

LUMIN8™

Professional Sounder with Logo Illuminator



Installation Instructions

Models: Lumin8 4012

Lumin8 Delta 4022

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Introduction

RISCO Group's LuMIN8 External Sounder combines high performance and reliability with an exclusive design, making it the perfect finishing touch for your security installations.

LuMIN8 can be connected to any alarm system, or it can be installed on serial BUS of RISCO Group's ProSYS FreeCom Integrated Security System or GT series Control Panels.

When installed in BUS serial mode the LuMIN8 supports remote parameter setting and remote diagnostics, saving time and money on installation and maintenance and reducing repeat site visits.

The LuMIN8 uses a patent pending spotlight and long life SLT strobe.

Main Features

- Patent pending spotlight lamp to illuminate your logo
- Long life SLT strobe (patent pending)
- UV-treated vandal proof polycarbonate housing
- Double skin with internal metal cover (optional)
- SAB/SCB selectable
- Auto recharging battery circuit
- Double tamper protection (Wall & Cover)
- Remote and local engineer mode
- Flexible strobe activation when connected in serial mode
- Remote diagnostics and control when connected in serial mode
- Protection from power supply inverted connection
- Audible confirmation of set/unset

Installation

Warning:

The circuit board contained within the encapsulated module produces high voltages that may be present at the piezo head connections.

1. Open the screw cover located at the bottom of the sounder and unscrew the cover screw.
2. Open the terminal block cover.
3. Use the back plate of the sounder as a template and mark the position for fixing the sounder.
4. Drill the holes and insert wall plugs.
5. Pull the connection cables through the back plate of the sounder.
6. Screw the back plate of the sounder firmly to the mounting surface. Use three 2" No 10 screws
7. Configure the dipswitches as required.
8. Make the required connections to the terminal block.
9. Connect the battery for the backup power supply.

Note:

The sounder will sound for 4 seconds when the battery is connected.

10. If required install the lamp spotlight (see page 14).
11. Close the terminal block cover, close the cover and tighten the screw.

Recommended maximum cable distances (single sounder)

| Cable Type | No of Cores | Distance SAB | Distance SCB |
|--------------|------------------|---------------------|--------------|
| 4 Core 7/0.2 | 1 x 0V ; 1 x 12V | 35m(1PZ) / 25m(2PZ) | 100m |
| 6 Core 7/0.2 | 2 x 0V ; 2 x 12V | 71m(1PZ) / 50m(2PZ) | 300m |

Note: (Health and Safety Advice)

The LuMIN8 sounders covered by this manual are capable of producing high volume sound. It is essential that suitable ear protection is worn when installing or testing the sounder.

Note:

For installation of the metal shroud follow the instructions attached with the product.

Dipswitch Settings

Note:

All switches must be positioned before powering up.

| SW | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|-----------|-----------|-----------|----|-----|-----|-----|---|-----|-----|----|---|-----|----|-----|---|-----|----|----|---|----|-----|-----|---|----|-----|----|---|----|----|-----|---|----|----|----|---|
| SW1: SCB/SAB | Used to select SAB or SCB mode for the sounder. ON (SCB): Current for the sounder will be drawn from the sounder's rechargeable battery. OFF (SAB): Current for the sounder will be drawn from the control panel. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SW2-SW4: A1, A2, A3 | The operation of the dipswitches varies according to the sounder operation mode (BUS or Stand Alone) as defined by SW5 . Stand Alone Mode (SW5 OFF): SW2 (A1) Used to control the Sounder Current . ON: Low current mode. The sound output will be reduced to 105dB 150mA (1 piezo). OFF: Normal current mode. The sound output will be 111dB 350mA (1 piezo). SW3 (A2): Used to select the Sounder Sound . ON: Low Sweep tone OFF: High Sweep tone SW4 (A3): Used to define Engineer Maintenance Mode (2 options available). ON: The Engineer may disable the box tamper (built-in bell tamper ring) by removing the 12V+ for 3 seconds. This mode will be indicated by a single flashing LED. To return the sounder to the normal mode, remove the power for 10 seconds. OFF: Application of 12V to the SET+ input will place the sounder in Engineer Maintenance Mode. When in Engineer Mode, the sounder tamper signal is active. BUS (Serial) Mode (SW5 ON): SW2-SW4: Used to set a unique ID number for the sounder when connected in serial mode (ProSYS or GT serial control panels). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>SW4 A3</th> <th>SW3 A2</th> <th>SW2 A1</th> <th>ID</th> </tr> </thead> <tbody> <tr> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>1</td> </tr> <tr> <td>OFF</td> <td>OFF</td> <td>ON</td> <td>2</td> </tr> <tr> <td>OFF</td> <td>ON</td> <td>OFF</td> <td>3</td> </tr> <tr> <td>OFF</td> <td>ON</td> <td>ON</td> <td>4</td> </tr> <tr> <td>ON</td> <td>OFF</td> <td>OFF</td> <td>5</td> </tr> <tr> <td>ON</td> <td>OFF</td> <td>ON</td> <td>6</td> </tr> <tr> <td>ON</td> <td>ON</td> <td>OFF</td> <td>7</td> </tr> <tr> <td>ON</td> <td>ON</td> <td>ON</td> <td>8</td> </tr> </tbody> </table> | SW4 A3 | SW3 A2 | SW2 A1 | ID | OFF | OFF | OFF | 1 | OFF | OFF | ON | 2 | OFF | ON | OFF | 3 | OFF | ON | ON | 4 | ON | OFF | OFF | 5 | ON | OFF | ON | 6 | ON | ON | OFF | 7 | ON | ON | ON | 8 |
| SW4 A3 | SW3 A2 | SW2 A1 | ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OFF | OFF | OFF | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OFF | OFF | ON | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OFF | ON | OFF | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OFF | ON | ON | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ON | OFF | OFF | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ON | OFF | ON | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ON | ON | OFF | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ON | ON | ON | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SW5: BUS/STD | Defines the operation mode of the sounder. ON (BUS): BUS (Serial) mode. Use when connecting to ProSYS Freecom or GT control panels. OFF (STD): Stand Alone mode. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| SW | Description |
|-------------------------|--|
| SW6: PRO/ACT | <p><u>Stand Alone Mode (SW5 OFF):</u> Select the triggering command that will activate the sounder. ON: Positive trigger OFF: Negative trigger</p> <p><u>BUS (Serial) Mode (SW5 ON):</u> Defines the BUS protocol when SW5 is set to BUS. ON (PRO): Connection to ProSYS Freecom. OFF (ACT): Connection to GT (NovaActive) control panels.</p> |
| SW7: MON/NM | <p>Used to connect an internal 4K7 resistor to TRIG terminal (only used for Stand Alone mode). ON (MON): (Monitored) An internal 4K7 resistor is connected between the TRIG terminal and the HOLD – (0V) terminal. OFF (NM): Not monitored. No 4K7 resistor disconnected from TRIG and HOLD – (0V) terminals.</p> <p>Note: See Wiring detail for two bell boxes wired in Standard mode.</p> |
| SW8: TMF/EXT | <p>Use this switch to ease installation of tamper in stand alone mode ON (TMF): Connects the TMPF terminal to HOLD – (0V) OFF (EXT): TMPF terminal is open.</p> <p>Note: See Wiring detail for two bell boxes wired in standard mode.</p> |

Terminal Block Wiring

The following explains the various wiring and connection procedures that must be performed when wiring the sounder.

| | | | | | | | | | | |
|------|---|---------|------|------|------|-------|------|---------|-----|------|
| HOLD | | ACT BUS | | STB- | TMPF | FAULT | SET+ | PRO BUS | | LAMP |
| - | + | TRIG | TMPR | | | | | YEL | GRN | |
| | | | | | | | | | | |

| Terminal | Description |
|-------------------------|---|
| HOLD + | The supply to this terminal is normally taken from the Bell+ of the control panel (depending on manufacturer) and provides the + hold off for the SAB/SCB function. When connected to the ProSYS BUS configuration, connect this terminal to the Bell+ terminal. |
| HOLD - | The negative supply to this terminal should be permanent as it is the - hold off for the SAB/SCB function. When connected to the ProSYS BUS configuration, connect this terminal to the COM BLK terminal. |
| ACT BUS TRIG | <p><u>Stand Alone Mode (SW5 OFF):</u> Sounder Trigger terminal. Trigger options are, Unmonitored Negative Trigger, Unmonitored Positive Trigger, Monitored Negative Trigger and Monitored Positive Trigger (see section - <i>Sounder Trigger Connection</i>). If switch SW1 is set for SAB, power for the sounder provided by the 12V & 0V terminals. If switch SW1 is set</p> <p><u>BUS (Serial) Mode (SW5 ON and SW6 OFF):</u> When used in Serial Mode this terminal will be used as a data input from the GT panel.</p> |

| Terminal | Description | |
|----------------------------|--|---|
| | for SCB, power for the sounder is provided by the on-board battery. | |
| ACT BUS TMPR | <u>Stand Alone Mode (SW5 OFF):</u> Negative Tamper Return to the GT (NovaActive) control panels. | <u>BUS (Serial) Mode (SW5 ON and SW6 OFF):</u> This terminal will be used as a data output to the GT panel. |
| STB - | <u>Stand Alone Mode (SW5 OFF):</u> Negative trigger terminal for the strobe light. Power for the strobe is provided by the Ni-MH battery. | <u>BUS (Serial) Mode (SW5 ON):</u> STB- connection is not required in Serial Mode. |
| TMPF | <u>Stand Alone Mode (SW5 OFF):</u> Link this terminal to 0V by setting SW8 to ON position. | <u>BUS (Serial) Mode (SW5 ON):</u> No connection required. |
| FAULT | <u>Stand Alone Mode (SW5 OFF):</u> Terminal will activate (0V low) for battery fault, low panel volts or Sounder Piezo Head Failure (also strobe flashes rapidly). | <u>BUS (Serial) Mode (SW5 ON):</u> No connection required. |
| SET + | <u>Stand Alone Mode (SW5 OFF):</u> A positive signal to this terminal will activate the Setting Confirmation Sound. | <u>BUS (Serial) Mode (SW5 ON):</u> No connection required. |
| PRO BUS YEL GRN | Connect these terminals in BUS mode configuration to the ProSYS Freecom. Connect point to point according to the indicated colours. | |
| LAMP | <u>Stand Alone Mode (SW5 OFF) or GT BUS Mode (SW5 ON and SW6OFF):</u> This terminal is for activating the external LAMP. The LAMP is activated when it is connected between LAMP and Hold -. | <u>Pro BUS (Serial) Mode (SW5 and SW6 ON):</u> Lamp controlled from ProSYS BUS, no connection required. |

Sounder Trigger Connection - Stand Alone mode

☐ **Monitored Trigger.**

Sounder will sound and a tamper will be generated if the Trigger wire is disconnected.

Note:

The sounder will recognise a valid trigger when the voltage level at the TRIG terminal is less than 2V (negative trigger) OR greater than 7V (positive trigger). A disconnected trigger wire will present a voltage of between 2V and 3.5V at the TRIG terminal. A healthy trigger wire connection (sounder not triggered) is a voltage greater than 3.5V for negative trigger, and less than 7V for positive trigger.

☐ **Non Monitored Negative Trigger.**

Switched Negative (BELL-) Trigger signal from Control Panel is wired directly to TRIG terminal on Sounder.

☐ **Non Monitored Positive Trigger.**

Switched 12V Positive Trigger signal from Control Panel is wired directly to TRIG terminal on Sounder.

☐ **Monitored Negative Trigger.**

GT Control Panels (or 3rd party equipment with a voltage free switched negative Bell trigger output):- On the Control Panel fit a 2K2 resistor between the Bell- output and the BELL+ terminal.

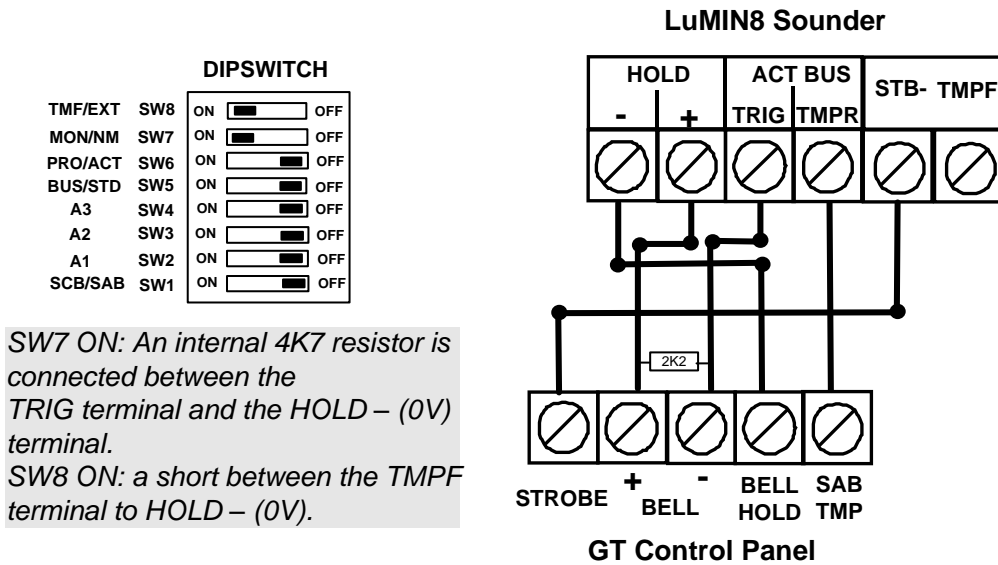
For Control panels where the Trigger output switches between 12V and 0V, the 2K2 resistor is NOT required. On the Sounder set SW7 to **ON (MON)**; this connects a 4K7 between the TRIG terminal

and the 0V terminal. Connect Switched Negative (Bell-) Trigger signal from Control Panel to TRIG terminal on Sounder.

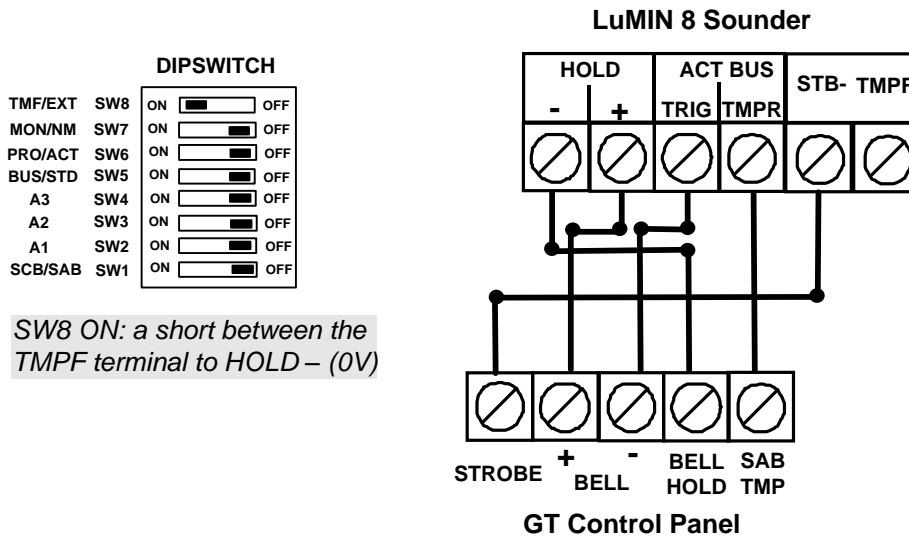
□ **Monitored Positive Trigger.**

On the Control Panel fit a 1K resistor (or 2 x 2K2 resistors in parallel) between the Trigger positive terminal and 0V. On the Sounder set SW6 (+ve trigger select) and SW7 to **ON** (4K7 resistor between the TRIG terminal and the Hold – terminal). Connect Switched 12V Positive Trigger signal from Control Panel to TRIG terminal on Sounder.

**Monitored Mode Wiring for GT Panels
(Stand Alone Mode)**



**Non - Monitored Mode Wiring for GT Panels
(Stand Alone Mode)**

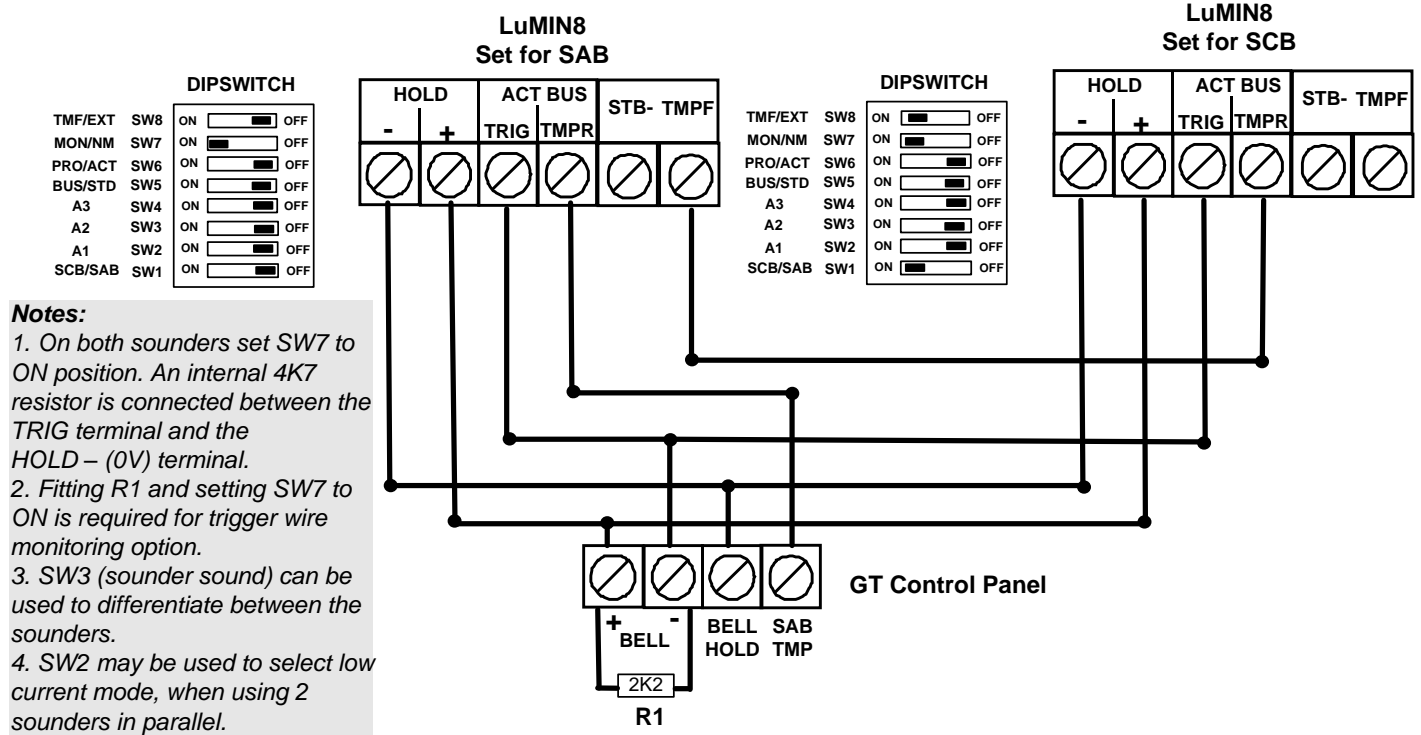


Sounder Trigger Connection - Stand Alone Mode to GT Control Panel, Parallel Mode

A maximum of 2 LuMIN8 sounders may be fitted to a single system. The illustration below is an example of a typical system using a maximum number of LuMIN8 sounders.

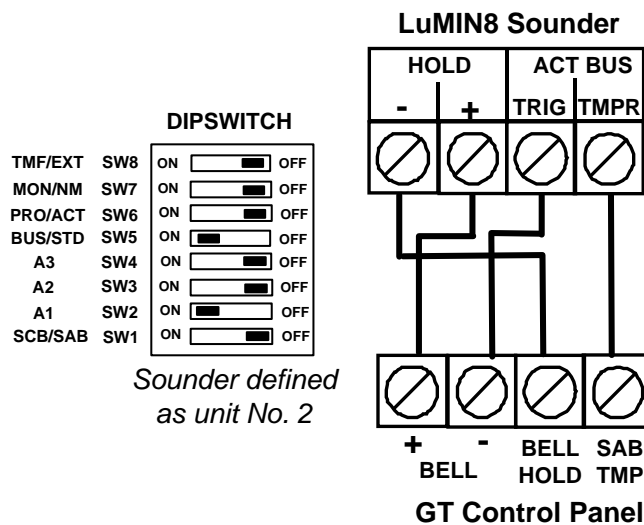
Note: In the following illustration the maximum distance for the first sounder set to SAB using a 6 core cable is 35m for a single piezo or 25m for a twin piezo. The maximum distance for the second sounder set to SCB using a 6 core cable is 200m.

Wiring for 2 Monitored LuMIN8 connected to GT Panels (Stand Alone Mode)



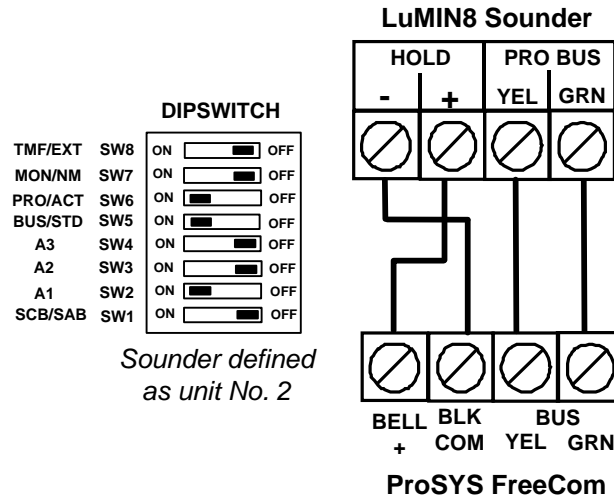
Sounder Trigger Connection - Serial Mode, GT Control panels

BUS (Serial) connection to GT panel



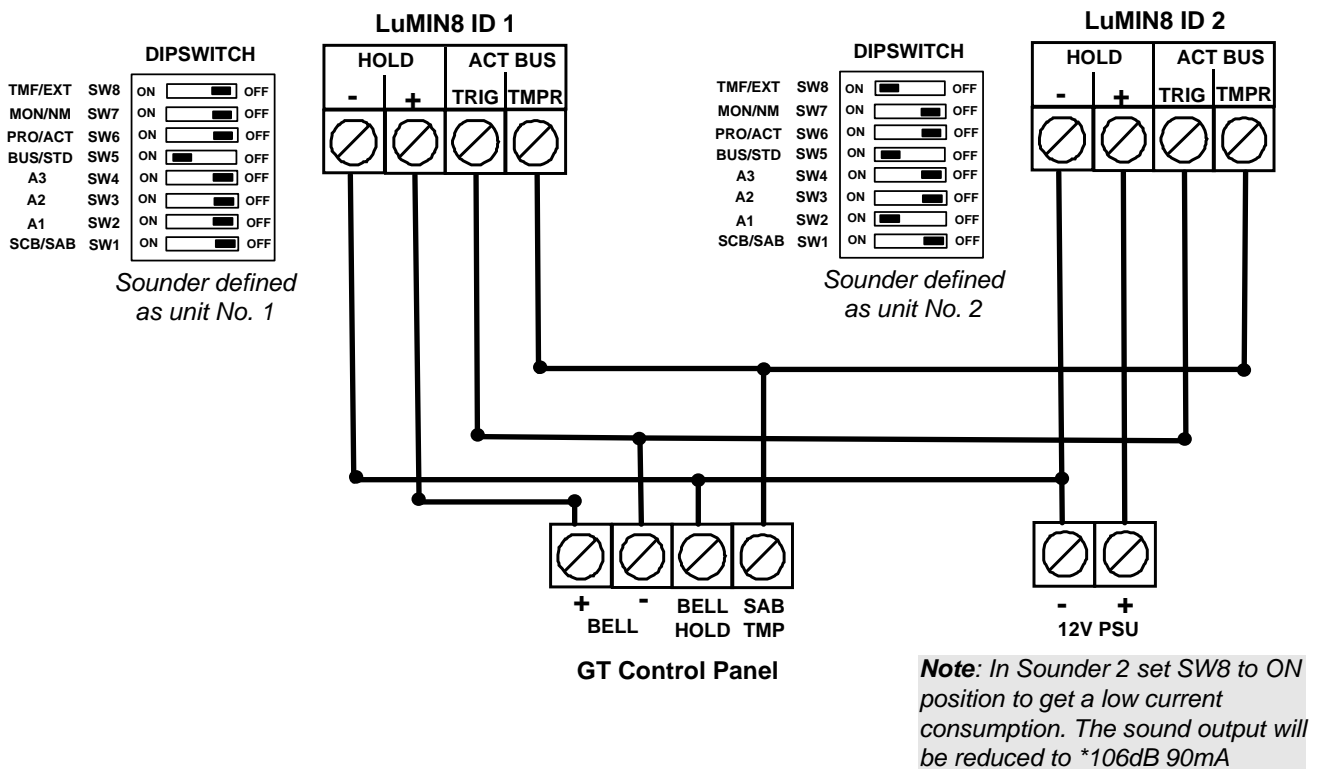
Sounder Trigger Connection - Serial Mode, ProSYS FreeCom

BUS (Serial) connection to ProSYS FreeCom



Sounder Trigger Connection - Serial Mode to GT Control Panel, Parallel Mode

2 Lumin8 Sounders connection to GT Panel in Serial mode using power supply for unit 2



Commissioning

Before powering the unit, ensure all dipswitches are in the required position. After the wiring has been completed the system should be powered up. Note that if the unit has a trigger (including tamper) it will sound for four seconds and then it will cut off (engineer test). The sounder may then only be re-triggered by clearing the original trigger (or tamper). This four second timer is only available at power up.

Notes:

1. Sounder cut-off time is 15 minutes unless the supply voltage is less than 13V when triggered the cut-off time is 5 minutes.
2. Strobe will flash at 1.25Hz unless the control panel appears to be running on battery; if so the strobe will flash once every 5 seconds.

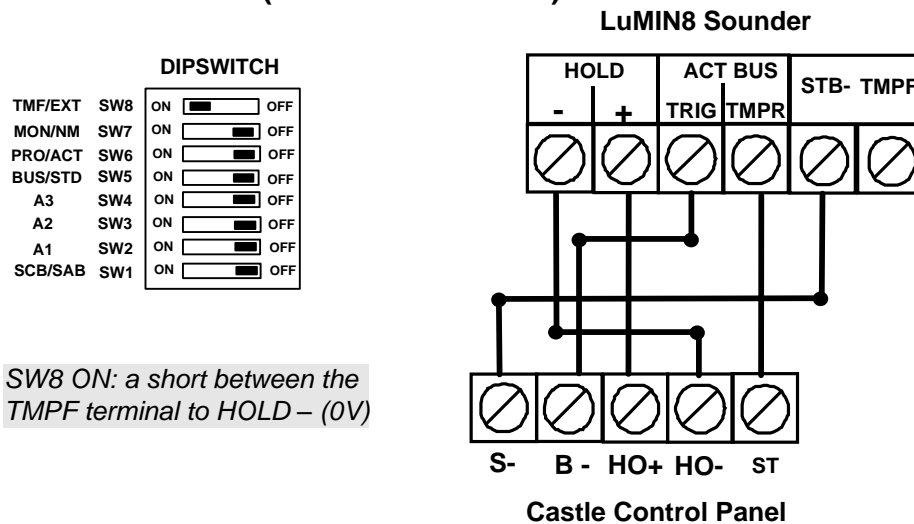
Technical Specification

| | Single Piezo | Twin Piezo |
|--|---|-------------------|
| Input DC Power | Regulated 13.0- 14.2V | |
| Quiescent Current | 23mA | 23mA |
| Sounder current | 350mA (Regulated) | 450mA (Regulated) |
| Sounder current (Quiet mode) | 150mA | 180mA |
| Strobe current | 10mA | 10mA |
| Battery charging current | 15mA | |
| Speaker Sound level | 111dbA | 114dbA |
| Strobe light | Surface Light Technology SMT LED | |
| Strobe lens | Polycarbonate, available in amber, red or blue | |
| Strobe flash rate | 60 times per minute (maximum) | |
| Back-up battery (rechargeable) | Ni-MH rechargeable 8.4V, 280mA/h | |
| Ingress Protection | IP65 (For encapsulated PCB), IP44 (For other sounder components), IK 08 | |
| Operating Temperature | -25°C to 60°C (-13°F to 158°F) | |
| Humidity | 95% maximum | |
| Lumin8 Dimensions (W x L x H) Lumin8 Delta Dimensions (W x L x H) | 74mm x 273mm x 230mm 50mm x 277mm x 236mm | |

Appendix 1: Standard Terminal wiring to other control panels

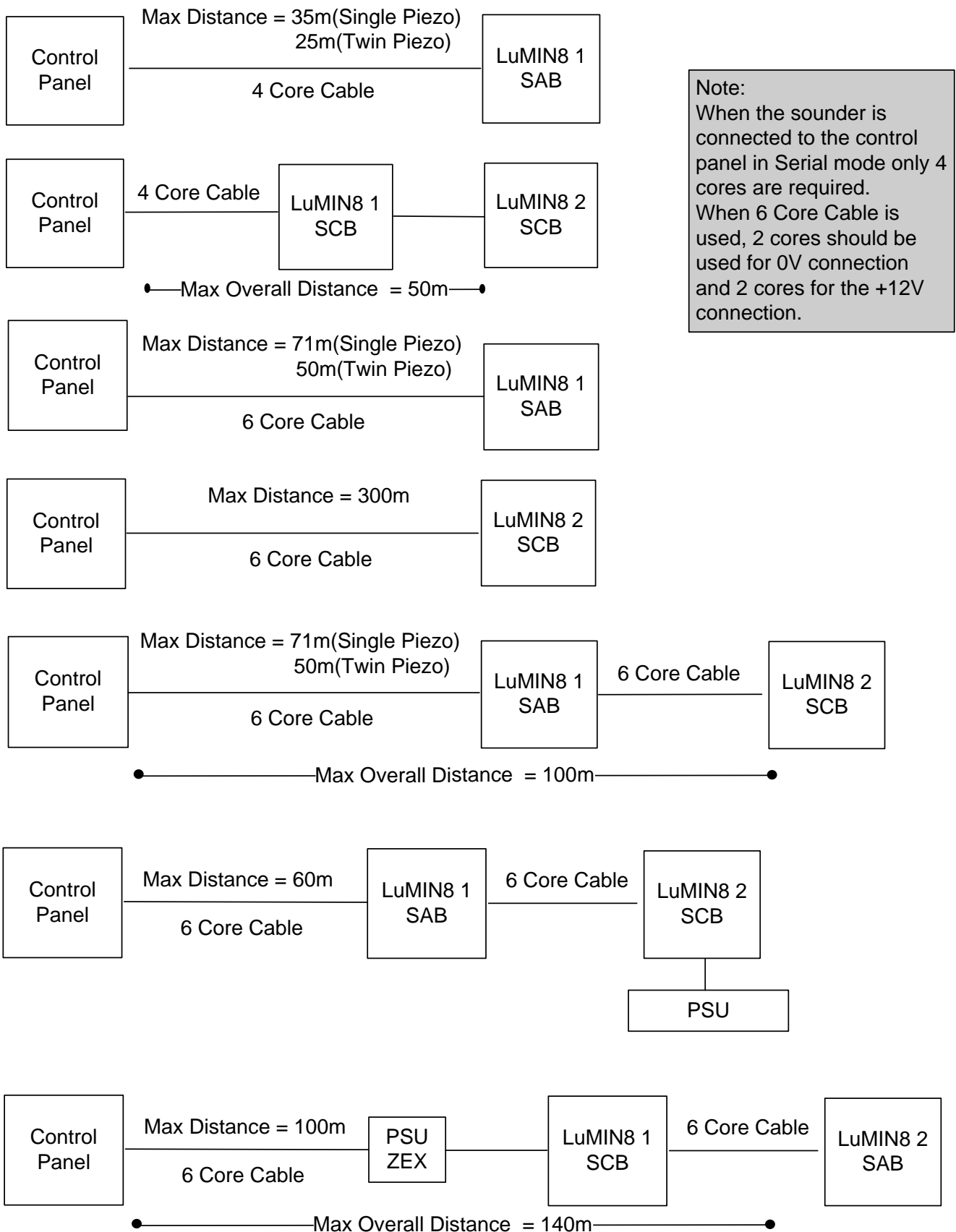
| LuMIN8 | Hold - | Hold + | TRIG | TMPR | STB- |
|----------------------------|------------|-------------|--------------|--------------|---------|
| ADE Optima | A | D | B | T | Strobe- |
| Scantronic | 0V | +12V | Bell | TR | STR |
| Menivier | HO- | HO+ | Trig- | TR- | STB |
| Digital Audio (DA Systems) | 0V | HD | BT | AT | ST |
| Pyronix | B- | B+ | BA | BT | STB- |
| Texecom | D | A | B | C | S |
| A1(Omnicon) | SCB (0V) | Bell Siren+ | Bell Siren - | SCB RT | Strobe- |
| Castle | HO- | HO+ | B- | ST | S- |
| Ademco | Bell Tamp- | Bell + | Bell - | Bell Tamp -R | STRB |

Non - Monitored Mode Wiring for Castle Panels (Stand Alone Mode)



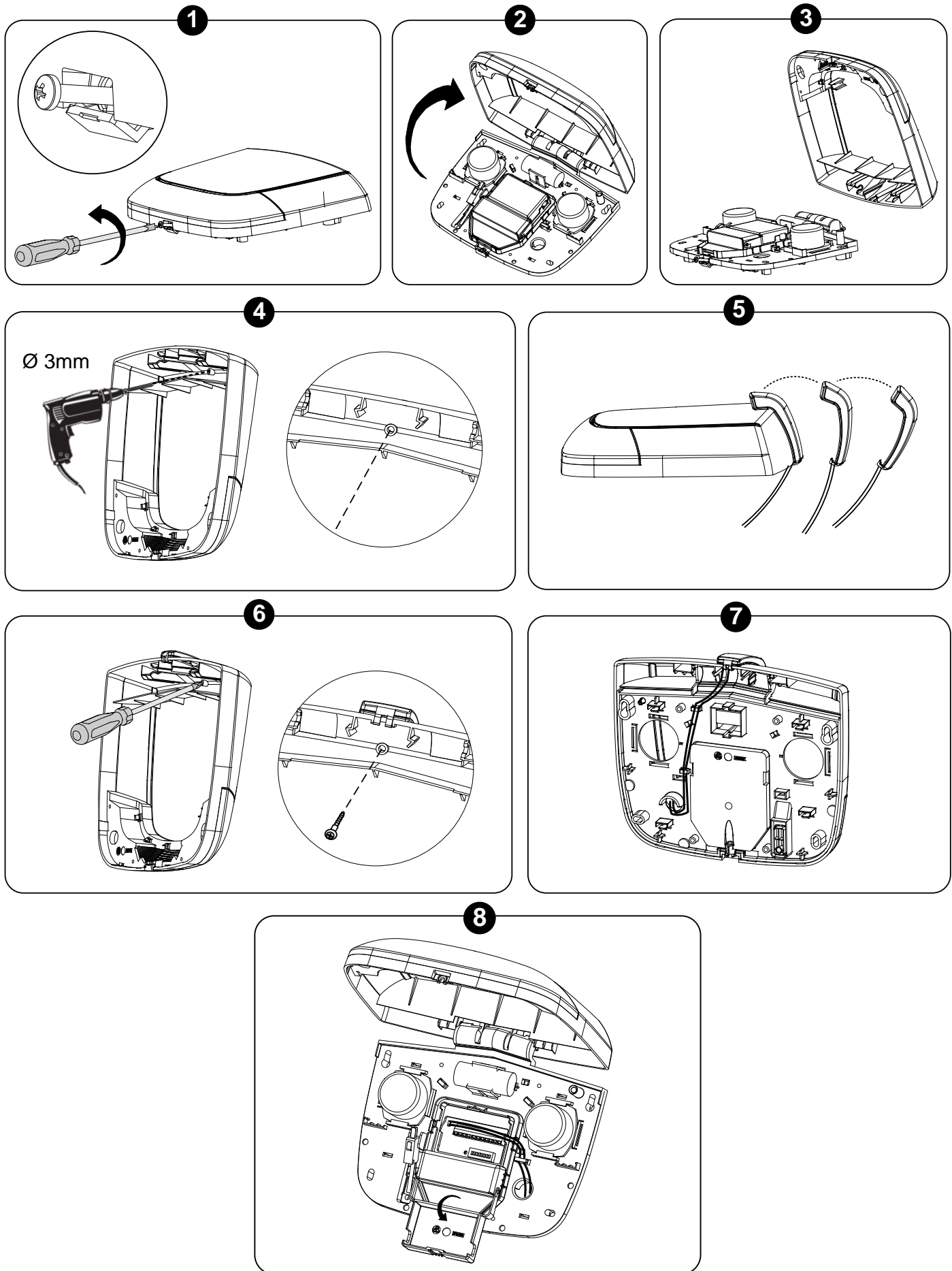
Appendix 2: Recommended Cable Distances Using 7/0.2 Alarm Cable in Serial Mode

Standard 7/0.2 alarm cable gives some limitation to the distance that a sounder may be wired away from the control panel for reliable operation. To overcome this limitation increase the number of cores used for the 0V and 12V feed to the sounder.



Appendix 3: LuMIN8 Lamp Spotlight Installation

Also represents model: Lumin8 Delta 4022



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications to this equipment which are not expressly approved by the party responsible for compliance (RISCO Group's.) could void the user's authority to operate the equipment.

FCC Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a different circuit from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

For the FCC Supplier's Declaration of Conformity please refer to our website: www.riscogroup.com

EMC Compliance Statement

Hereby, RISCO Group declares that this equipment is in compliance with the essential requirements and other relevant provisions of Directive 2014/30/EU. For the CE Declaration of Conformity please refer to our website: www.riscogroup.com

RISCO Group Limited Warranty

RISCO Group and its subsidiaries and affiliates ("Seller") warrants its products to be free from defects in materials and workmanship under normal use for 24 months from the date of production. Because Seller does not install or connect the product and because the product may be used in conjunction with products not manufactured by the Seller, Seller cannot guarantee the performance of the security system which uses this product. Seller's obligation and liability under this warranty is expressly limited to repairing and replacing, at Seller's option, within a reasonable time after the date of delivery, any product not meeting the specifications. Seller makes no other warranty, expressed or implied, and makes no warranty of merchantability or of fitness for any particular purpose.

In no case shall seller be liable for any consequential or incidental damages for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever.

Seller's obligation under this warranty shall not include any transportation charges or costs of installation or any liability for direct, indirect, or consequential damages or delay.

Seller does not represent that its product may not be compromised or circumvented; that the product will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; or that the product will in all cases provide adequate warning or protection.

Seller, in no event shall be liable for any direct or indirect damages or any other losses occurred due to any type of tampering, whether intentional or unintentional such as masking, painting or spraying on the lenses, mirrors or any other part of the detector.

Buyer understands that a properly installed and maintained alarm may only reduce the risk of burglary, robbery or fire without warning, but is not insurance or a guaranty that such event will not occur or that there will be no personal injury or property loss as a result thereof.

Consequently seller shall have no liability for any personal injury, property damage or loss based on a claim that the product fails to give warning. However, if seller is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, seller's maximum liability shall not exceed the purchase price of the product, which shall be complete and exclusive remedy against seller.

No employee or representative of Seller is authorized to change this warranty in any way or grant any other warranty.

WARNING: This product should be tested at least once a week.

Contacting RISCO Group

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