# EMERGENCY LIGHTING EQUIPMENT Item No. 184010-1

#### **INSTRUCTION MANUAL**

## **IMPORTANT SAFEGUARDS**

## READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

- 1. The equipment is for use with grounded lighting fixtures. Do not use outdoors.
- 2. Do not mount near gas or electric heaters.
- 3. Use caution when servicing batteries. Batteries acid can cause burns to skin and eyes. If acid is spilled on skin or in eyes, flush acid with fresh water and contact a physician immediately.
- 4. To prevent electric shock, switch off the mains circuit until installation is complete.
- 5. The equipment should be mounted at locations and at heights where it will not be easily accessible by unauthorized personnel.
- 6. The equipment requires an unswitched A.C. power supply of 120-277VAC.
- 7. The equipment has been evaluated for use with T8 17W, 18W, 32W, 36W fluorescent lamps. Use with most 2'- 4' single bipin T8 to T12, T5 28W, compact 42W, circular 40W fluorescent lamp shall be evaluated in the end product.
- 8. The lead wire in the terminal block shall be disconnected when the equipment is operating a 22-42W fluorescent lamp.
- 9. The equipment is compatible with A.C. magnetic and electronic ballasts, including multiple lamp ballasts, with one lamp operating in emergency mode.
- 10. Make sure the polarity is correct when connecting the batteries.
- 11. Installation and servicing should be performed by qualified personnel.
- 12. Lighting fixture manufacturers, electricians and end-users need to ensure product system compatibility before final installation.
- 13. Do not use this equipment in high-risk task area or for other than intended use.
- 14. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- 15. The equipment is suitable for use only on battery supply not having a trickle or intermittent re-charging circuits.
- 16. Live and neutral power supply wires shall be correct connected. Reverse connection may damage the equipment.
- 17. The equipment is for emergency lighting use only. Surrounding operation temperature Ta 0-55°C.
- 18. Basic insulation used between the equipment and the battery circuit.
- 19. The battery can recover after short-circuit test of EN 61347-2-7 clause 22.3.

## SAVE THIS INSTRUCTIONS

## 1. The Emergency Lighting Equipment set contains

184010-1:

1 pcs. Emergency module

4 pcs. 1.2V/1.8AH Ni-Cd batteries in one package

2 pcs. Battery holders

1 pcs. LED signal lamp 1 pcs. Test switch

1 pcs. Instruction manual

#### 2. Installation instruction

The equipment can be used with 17W/18W/32W/36W fluorescent lamps. The equipment requires an unswitched A.C. power supply of 120-277V. The equipment and the AC ballast must operate on the same mains power supply. Mount the equipment and the battery pack on the gear tray with a minimum distance of 10mm from the A.C. ballast. For wiring the battery pack and the equipment to the fluorescent tubes and AC ballast, see the wiring diagram. The battery pack cannot be mounted outside the fixture. The last step of installation is to connect the wires to the battery pack. Disconnect the wires firstly before servicing.

Select a convenient location on the fixture for the LED signal lamp so it can be seen after installation. Drill a 12.7mm hole in the gear tray and push the LED signal lamp into the hole. Drill a 10mm hole in the gear tray and push the test switch into the hole. Connect the wires from LED signal lamp to the equipment according to the diagram (The wire gauge is 18AWG or 1.5mm<sup>2</sup>).

#### 3. Operation

**Normal mode** – the A. C. power operates the fluorescent lamps as intended. The equipment is in standby charging mode. The LED signal lamp is lit, indicating that the batteries are being charged.

**Emergency mode** – the A. C. power fails and the batteries are being charged to take over the operation. One lamp is illuminated at reduced output and the LED signal lamp is switched off. When the A. C. power is restored, the equipment switches the system back to normal mode and resumes battery charging. The minimum emergency operation time is 90 minutes.

Charging time – the charging time for the battery after discharging is 24 hours.

#### 4. Maintenance

**Monthly** – conduct a 30 seconds discharge test by switching off the mains power. The signal lamp is switched off and one lamp is operating at reduced light output.

**Annually** – Conduct a full discharge test by switching off the mains power to control if the operating time of the equipment is accordance with the specification.



#### 5. Connection Diagram



