

## GR-940/15L/MAR WATERPROOF SELF TESTING EMERGENCY LUMINAIRES

### TECHNICAL CHARACTERISTICS

OPERATION VOLTAGE	220-240V AC/50-60Hz
MAXIMUM POWER CONSUMPTION	4W/7VA
BATTERY (Ni-Cd)	3.6V/3Ah
BATTERY PROTECTION	From overcharge and full discharge
INDICATIONS	Charge, lamp fault, battery fault indication LED
CHARGING TIME	24h
MINIMUM AUTONOMOUS DURATION	480min
ILLUMINATION SOURCE	15 white LED's
ILLUMINATION (MAINS / EMERGENCY)	105lm / 105lm
DEGREES OF COVER PROTECTION	IP 65
PRODUCED IN ACCORDANCE WITH	EN 60598-1, EN 60598-2-22, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3, IEC 60092-306, IEC 60533
OPERATION TEMPERATURE RANGE	5 to 40 °C
RELATIVE HUMIDITY	Up to 95%
CONSTRUCTION MATERIALS	Bayblend FR3010, transparent polycarbonate
EXTERNAL DIMENSIONS	363 x 145 x 73 mm
TYPICAL WEIGHT	945gr.
GUARANTEE	3 years (1 year for the battery)

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### GENERAL

These luminaires, according to Lloyd's Register Type Approval System are suitable for marine and offshore applications for use in environmental categories ENV1, ENV2, ENV3 and ENV4, where ENV1 are controlled environments, ENV2 are enclosed spaces subject to temperature, humidity and vibration, ENV3 are enclosed spaces subject to generated heat from other equipment and ENV4 are mounted on reciprocating machinery. Each luminaire must be permanently connected to mains power supply. In normal operation the led strip lights and the battery is charging. In case of a mains power supply failure the luminaire will light the led strip automatically in emergency mode. When the mains power supply is restored the device turns to normal operation.

### INSTALLATION

To install the luminaire follow the installation instructions on page 3.

### OPERATION

#### **Battery Charging**

The battery charging is completely

controlled. In this case, is achieved the perfect battery maintenance, as well as the elongation of its duration. When the battery has completely charged, it charges with a maintenance current.

#### **Battery Cut-off**

The luminaire enters in this operation when the mains power supply fails and battery has lost its energy. During this operation the luminaire enters the idle state and battery consumption is negligible, in order to be protected from deep discharge.

#### **Manual Test**

The manual test can be conducted only if the main power supply and the battery is connected. By pressing the TEST/RESET button briefly (page 3) an operation test is initiated. During this test period all indication LEDs are OFF.

#### **Automatic Test**

This test includes all the operations that provide the manual test and is conducted automatically every 15 days. In order to be performed, the main power supply and the battery should be connected.

#### **Automatic Autonomous Test**

The Automatic Autonomous Test is conducted and measures the luminaire's back up operation. This test is conducted automatically every six months. In order to be performed, the main power supply and

the battery should be connected (the battery should be charged). If the battery is not charged, the test is postponed until the battery is completely charged. If during the Automatic Autonomous Test the luminaire's duration is lower than the nominal, then the battery must be replaced.

### **Back Up Operation**

The autonomous duration of battery during emergency mode is at least the one that is stated in the technical characteristics. During emergency mode, a LED strip test is also performed.

### **Resetting Errors**

Push the TEST/RESET button for 5 seconds, to extinguish all the indicated LED errors (page 3). Then the luminaire enters regular operation mode.

### **Indication LED status**

*(with connected mains power supply).*

#### **Charge**

**On:** Good charge current.

**Off:** No battery (No charging current or disconnected battery).

#### **Lamp Fault**

**On:** Faulty LED strip.

**Off:** Good LED strip.

#### **Battery Fault**

**Off:** Battery OK.

**Blink** (With **Charge LED ON**): Autonomy or low battery problem

**(the battery must be replaced).**

**Blink** (With **Charge LED Off**):

No charging current or disconnected battery.

### **ATTENTION!!!**

1. Operations for installation, maintenance or testing must be done by authorized personnel only.

2. The device must be connected to the mains power supply through a fuse dependent by the total amount of the line's power load.

3. In case of battery or lamp replacement, these must be replaced by parts of the same type, by the manufacturer or by a competent person.

4. In case of inactive use for a period greater than 2 months, disconnect the battery by pulling out the battery's connector.

**5. It is not allowed to discard batteries in to common trash bins, they must be discarded only in battery recycling points. Do not incinerate.**

**NOTE:** LED= Light Emitting Diode

### **LABELING EXPLANATION:**

**X:** Self contained

**1:** Maintained (\*)

**A:** Including test device

**480:** 8 hour duration

(\* Maintained operation: The luminaire lights its illumination source, when it is powered by the mains power supply or not. Non Maintained operation: The luminaire lights its illumination source, only in power supply's failure.

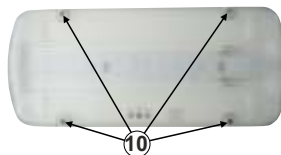
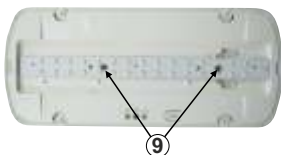
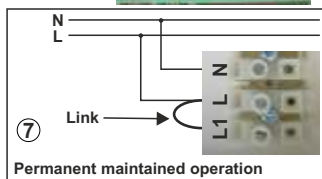
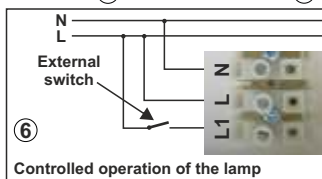
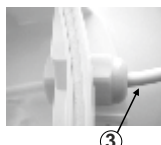
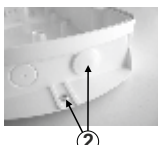
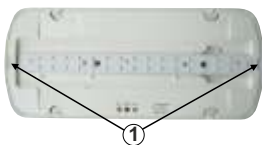
**NOTE!! After finishing the installation you must power the luminaire at least for 24 hours for battery charging to perform the nominal autonomy.**

### **Battery replacement**

1. Unfasten the 4 retaining screws (step 10 of the installation instructions) and remove the diffuser.
2. Unfasten the 2 retaining screws step 9 of the installation instructions and remove the reflector.
3. Remove the old battery and place a new one of the same type and characteristics.
4. Replace the removed parts (previous steps 1,2).

## INSTALLATION INSTRUCTIONS

- ① Remove the diffuser. Place simultaneously 2 flat blade screwdrivers and pull up gently the reflector.
- ② Install the included plastic cover in to the unused hole and install the base plastic (with the included mounting screws and plugs).
- ③ **Always use in any case round mains cable, with external diameter of 6-9mm (H05RN-F type 2x1mm<sup>2</sup> or any other type, at least equal to it's mechanical and electrical properties). ATTENTION!! The cable must not be deformed in any way (This requirement is important to ensure the tightness isolation IP 65).** Install the cable gland, pass the round cable through and tighten it all the way.
- ④ Place the battery's connector to the corresponding connector on the P.C.B.
- ⑤ Connect the mains cables to the respective terminal block (connect the ground wire if required).
- ⑥ **N** for neutral, **L** for live wire and **L1** for the maintained operation. The **L1** wire can be connected to an external switch to control the maintained or non maintained operation of the luminaire.
- ⑦ For permanent maintained operation use two wires to power the luminaire, **N** for neutral and **L** for live wire, and link the **L** and **L1**.
- ⑧ Install the included tie (if needed) to fasten securely the power cables.
- ⑨ Refit the reflector and fasten the two small screws (included).
- ⑩ Finally place the diffuser by using the 4 included screws (tightening torque 1.2 Nm).



**Manual TEST or Resetting Errors**  
In order to test or reset the device you must carefully remove the diffuser by unfastening the 4 mounting screws. Then push the button as described in the according paragraphs on page 1.

