SHINZ®

Innovating Future

EL-T

Self-Contained Emergency Luminaires

MODEL
SE-10ST / SE-10RST

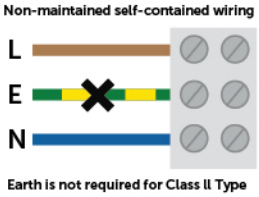
2 IN 1 S-T

OPERATION MANUAL

BEFORE YOU BEGIN
Read this instructions completely and carefully.

WARNING / COMMERCIAL EMERGENCY KELUAR SIGN INSTALLATION GUIDE

- Equipment should be mounted in locations and at heights where it will not be subject to tampering by unauthorized personnel.
- Do not use outdoors.
- Do not mount near gas or electric heaters.
- Read all product labels and instructions before installing fixture.
- The use of accessory equipment that is not recommended by the manufacturer may cause an unsafe condition.
- Servicing of this equipment should be performed by qualified personnel and do not use this equipment for other than its intended use.
- To prevent wiring damage or abrasion , do not expose wiring to edges of sheet metal or other sharp objects.
- Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation.
- Installation should only be performed after power to the fixture has been disconnected.



Non- maintained luminaires activate only on failure of the local mains supply and require connection to permanent live , earth and neutral.

Lamp is OFF and battery is on automatic charging mode
(with Red Led "ON" indication) when A.C. power is supply.

Lamp is ON automatically when the A.C. power supply is interrupted.

Product Informations

MODEL	DESCRIPTIONS	INPUT VOLTAGE	INPUT WATTAGE	INPUT CURRENT	FREQUENCY	TEMPERATURE	POWER FACTOR	IP
SE-10ST (B)	SURFACED EL- BEIGE	AC240V	1.6W	0.01A	50Hz	ta 35°C	0.8	20
SE-10ST (BL)	SURFACED EL- BLACK							
SE-10ST (W)	SURFACED EL- WHITE							
SE-10RST (B)	RECESSED EL- BEIGE							
SE-10RST (BL)	RECESSED EL- BLACK							
SE-10RST (W)	RECESSED EL- WHITE							

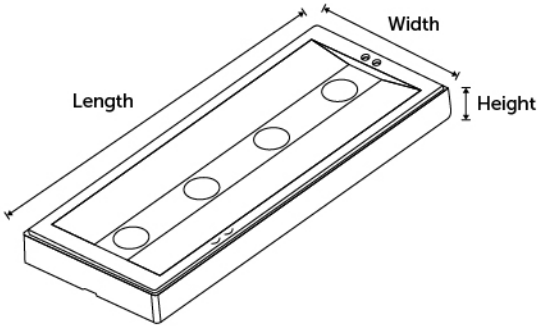
Product Dimensions

DESCRIPTIONS	LENGTH	HEIGHT	WIDTH
SURFACED	215 MM	28 MM	88 MM
RECESSED	240 MM	30 MM	113 MM

PRODUCT ACCESSORIES

PIPE CONNECTOR
BASED PADS
RECESSED PLATE

SE-10ST



SE-10RST

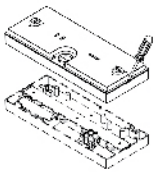
RECESSED PLATE

PIPE CONNECTOR

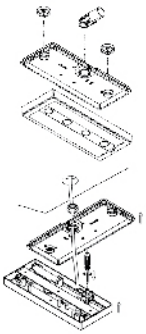
BASED PADS

INSTALLATIONS GUIDE - SURFACED

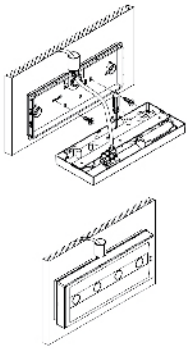
STEP 1



STEP 2



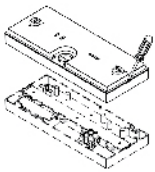
STEP 3



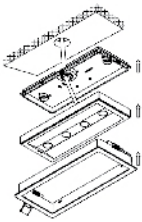
NOTE : Make sure the POWER IS TURNED OFF at the source to the location in which you are installing the product.

INSTALLATIONS GUIDE - RECESSED

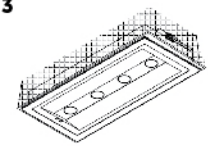
STEP 1



STEP 2



STEP 3



NOTE : Make sure the POWER IS TURNED OFF at the source to the location in which you are installing the product.

SHINZ SELF-TEST

What is Self-Test?

Shinz Self-Test feature is a built-in function to perform periodical (monthly & yearly) tests on our products to ensure optimal operational performance. Typical emergency lights and keluar signs requires manual tests to determine whether the units are still functioning according to requirements and Shinz Self-Test models is designed to address this shortcoming. This function requires minimal user actions and will start to run once installation is completed.

There will be 2 tests being performed and they are the monthly and yearly tests. The monthly test will check basic functionality and will take about 30 second to complete to minimize interruption to work place. The yearly test is performed to determine whether the unit's battery can provide enough charge for a minimum of ~90 minutes as required by authority.

Monthly Functional Test

Once the unit's battery is fully charged and remains energized for more than 48 hours, the unit will perform the 1st Monthly Functional Test after 30±2 days from that date.

The basic functions below are tested to ensure the proper operation of the device.
• *Charger* • *Light source* • *Switch over control*

During the test:
The LED indicator (RED) will flash at 1Hz and the test will take approximately 30s.
If a fault is detected the LED indicator (Green) will flash at 3Hz. (Refer to Led status indication table)

Yearly Duration Test

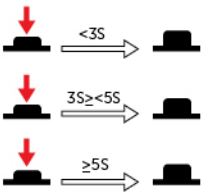
The unit will perform the Yearly Duration test at the 12th cycle to determine the charge storing capability of the battery. The unit will disconnect mains and enter into emergency mode where the battery is discharged. The test will take ~90 minutes to ensure that the battery can support the system for the required duration.

The basic functions below are tested to ensure the proper operation of the device.
• *Battery*

During the test:
The indicator LED (RED) will flash at 3Hz during the test which is programmed to take ~90 minutes.
If a fault is detected the LED indicator (Green) will flash at 1Hz. (Refer to Led status indication table)

Manually Triggering The Test

Using the built-in RED test-switch, the user can initiate the tests following the instructions below.



- This will simulate a mains failure to check whether the unit will switch over to the battery and the light source will illuminate.
- The system will initiate the Monthly Functional Test to check the light source, charger and switch-over circuit. The test will take about 30 seconds.
- The system will initiate the Yearly Duration test, the battery will be discharged for about ~90 minutes to determine the condition of the battery. Any unit that extinguish before the end of the test duration will indicate a weak/worn out battery.

This enables maintenance crew / local authorities to initiate a functional test (described above) to ensure the tested units are functioning properly.

STATUS INDICATIONS

LED Indication	LED Figure	Status
Permanent On		Charging or Standby - AC mode
Red LED Flashing @1Hz		Monthly **Functional** Test activated and take around 30sec. to complete .
Red LED Flashing @3Hz		Yearly **Duration** Test activated and take around ~90 minutes. to complete .
Green LED Flashing @1Hz		Battery and Charging Circuit Fault.
Green LED Flashing @3Hz		Light Source or Monthly test fail

Note :
The Yearly Duration Test is a partial discharge test to determine the condition of the battery and therefore the test duration is set at ~90 minutes. If the duration test fails a proper test and inspection shall be conducted by the maintenance personnel.

ESCAPE ROUTE

Emergency escape routes, intersections of corridors and exits doors requiring illumination must be provided with emergency lighting of adequate intensity in case the lighting fails.

SIGNAGE

Adequate provision of signs protected by emergency lighting. Signs should be located at all final exits and also on the escape routes at any location where the route may be in doubt.

POINTS OF EMPHASIS

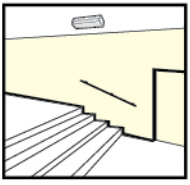
Point of Emphasis is known for locating luminaires correctly to reveal specific hazards and highlight safety equipment and signs. Whether it is for an emergency escape route , open area (anti-panic) or hazardous area.

It is necessary to identify and needed to be highlighted to ensure people do not trip or fall during evacuation.

Luminaires identified and locating at points of emphasis should be positioned close by within ***2 meter measured*** **horizontally**.

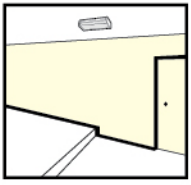
The design standards must also take into account the type of luminaire needed and its light output according to EN1838:2003 , MS IEC 60598-2-22.

At every exit door planned to be used in an emergency.

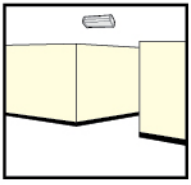


Near the stairs so that each step receives direct light.

Near every first-aid zone.



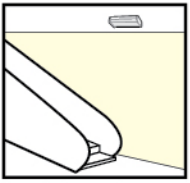
Near every change in floor level.



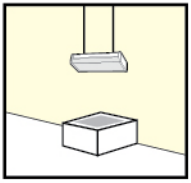
At every corridor intersection.

Near every fire safety device and call point.

Near the safety equipment



At the escalator



High-risk forms moving machinery or chemical workshops and substances in the laboratory

OPERATION

1.) Connect 240VAC ~ 50Hz supply , lamp is OFF and battery is on automatic charging mode (with Red LED "ON" indication) , Lamp is ON automatically when A.C. supply interrupted or charging circuit failure.

2.) Press " TEST BUTTON" , the red indication light goes off and the LED Emergency Lights will ON . The Test Button Switch is designed to avoid unauthorised switching and be arranged to ensure the supply is never unintentionally left disconnected.

Important:
Batteries are stored and not connected to any load and not being charged.
1) Please charge the battery for 24 hours before 1st discharge.
2) Please charge the battery for 48 hours continuosly in order to initiate Automatic Testing.

3.) When carrying out a test by simulating a mains failure , safe procedures must be followed:

a.) Do not switch off other essential services or equipment.
b.) Do not fully discharge a system if the building has to be re-occupied before re-charge is completed (typically 24 hours).
c.) Do not test by removing fuses. This practice is not acceptably safe. Purpose designed test switches or systems should be utilised.

FAILURE ANALYSIS AND TROUBLE SHOOTING

Problems	Causes and Analysis	Solutions	Remarks
Switch on power supply, Red indicator light not emitting	No supply AC 240V to emergency light	Check power supply	**If the unit does not light up (LED indicator does not come on)...** Check to see if the supply wires are properly connected. Mis-wiring (connecting 240V input to a 120V wire or vice versa) can either cause the unit to burn or not turn on. In some cases there might be a gap between the input clip and the board. Check to make sure the clip sits correctly on the board.
	AC supply fuse burnout	Replace fuse	**Unit does not come on in emergency...** The battery in the unit needs to be connected right after AC power is supplied to the unit, so make sure that gets done. Also the battery needs to charge for a couple of hours before doing any tests. 24-hr recharge is required for a full 90-minute emergency operation.
Lack of time after normal power supply cut-off	Power pack failure	Replace power pack	**If battery connected; Unit still doesn't come ON in emergency...** Battery should have been in a charging mode for at least a couple of hours. Further lamp connections could be checked. The battery also needs to be charged for a few hours in order to be able to light up the lamps. If all these conditions are met and the lamps still don't come on, then the battery might need to be replaced.
	Lack of charging time	Extend charging time	

Note - It's the common new trend for installing EL-T emergency light with automatic testing. Shinz EL-T also provide Fault indications when failure. Kindly refer to Shinz S-T for further informations.

MAINTENANCE AND RECOMMENDED ROUTINE TEST PROCEDURES

All emergency lighting systems are required to regular testing and inspection to ensure correct operation when required to operate in an emergency.

All too often emergency lighting has been seen as a 'fit and forget' product. A consultant or specifier may have carefully designed an emergency lighting installation, the equipment may have been correctly installed and certified as complying with the appropriate standards and then it is totally neglected. It should not, then, be a surprise when it fails to operate when required. The implications of failure of the emergency lighting may of course be catastrophic, with the lives of building occupants being put at risk.

Daily	• Visually check and inspection of RED LED indicate battery charging.
Monthly	• Check all emergency lighting equipment are in a good condition, all lamps and light controllers are clean, undamaged and not blackened. • Briefly test all emergency lighting equipment by simulating a failure of the normal lighting supply. The test should not exceed a quarter of the equipment rated duration. Check that all equipment functions correctly. • Check that, upon restoring the mains supply, all supply healthy indicators are again illuminated.
Twice a year	• Carry out the inspection and testing as described in the monthly test schedule, but conduct a test of the equipment for one third of its rated duration.
Annually	• A full system test should be conducted by a competent service engineer including a full rated duration test of the system.

BATTERY

- The sealed Lithium Iron Phosphate ($LiFePO_4$) battery , designed to provide three(3) hours standby time whenever the mains AC power supply is interrupted.
- $LiFePO_4$ is becoming the preferred choice for emergency lighting, not only because the batteries are physically smaller, but because they draw far less power when they are charging. LiFe04 can also last double the life of traditional emergency lighting batteries such as nickel cadmium or nickel metal hydride.
- It is required to recharge for 24 hours after storage period is over three(3) months in order to perform as required standard.
- In the event the battery is not able to provide sufficient capacity for the rated duration of operations, it is required to change or replace the batteries as follow:

1. Disconnect the unit from mains supply , open up the cover, unplug battery wire, take out battery and replace with a new one.
2. Connect red wire to positive terminal, black wire to negative terminal.
   Used battery will pollute the environment and needed to be recycled by special authority.
3. The old/used batteries shall be disposed according to the local rules and regulations in order to prevent/minimize pollution to the environment.

PRODUCT WARRANTY

- The Emergency Warranty applies only when (1) **SHINZ** Emergency Fixtures products containing Batteries have been continuously connected to an AC input power source, OR (2) Batteries sold separately have been placed in fixtures continuously connected to an AC input power source, in each case within 2 years of the date of purchase.
- The Product warranty is subject to **SHINZ** Terms and Condition of Product Warranty .
- As a service to our customers / channel partners , in situations on faulty goods where we are unable to be definite in our analysis , despite the fact that the faulty may not be attributable to **Shinz Global Sdn Bhd** , we may at our discretion to issue you the necessary credit as a gesture of goodwill, however site costs are not recoverable.

SHINZ®

Innovating Future

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