GENERAL DESCRIPTION

EK-WL8-OV/AU is a wireless 3-in-1 device equipped with an optical smoke detector and a voice annunciator and visual alarm device (VAD).

The device analyzes physical factors associated with fire and the way these factors change through time. An alarm signal is generated when the smoke level inside the optical chamber exceeds a certain threshold. The signal travels through repeaters to the translator module, which then informs the main control panel about the emergency.

The advanced design of the optical chamber guarantees a very high level of dust protection, effectively increasing the time between maintenance procedures. The device can also automatically connect to different repeaters which makes the wireless connection robust and reliable.

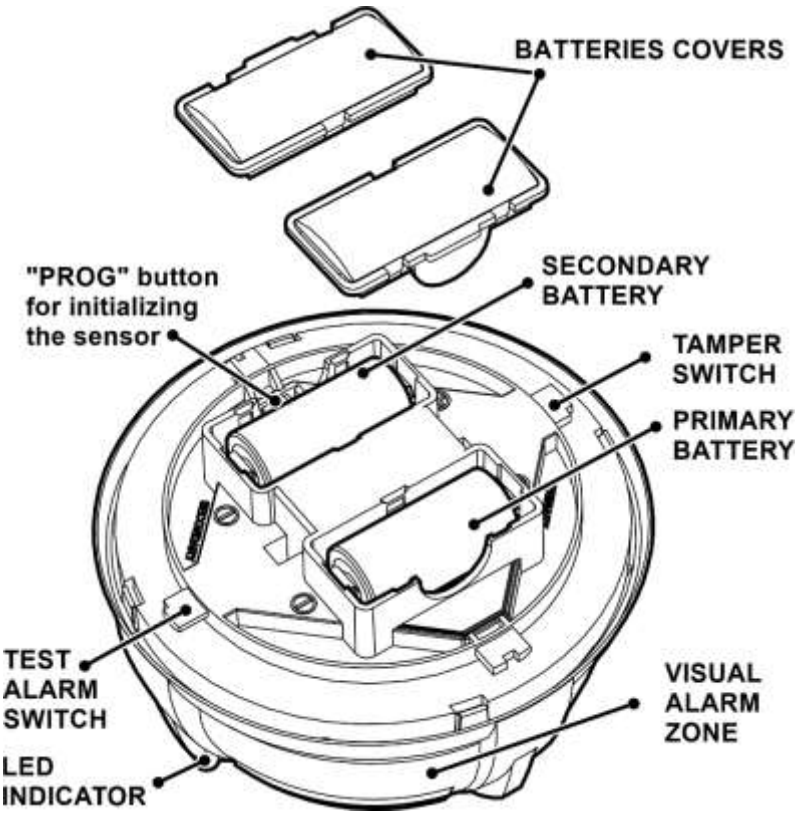
The device is supplied with a mounting kit.

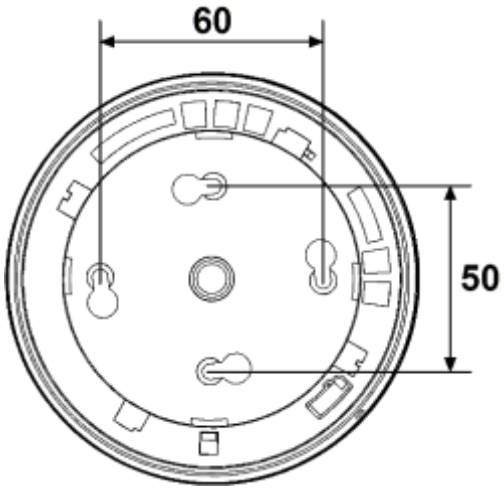
The product complies with the requirements of the AS ISO 7240.7, AS ISO 7240.23:2014 and AS ISO 7240.25 standards.

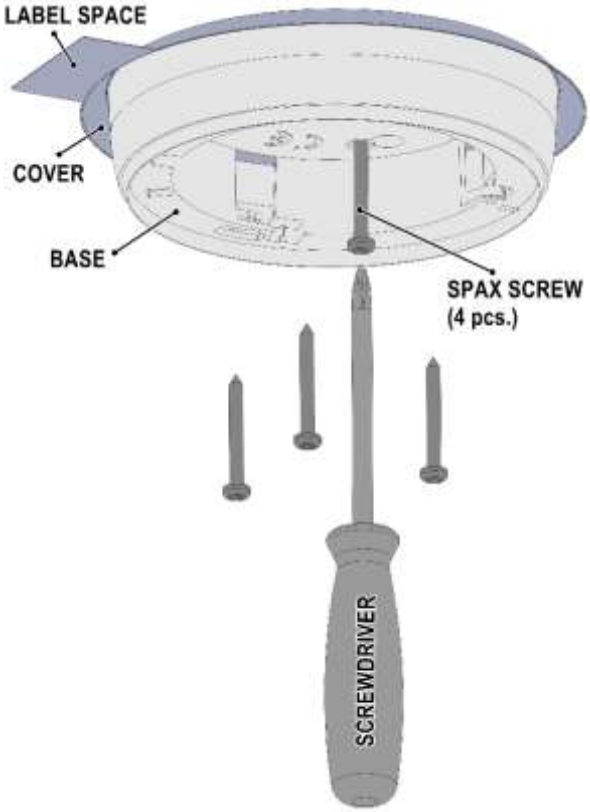
FEATURES

- Adjustable photo sensitivity – low, normal or high
- Bi-directional wireless communication
- Intelligent algorithms
- Sound synchronization with same devices in the system
- Tamper switch
- 10-year battery life
- Self-optimizing wireless frequency and amplitude algorithms
- Patented design of the smoke chamber
- Ability to operate in a thread of similar devices
- 5-year warranty

GENERAL OVERVIEW







INSTALLATION

In order to install the device on the ceiling, you need to place cover between ceiling and base and then fix the sandwich by spax-screws.

Ideally, the device should be installed at a certain distance from metallic objects, doors, and power lines, as they can cause the communication distance to drop. It is also important to avoid installing the device near electronics and computer equipment in order to protect it from potential electromagnetic interference. When using VAD, the device should be installed so that the visible areas are provided with flashes of the device.

If it is necessary that the device could not be detached from the base without special tools, it is necessary to tighten the screw in the wireless base.

In order to remove the device from the base, release the screw in the wireless base.

Coverage volume of the device is C-3-2.6.

TECHNICAL SPECIFICATIONS

Communication range with a translator or expander	1200 m
Radio frequency	918-926 MHz
Modulation type	GFSK
Operating frequency channels	6
Radiated power	Not more than 25 mW
Receiver category (EN300-220-1)	1.5
Sound pressure level at 1m	> 91 dB(A) for all messages*
Frequency range	500…3500Hz
Number of messages	up to 3
VAD: Ceiling mounted Flash color Flash rate Light temporal pattern	 C-3-2,6 (dia 2,6m, volume 16m^3) White 0,5Hz 200msON / 1800ms OFF
Battery life: Primary battery (type CR123A, 2.75-3.2V) Secondary battery (type CR123A, 2.75-3.2V)	 > 10 years (No activation) > 7 years (Activation 30 s / week) > 2 months (after primary battery low fault)
Dimensions (with the base)	(111x111x74) mm
Weight	215 g
IP rating	IP21C
Max tolerated humidity	95% RH
Operating temperature range	From –10 °C to +55 °C
Case material	FR ABS & Polycarbonate

***see full table at the end of the document**

PROGRAMMING

The “Prog." (or "P") button on the device is used for initializing the device in the system. Please refer to the translator manual for full instructions on how to add a child device to the system. The device can also be initialized using the “Streletz-Wizard” software.

INDICATION

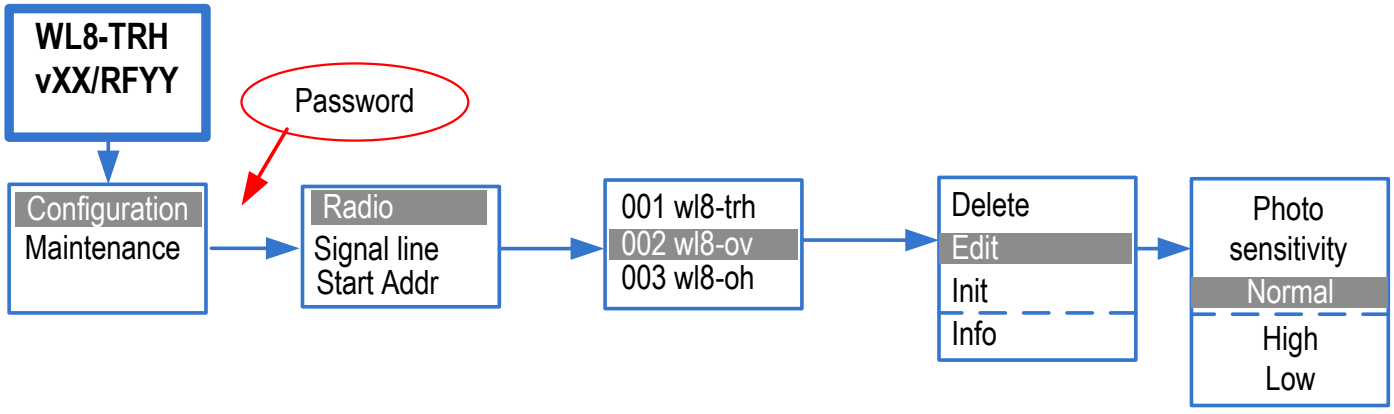
The device has a three-color LED which indicates the state according to the following rules.

LED indication	Device’s state
No indication or rare green flashes	Standby mode
Yellow flashes every 4 seconds	Fault state – malfunctioning smoke sensor
Red flashes every 2 seconds	Fire alarm

When the device power on, it begins an automatic calibration process, which lasts about a minute or less. This state is indicated with rare flashes of red LED.

SMOKE SENSITIVITY

In order to set smoke sensitivity level, you should do it in translator menu.



There are three sensitivity levels (High, Normal, Low) in depend on transparent air inside of room (e.g. dust, vapor). It may help to reduce probability of false alarm.

SYNCHRONIZATION

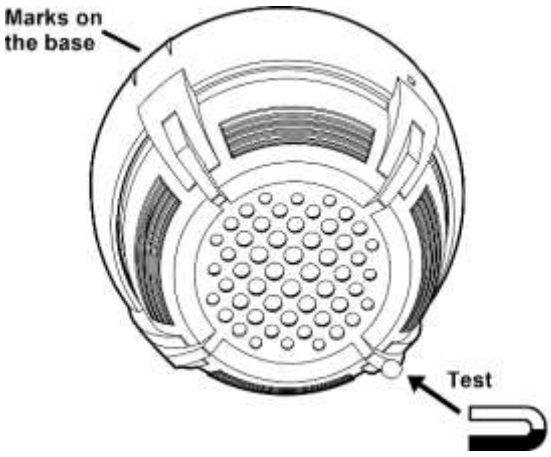
To indicate the direction of evacuation in the corridors the devices can be combined into a dynamic evacuation system. In this mode devices are installed one after another (maximum 16 pcs.). When system gets an activation command from control panel, the devices start reproducing speech (sound) information, and then, one after another, sequentially reproduce a short multi-frequency signal together with a light flash. The traveling light-sound "wave", created in this way, indicates the direction to a safe escape route.

NOTE After programming or power on the devices or translator it takes about 10 minutes to finish the synchronization.

Sound synchronization with other devices in the system is not worse than 50ms.

TESTING

A test alarm can be activated with a magnet by holding it for 1 second near the area on the opposite side of the marks on the detector's base.



ANALOG DATA

The device provides the translator module with analog data about the current smoke level, air temperature, dust in the chamber as well as voltage levels on its batteries. This information can be viewed in the "Streletz-Wizard" software.

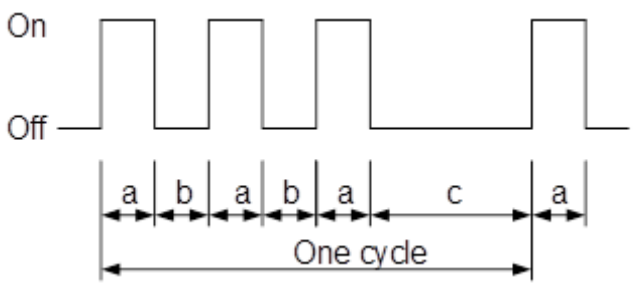
Sensor	Actuality	Primary supply	Standby supply	Temperature	Analog. type 1	An. value 1
147 WL8-OV	4' 56"	3,1 V (5)	3,1 V (5)	25 °C (13)	Smoke	17 (17)
148 WL8-OV	4' 56"	3,0 V (4)	3,1 V (5)	25 °C (13)	Smoke	20 (20)
149 WL8-OV	4' 56"	3,1 V (5)	3,1 V (5)	20 °C (12)	Smoke	20 (20)
150 WL8-OV	4' 56"	3,0 V (4)	3,1 V (5)	20 °C (12)	Smoke	20 (20)

By analyzing the voltage or dust levels, you can manage your maintenance procedures and predict when you will have to replace the batteries or clean the smoke detectors. Please refer to the software manual for full instructions on how to use the program for system maintenance.

SOUNDER

The **EK-WL8-OV/AU** sounder may generate three messages.

For normal operation it is necessary that the message number set in the translator and in the device match.

Mess.	**Pattern**
1	Pulse signal 2500 Hz (pattern **ISO 8201 Evacuate signal**)  Phase a: = Sine for 0.5±0.05s Phase b: = Silence for 0.5±0.05s Phase c: = Silence for 1.5±0.15s Total cycle to last 4.0±0.4s
2	Voice message 2 (Fire! Fire! Please leave the building by the nearest exit)
3	Voice message 3 (Fire! Fire! Please leave the building by the central exit)
Total duration of all messages up to 20 sec	

Voice sounders sequence and timing:

Sequence step	**Duration**
a) attention-drawing signal	2,5 s
b) silence	0,75 s
c) voice message (for message 2 and 3)	3,9 s
d) silence	0,85 s

NOTE All voice messages may be rerecorded by using "OrpheyRLib" special utility from "Streletz-Wizard" software and special tool (Programmer-PRO device, see STFV.425238.037-D5 EK-WL8-OV).

WARNINGS & LIMITATIONS

Devices use high quality electronic components and plastic materials that are highly resistant to environmental deterioration. However, after 10 years continuous operation it is advisable to replace them to reduce the risk of reduced performance caused by external factors. Ensure the devices are only used with compatible control panels. Detection systems must be checked, serviced and maintained on a regular basis to confirm correct operation.

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 covered by a 5-year limited warranty (does not apply to batteries). The warranty is voided by mechanical or electrical damage caused by incorrect handling or usage. Product should be returned via an authorized supplier for repair or replacement along with full information on the identified problem.

BATTERY REPLACEMENT

When a battery requires replacement, both batteries must be changed together.

a. Remove the detector from the base.
b. Clip off the battery cover and remove the batteries.
c. Insert the new batteries as detailed in the installation manual above – take care to observe + / - polarity.
d. Re-fit the battery cover and re-insert the detector into the base.
e. Test the detector in accordance with the manufacturer's instructions.

It is recommended to change both batteries after 10 years of operation despite of their indicated discharge level.

To replace the batteries, use Panasonic CR123A (primary and secondary batteries) or other with similar characteristics. The batteries must meet the following standards: UL 1642 lithium batteries, UL certified at www.ul.com or IEC 60086-4 Primary batteries, Part 4: Safety of lithium batteries.

The remaining shelf time of the new batteries must be not less than 8 years.

Failure to observe these instructions will void the device warranty and any liabilities.

CAUTION

- Replacement of a battery with an incorrect type can defeat a safeguard (for example, in the case of some lithium battery types).
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery can result in an explosion.
- Leaving a battery in an extremely high temperature surrounding environment can result in an explosion or the leakage of flammable liquid or gas.
- A battery subjected to extremely low air pressure may result in an explosion or the leakage of flammable liquid or gas.

DISPOSAL

- Follow local regulations regarding disposal of the batteries.

Angle	Minimal Sound pressure level, dB(A) for all supply voltages at 1 m
	Horizontal and vertical plane
15°	83
45°	88
75°	91
105°	91
135°	89
165°	90