

Elpas 3 Shield

P/Ns: 5-LW200037-1 (BLE, LF, No Button), 5-LW240057-1 (Fall detect, RF/LF, BLE), 5-LW243037-0 (Fall Detect, RF/LF/IR), 5-LW242057-0 (Fall Detect, RF/LF), 5-LW243037-1 (Fall Detect, IR/RF/LF, BLE), 5-LW242057-1 (Fall Detect, RF/LF, BLE)

User Guide

Introduction

This User Guide provides basic instructions for the successful usage of the Lone Worker Transmitter.

⚠ CAUTION! Reasonable effort was made to ensure that the specifications and other information in this guide are accurate and complete at the time of its publication. Nonetheless, all information contained in this document is subject to change at any time without prior notice. Any modifications to this equipment without prior written consent of Elpas Solutions Ltd. will void all warranties including the pertinent regulatory certifications and as such revoke your authority to operate this product. Furthermore, unauthorized modifications may also result in damage to this device and may cause a safety hazard to the users.

Product Description

The Elpas Shield is a personal duress button device with optional pull cord and fall detection capabilities. Elpas Shield is designed for real-time monitoring and tracking of staff members and visitors, both indoors and outdoors. The LoneWorker Fall Detect Transmitter is designed both for seniors in assisted living facilities or work place staff members that may be subject to attack or injury in high-risk environments.

Alarms can be triggered either by squeezing the two side buttons. In the Fall Detect version, when worn on a belt, a short rip cord may be attached to a belt loop so that an alarm is transmitted when the device is pulled off the belt.

Note: Users can also wear the Shield as a pendant using a lanyard. If you choose to do so, make sure you use a lanyard for which, the force required to unlatch the tether switch is less than the force required to open the clasp.

The pull mechanism is particularly useful for seniors with arthritis who have difficulties pressing buttons.

The LoneWorker Fall Detect Transmitter also detects falls and alarms when tilted horizontally. To prevent false alarms, the device indicates a pre-alarm by giving the wearer a chance to cancel the alarm before it is transmitted by pressing on the front cancel button.

Button press or pull cord (pull cord is present only in Fall detect version) should be used as the primary means of calling for help even after a fall. The fall detection is meant to alert in the event that the victim falls unconscious and may not trigger if not sufficiently horizontal.

Elpas Shield based help call systems may be monitored by Elpas ELC controllers and/or by Eiris Software which also receives alerts, through Eiris Cloud, from the LoneWorker application that connects to Elpas Shield through Bluetooth, outdoors. Elpas Low Frequency Beacons may be used to provide room level indoor location.

Outputs on all Elpas network devices may be used to drive sirens, strobe lights or PA systems. Alerts may be sent to various handheld devices such as DECT handsets using Eiris DECT interfaces or to IOS or Android smartphones using EirisGo apps.

Calls may be cleared by exposing Elpas Shield to a responder's handheld LF beacon requiring that staff arrive at the location of the caller.

The same Elpas infrastructure used for the duress solution may also be leveraged for Access control, Asset tracking, Attendance and intrusion alarming making Elpas one of the most competitive comprehensive solutions available today.



(Actual product may vary from photo)



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Emergency Call Button Events

Factory Default: B1=0 (Button Up)

Activation/Emergency Call (LoneWorker Panic event): Pressing both buttons, simultaneously, for at least 1 second or pulling the cord (in the Fall Detect version) is - B1=1 (Button Down) and last LF location, 6 RF messages, 3 for B1 Down and 3 for last LF, are transmitted (each @ 4ms in duration), 312.5ms apart.

Upon button release, B1=0 (Button Up), 3 RF messages are transmitted (each @ 4ms in duration), 312.5ms apart.

Alert Testing (LoneWorker Test event): Pressing either button alone, B1=1 (Button Down), 3 RF messages are transmitted (each @ 4ms in duration), 312.5ms apart.

Upon button release, B1=0 (Button Up) 3 RF messages are transmitted (each @ 4ms in duration), 312.5ms apart.

Product Specifications	
RTLS Technologies	IR (Reception, 800nm) RF (433MHz) LF (125KHz)
RF (Motion/Stationary)	Supervision messages every 30secs /60secs
IR (Motion/Stationary)	Supervision messages every 5secs /60secs
RF under LF	6 RF transmissions (each transmission @ 4ms in duration), 312.5ms apart
IR under LF	Does not transmit
Event Messages Button Press/Release Low Battery	3 RF transmissions (each transmission @4ms in duration), 312.5ms apart
Bluetooth	2.4 GHz
Power Source (recommended)	CR2450 Lithium Battery: 620 mAh/2V
Battery Life	18 to 36 months, depending on usage
LED Status Indicator	Button Press/Release, Motion/Stationary Entering/Exiting LF Field, Low Battery
Badge ID	Unique, factory-programmed ID
Construction	Nylon Plastic (IP65)
Dimensions (H x W x D)	8.3 x 4.4 x 1.7 cm (3.3 x 1.7 x 0.7 inches)
Weight	40 grams (1.4 ounces)
Mounting	Belt worn
Operating Environment	Temp: -30°C to 70°C (25°F to 159°F) Humidity: 95% non-condensing
Management Software	Eiris V4.8 or higher
Regulatory	IC, FCC & CE compliant
Warranty	1 year limited (excluding battery)

Product offerings and specifications are subject to change without notice.

Accessories	
5-LW009800-0	Belt Clip – 5 units
5-LW009700-0	LoneWorker Pull Cord – 5 units

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Initial Activation & Software Enrollment

The Lone Worker Transmitter is shipped from the factory in **Sleep Mode** to conserve battery power during transit.



1. Prior to initial usage, remove the Activation Label and then press, simultaneously, both of the emergency call push buttons for at least 7 seconds.



This action Awakens the Transmitter from Sleep Mode and also enrolls its unique factory installed **ID Number** (a six-digital hexadecimal value) into the Host RTLS Application.

If the Enrollment process is successful, the Red LED Status Indicator of the transmitter lights up for 3 seconds.

(Refer to your Eiris Configuration Guides for additional details.)

Safety Issues

It is the responsibility of the system installer to ensure that the appropriate staff members are suitably trained in the usage and maintenance of the Lone Worker Transmitter.

Additionally, **Supervisory Alerts** should be configured in the Host RTLS Application to notify staff members that the detection Transmitter is:

- In a low battery condition, or
- Not properly transmitting location and status data.

Note: The above configured **Supervisory Alerts** should be triggered periodically to ensure system integrity.

Alert Testing

When you press either the left or the right emergency call push-button individually, you trigger the Lone Worker Transmitter to emit a Test Alert Message for the host RTLS application to confirm that the unit is functioning properly.

Battery Replacement

CAUTION! Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

1. Temporarily suspend usage of the Transmitter in the host RTLS application.
2. Place the transmitter on its right side. Remove the 2 screws that hold the battery cover to the body of the Transmitter



3. **First time replacement:** Utilize the pull tab (find it with the **Bat ▼** mark engraved on the back) to slide the battery out of the Transmitter.

Future replacements: In the absence of the pull tab, remove the cover from the other side, and use a plastic instrument to slide the battery out.

Dispose of the used battery in accordance with local regulations.

CAUTION! After removing the battery please wait at least 30 seconds before installing the replacement battery so as to not cause damage to the tag or to negatively affect the tag's operational performance.

4. Slide the new battery into the transmitter. Recommended battery: CR2450 Lithium Battery.

IMPORTANT! Ensure that the positive (+) side of the battery faces up.

5. Close the side-cover(s) such that the screw holes are correctly aligned. Tighten the 2 screws snugly into place. Do not over-tighten as this may strip the case threads.
6. Reactivate the Transmitter in the Host RTLS Application.

RF Transmissions in LF Fields

For Moving Transmitter

LF Response Time: Onboard LF receiver polls every 250ms to check if the Transmitter is in an LF zone

Transmission Rate: 3 RF event transmissions (each transmission about 2ms in duration), at 0.4 second intervals.

If the Transmitter stays in an LF zone, then repeated at 2 seconds intervals.

Transmitted Message Type: RF Data Message includes ID code of LF Beacon. Motion bit, M=1.

For Motionless Transmitters

LF Response Time: Onboard LF receiver polls every 250ms to check if the Transmitter is in an LF zone

Transmission Rate: 3 RF supervision transmissions (each transmission about 2ms in duration), 0.4 seconds apart:

If the Transmitter stays in a LF zone for more than 10 minutes, then repeated at 15 second intervals.

Transmitted Message Type: RF Data Message includes ID code of LF Beacon. Motion bit, M=0

Cleaning & Disinfection Procedures

Use an appropriate antibacterial disinfectant such as Dispatch® Hospital Cleaner Disinfectant with Bleach from Caltech Industries (<http://www.caltechind.com>) to clean the Lone Worker Transmitter.

Since 'Cleaning Procedures' may vary according to facility guidelines, thus the procedures given below are for illustrative purposes only:

Option 1 – Using Dispatch Disinfectant Spray

1. Lightly wet a disposable towel with Dispatch spray.
Do not saturate the towel
2. Wipe the outer surfaces of the sensor
3. Wipe the sensor with a dry disposable towel
4. Allow the sensor to air dry
5. Return the clean sensor to inventory or usage
6. Dispose of used towels per facility policies

Option 2 – Using Dispatch Disinfectant Towels

1. Open a new Dispatch pre-moistened towel
2. Wipe the outer surfaces of the sensor
3. Wipe the sensor with a dry disposable towel
4. Allow the sensor to air dry
5. Return the clean sensor to inventory or usage
6. Dispose of used towels per facility policies

Pull Switch Cleaning: Frequent use of the pull switch may result in a buildup of dust on the mechanism. Dust buildup causes friction which requires added force to pull and restore the switch. Should this occur, clean the switch using a compressed air duster. Gently spray on the pull switch, and use a brush (often included in the canister).

Alert Event Configuration in Eiris

There are nine alert events relevant to the Lone Worker tag.

- **LoneWorker Fall Alarm** (Fall Detect version only): When the tag tilts and the Pre Alarm event is not cancelled within 15 seconds, the tag transmits the LoneWorker Fall Alarm which indicates that the user has fallen and unable to function.
- **LoneWorker Front Button Press:** In regular version, B2 down. In Fall Detect version, to cancel an alert event, the user can press the button in the front of the tag. To cancel a Pre Alarm event, the user can place the tag in the up-right position. If the tag is repositioned, it transmits the Cancel (cancel the Pre Alarm) alert event.
- **LoneWorker Panic:** When under duress, the user can press both of the side buttons, simultaneously, or pull the cord to transmit a LoneWorker Panic event.
- **LoneWorker Pre Alarm:** When the tag tilts, it transmits a Pre Alarm event and starts to vibrate. The pre Alarm and vibration last for 15 seconds during which, the user can cancel it.
- **LoneWorker Pull Cord Restore:** When the user inserts the cord back into place, the tag transmits a cancellation for the Pre Alarm event.
- **LoneWorker Single Side Button:** To test the alerts, the user can press either of the side buttons to transmit a LoneWorker Single Side Button event.
- **Low Battery:** When the battery of the tag runs low, it transmits a Low Battery event.
- **Motion:** When the tag is in motion, it transmits a Motion event.
- **Stationary:** When the tag is stationary, it transmits a Stationary event.

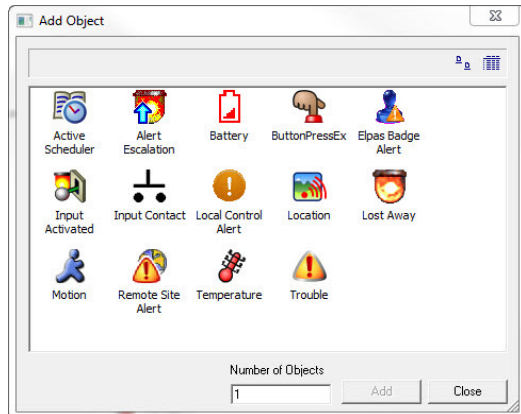
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Users can configure all or some of these alert events in one alert object, the Elpas Badge Alert object.

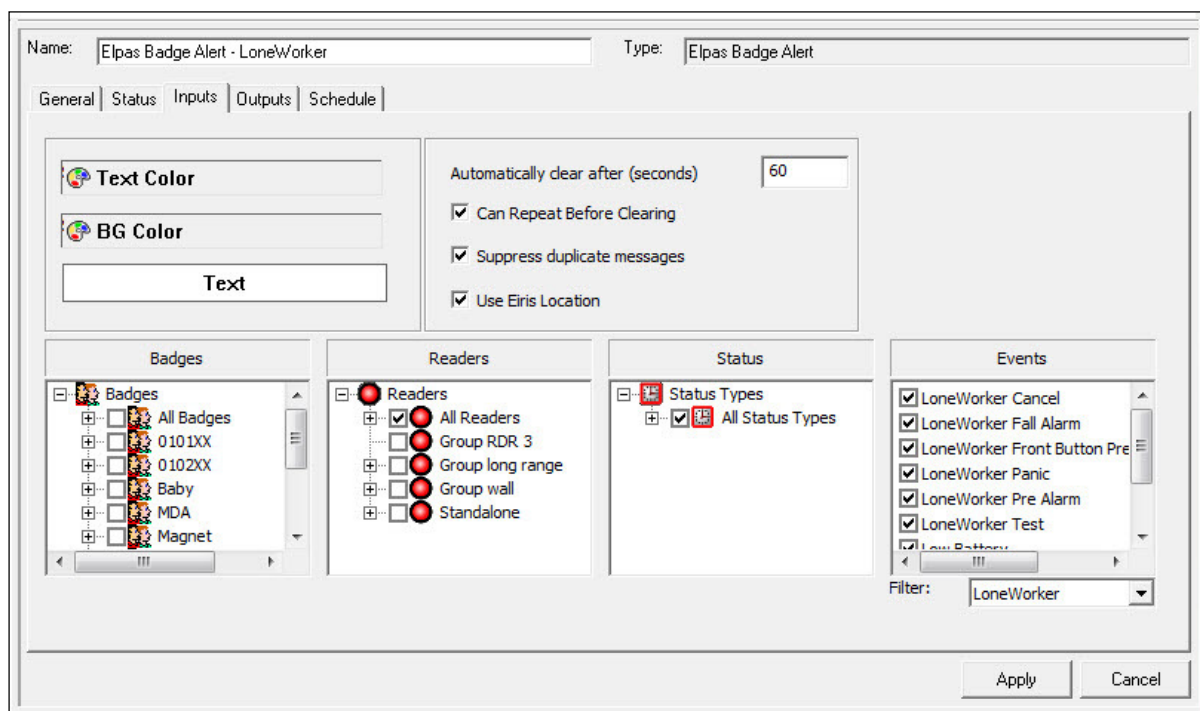
Note: This document includes only the Shield alert event specific instructions. For further information regarding alert configuration, see Eiris Configuration Guide, section 5.

To configure LoneWorker alerts:

1. In the EV2 setup mode, Right-click the Alerts branch and select **Add by Type**. The alerts **Add Object** window opens.



2. Select **Elpas Badge Alert** and click **Add**. A new Elpas Badge Alert object is created and opens in its **General** tab.
3. In the **Name** field, enter the name you choose (one that includes LoneWorker is recommended since the object is also used for other badges).
4. Open the **Inputs** tab.
5. Under the **Events** pane, from the **Filter** drop-down list, select **LoneWorker**. The LoneWorker related events appear in the **Events** pane.
6. Select the check-boxes of the events for which you want the alerts.



Configuring LoneWorker Application

The LoneWorker application and the alerts it sends to Eiris through the Cloud need to be configured in Eiris. See Eiris Cloud Extension and LoneWorker Application Configuration and User Guide.

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Compliance with Standards

This device complies with FCC Rules Part 15 and with Industry Canada license exempt RSS standard(s). Operation is subject to two conditions:

- (1) This device may not cause harmful interference
- (2) This device must accept any interference that may be received or that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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 off and on, 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 receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Cet équipement a été testé et jugé conforme aux limites s'appliquant à un appareil numérique de classe B, conformément à la Partie 15 des réglementations de la FCC. Ces limites ont été élaborées pour offrir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle.

Cet équipement génère, utilise et peut émettre de l'énergie de fréquence radio et, s'il n'est pas installé et utilise conformément aux instructions du fabricant, peut provoquer des interférences dangereuses pour les communications radio. Toutefois, rien ne garantit l'absence d'interférences dans une installation particulière. **Si cet équipement provoque des interférences nuisibles au niveau de la réception radio ou télévision, ce qui peut être déterminé par la mise hors, puis sous tension de l'équipement, vous êtes invité à essayer de corriger les interférences en prenant les mesures suivantes:**

- Réorientez ou déplacez l'antenne réceptrice.
- Augmentez la distance qui sépare l'équipement et le récepteur.
- Branchez l'équipement à une prise d'un circuit différent de celui auquel est branché le récepteur.
- Consultez le revendeur ou un technicien radio/télévision expérimenté pour obtenir de l'aide.

Warning!

Changes or modifications to this equipment not expressly approved by the party responsible for compliance (Elpas Solutions Ltd.) could void the user's authority to operate the equipment.

Europe

This equipment complies with the RTTE requirements - Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999.

EN 300220, EN 301489, EN 50130-4, EN 61000-6-3, EN 60950-1.



Product Warranty

Elpas Solutions, Ltd. (Elpas or the Company), and its affiliates, warrants its products (hereinafter referred to as "the Product") to be free of defects in materials and workmanship under normal operating conditions and use for a period of one year from the date of shipment by Elpas. The Company's obligations shall be limited within the warranty period, at its option, to repair or to replace the defective Product or any defective component or part thereof. To exercise this warranty, the product must be returned to the manufacturer freight prepaid and insured.

This warranty does not apply to repairs or replacement caused by improper installation, Product misuse, failure to follow installation or operating instructions, alteration, abuse, accident, tampering, repair by anyone other than Elpas, external causes, and failure to perform required preventive maintenance. This warranty also does not apply to any products, accessories, or attachments used in conjunction with the Product, including batteries, which shall be covered solely by their own warranties, if any. Elpas shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, resulting from a malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Product.

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Elpas shall not, under any circumstances whatsoever, be liable for any inaccuracy, error of judgment, default, or negligence of Elpas, its employees, officers, agents, or any other party, or of the purchaser or user, arising from any assistance or communication of any kind regarding the configuration, design, installation, or creation of security system involving the Product, that being the responsibility of the purchaser or user. If Elpas is unable to make such repair or replacement, the company's entire liability shall be limited to the cost of a reasonable substitute product. Elpas shall not be responsible for any dismantling, installation, reinstallation, purchasing, shipping, insurance, or any similar charges.

Elpas shall have no liability for any damages, including without limitation, any direct, indirect, incidental, special, or consequential damages, expenses, costs, profits, lost savings or earnings, or other damages arising out of the use of the Product or the removal, installation, reinstallation, repair or replacement of the Product or any related events. In the event that there is any liability against Elpas, such liability shall be limited to the purchase price of the Product which amount shall be fixed as liquidated damages.

The purchaser and user understand that this Product may be compromised or circumvented by intentional acts; that the Product will not in all cases prevent death, personal injury, property damage, or other loss resulting from burglary, robbery, fire or other causes; and that the Product will not in all cases provide adequate warning or protection. The purchaser and user also understand that a properly installed and maintained alarm may reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such events will not occur or that there will be no death, personal injury, property damage, or other loss as a result of such events.

By purchasing the Product, the purchaser and user shall defend, indemnify and hold Elpas, its officers, directors, affiliates, subsidiaries, agents, servants, employees, and authorized representatives harmless from and against any and all claims, suits, costs, damages, and judgments incurred, claimed, or sustained whether for death, personal injury, property damage, or otherwise, because of or in any way related to the configuration, design, installation, or creation of a security system involving the Product, and the use, sale, distribution, and installation of the Product, including payment of any and all attorney's fees, costs, and expenses incurred as a result of any such events.

The purchaser or user should follow the Product installation and operation instructions and test the Product and the entire system at least once each week. For various reasons, including but not limited to changes in environmental conditions, electric, electronic, or electromagnetic disruptions, and tampering, the Product may not perform as expected. The purchaser and user are advised to take all necessary precautions for the protection and safety of persons and property.

This statement provides certain legal rights. Other rights may vary by state or country. Under certain circumstances, some states or countries may not allow exclusion or limitation of incidental or consequential damages or implied warranties, so the above exclusions may not apply under those circumstances and in those states or countries.

Elpas reserves the right to modify this statement at any time, in its sole discretion without notice to any purchaser or user. However, this statement shall not be modified or varied except by Elpas in writing, and Elpas does not authorize any single individual to act on its behalf to modify or vary this statement.

Any questions about this statement should be directed to Elpas.



W.E.E. Product Recycling Declaration

For information regarding the recycling of this product, you must contact the company from which you originally purchased it. If you are discarding this product and not returning it for repair then you must ensure that it is returned as identified by your supplier. This product is not to be thrown away with everyday waste - Directive 2002/96/EC Waste Electrical and Electronic Equipment.