ELECTRIO
ELEKTRONIK

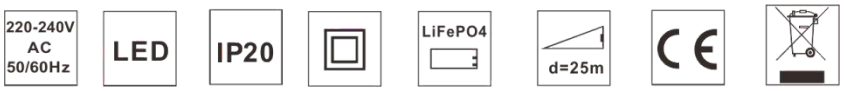
LED EMERGENCY EXIT SIGN
LUMICON

Features

- Economical escape sign products
- Emergency lighting LED escape sign with DALI-2 interface and automatic testing function
- Various legends in compliance with ISO3864-Parts 1&3&4
- PET directional film can be replaced as required
- Visual Distance 30M
- LiFePO4 batteries are designed to be replaceable
- Very low stand-by power loss
- 6 in 1 installation mode
- Polycarbonate white RAL9016
- Colour temperature：5700-6500K
- 5 years guarantee electronic

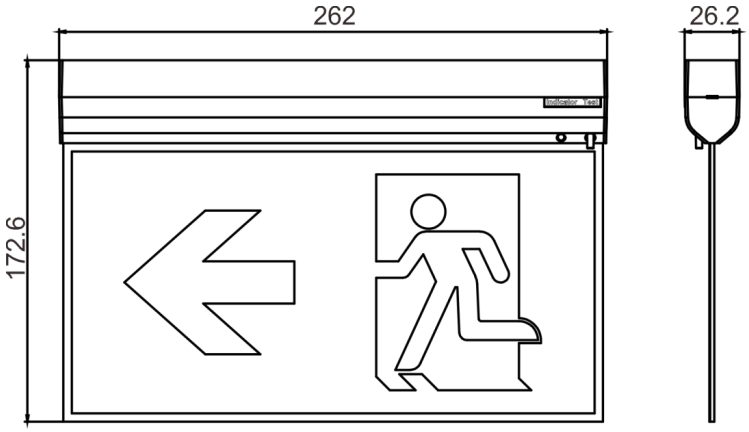
Functions

- Emergency state, with the function of switching test line
- Maintained and Non-maintained mode
- DALI-2 automatic testing function
- Electronic charge system
- Deep discharge protection
- Polarity reversal protection for battery
- After the battery is fully charged,in order for the luminaire to provide at least 50%of its rated duration of emergency operation,
- when in rest mode,it can hold for three day



Dimensions

Unit: mm



Item Code	Carton size	QTY	Weight per pc.
LMCN	481*295*235	18PCS	217g

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Technical Data

Rated supply voltage	220-240VAC
AC voltage range	144-187VAC
Mains frequency	50/60Hz
Power factor	≥0.35
Starting time	1s
Ambient temperature ta	5-45℃
IP rating	IP20
In-rush current	3.5A
In-rush current duration	4ms
Mains surge capability (between L – N)	1KV
CCT	5700-6500K

Item Code	Typical output emergency power	Mains input current, min	Mains input current, max	Input power in mains operation, min	Input power in mains operation, max
LMCN-M1N1WBS/ST (Maintained)	0.3W	11mA	25mA	1W	2W
LMCN-MN1WBS/ST (Non-maintained)		6mA	13mA	0.3W	1W

Item Code	LED module forward voltage range Min-Typ-Max	LED module forward current range Min-Typ-Max	LED module forward power range Min-Typ-Max	Visual Distance	Test Line	Self-test
LMCN-MN1WBS-3H-LI	2.4-2.6-2.8V	90-100-110mA	0.2-0.27-0.3W	25m	○	○
LMCN-MN1W(L)BS-3H-LI					●	
LMCN-MN1WST-3H-LI					○	●
LMCN-MN1W(L)ST-3H-LI					●	

Note:

1.All specifications are typical at 25°C unless otherwise stated.
2.All specifications are typical on the 230VAC unless otherwise stated.
3.○Means “No”. ●Means "Yes".

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Testing/Commissioning(self test)

Functionality of the test button
1) A short press (>1s) on the button start a function test lasting 5 seconds (The battery's capacity should be more than 5%=charging 30mins
2)Holding down the button(>10s) resets the timer(System-reset)

Function test
The 5 second long, each 7 days' function test serves to check the functionality of the emergency unit, the batteries and LED module.

Duration test(Europe)
-First test: After 24 hours of AC mains power input, the emergency lighting unit will enter into a 3-hour duration test.
-Half year duration test: Conduct 3-hour duration test every 180-182 days to check the battery capacity.

Duration test(Europe)
-First time test: After 16 hours of AC mains power input, the emergency lighting unit will enter into a 2-hour duration test.
-Half year duration test: The test will be carried out on each 180-182days to check the capacity of batteries. The 2-hour duration test will be carried out at the first time; 1.5-hour duration test will be carried out in the following duration tests.

Notice.
-A function test&duration test shall only be started when the battery supply is fully charge if a mains supply failure occurs while a function test& duration test is in progress, the test shall be postponed and the system shall enter emergency operation. Following restoration of the mains supply , a postponed duration test shall re-commence automatically when the battery supply is fully re-charge,function test bettery≥3V,duration test bettery ≥3.55V
-The indicator will be slow flashing Green within 5 days if the duration test be carried out successfully.

Indicator LED System status is locally by a bi-color indicator LED

LED Indication	Status	Description
Permanent Green	Standby ,System OK	Mains Operation ,battery is charged
Fast flashing Green （0.25s on 0.25s off）	Function test underway	Function test underway
Slow flashing Green (1s on 1s off)	Duration test underway	Duration test underway
Permanent Red	Lamp failure	Open Circuit or Short circuit or LED failure
Fast flashing Red (0 .25s on 0 .25s off)	Battery capacity failure	Battery failed duration test
Slow flashing Red (1s on 1s off)	Battery fault	Incorrect battery voltage or Short circuit or Open Circuit
Green and Red off	Battery Operation	Emergency mode:Mains disconnected or Mains failure
Slow flashing Red (1s on 3s off)	Battery temperature error	When power on and battery temperature is above 55(+2)℃ or below 0(+2)℃

Notice
Fault status:
If an error is detected, the indicator LED switches to RED. If the error has been corrected please re-connecting the battery after the mains power off, the indicator LED immediately switches back to GREEN when mains power on.

Notice
Battery failed duration test:
After an exchange of the battery and holding down the button(>10S) reset the timer, the indicator LED switches to GREEN.

Note:

Instructions for entering the life inspection for the first time:
1.After the first power on, continuous charging for 24 hours will enter the first inspection. If additional operations are performed during the continuous charging process, it will cause a deviation in the time to enter the first inspection.
2. When there is a deviation in the initial inspection time, the reset operation can be selected to reset (the AC switch can be turned on and off three times continuously, and the fourth power on is sufficient. The complete reset process needs to be completed within 20 seconds). After the reset is completed, continue charging for 24 hours to enter the initial inspection.
3.When the standard model is powered on and the battery temperature is above 55(±2)°C or below 0(+2)°C, the indicator status is green off.

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Mounting Options

•Ceiling mounted	•Wall mounted
	
•Recessed mounted	•Suspended mounted
	
•Perpendicular mounted	•Parallel mounted
	

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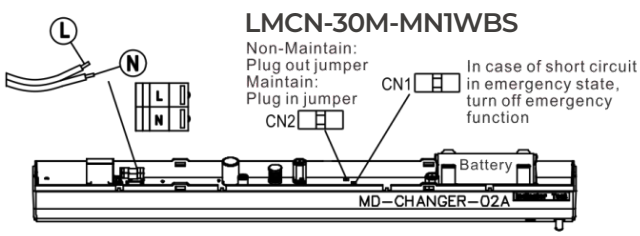
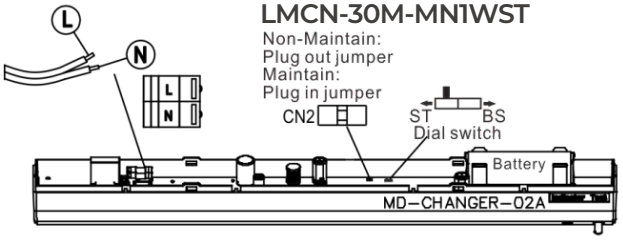
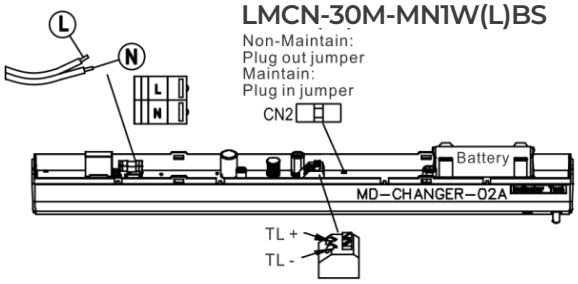
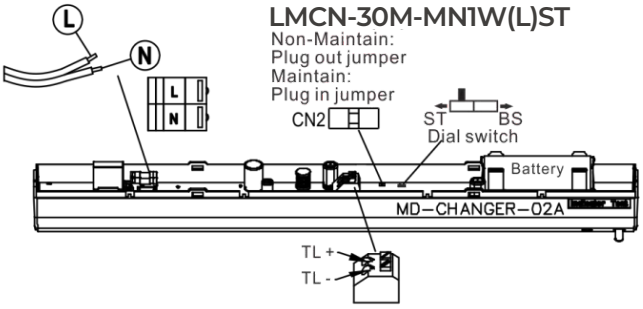
Wiring Diagram









Notice.
Step "1":Insert AC wires into the connector shown by the arrow.
Step "2":Insert the plug with the AC wires cord into the socket as shown by the arrow.

Function switching:
Step 1: According to the diagram, switch the BS/ST function by the dial switch.
Step 2: Turn to the left and switch the function to self-test version (ST).
Step 3: Turn to the right and switch the function to standard version (BS).

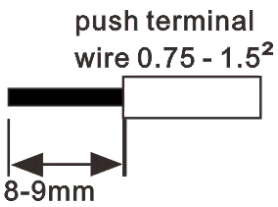
Note:
1.Please noted that only the self-test version product can switch functions by the dial switch, which is not available for the standard version.
2.Please noted that functions switching by dial switch would only be available when all the wiring is disconnected, including the AC input, DC output and the battery.

Turn off emergency function:
CN1 purpose: In case of short circuit in emergency state, turn off emergency function

Note:
1. Please note that products with self-test and Test Line functions do not have this feature.
2. Please note that when the AC input is disconnected, the emergency light is turned off by short circuiting through CN1.

For CN2 connector:
1.Non-Maintain:Plug out jumper
2.Maintain:Plug in jumper

Requirements for wiring wires:
1.Wire diameter range: 0.75-1.5 square millimeters;



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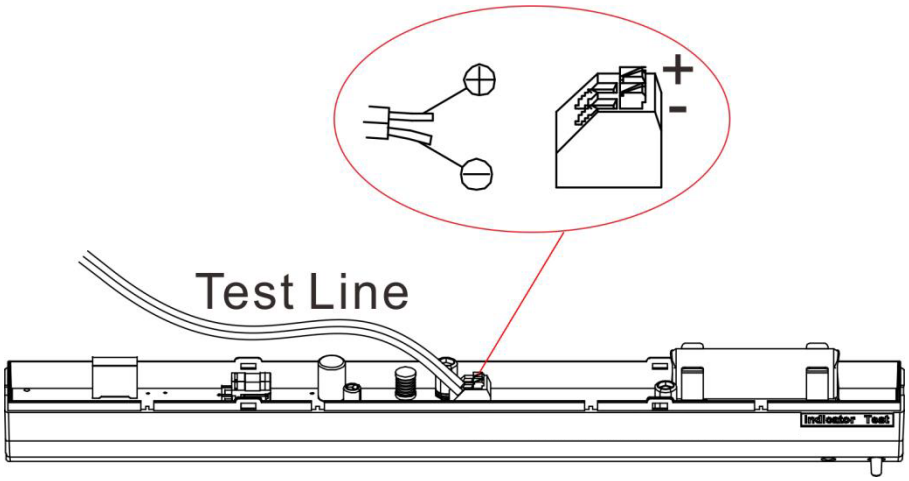
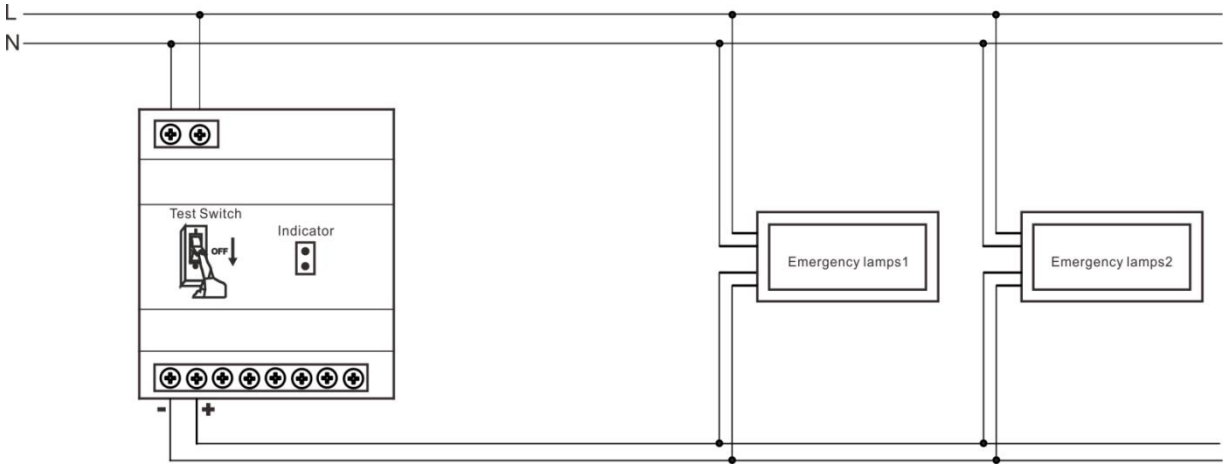
Test Line





It has the function of connecting remote control, which is used to remotely manage the emergency lamps of the remote control device in the rest mode.

Wiring Diagram

Functions of remote control device:
In the emergency system with autonomous lighting body, the suppression circuit is an auxiliary circuit that allows the lamps to be turned off in the emergency operation device.
During the test, the simulated emergency mode is activated to check the function of the lamp and correct any faults.
In large or complex factories / shopping malls, it is particularly difficult to solve the inhibition problem according to the regulations. In fact, if you want to turn on or off the circuit to suppress the lamp, the solution can only be implemented near the lamp body. This is to prevent accidental reasons (drilling, masonry, etc.) or catastrophic events (earthquake, fire, etc.) from interrupting or short circuiting the suppression cable, resulting in the lack of emergency intervention when needed.

Using the remote control can solve the following problems:
1. It will send out a pulse that is remembered by the device. After this moment, this line will no longer suppress any influence;
2.When the lighting power is restored, the lamp will automatically restore the emergency preparedness state and forget the prohibition command, thus avoiding the risk that the operator forgets to reset, which may be achieved in the prohibition of manual switch.

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Battery Data

Emergency power	Batteries	Battery fully charged time	Charge Current	Battery discharge voltage	Battery discharge current	Battery output power	Emergency Duration
1W	14500/3.2V/600mAh LiFePO4	24h	45mA±20%	2.75-3.2-3.6V	90-100-110mA	0.25-0.35-0.4W	3h

Note.
Automatically charge when the voltage of a single battery drops below 3.4V. When the voltage of a single battery exceeds 3.6V, the charger turns off (0mA).
If the battery temperature is above 55（± 2°C）or below 0（+2°C）, the battery will stop charging.
The emergency lighting LED driver will recharge the battery normally after running the test of 61347-2-7 CL22.3 (abnormal operating conditions).
When the voltage of a single battery is below min 2.6 V, the battery will not enter an emergency state.
The minimum charging environment temperature of the battery is 5°C , to ensure that the battery can be charged.

Capacity	0.6 Ah
International designation	IFpR 14/50
Battery voltage/cell	3.2V
Cell type	14500
Case temperature range to ensure	
4 years design life	+5°Cto+55°C
5 years design life	+5°Cto+45°C
6 years design life	+5°Cto+35°C
Max. short term battery case temperature (shorter than 1 month over the battery lifetime)	70°C
Max. number discharge cycles	50 cycles total
Max. storage time	6 months

Notice: Storage condition
Batteries should be stored within the specified temperature range in low humidity conditions.
Optimal storage conditions are
- Temperature:-20℃ to +40℃
- Humidity: 45%- 85%
Avoid atmosphere with corrosive gas
It is recommended to disconnect the battery before storage or delivery
Battery should be charged every three months in order to keep it's initial performance

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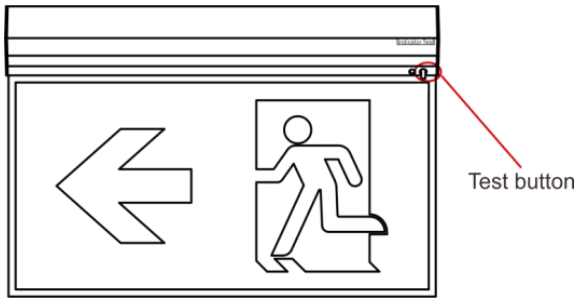
Test Button



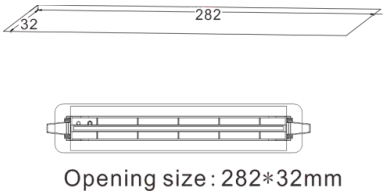
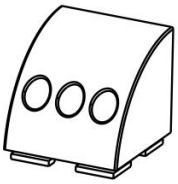
Test button:
When 220VAC is powered on, press this button, the standard product will enter an emergency state, the self test product will enter a functional test for 5 seconds, and the self test product will reset after holding for 10 seconds.

Standard

This product meets the following standards:

- EN IEC60598-1
- EN IEC60598-2-1
- EN IEC60598-2-22
- ISO3864-Parts 1&3&4
- EN IEC61347-1
- EN IEC61347-2-7
- EN IEC61347-2-13
- EN 61000-3-2
- EN 61000-3-3
- EN 61547
- EN 62034
- EN 55015
- ROHS 2.0
- DALI standard EN 62386-202

Mounting Accessories

Item Code	Evacuation direction sign	Embedded	Sling	Wall mounted
Accessories' Images		 Opening size: 282*32mm	 Length:1.5m	

Note:
1. Before using PET directional film, tear off the protective film and use it.
2. The product can be installed in a variety of ways through the installation of accessories.

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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.

Important

The electric source for safety service is not a user serviceable item and shall only be replaced by the manufacturer service agent or a similar qualified person.

When the lamp reaches the rated life, the whole lamp needs to be replaced.

The company accept no responsibility for incorrect installation, incorrect operation or improper maintenance.

After installation of the fitting, the battery must be charged for 24 hours for duration test.

The recharging device will recharge the battery ESSS normally after removal the short circuit link and reconnecting the ESSS.

Double or recinforce insulation between supply and battery/ESS circuits and based on a working voltage of 250V;