

Designed for Industrial Safety



Explosion Proof Luminaires ES01 Series

Specsheet-2024-01 EN

VENAS
Venas International Co., Ltd



Used as Escape Route Sign Luminaires

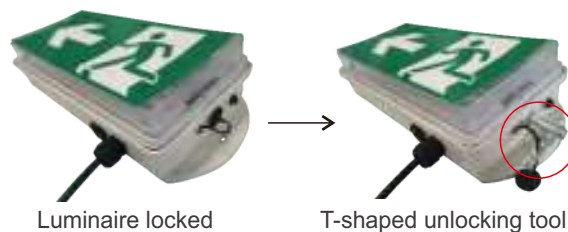
Used as Lighting Luminaires and
Emergency Lighting Luminaires

Product Description

The ES01 series explosion proof exit light is designed for use in locations deemed hazardous due to the presence of flammable vapors, gases or combustible dusts, while providing distinct, highly visible exit marking. It is suited for marking escape routes and exits in hazardous areas. It can be used as Lighting Luminaires, Emergency Lighting Luminaires, and Escape Route Sign Luminaires.

Features

- Emergency control power supply specially designed for the luminaire.
- Central locking available.
- 3-hour emergency operation.
- Various exit labels for choice, and the labels can be customized.
- Each lamp is equipped with a T-shaped unlocking tool that can be used for all lamps (see the below images).



Luminaire locked

T-shaped unlocking tool

Compliance

IECEx Standard:

Ex db eb mb q IIC T4/T5 Gb

Ex tb IIIC 80°C/90°C Db

ATEX Standard (Certificate: CML 23ATEX1091X):

II 2 G D

Ex db eb mb q IIC T5/T4 Gb

Ex tb IIIC T80°C/T90°C Db

Ta= -20°C to +35°C (T5/T80°C)

Ta = -20°C to +45°C (T4/T90°C)

CB

IP66

IK10

1000 hours salt spary



Application

- Power Plants
- Heavy Industrials Storage Facility
- Paper mills
- Wastewater Treatment Plants
- Chemical Processing Facility
- Petrochemical Processing Facility
- Metallurgical Industry
- Food and Alcohol industry

Warranty

- 3-year limited warranty.
- Except for the following circumstances:
 - Improper installation or operation.
 - Misuse.
 - Abuse
 - Unauthorized or improper repair alteration.
 - Accident or negligence in use, storage, transportation.
 - Any natural acts.



Technical Parameter

• Electrical

Specification	EX-**W ES01**
Product Type	Can be used as Lighting Luminaires, Emergency Lighting luminaires, and Escape Route Sign Luminaires
Rated Voltage	100-277Vac, 12-36Vdc, 50/60Hz
Rated Power	Regular wattage in normal mode: 3W

• Emergency Control Power Supply

Input Voltage	AC100-277V, 50/60Hz
Input Power	Max. 10W
Output Voltage	3Vdc
Emergency Time	3 hours
Response Time	<0.5 seconds
Charging Time*	≤ 24 hours
Battery	Lithium ion battery

* **Notice of Charging:** Quick charging for the first 2 hours to 20% to 80%, then followed by trickle charging to 80% to 100%. Once the battery level is below 100%, trickle charge comes in again.

• Optical

CCT*	2700K-7000K
Beam Angle	120°

* **Notice of CCT:** Only for use as Lighting Luminaires, Emergency Lighting luminaires, and Escape Route Sign Luminaires.

• Mechanical

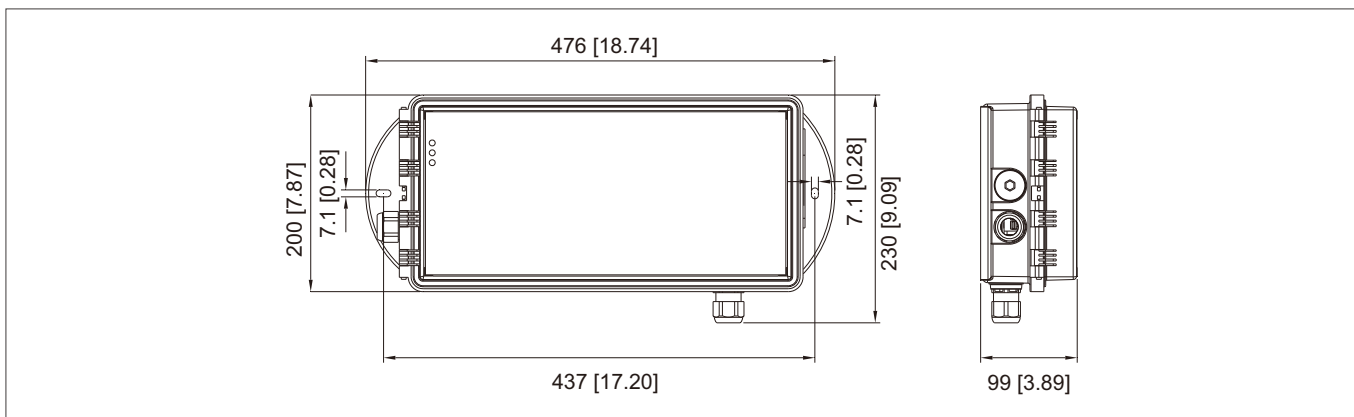
Housing Material	Glass Fiber Reinforced Polyester Resin
Cover	PC
Bearing	Stainless steel
Mounting Sling	Stainless steel
Cable Entry	M25×1.5, 3/4" NPT
Stopping Plug	M25×1.5
Installed Terminal Strip	PE + N + L
Connection Terminals Solid Max.	4mm ²
Connection Terminals Finely-stranded Max.	2.5mm ²
Lifespan	50,000 hours

• Environmental

Ambient Temperature	Explosive Gas Atmosphere Temperature Class	Explosive Dust Atmosphere Maximum Surface Temperature
-20°C to +35°C (-4°F to 95°F)	T5	T80°C
-20°C to +45°C (-4°F to 113°F)	T4	T90°C

Product Dimensions

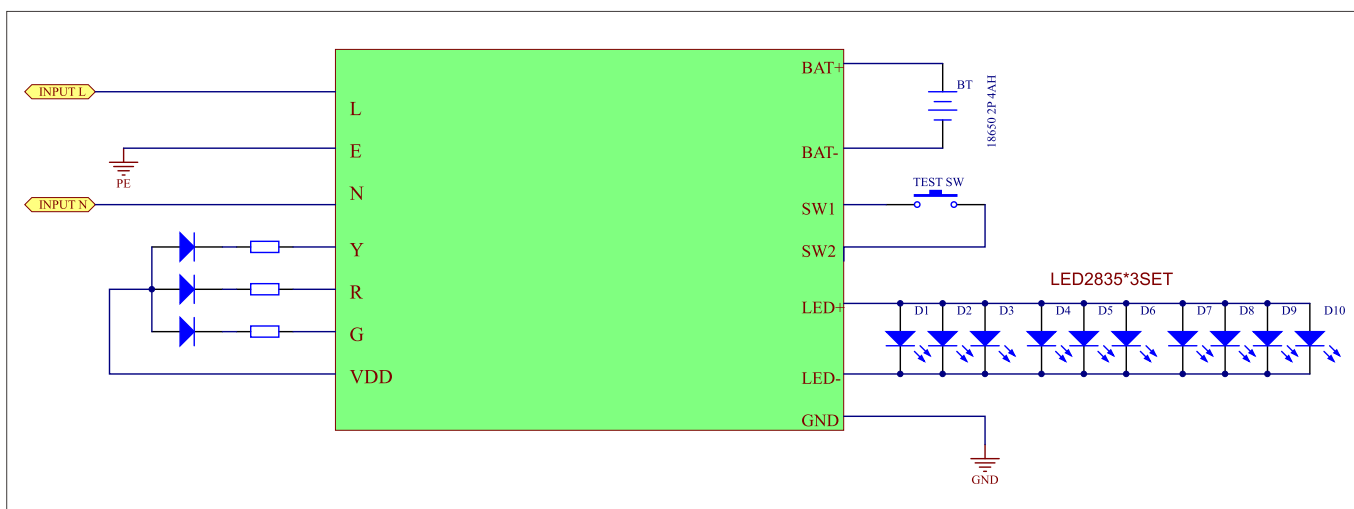
Unit: mm [inch]



• Packing Information

Model	Net Weight	Gross Weight	Quantity/ Carton	Package Dimensions (LxWxH)
ES01 (Escape Route Sign Luminaires)	4.32kg/ 9.52lb	5.00kg/ 11.02lb	1 pc	550x300x190mm/ 21.65x11.81x7.48inch
ES01 (Lighting Luminaires or Emergency Lighting Luminaires)	4.00kg/ 8.82lb	4.68kg/ 10.32lb	1 pc	550x300x190mm/ 21.65x11.81x7.48inch

Circuit Diagram



EMI & EMC Diagram

EMI & EMC Diagram (1):

Impact of the product on the grid

Conducted Emission Measurement

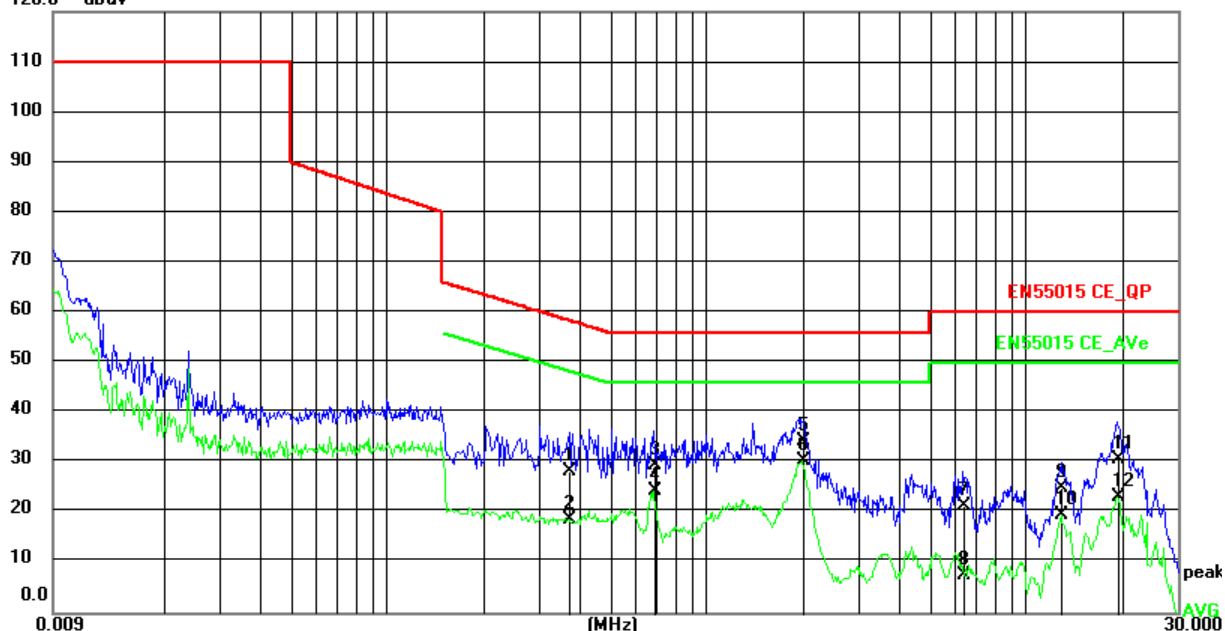
File: ES01

Data :#8

Date: 2022/7/4

Time: 16:21:55

120.0 dBuV



EMI & EMC Diagram (2):

Conducted Emission Measurement

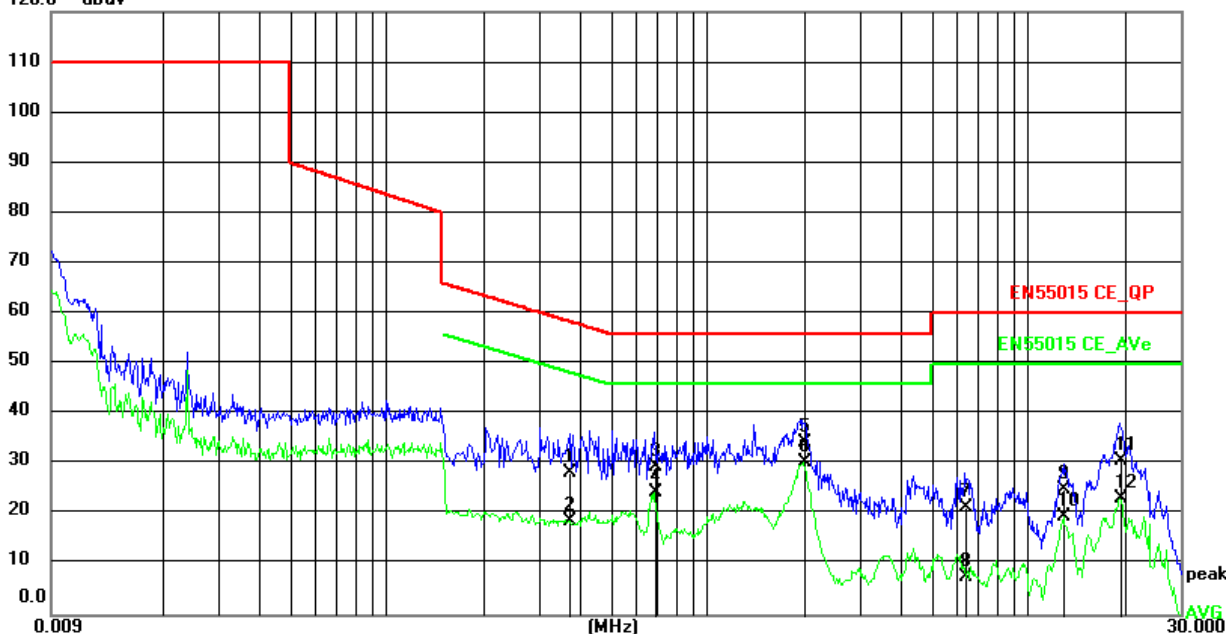
File: ES01

Data :#8

Date: 2022/7/4

Time: 16:21:55

120.0 dBuV



EMI & EMC Diagram

EMI & EMC Diagram (3):

Impact of the product on environmental location

Radiated Emission Measurement

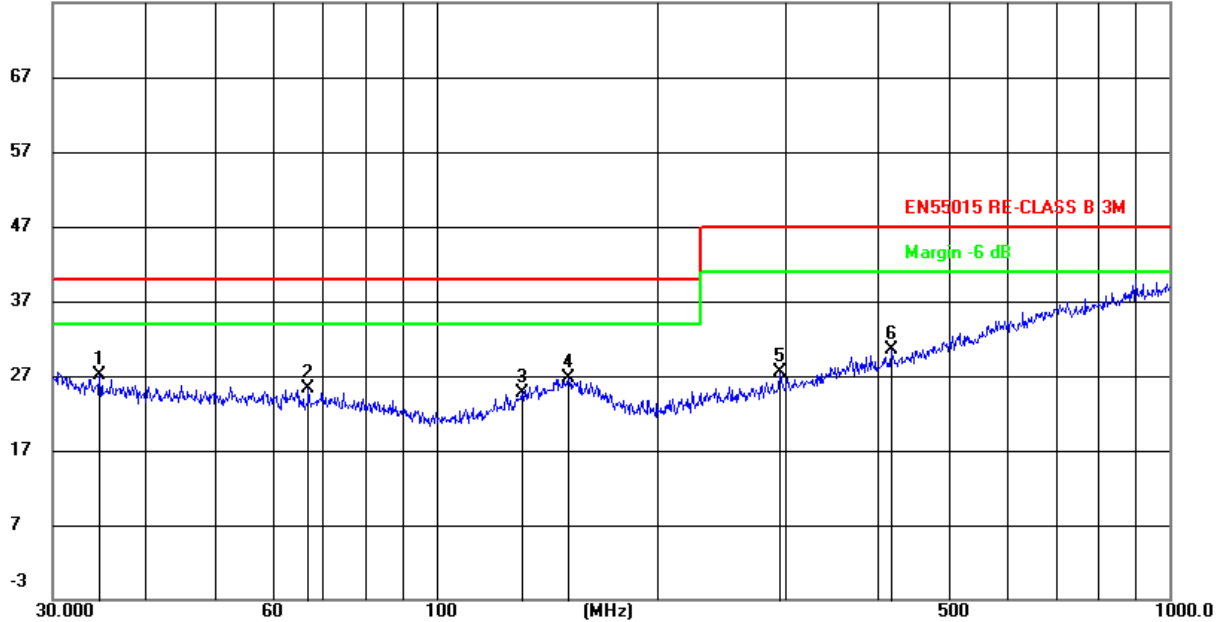
File: ES01

Data :#19

Date: 2022/7/4

Time: 16:46:35

77.0 dBuV/m



Ordering Guide

EX - **W ES01 * *

1
2
3
4
5

1. Product Categories

"EX" means explosion proof product

2. Luminaire Rated Wattage

1W to 10W.

The rated power is a multiple of 0.5, with a minimum of 1W and a maximum of 10W.

Escape route sign luminaires: Max. 10W

Emergency lighting luminaires and Lighting luminaires: Max. 10W

3. Type Series

"ES01" designates type series.

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(1) When the luminaires do not have a battery, the main function is lighting, and its value is "N".

(2) When the luminaires have its own battery and its main function is emergency lighting, its value is "Y".

(3) When the lamp is an emergency escape route sign luminaire, its value is "A" to "X". See the Table 1 in next page for details.


















5. Color Temperature Optional

Can be 27 to 70 denotes 2700K to 7000K, and each 100K gradually increase, max 7000K.

Note: Escape route sign luminaires do not have this option.

Ordering Guide

Table 1

No.	Model	Meaning	Pattern
1	EX-*W ES01N*	"N" means that the main function is lighting when the luminaires do not have a battery.	
2	EX-*W ES01Y*	"Y" means that the main function is emergency lighting when the luminaires do have its own battery.	
3	EX-*W ES01A	Exit	
4	EX-*W ES01B	Left and Human logo	
5	EX-*W ES01C	Up and Human logo	
6	EX-*W ES01D	Right and Human logo	
7	EX-*W ES01E	Down and Human logo	
8	EX-*W ES01F	Top-left and Human logo	
9	EX-*W ES01G	Bottom-left and Human logo	
10	EX-*W ES01H	Upper-right and Human logo	
11	EX-*W ES01I	Bottom-right and Human logo	
12	EX-*W ES01J	Exit and right and Human logo	
13	EX-*W ES01K	Exit and left and Human logo	
14	EX-*W ES01L	Exit with Arabic and Human logo	
15	EX-*W ES01M	Exit with Arabic	
16	EX-*W ES01N	Right and Human logo and exit with Chinese	
17	EX-*W ES01O	Left and Human logo and exit with Chinese	
18	EX-*W ES01P to X	Pattern can be customized according to user needs. When ordering, please provide the requirements of local laws and regulations.	

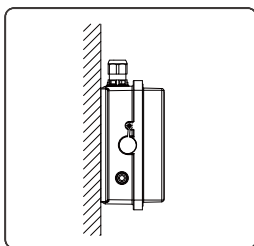
Installation Instruction



CAUTION: Before installation, make sure the AC power is off.

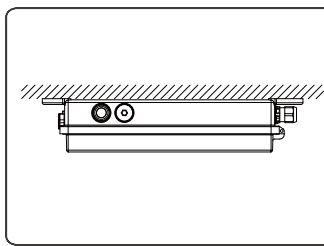
- Any installation and maintenance need to be operated by a licensed electrician.
- Please check and confirm all the data and usage surrounding before installation.
- It's OK to install the product in damp or wet location.
- Please charge the battery consistently for more than 24 hours for the first time usage so as to activate the whole battery cells of discharging/charging duration.
- Please do not dismount, change or replace any inside parts. Any difficulties in the process of installation, contact our local distributors or us directly.
- Explosion proof cable introduction device or explosion proof metal conduit should be used in the process of installation and maintenance, its IP rating and explosive-proof grading should not be lower than the standard indicated on this product label.
- Do not install this product on an incomplete or easy-to-damage surface.
- Overload is strictly prohibited in use.
- For installation or maintenance, please cut off power supply and don't open the enclosure in the explosive atmosphere. Before turn it on, confirm the light source and electrical installation are correctly connected.
- No matter what circumstances, LED Luminaires can't be covered by thermal insulation material, or similar materials.
- In the event of an accident, please turn off the power and contact your local distributor timely.

• Option 1: Wall Mounting



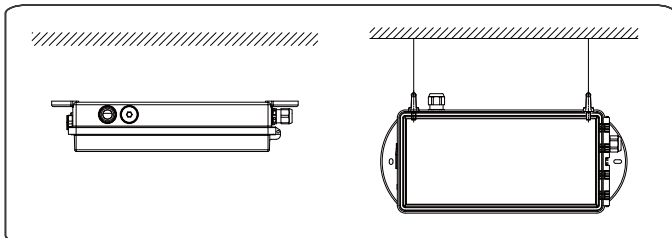
Open the cover by turning the regular hexagon spanner counterclockwise. Then connect the wire, fix the fixture to the wall.

• Option 2: Ceiling Mounting



Fix the fixture to the ceiling through the two mounting holes on the fixture.

• Option 3: Pendant Mounting



Connect the two pendant strings with the fixture, then fix it on the ceiling.

Maintenance

- Please check the emergency function with the push test button.
- Battery capacity is more than 60% when factory deliver goods, so it could be consistently stocked for maximum 12 months.
- The LED circuit board and driver are not replaceable on site.
- Users are not suggested replacing the batteries by themselves. If needed, please use the nominated batteries pack by the manufacturer and contact with us for the instructions of maintenance.