

**SELF-TESTING NON MAINTAINED EMERGENCY LUMINAIRE WITH WIRELESS COMMUNICATION**



**TECHNICAL CHARACTERISTICS** (for LED MODULE Specifications see page 4)

	<b>GRL-37/90/WP/WL</b>	<b>GRL-37/180/WP/WL</b>
OPERATION VOLTAGE	220-240V AC/50-60Hz	
MAXIMUM POWER CONSUMPTION	13.3W/14VA	
SUPPLY CURRENT	63 mAAC	
MIN./MAX. CHARGE CURRENT	230/710mA	
CHARGING VOLTAGE	14.7V	
TRICKLE CHARGE VOLTAGE/CURRENT	13.7V/25mA	
MIN./MAX. DISCHARGE CURRENT	1.7A/2.3A	
CUTOFF VOLTAGE	10.8V	
U-OUT	18V	
OPEN CIRCUIT VOLTAGE	23.5V DC	
CONTROL GEAR CHARACTERISTICS	Prated = 21.6W, Irated = 1.2A	
CONTROL GEAR FUSE	8A/250V FB, 5x20mm	
CONTROL GEAR MAX. TEMPERATURE	tc = 75 °C at R11	
TX/RX FREQUENCY RANGE	868.150-868.450MHz	
TX POWER	11dBm	
BATTERIES (Pb)	12V/7Ah	2x12V/7Ah
BATTERY PROTECTION	From overcharge and deep discharge	
INDICATIONS - CONTROLS	POWER-CHARGE indicator, LAMP FAULT-BATT. FAULT indicator, TEST button	
CHARGING TIME	<24h	
MINIMUM AUTONOMOUS DURATION	90 mins	180 mins
LIGHT SOURCE	White power LEDs	
EMERGENCY ILLUMINATION	3200lm	
DEGREES OF COVER PROTECTION	IP65	
PRODUCED IN ACCORDANCE WITH	EN 60598-1, EN 60598-2-22, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3, EN 62311, ETSI EN 303 446-1 V1.1.0, ETSI EN 300 220-2 V3.1.1	
OPERATION TEMPERATURE RANGE	5 to 40 °C	
RELATIVE HUMIDITY	Up to 95%	
INSULATION BETWEEN SUPPLY & BATTERY CIRCUIT	Basic Insulation	
CONSTRUCTION MATERIALS	Aluminium, ABS/PC, PC	
EXTERNAL DIMENSIONS	307 x 100 x 333 mm	
TYPICAL WEIGHT	4260gr	6450gr.
GUARANTEE	3 years (1 year for the battery)	
CONTROL GEAR WITH AUTOMATIC TEST FUNCTION	<b>EL-T</b>	



Do NOT stare at operating light source. The luminaire should be positioned so that prolonged staring into the luminaire at a distance closer than 1.2m is not expected.  
E<sub>thr</sub> = 904.8 lux.

**Thank you for your trust in our products**  
**Olympia Electronics - European manufacturer**

**GENERAL**

These luminaires are used indoors (ta 40°C) where emergency light is needed. Each luminaire must be connected permanently to the mains power supply.

**WIRELESS COMMUNICATION**

The WL luminaire models have the ability to communicate over the air with Olympia's control panels for wireless emergency luminaires. The luminaires can also communicate with a PC/laptop through a gateway (Ethernet, Wi-Fi, USB). For more information, please refer to Wireless Emergency Lighting guides, available on the company's website.

## OPERATION DESCRIPTION

When the unit is connected to the main power supply (after connecting the battery) the indicator LAMP FAULT – BATT. FAULT remains OFF whereas the indicator POWER CHARGE blinks to indicate that the batteries are charging. When the batteries are fully charged this indicator will light permanently. If this indicator does not light then probably the battery has not been connected. If the batteries are connected and the indicator does not light then contact a qualified service technician for assistance. The charging procedure is monitored by a microprocessor and is based on a 3 stage cycle thus ensuring a fast and full charge of the battery. The charge current is supplied by a high efficiency switch mode power supply which ensures perfect charging even during the fluctuations of the mains power supply.

## BATTERY CHARGE FAILURE DUE TO SHORTCUT

The recharging device will recharge the battery normally after the short circuit is removed and the batterie(s) are reinstalled.

## BATTERY CUTOFF

The unit enters this state during the power supply failure and when the battery has been fully discharged. In this state the luminaire draws the least power from the battery in order to prevent deep discharge.

## MANUAL TESTING

Is accomplished by briefly (<1 sec.) pressing the TEST button. This permits the user to test the good operation of the luminaire's emergency circuit. The unit simulates a power failure and the lamps are lit using the batteries. This manual test does not affect the automatic test.

## DIMMING OPTION

When the voltage is interrupted, with corresponding pressings of the button, we can choose the illumination of 100%, 50%, 33% or turned off, either to increase the autonomy time or not to consume the battery power unnecessarily. This option is canceled when the power network is restored.

## LAMP TESTING

The luminaire tests the good condition of the lamps in emergency mode and warns the user for probable malfunction. If a lamp is found faulty then the LAMP FAULT indicator starts to blink. To verify which lamp is faulty use the TEST button. If the faulty lamp is replaced then the error is automatically restored and the indicator is turned OFF.

## AUTOMATIC EMERGENCY CIRCUIT TEST

The unit automatically tests the emergency circuit every 15 days (if the battery and mains power are

connected). During this test the lamps are turned ON for 3 seconds using the batteries. In some cases this function might not be acceptable (i.e in cinema theaters) so the installer must take this into account during the installation.

## AUTOMATIC DURATION TEST


This test is conducted every 6 months by simulating a power failure, if the battery and mains power supply are connected. The unit lights the lamps using the charged battery and counts the time until the stated duration. If the lamps are ON during the end of the test then the unit is restored to its normal operation (lamps OFF and battery charging). If the lamps go OFF before the end of the test then the unit is restored to its normal operation but the LAMP FAULT / BATT. FAULT indicator is lit to show that there is a problem with the battery and that the battery must be replaced. Let it be noted that this duration test is also done during every long power failure. If the power failure lasts for a long time and the luminaire has entered the BATTERY CUTOFF mode and the duration measured is not correct then the fault indicator will light when the power is restored.

## ERASING ERRORS

Erasing errors is accomplished with a prolonged pressing of the TEST button (>5 sec) when the unit is connected to the mains power supply. The fault indicated with the indicator LAMP FAULT / BATT. FAULT will be erased. If the cause of the fault has not been restored (i.e burned lamp) then the indicator will light again. If the fault was caused by a low emergency duration and you erase the error then this will be indicated again during the next duration test after 6 months. In this case (for duration errors) it is vital to replace the battery before erasing the error (the error is automatically erased if the mains power and the battery are disconnected).

## WARNING !!!

1. Every test, installation or maintenance procedure must be done only by qualified personnel.
2. The unit must be connected to the mains power supply using a line fuse rated accordingly.
3. The replacement of the battery and the light source must be done using parts of the same type, by the manufacturer or by a competent person.
4. If the luminaire must be isolated from the mains power supply for more than 2 months then the batteries must be disconnected by removing the battery connectors.

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.**

## Wireless Communication LED indications (interior)

The **top LED** (LD3-green) indicates the network connection status.

This LED may blink according to the following patterns:

1. Steady ON: The device has established direct connection to a Gateway device, and at least one more Gateway device is available for alternate routing (false condition).
2. Rapid flash [5 times/s]: The device has established direct connection to a single Gateway device.
3. Fast flash [2 times/s]: The device has established connection to a Router device and at least one more Router device is available on the same hop level, as an alternate route (redundant connection).
4. Moderate flash [1 second ON / 1 second OFF]: The device has established connection to a single Router device, and no alternatives exist on the same hop level.
5. No light: The device is disconnected.

The **middle LED** (LD2-green) indicates the received signal strength (RSSI) of the router module.

This LED may blink according to the following patterns:

1. Very fast flash [5 times/s]: received signal strength is excellent.
2. Fast flash [2 times/s]: received signal strength is good.
3. Moderate flash [1 second ON / 1 second OFF]: received signal strength is acceptable for reliable communication.
4. Very slow [2 seconds ON / 2 seconds OFF]: received signal strength is not acceptable for reliable communication, or no signal.

The **bottom LED** (LD1-red) indicates operation status.

This LED may blink according to the following patterns:

1. Very fast blink [5 times/s]: the module is not initialized correctly. In this case you have to press for more than 2 seconds the push button, in order to reset the module (loads default settings).
2. Moderate flash [2 times/s]: The module is properly operating.

## Button functionality:

The on-board button has the two following functions:

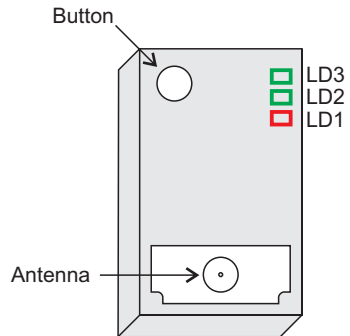
1. Short press (<2"): a status message will be sent to the Gateway device of the wireless network.
2. Long press (>2"): Loads factory default settings to the module.

### Default settings (V1 Wireless System):

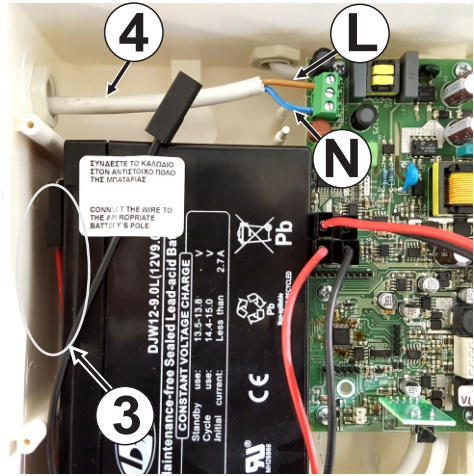
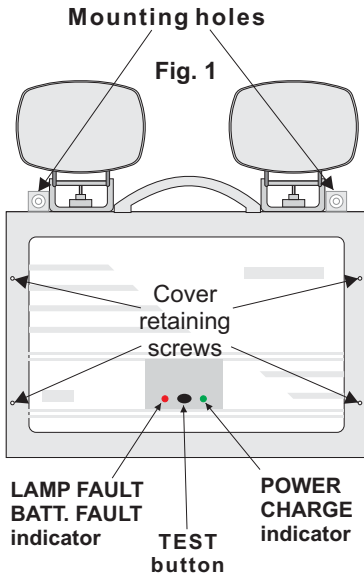
- SID: 00000001
- RF Channel: 13 ( 869.525MHz )

### Default settings (V2 Wireless System):

- SID: 00000001
- NKEY: 00000000
- RF Channel: 2 ( 868.150MHz )



## INSTALLATION PROCEDURE (For wall mounting only)



1. Use the supplied mounting accessories to mount the device (Fig1).
2. Remove the four cover retaining screws (Fig 1).
3. Install the battery cable connectors to the batteries taking care of the polarity, black cable (-) and red cable (+).
4. **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 IP65).** Install the cable gland, pass the round cable through and tighten it all the way.
5. Connect the cables to the respective positions in the terminal block **L for phase and N for neutral.**
6. Reinstall the front cover and fasten the retaining screws. (Tightening torque 1Nm). Pay attention to the 4 sealing o-rings.

**WARNING!!** After the installation has finished, charge the batteries for at least 24 hours so as to obtain the rated autonomous duration.

**ATTENTION!!** After installing the luminaire, you are advised to briefly press (<5sec) the test button in order to conduct a lamp test. If there is no fault indicator permanently turned on, it means that the luminaire is working properly in emergency mode. After 24 hours of the installation, you are advised to conduct a battery capacity test, by disconnecting the mains power supply from the luminaire. The luminaire should operate in emergency mode, for at least the nominal duration time. The result of the test will be available in the fault indication LEDs, after reconnecting the luminaire to the mains power supply. If there is no error indicated, it means that the luminaire will meet its nominal duration in case of an emergency. In case of any error, please contact the installer or the representative seller of this product.

### INDICATION LED STATUS (with the mains power supply connected)

POWER / CHARGE		LAMP FAULT / BATT. FAULT	
○	Disconnected battery / not charging	○	Normal operation mode
●	Charged battery	●	Low emergency duration (replace battery)
⚡	Battery under charge	⚡	Lamp fault (Check lamps and replace if needed)

○ Indicator OFF ● Indicator ON ⚡ Indicator Blinking

**NOTE:** LED= Light Emitting Diode

**LABELING EXPLANATION:**

**X:** Self contained

**0:** Non Maintained (\*)

**A:** Including test device

**B:** Including remote test mode

**C:** Including inhibiting mode

**F:** Automatic test gear complying with IEC 61347-2-7 denoted EL-T

**\*90:** 1.5 hour duration

**180:** 3 hour duration

(\*)**Non Maintained operation:** The luminaire lights its illumination source, only in power supply's failure.

**X 0 A B C F 90**

**Battery replacement**

***It can be done only by a competent person and after the mains interruption***


1. Follow the step 2 of the installation procedure.
2. Disconnect the cables and remove the old battery.
3. Connect the new battery with the same type (step 3 of the installation procedure) and place it in the position of the old one.
4. Follow the step 6 of the installation procedure and power the device.



*The light source contained in this luminaire shall only be replaced by the manufacturer, or his agent, or a similar qualified person.*

**NOTE!** *The light source is non-user replaceable.*

**LED MODULE CHARACTERISTICS**

Manufacturer	Olympia Electronics S.A.
Model Number	1005183
Voltage Range	17.5-20.5V
Nominal Power	14W
Supply Current	600 mA on each lamp
Max Working Voltage for Proper Insulation	700 V
LV Supply - Control Conductors Insulation Type	Basic Insulation
Connections	Cable connection between main pcb and led module
Temperature (tc)	68 °C max.
LED Module Type	Built-in 

**WARRANTY**

Olympia Electronics guarantees the quality, condition and operation of the goods. The period of warranty is specified in the official catalogue of Olympia Electronics and also in the technical leaflet, which accompanies each product. This warranty ceases to exist if the buyer does not follow the technical instructions included in official documents given by Olympia Electronics or if the buyer modifies the goods provided or has any repairs or re-setting done by a third party, unless Olympia Electronics has fully agreed to them in writing. Products that have been damaged can be returned to the premises of our company for repair or replacement, as long as the warranty period is valid. Olympia Electronics reserves the right to repair or to replace the returned goods and to or not charge the buyer depending on the reason of deflection. Olympia Electronics reserves the right to charge or not the buyer the transportation cost.

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