

Pro wireless lighting control system

# ZigBee HA1.2 Emergency Converter



## Application

Emergency lighting LED driver for manual testing For  
LED module with a forward voltage of 3.0Vdc SELV for

Output voltage

3.6V HT-NI-CD battery

3-year guarantee (battery 1-year guarantee)

Wireless ZigBee emergency system



## Description

The series is maintained mode design, operate 220-240Vac input range, and provide constant current 450mA output. These units will provide 2W maximum output power at emergency mode. The system shift to emergency mode when the mains fails or the mains is less than 65% of rated voltage.

The Wireless ZigBee Emergency (WZE) system is designed to provide building owners and electrical contractors with a cost-effective and thorough means of managing emergency lighting.

## Technical Data

Parameters	AHEC921-Z-PRO
Rated supply voltage	220-240VAC
Mains frequency	50/ 60Hz
Mains input current, min	22mA
Mains input current, max	25mA
Input power in mains operation, min	4.5W
Input power in mains operation, max	5W
Battery charge time	24H
Ambient temperature $t_a$	0°C~45°C
Max. Casing temperature $t_c$	50°C
Type of protection	IP20

Note:

All specifications are typical on the 230VAC unless otherwise stated.

The emergency function test must be performed when a battery is fully charged for 24 hours.

## Battery Discharge & Charge Specification

Parameters	Min	type	Max
Battery discharge current	427mA	450mA	473mA
Output voltage	2.8VDC	-	3VDC
Output constant current	427mA	450mA	473mA
Emergency power	1.3W	-	1.8W

Note: Measured at 3.6V input from batteries.

Item Code	Batteries	Emergency	Emergency Duration	Change Current	Change Time
AHEC921	SC 3.6V/2000mAh HT-NI-CD battery	2W	3h	130mA±10%	24h

Note: All specifications are typical at 25°C unless otherwise stated.

## Service Life

Average life-time 50,000 hours under rated conditions with a failure rate of less than 10% for the emergency converter as rated power. Average failure rate of 0.2% per 1000 operating hours.

## Compliance

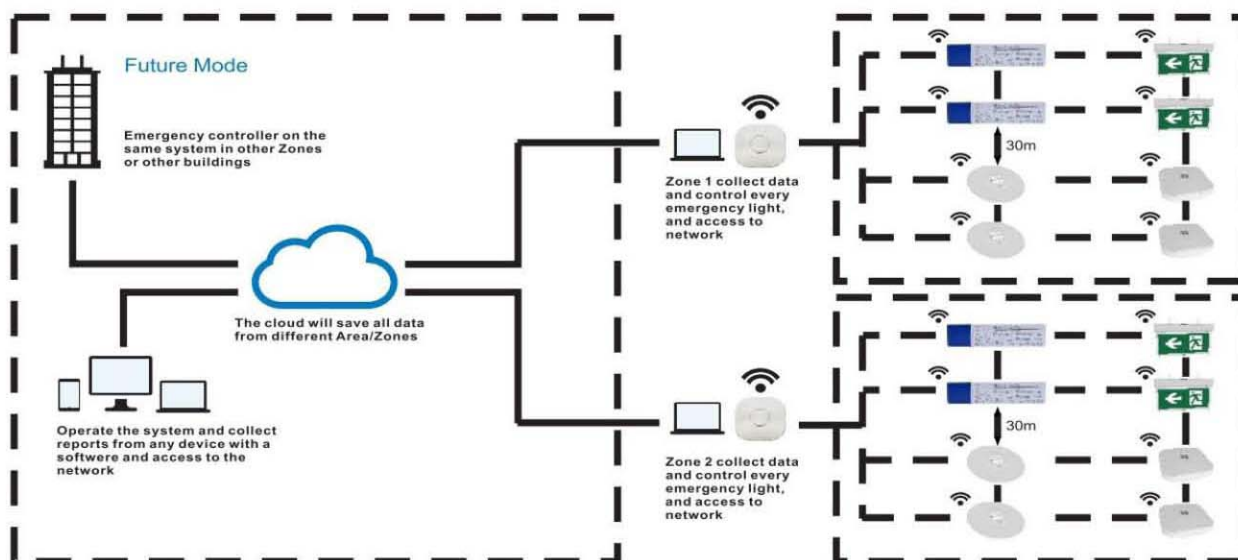
Safety Category	Countries	Standard
CE	Europe	EN61347-1, EN61347-2-7, EN61347-2-13

EMC Category	Countries	Standard
EMI	Europe	EN 55015
EMS	Europe	EN 61000-3-2, EN 61000-3-3, EN 61547

Rohs Compliance:

Our products comply with the European Directive 2011/ 65/ EU, calling for the elimination of lead and other hazardous substances from electronic products.

## Wireless ZigBee Emergency System





## 1. What is WZE system?

The WZE designed based on normal ZigBee wireless system, site terminal wireless management, analysis and compliance reporting on each emergency subsystem to the PC Terminal. Despite our connected world, the vast majority of new installs continue with manually tested fittings, wiring and paper-based compliance reports which are time-consuming, inefficient, often inaccurate and difficult to access. To overcome these issues, the WZE System brings automatic testing, your accurate site information will now be available when you want it.

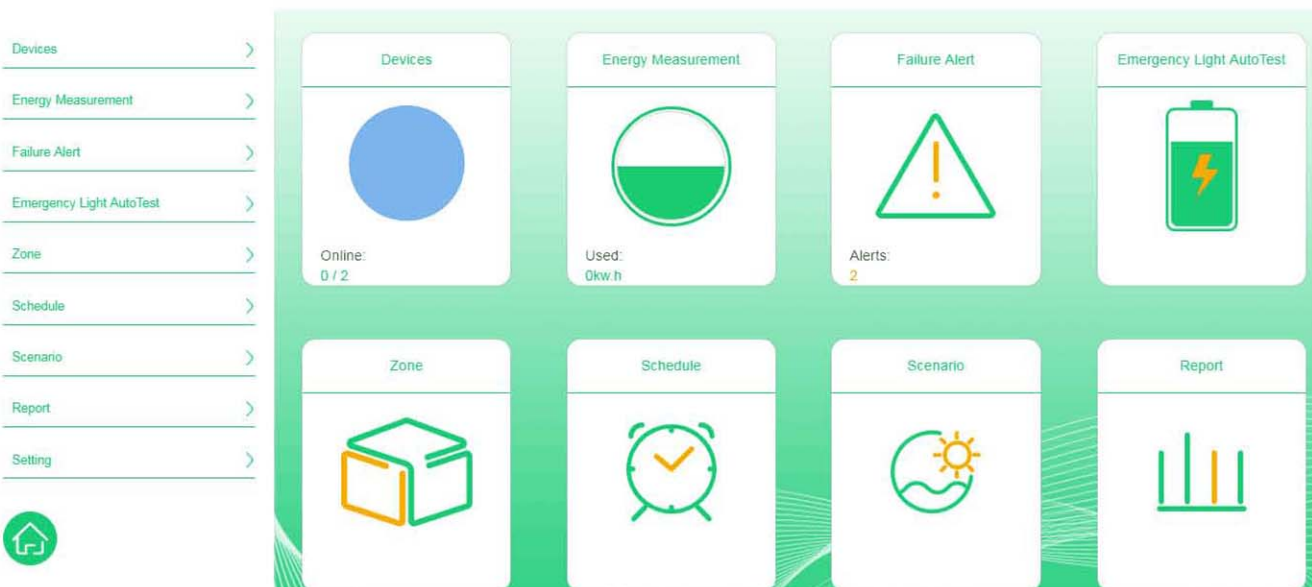
After we overcome the developing on the first generation WZE between the PC terminal and emergency subsystems, we will upgrade the system with the Internet, build the relevant database, and make a real big data analysis on the Internet of Things. Your accurate site information will now be available where you want it and when you want it.

## 2. Features

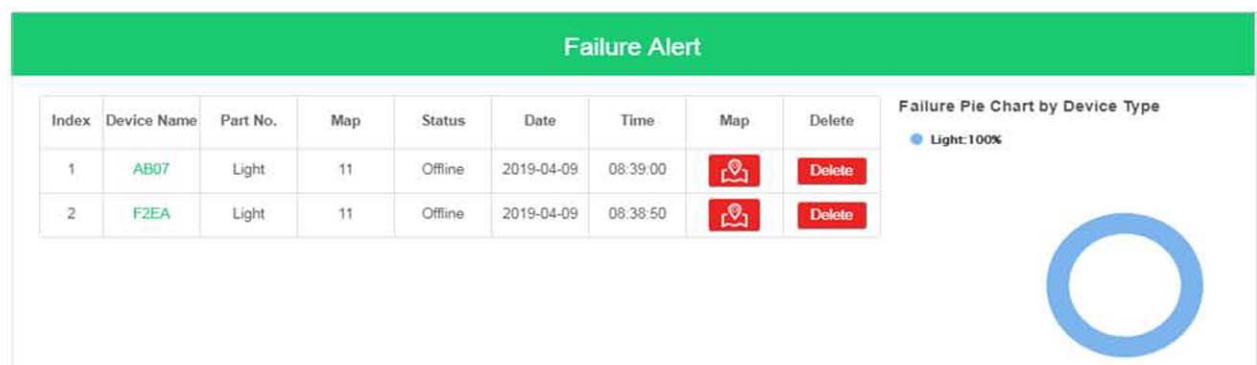
The WZE system is Collecting and controlling on each emergency lights, the status on each light will be should on PC terminal. According to En62034 emergency standard, you could set and adjust the testing time on function test and duration test by yourself. There will the following status be showed through the PC terminal.

## 3. Main interface

- 1) Online: The quantity on online facilities.
- 2) Energy Measurement.
- 3) Failure Alert: The quantity on failure warning, point of it, and the failure light will be showed.
- 4) Emergency Light Auto Test: Point of it, set the emergency time.
- 5) Zone: Import the CAD format file to the system, set the position on each light.
- 6) Schedule.
- 7) Scenario: Setting the different scene like the office or stairs.
- 8) Report: All testing results could be exported as a report.



Failure Alert interface: The failure comments and the position will be shown from such interface.



Emergency testing interface: The testing time on function and duration test could be set.

Emergency Light AutoTest

Please enter name of emergency light.

Time:

4/2019						
Sun.	Mon.	Tue.	Wed.	Thur.	Fri.	Sat.
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

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1200

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Functional detection ▼

Detection frequency: 7 Day

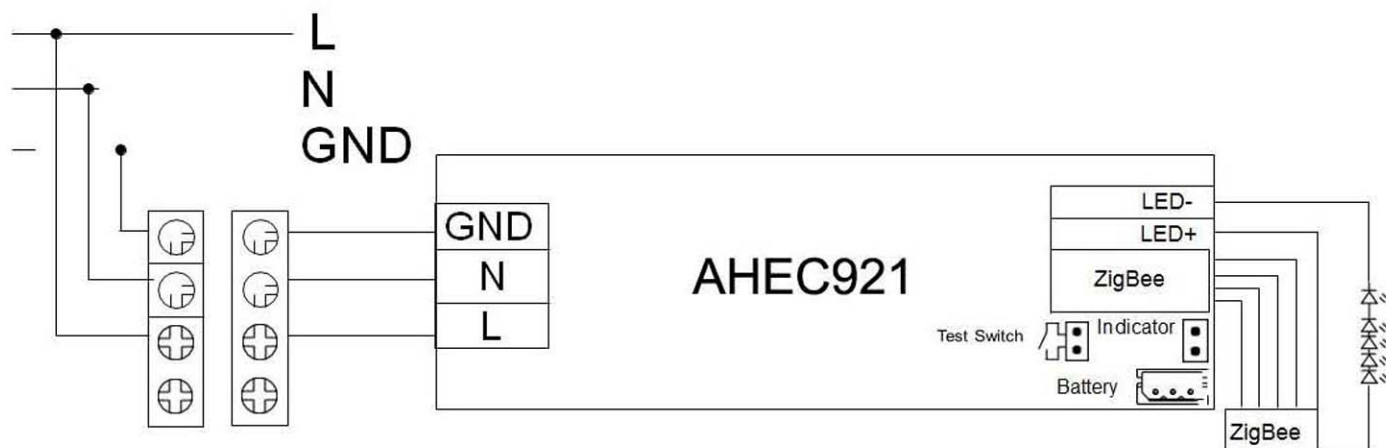
Select Device

Save

5

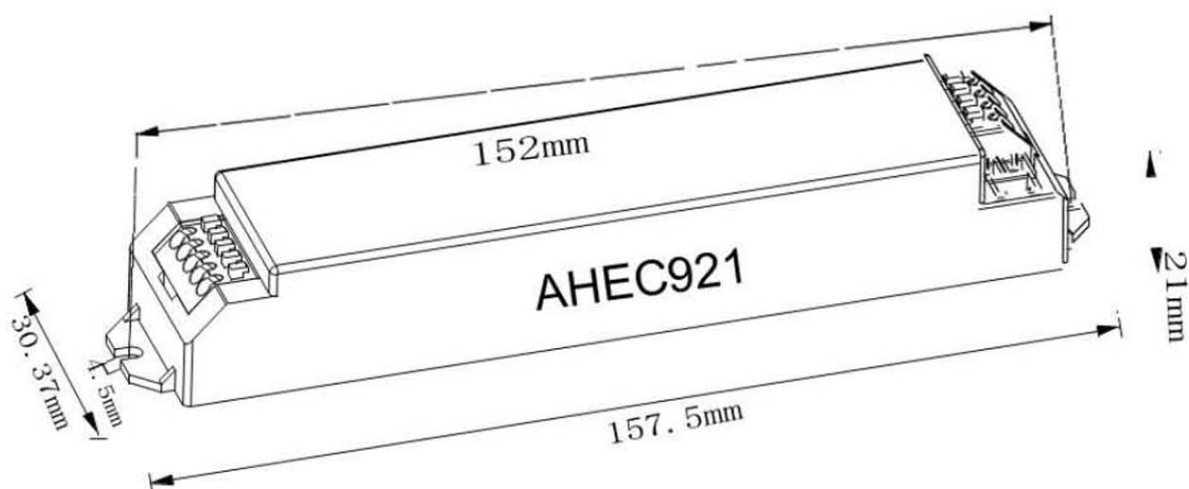
## Wiring Diagram

220- 240V 50-60HZ

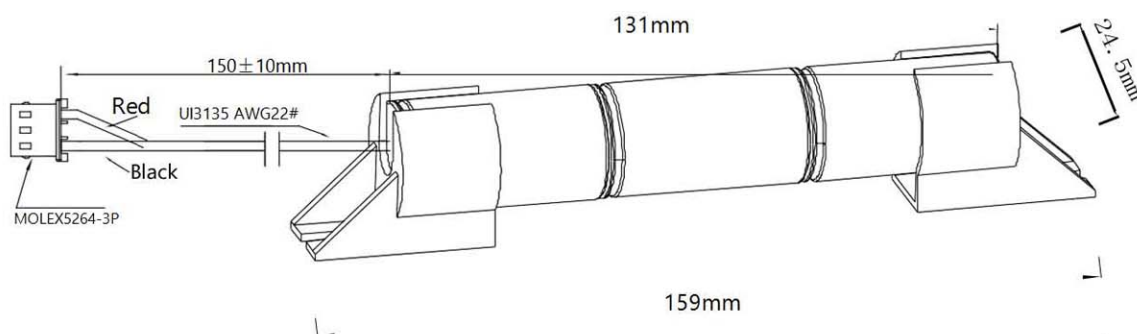


## Mechanical Outline

Unit: mm



## Battery Mechanical Outline



SC 3.6V/1800mAh HT-NI-CD (unit: mm)  
Spacing between mounting holes: 145-150mm

With the following cases, the indicator will be off

1. Mains power off, the light goes into emergency mode
2. Battery is disconnect when mains power on

## Battery

1. High-temperature grade battery cells
2. 3.6V HT-NI-CD battery
3. Male/female socket for simple connection

## HT-NI-CD Battery

Case temperature range to ensure 2 years design life	0°C to +50°C
Battery voltage	1.2V per cell
Capacity	SC 3.6V/2000mAh HT-NI-CD battery

### Storage

1. Batteries should be stored within the specified temperature range in low humidity conditions. Optimal storage conditions are:
  - Temperature: -20°C to +40°C
  - Humidity: 45% - 85%
2. Avoid atmosphere with corrosive gas
3. It is recommended to disconnect the battery before storage or delivery
4. Battery should be charged once in three months in order to keeping it in initial performance



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## ZigBee Module



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## Status Indication Green LED

A green LED indicates that charging current is flowing into the battery Plug connection 1.



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## Test Switch

For connection to the emergency lighting unit for checking the device function plug connection.

