WAVE-SENSE

Wireless Device

INSTALLATION MANUAL

TI-002277

WIRELESS DUAL OPTICAL SMOKE DETECTOR (865 MHZ)

OVERVIEW

This detector model samples the air in the protected area. An alarm condition is raised when the detected environmental smoke quantity 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**).

LED INDICATORS

Picture 1

LED INDICATORS

Picture 1: provides visual indication for functional conditions and battery levels as indicated in table 1.
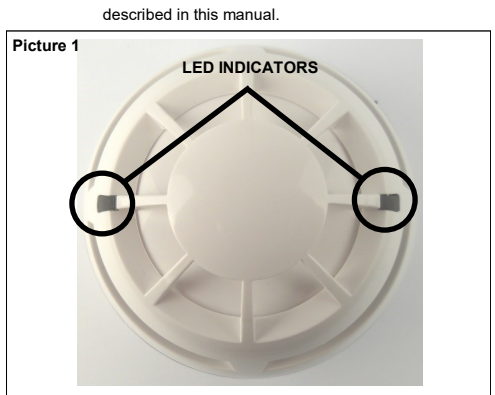
Detector's status	LEDs indication
Power up	1 second **GREEN**, then 4 X 0.5 second **RED** blink
Linking to the system	Blinking **GREEN** until linking is completed
Link failure	**RED** on (continuous)
Normal condition	LEDs off
Alarm	Blinking **RED**: 0.5 second on and 0.5 second off
Battery 1 fault	0.1 second **ORANGE** blink, then 5 seconds off
Battery 2 fault	0.1 second **GREEN** blink, then 5 seconds off
Both batteries fault	0.1 second **ORANGE,** then 5 seconds off 0.1 second **GREEN,** then 5 seconds off
Other fault	sequential **ORANGE** / **GREEN** 0.5 second blinking
Tamper	LEDs off
Lost link with wire to wireless translator / wireless expander	LEDs off
Test Mode - Detector is more reactive to aerosol stimulus	Blinking GREEN every 1 second for 1 minute

Table 1

CEASEFIRE INDUSTRIES PRIVATE LTD., E6, UPSIDC Industrial area, Selaqui, Dehradun, Pin Code - 248001, Uttarakhand, India

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**.

Picture 2

Link switch

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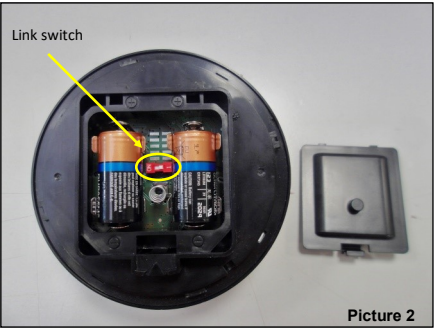
> ⚠️ **During the linking phase, the detector must be positioned close to the aerial (within a few centimeters) of the translator or expander to which it is being linked.**

DETECTOR SENSITIVITY SETTINGS

During installation using the Wirelex software it's possible to set the smoke sensitivity of the detector (see table 4). 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.
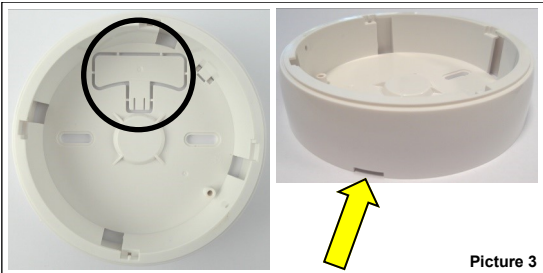
Picture 3

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.**
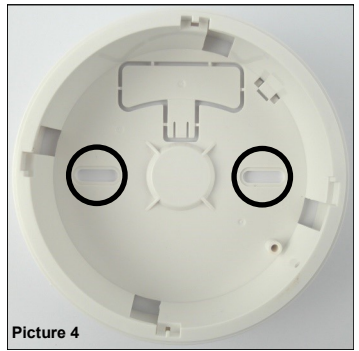
Picture 4

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 1 - MAGNET TEST

1) Hold a suitable magnet in correspondence of the indicated area (picture 7).

2) LED indicator will signal "Test Mode" (blinking GREEN every 1 second)

3) Apply again the magnet in correspondence of the indicated area (picture 7)

4) If it works 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 "Test Mode" (blinking GREEN every 1 second)

3) By following its specific instructions, apply the aerosol test device to the detector

4) Wait a few seconds

5) If it works LED indicator will signal "Alarm"
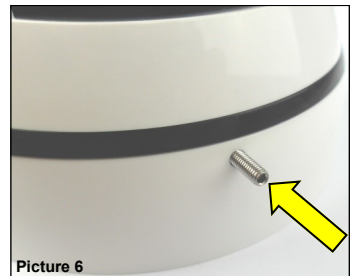
Picture 5

Picture 6

MAINTENANCE - CLEANING

1) Remove the detector from its base.

2) Smoke entry areas: use a small, soft bristle brush to dislodge any obvious contaminants such as insects, spider webs, hairs, etc.

3) Smoke entry areas: 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.

Picture 7

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 !

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 3

TECHNICAL SPECIFICATIONS **

Communication range with the translator or expander	200 m	Open space
Operating frequency	865 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)	
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	

* 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-LOPXX for further data, obtainable from your supplier.

SMOKE SENSITIVITY (EN 54)

Threshold level	Wirelex setting	Notes
Level 1	High	
Level 2	Normal	default
Level 3	Low	

Table 4

NOTE OF THE DOCUMENT:

Argus Security Srl hereby declares that this detector is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. A copy of the original Declaration of Conformity (Document: DoC LI01) is made available to the user on website: 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 3 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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EN 54-7:2000+A1:2002+A2:2006

EN 54-25:2008

TI-002277

For use in compatible fire detection and alarm system

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