SGBE100

WIRELESS STROBE BEACON

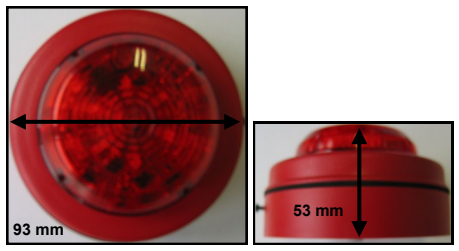
CE

GENERAL DESCRIPTION

The wireless strobe beacon is an output device which, activated by the control panel, switches on in the event of alarm or emergency conditions.
The activation command is sent from the control panel to the beacon through the wire to wireless translator interface module and other possible wireless expander modules.
Communication between the wireless beacon and the translator / expander modules is obtained via the "Sagittarius" wireless, analogue-intelligent bidirectional protocol.

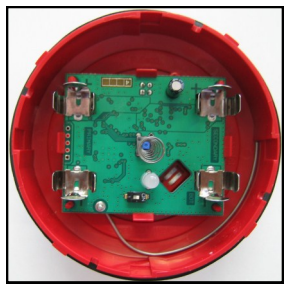
GENERAL OVERVIEW

Picture 1 - device overview



Picture 2 & 3 - device dimensions

Picture 4 - front view of the device's wall base



Picture 5 - inside view of the device: the PCB

Picture 6 - rear view of the device's wall base

Table 1

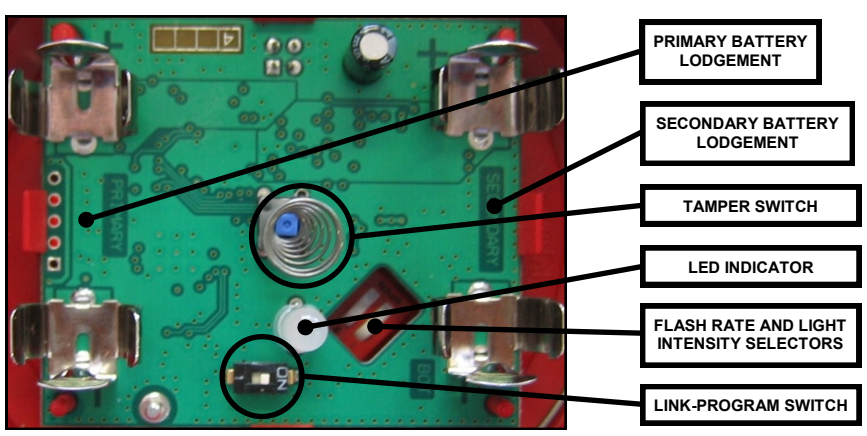
TECHNICAL SPECIFICATIONS

Operating frequency range	868.15 MHz - 869.85 MHz
Max radiated power	5 dBm (3 mW)
Radio signal's modulation type	FSK
Operating frequency channels	7
Communication range with a wire to wireless translator or an expander *	200 m (in open space)
Main battery type	CR123A (3 V & 1.2 Ah)
Secondary battery type	CR123A (3 V & 1.2 Ah)
Min alarm current consumption range @ 24 V (0.5 Cd and 1 Hz beacon's selected settings) Max alarm current consumption range @ 24 V (1 Cd and 0.5 Hz beacon's selected settings)	3 mA 6 mA
Light output intensity range (user selectable)	0.5 / 1 Cd
Flash rate range (user selectable)	0.5 / 1 Hz
Main battery lifespan **	5 years ***
Secondary battery lifespan **	2 months ***
Operating temperature	-10 °C - +55 °C
Tolerated humidity range (no condensing)	5% - 95% RH
IP rating	21C
Dimensions	93 mm x 53 mm
Weight (without batteries)	110 g

*** Ideal operating range: may vary consistently according to environmental conditions.**

**** When a low battery condition is indicated, both, main and secondary, batteries must be changed altogether.**

***** These lifespan values refer to the device being programmed with a control signals transmission period of 12 seconds (under the assumption that the wireless strobe beacon is not activated).**
If the device is activated 30 seconds a week for test, the primary battery's lifespan reduces to 4 years (with maximum selected flash rate, i.e. 0.5 Hz and light intensity, i.e. 1 Cd).



Picture 7 - PCB detailed overview

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 sensors may respond differently to various kinds of smoke particles, thus application advice should be sought for special risks. Sensors 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

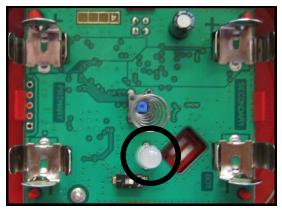
All devices are supplied with the benefit of a limited 3 year warranty relating to faulty materials or manufacturing defects, effective from the production date indicated on each product.

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.

VISUAL LED INDICATOR

The wireless strobe beacon (picture 8) is equipped with a bicolour LED (red/green) that provides visual indication for functional conditions and battery levels as indicated in table 2.



Picture 8 - the visual LED indicator

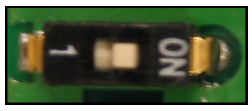
Device status	Green LED	Red LED
Power up	1 second green, then 0.5 second red for 4 times	
Programming and linking to the system	Blinking until linking and programming is completed	
Program - link failure	-	Continuously on
Normal condition	-	-
Main battery fault		0.1 second on and 5 seconds off
Secondary battery fault	0.1 second on and 5 seconds off	
Both batteries fault	Sequential bicolor blinking (0.1 second on and 5 seconds off)	
Lost link with a translator or expander		0.5 second on and 1 second off

Table 2

DEVICE'S POWER SUPPLY AND LINKING

The linking operation permits the configuration of the wireless strobe beacon on the wireless system.
The linking operation described below does not change if made directly from the translator module's interface or from the Wirelex PC configuration program.

1) Move the "Link-program" switch to position ON (picture 9).



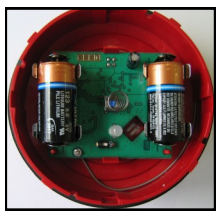
Picture 9 - "Link-program" switch: ON position

2) Insert the secondary battery into its housing (picture 10).

Picture 10 - secondary battery inserted

3) Insert the primary battery into its housing; the visual LED indicator switches on accordingly (see "Power up" in table 2 and picture 11).

Ensure that both battery's polarity are correct!!!

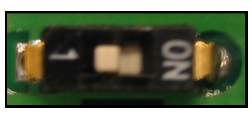


Picture 11 - primary and secondary batteries inserted

4) When the translator (by itself or piloted by the Wirelex) is searching for a new device for linking, move the "Link-program" switch to position 1 in order to initiate communication with the translator module (picture 12); the visual LED indicator switches on accordingly (see "Programming and linking to the system" in table 2).

IMPORTANT NOTE!
Programming is considered to be completed successfully only if there is an indication of programming success on the translator or on the window of the Wirelex program.

If the linking and programming operation fails, check if mistakes were made with the translator or the Wirelex, remove the batteries, change the switch over ON / 1 alternatively a few times in order to discharge the internal capacitor and then start again from point 1) re-performing the linking procedure.



Picture 12 - "Link-program" switch: 1 position

COMMUNICATION QUALITY ASSESSMENT

It is possible to assess the wireless communication quality between the wireless strobe beacon and the translator / expander by using a testing feature built in the device.

After a successful linking operation, by changing over the "Link-programming" switch on the ON position, the device's LED will start blinking according to table 3.

Always remember to reposition the switch to 1 after the assessment operation: device will NOT work operatively while the switch is changed over the ON position.

Communication quality	Assessment	Device's indication
No connection	Fail	Two red blinks
Link margin is less than 10 dB	Poor	One red blink
Robust communication with link margin from 10 dB to 20 dB	Good	One green blink
Robust communication with link margin over 20 dB	Excellent	Two green blinks

Table 3

DEVICE'S PLACEMENT

For specific information regarding detector and device's spacing, placement and special applications refer to your specific national standards.

It is strongly advised to mount the device 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 device should not be installed near electronic devices and computer equipment that can interfere with the reception's quality.

1) Select the position of the wireless strobe beacon before installing and fixing it.
Verify, from that position, that the communication between the device and the wire to wireless translator / wireless expander is correctly established and working (see the COMMUNICATION QUALITY ASSESSMENT paragraph).

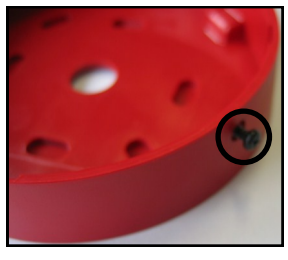
2) By previously punching the required holes, install and fix the device's base in the selected position with the provided screws (picture 13).

3) Insert the device onto its base, then secure it by turning it clockwise.

4) Lock the device by tightening clockwise the base's little locking screw (see picture 14).

Picture 13 - position of breakable holes ,on the device's wall base, for screw's insertion

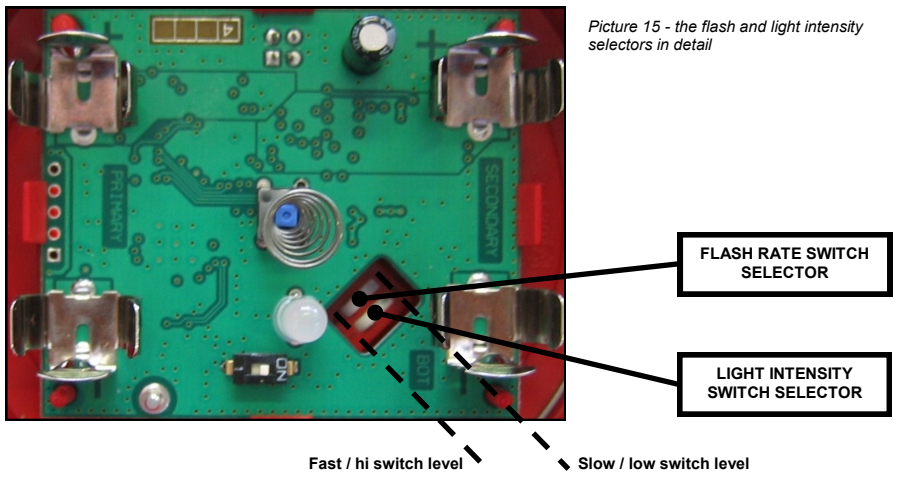
CAUTION
Electrostatic sensitive device.
Observe precautions when handling.



Picture 14 - the device's locking screw on its wall base

STROBE SETTINGS

Strobe's characteristics when lit (flash frequency and emitted light power) can be selected through the flash rate and light intensity selectors located on the PCB (see picture 15).



Picture 15 - the flash and light intensity selectors in detail

In order to change over the switches use the tip of a pen or a little screwdriver; switches can be changed over towards an “hi-level” or a “low-level” position (refer to picture 15) to determine a specific device’s strobe setting; the effect of those switching operations is reported in table 4.

Selected switch level	Flash rate switch selector	Light intensity switch selector
Fast / hi	0.5 Hz	1 Cd
Slow / low	1 Hz	0.5 Cd

Table 4

BATTERY FAULTS

If a battery fault condition is detected on the wireless beacon, a fault message is sent to the control panel via translator / expander. This kind of fault condition is locally signaled by the beacon’s visual LED indicator (see table 2).

TAMPER DETECTION FEATURE

The wireless beacon is provided with a tamper detection switch-spring system (see picture 7): in case of removal of the device from its base, it sends a tamper detection message to the control panel. For this reason be sure that the device is well inserted, tightened and blocked onto the base.

TESTING

In order to test the functionality of the installed wireless beacon, the following test must be performed: activate an alarm condition on the control panel (by a call-point or sensor in the installed system): the control panel will transmit an activation message to the device via wire to wireless translator / wireless expander and activate the beacon.

After each test the device must be reset by the specific command on the control panel or on the translator (see the RESET paragraph).

If the test fails check whether the batteries are charged, if mistakes were done previously or even if the system is activated. If the wireless beacon functionality is hopeless, send back the device to your distributor for repair or substitution.

All devices must be tested after installation and, successively, on a periodic basis.

RESET

To reset the wireless strobe beacon from an activated or a fault condition, it is necessary to:

1) solve the cause of the abnormal condition

2) send the reset command from the control panel or from the wire to wireless translator.

Performing sequentially those two operations, the strobe indication and/or fault condition will deactivate / resolve.

MAINTENANCE

1) Before starting any maintenance work, isolate and disable the system, in order to avoid accidental and unwanted fault detection conditions.

2) Remove the beacon device from the wall base.

4) Perform the planned necessary maintenance operations.

5) After the device has been serviced, reinstall it correctly onto its wall base, re-apply power to the system and check correct operation as described under the TESTING paragraph.