

### OVERVIEW

This detector model samples the air and the environmental temperature in the protected area. An alarm condition is raised when the detected environmental smoke quantity, the temperature level or the thermal variation rate exceeds the alarm threshold.

### COMPATIBILITY

This detector is compatible only with wireless systems based on the Sagittarius protocol.  
For more specific information concerning compatibility refer to your fire security system supplier.

### INSTALLATION - IMPORTANT NOTES

For detector spacing, placement and special applications refer to your specific national standards.

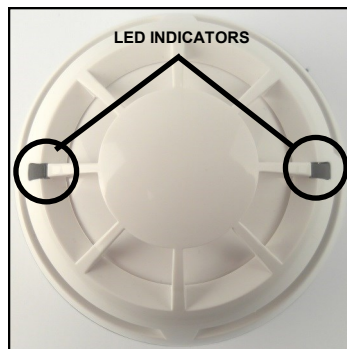
Mount the detector as far as possible from metal objects, metal doors, metal window openings, etc. as well as cable conductors, cables (especially from computers), otherwise the operating distance may greatly drop. The detector must NOT be installed near electronic devices and computer equipment that can interfere with its wireless link quality.

This detector must be installed according precisely to the procedures described in this manual.

Test this detector after installation.

### BEFORE INSTALLING THE DETECTOR

- 1) Extract the batteries cover from the back of the detector
- 2) Power-up the detector removing the isolating tab in the battery housing. LED indicators signal "Power up"
- 3) Link the detector to the Sagittarius wireless system ([LINKING](#))
- 4) Check the [WIRELESS LINK QUALITY](#)
- 5) [SELECT A GOOD LOCATION FOR THE DETECTOR](#)
- 6) Tag device's loop and address data ([IDENTIFICATION](#))
- 7) Fix the detector supporting base to the wall ([BASE INSTALLATION](#)).



Picture 1

### LED INDICATORS

Picture 1: provides visual indication for functional conditions and battery levels as indicated in table 1.

| Detector's status  | LEDs indication   |
|--|---|
| Power up   | 1 second <b>GREEN</b> , then 4 X 0.5 second <b>RED</b> blink                                  |
| Linking to the system  | Blinking <b>GREEN</b> until linking is completed  |
| Link failure   | <b>RED</b> on (continuous)  |
| Normal condition   | LEDs off  |
| Alarm  | Blinking <b>RED</b> : 0.5 second on and 0.5 second off  |
| Battery 1 fault  | 0.1 second <b>ORANGE</b> blink, then 5 seconds off  |
| Battery 2 fault  | 0.1 second <b>GREEN</b> blink, then 5 seconds off   |
| Both batteries fault   | 0.1 second <b>ORANGE</b> , then 5 seconds off<br>0.1 second <b>GREEN</b> , then 5 seconds off |
| Other fault  | sequential <b>ORANGE</b> / <b>GREEN</b> 0.5 second blinking                                   |
| Tamper   | LEDs off  |
| Lost link with wire to wireless translator / wireless expander | LEDs off  |
| Type 1 Test Mode   | Blinking <b>GREEN</b> every 1 second for 1 minute   |
| Type 2 Test Mode   | <b>GREEN</b> on (continuous) for 30 minutes   |

Table 1

**LINKING**

The system is waiting to achieve a wireless child device (for further information refer to the translator's or the Wirelex configuration software's literature):

- 1) Move the link switch's cursor from ON to the opposite side of its run (we will call it BLANK, since it carries no indication). LED indicators signal "Linking to the system" (picture 2).

Linking is successful when:

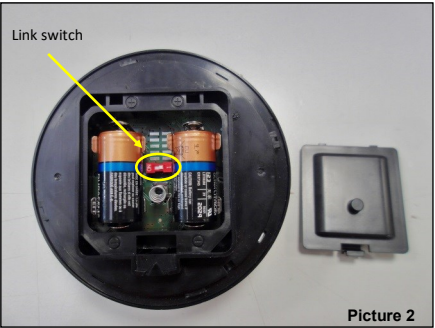
- a) the translator indicates so (check translator's literature)
- OR
- b) the Wirelex software indicates so (check the Wirelex's literature).

If linking is unsuccessful:


- 2) Check if evident mistakes were made.
- 3) Perform the **LINKING RECOVERY**.

**LINKING RECOVERY**

- 1) Take out both batteries from their holders
- 2) Move alternatively the link switch to ON / BLANK five times (picture 2)
- 3) Move the link switch to ON
- 4) Reinsert both batteries into their holders, oriented as per polarity marks
- 5) Perform the **LINKING** procedure.



Picture 2



During the linking phase, the detector must be positioned close to the aerial (within a few centimeters) of the translator or expander to which it is being linked.

**DETECTOR SENSITIVITY SETTINGS**

During installation using the Wirelex software it's possible to set the smoke sensitivity and the heat category of the detector (see tables 4 and 5). Otherwise if the installation is performed manually through the translator keyboard, default setting will be applied.

**WIRELESS LINK QUALITY**

It is possible to check wireless link quality between the detector and its linked-to translator or expander in this way:

- 1) Move the link switch to the ON position.
- 2) LED indicators will start blinking according to the following table:

| Communication quality                         | Assessment                  | Device's indication |
|---|-----------------------------|---------------------|
| No communication                              | Fail                        | Two red blinks      |
| Communication quality: 0 dB - 10 dB (Mark 2)  | Poor, not acceptable        | One red blink       |
| Communication quality: 10 dB - 20 dB (Mark 3) | Medium-low, not recommended | One green blink     |
| Communication quality: 20 dB - 30 dB (Mark 4) | Good                        | Two green blinks    |
| Communication quality: > 30 dB (Mark 5)       | Excellent                   | Two green blinks    |

Table 2

- 3) **NOTE:** Ensure the link switch is returned to the "BLANK" (operational) position on completion of testing.



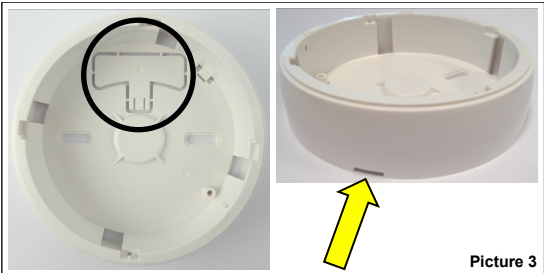
**SELECT A GOOD LOCATION FOR THE DETECTOR**

Choose for the detector a placement position that:

- compliances with your specific standards
- is reached by a strong wireless signal from its linked-to translator or expander module
- is not interfered by environmental factors.

**IDENTIFICATION**

For identification purposes, analogue loop number and device's address can be recorded on the plastic tag supplied with the base (picture 3). Extract the plastic tag from the bottom of the base, write or label identification data on it and, finally, insert it in the side slot of the base.



Picture 3

## **BASE INSTALLATION**

Fix the base to the wall with the provided screws (picture 4).

## **DETECTOR PLACEMENT**

- 1) Install the batteries cover.
- 2) Position the detector centrally on the base ensuring it is level.
- 3) Rotate clockwise applying gentle pressure. The detector will drop into its keyed location.
- 4) Continue to rotate clockwise a few degrees until the detector has fully engaged in the base.
- 5) When the detector is firmly engaged, check the alignment of the raised reference marks on the detector and on the base (picture 5).



**Dust covers DO NOT provide complete protection against contamination: detectors should be removed before construction, major re-decoration or other dust producing work is started.**

**Dust covers MUST be removed before the system can be made operational.**

## **DETECTOR LOCKING**

To lock the detector to the base, screw in the provided security screw; screw entry is located on the side of the detector's base (picture 6).

## **TAMPER DETECTION**

When the detector is detached from the base a tamper message event is sent to the control panel.

## **TESTING**

### **Test this detector after installation.**

After each test reset the fire security system from the control panel, as per your control panel instructions.

### **TEST MODES**

Test modes make the **L-MC-SG** more reactive to aerosol stimulus; two test mode types are provided:

Type 1 Test Mode - triggered by a test magnet; persists for 1 minute. This mode makes the detector almost instantaneously alarm agent reactive.

Type 2 Test Mode - remotely triggered by the Wirelex program; persist for 30 minutes. This mode makes the detector as reactive to smoke as an optical smoke detector, simulating it.

### **TEST 1 - MAGNET TEST**

- 1) Hold a suitable magnet in correspondence of the indicated area (picture 7)
- 2) LED indicator will signal "Type 1 Test Mode"
- 3) Apply again the magnet in correspondence of the indicated area (picture 7)
- 4) LED indicator will signal "Alarm"

### **TEST 2 - AEROSOL TEST**

**Use only suitable aerosol testers supplied by approved manufacturers.**

- 1) Hold a suitable magnet in correspondence of the indicated area (picture 7)
- 2) LED indicator will signal "Type 1 Test Mode"
- 3) By following its specific instructions, apply the aerosol test device to the detector
- 4) Wait a few seconds
- 5) LED indicator will signal "Alarm"

### **TEST 3 - AEROSOL TEST**

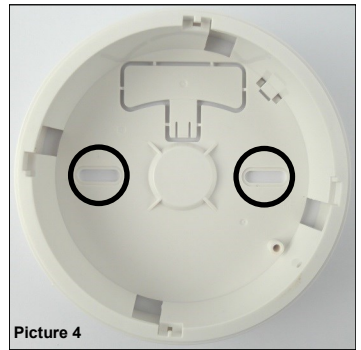
**Use only suitable aerosol testers supplied by approved manufacturers.**

- 1) Remotely activate the detector's green LED from the Wirelex program
- 2) LED indicator will signal "Type 2 Test Mode"
- 3) By following its specific instructions, apply the aerosol test device to the detector
- 4) Wait a few seconds
- 5) LED indicator will signal "Alarm"

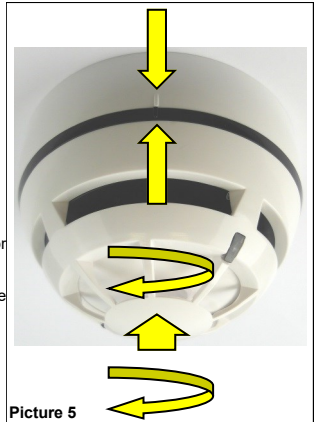
### **TEST 4 - HEAT TEST**

**Use only suitable heat test devices from approved manufacturers.**

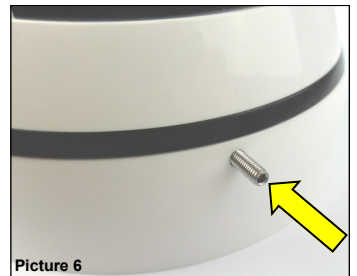
- 1) By following its specific instructions, apply the heat test device to the detector.
- 2) Wait a few seconds.
- 3) LED indicator will signal "Alarm".



Picture 4



Picture 5



Picture 6



Picture 7

MAINTENANCE - CLEANING

- 1) Remove the detector from its base.
- 2) Smoke entry areas and thermistor area: use a small, soft bristle brush to dislodge any obvious contaminants such as insects, spider webs, hairs, etc.
- 3) Smoke entry areas and thermistor area: use a small vacuum tube or dry, clean, compressed air to suck up or blow any remaining small particles away.
- 4) Wipe the exterior housing of the detector with a clean, damp, lint-free cloth to remove any surface film that can later attract airborne contaminants.
- 5) Install the detector onto its base again.
- 6) Test the detector.



TECHNICAL SPECIFICATIONS \*\*

|  |                              |                             |
|--|------------------------------|-----------------------------|
| Communication range with the translator or expander        | 200 m                        | Open space                  |
| Operating frequency  | 868 MHz                      |                             |
| Operating frequency channels                               | 7                            |                             |
| Radiated power   | ≤ 14 dBm (25 mW)             |                             |
| Batteries type*  | Type CR123A (3 Vdc)          | 8.2 years life              |
| Parent expander's check-up period                          | 60 seconds (default setting) |                             |
| Alarm threshold temperature. Category A1R ROR              | 58 °C                        |                             |
| Alarm threshold temperature. Category B - high temperature | 78 °C                        |                             |
| Dimensions   | 110 mm x 65 mm               |                             |
| Weight   | 190 g                        | Base and batteries included |
| IP rating  | 40                           |                             |
| Max tolerated humidity (no condensing)                     | 95% RH                       |                             |
| Operating temperature range                                | From -10 °C to +55 °C        |                             |

Table 3

MAINTENANCE - BATTERY REPLACEMENT

When a low battery condition is indicated, both batteries must be changed altogether.

During this procedure the linking switch must NOT be touched at all !

\* When a low battery condition is indicated, both batteries must be changed for new cells. Lifespan of batteries indicated is subject to standard environmental conditions default monitor settings and excellent link quality.  
\*\* Check latest version of document TDS-LMCXX for further data, obtainable from your supplier.

- 1) Detach the detector from its base.
- 2) Extract the batteries cover.
- 3) Extract the batteries.
- 4) Insert the new batteries into their holders, oriented as per polarity marks.
- 5) Reinstall the batteries cover.
- 6) Reinstall the detector onto its base.
- 7) Test the detector.

Table 4

| SMOKE SENSITIVITY (EN 54) |                 |         |
|---------------------------|-----------------|---------|
| Threshold level           | Wirelex setting | Notes   |
| Level 1                   | High            |         |
| Level 2                   | Normal          | default |
| Level 3                   | Low             |         |

| THERMAL SENSITIVITY (EN 54) |                  |              |
|-----------------------------|------------------|--------------|
| Detector Category           | Wirelex setting  | Notes        |
| A1R                         | A1R              | default      |
| BS                          | High temperature | Non-approved |

Table 5

NOTE OF THE DOCUMENT:

Argus Security Srl hereby declares that this detector is in compliance with the essential requirements and other relevant provisions of RED Directive 2014/53/EU. A copy of the original Declaration of Conformity (Document: DOC-LI10-02) is made available to the user on website: [www.argussecurity.it](http://www.argussecurity.it)

WARNINGS AND LIMITATIONS

Our devices use high quality electronic components and plastic materials that are highly resistant to environmental deterioration. However, after 10 years of continuous operation, it is advisable to replace the devices in order to minimize the risk of reduced performance caused by external factors. Ensure that this device is only used with compatible control panels. Detection systems must be checked, serviced and maintained on a regular basis to confirm correct operation. Smoke detectors may respond differently to various kinds of smoke particles, thus application advice should be sought for special risks. Detectors cannot respond correctly if barriers exist between them and the fire location and may be affected by special environmental conditions. Refer to and follow national codes of practice and other internationally recognized fire engineering standards. Appropriate risk assessment should be carried out initially to determine correct design criteria and updated periodically.

WARRANTY

All devices are supplied with the benefit of a limited 5 years warranty relating to faulty materials or manufacturing defects, effective from the production date indicated on each product. This warranty is invalidated by mechanical or electrical damage caused in the field by incorrect handling or usage. Product must be returned via your authorized supplier for repair or replacement together with full information on any problem identified. Full details on our warranty and product's returns policy can be obtained upon request.

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LI5310CPR

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EN 54-25:2008  
EN 54-5:2017+A1:2018  
Category A1R  
EN 54-7:2018  
CEA 4021:2003  
L-MC-SG  
For use in compatible fire detection and alarm system