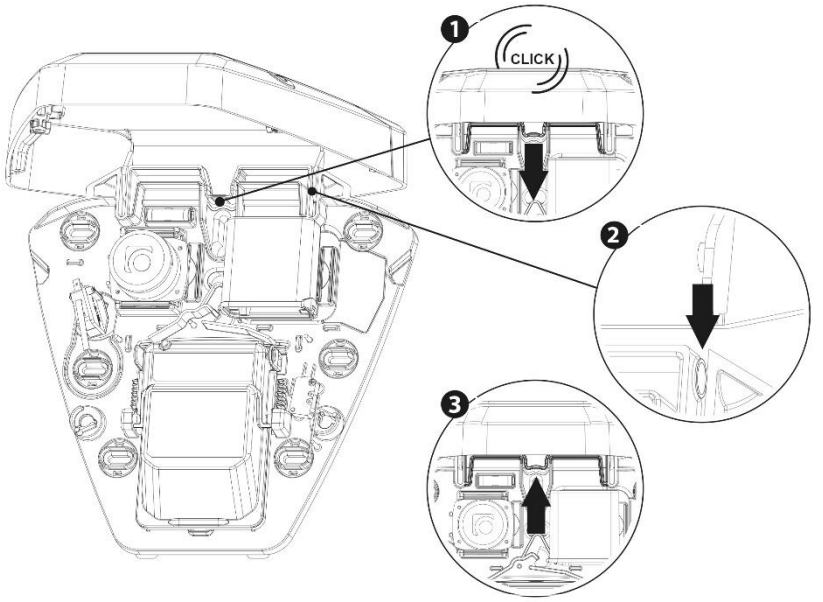




Model shown W-ES-120

3. Fixing the Front Cover to the Backplate

1. Pull the pull tab mechanism downwards until it clicks.
2. Position the cover so the hinge studs and the backplate holes align.
3. Push the cover release tab upwards to secure the cover.



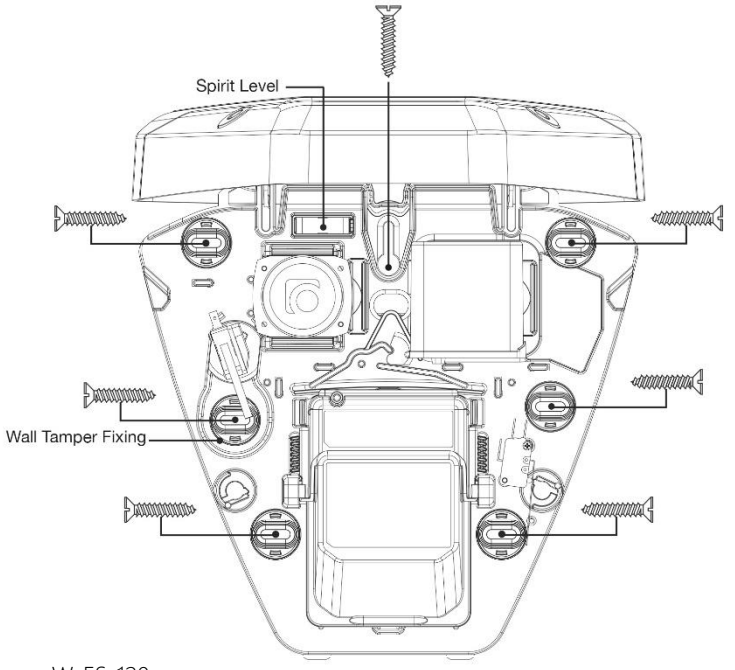
Model shown W-ES-120

4. Mounting the External Sounder

Depending on the model, four, five or six standard fixing holes are provided, plus the central keyhole, to aid mounting and levelling. It is recommended that a minimum of four fixing points are used for maximum security.

Wall tamper detection is required for wireless devices. Use the fixing next to the front cover/wall tamper switch.

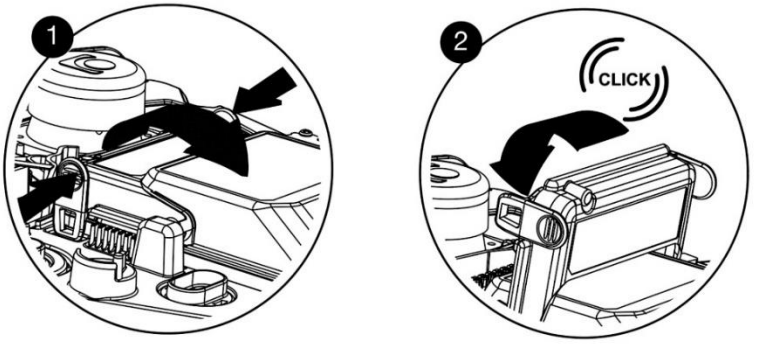
1. Drill the hole required for the cable access (if locally powering).
2. Mark the central keyhole position, drill and plug the hole.
3. Fit a No. 10 screw in the hole and offer the backplate into position.
4. Level the external sounder using the on-board spirit level for guidance.
5. Route the cable through the cable entry hole (if locally powering).
6. Drill, plug and fit the remaining screws, adjusting the rotating mounting feet to fit.



Model shown W-ES-120

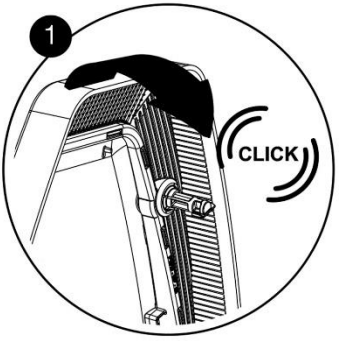
5. Accessing the Terminal Block

1. To open the terminal block cover, squeeze the side clips inwards and pull away from the backplate.
2. To close the terminal block cover, push towards the backplate until you hear a click.



6. Closing the Front Cover

1. To close the front cover, pull downwards. You will hear a loud click.
2. Rotate the retained front cover locking screws 180° clockwise to secure the cover in place.



Model shown W-ES-120

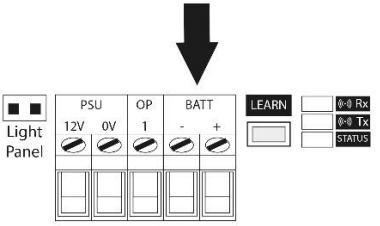
Powering the External Sounder

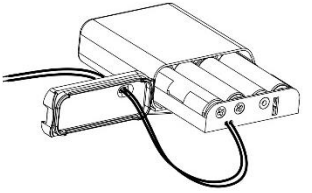
There are 2 options when powering the External Sounder:

1. Using the provided battery pack

The External Sounders are provided with 4x 3.6V AA Lithium Thionyl Chloride Batteries pre-fitted within the battery pack casing.

To connect the battery pack: connect the black wire to "Batt-" and the red wire to "Batt+"





2. Using a 12V local power supply with battery backup

To connect the 12V local power supply with its own battery backup: connect the 12V and 0V wire to the PSU terminals, ensuring polarity is correct. Connect the 4 x 3.6V battery pack, this will act as a backup battery if the 12V supply is removed. In this scenario the battery pack is not being drained when the 12V supply is present. The D-Lux backlight only operates when the 12V supply is present.

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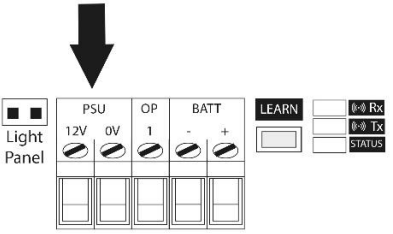
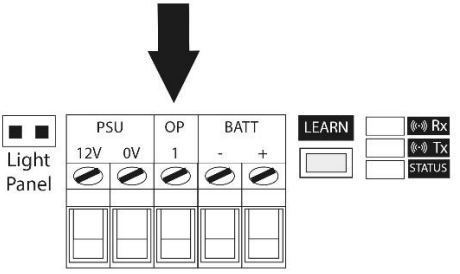


NOTE: If powered via a 12V local power supply, the External Sounder automatically acts as a wireless repeater and will repeat signals for all wireless devices.

Programmable Output

The External Sounders have 1 fully programmable output (100mA, transistorised) which may be set to any of the available output types. For a full list of output types and attributes please refer to the control panel installation manual.



The physical allocation for the External Sounder's output is dependent on the zone number the External Sounder has been learnt to.

E.g.

Zone 6 = Panel Output 6

Zone 17 = Expander 1 Output

Simple Enrolment

On the control panel:

1. Enter engineering mode
2. Select "setup wireless zones"
3. Highlight required zone
4. Scroll down to "Learn"
5. Press and hold "Learn" button on the sounder for 1 second

NOTE: The zone type should be programmed as 'Wireless Tamper' in the Zone Set Up menu. Please refer to the control panel installation manual for further information.

The signal strength can be shown by activating the lid tamper switch. LED Signal Strength Indication:

- 'Rx' LED - Solid Green = Strong Signal
- 'Status' LED - Solid Orange = Medium Signal
- 'Tx' LED - Solid Red = Low Signal

Commissioning and Maintenance

WARNING: The sounder will produce high levels of sound during commissioning. For you own safety please wear suitable hearing protection.

1. Test the sounder by activating the "Bell" found in 'Tests & Diagnostics' > 'Test Bell and Strobe'.
2. Test the strobe by activating the "Strobe" found in 'Tests & Diagnostics' > 'Test Bell and Strobe'.
3. Check the signal strength found in 'Tests & Diagnostics' > 'Wireless Status'.

   Recommended signal strength >40%

DLUX Backlight – PSU only

The DLUX Backlight can only be used when powered via the PSU. It will automatically illuminate the external sounder during darkness.

Programming

If you do not want the DLUX Backlight to automatically illuminate during darkness, a custom programmed "Chain" can be allocated on the control panel. This is assigned in 'System Options' > 'Chain Control Outputs'. Please refer to the control panel installation manual for further information.

Backlight Adjustment

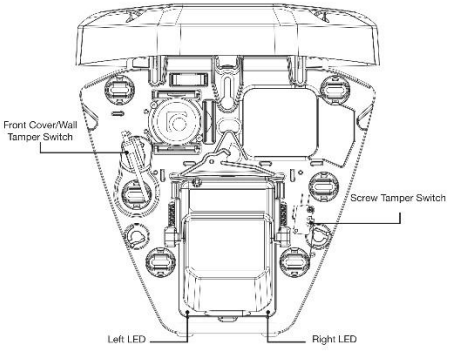
The backlight brightness level can be adjusted via the control panel software. This can be found in the following menu:
'Programming Menu' > 'System Options' > 'ES Backlight'

Comfort LEDs

The External Sounder can be programmed so the left and right LED flash alternately using a custom programmed 'chain' if battery powered. If powered by the PSU, the left and right LED will automatically flash alternately.

Programming

To enable the comfort LEDs, turn on the 'Enable Comfort LEDs' option in 'System Options' > 'Radio Options'. If you do not want comfort LEDs on all the time, a custom programmed "Chain" must be allocated on the control panel. This is assigned in 'System Options' > 'Chain Control Outputs'. Please refer to the control panel installation manual for further information.



Specifications

Electrical

Supply Voltage:	9 - 16 VDC (14.4V nominal)
Battery:	4x 3.6V AA Lithium Thionyl Chloride
Average Battery Life:	>2 years
Cut Off Timer - Bell:	Programmable (Default 3 minutes)
Cut Off Timer - Strobe:	Programmable (Default 3 minutes)

Environmental

Operating Temperature:	-25°C to +55°C (-13°F to +131°F)
Storage Temperature:	-25°C to +60°C (-13°F to +140°F)
Max. Humidity:	95% non-condensing

Physical

	W-ES-120	W-ES-220	W-ES-320	W-ES-420	W-ES-520
Packed Weight:	1.3 kg	1.3kg	1.3 kg	1.3 kg	1.3 kg
Dims: (hwd) mm	299x304x62	240x397x63	298x295x60	326x225x60	296x297x54
Material:	(All External Sounders) 3mm Polycarbonate				

Current Draw

Battery Only Operation

Supply:	14.4VDC (4 x 3.6V AA Batteries – Lithium Thionyl Chloride)
Current Draw:	Quiescent: 85 µA
	Sounder: 210 mA
	Strobe: 20 mA

PSU Operation with Battery Backup

Supply Voltage:	9 - 16VDC
Current Draw:	Quiescent: 16 mA
	Sounder: 210mA
	Strobe: 20mA
	Backlight: 60mA

BS EN ISO 9001 : 2015 Registered Firm — Certificate No. GB2005228

International Accreditation Board — Registration No. 0044/1

Standards

Security

PD 6662:2017

EN 50131-4:2019

EN 50131-5-3:2017

Grade 2, Class IV

EN 50130-4:2011+A1:2014

EN 301 489-3 V1.6.1

EMC

Conforms to European Union (EU) Electro-Magnetic Compatibility (EMC) Directive 2014/30/EU

EMC Environment: Residential / Commercial / Light Industrial / Industrial

Conforms to RE Directive 2014/53/EU

CE: You can view the product EC Declaration of Conformity here: www.orisec.co.uk/compliance

WEEE Directive: 2012/19/EU Compliant: This symbol indicates that according to local laws and regulations, this product should not be disposed of as municipal/household waste. Instead, it should be disposed of at the appropriate collection points designated for the recycling of electrical and electronic equipment, or returned to Orisec upon purchase of new replacement products. This will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

RoHS

RoHS Directive: 2011/65/EU Compliant: Orisec declares that this product complies with and conforms to RoHS legislation that it does not contain more than the agreed levels of: Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent chromium (Cr6+), Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE)

Manufacturer: Orisec Ltd, 1 St Crispin Way, Haslingden, Lancashire. BB4 4PW. United Kingdom.

Warranty

The Wireless External Sounders are guaranteed against defects in material or faulty workmanship for a period of 2 years (Grade 2 models) from the date of purchase excluding batteries.

Disclaimer: Orisec will not accept any liability based on a claim that the external sounder failed to perform correctly as it is a component part of an installation and not a complete intruder alarm system. If the front cover is exposed to excessive levels of U.V. sunlight, over time colour fading may occur. This is not covered by the warranty.

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