European manufacturer

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SAFETY & SECURITY SYSTEMS
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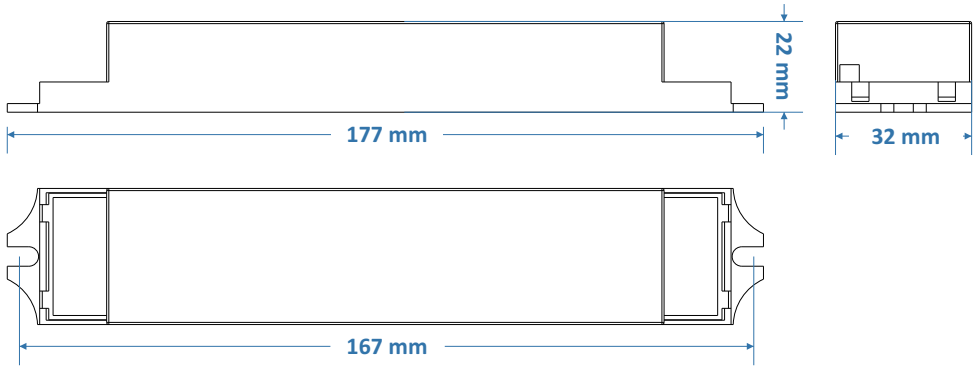
COMMON LED LUMINAIRE TO EMERGENCY CONVERTER

CE

TECHNICAL CHARACTERISTICS

MODELS	GR-1107/LF/90	GR-1107/LF/180
RATED INPUT VOLTAGE	220-240V AC, 50/60Hz	
MAXIMUM POWER CONSUMPTION	3W / 6.5VA	
INPUT CURRENT	24mA	
OUTPUT POWER	3W	
POWER FACTOR	>0.6	
TERMINAL L-in / L-out (LED driver input constant)	AC 3A Max	
OUTPUT VOLTAGE RANGE	DC 50-300V	
MAX. OUTPUT CURRENT	300mA	
OUTPUT POWER (CONSTANT)	4W	
BATTERY CELLS VOLTAGE/CAPACITY ($LiFePO_4$)	6.4V 2Ah	6.4V 3Ah
DISCHARGE TIME	1.5 hour	3 hours
RECHARGE CURRENT	180 - 200mA	
RECHARGE TIME	24 hours Max	
TYPE OF INSULATION BETWEEN THE SUPPLY AND THE BATTERY CIRCUIT	Basic	
THE BATTERY WILL RECHARGE NORMALLY AFTER ABNORMAL OPERATION CONDITION	Yes	
MAX. CASING TEMPERATURE tc	70 °C	
LED OUTPUT SHORT CIRCUIT PROTECTION	Included	
EXTERNAL LED DRIVING TYPE	With constant power output	
DEGREES OF COVER PROTECTION	IP20	
PRODUCED IN ACCORDANCE WITH	EN 61347-1, EN 61347-2-7, EN 61347-2-13, EN 55015 EN 61547, EN 61000-3-2, EN 61000-3-3	
AMBIENT TEMPERATURE RANGE ta	0....50 °C	
CONSTRUCTION MATERIALS	ABS/PC	
CONSTRUCTION COLOR	White (RAL9010)	
EXTERNAL DIMENSIONS (L x W x H)	160 x 30 x 23 mm	
TYPICAL WEIGHT	130 g	
GUARANTEE	3 years (10 years for the battery)	

Dimensional drawing



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GENERAL

The GR-1107/LF device is an electronic unit that enables the installer to convert a conventional low-voltage LED luminaire into an emergency lighting luminaire. It supports the connection of the luminaire LED driver through an internal relay, thus forming a maintained emergency luminaire. The LED driver supply is provided via the ~LOUT terminal, allowing it to be connected to the mains at the appropriate time. The built-in processor manages the battery charging and discharging in a way that ensures maximum battery lifetime. The battery charger is powered by a high-efficiency switch-mode power supply, which isolates both the battery charging process and the device's internal circuitry from mains disturbances. The device can provide a charging current of up to 200 mA and includes short-circuit protection at the charger output. The discharge circuit continuously monitors the current in relation to the selected settings and adjusts the luminaire load accordingly, ensuring the required autonomy, regardless of load variations.

BATTERY DISCONNECTION

The device enters this mode when the mains supply is interrupted and the battery is fully discharged. In this condition, the current drawn from the battery is kept at a minimum and within safe limits, protecting it from damaging deep discharge. When the mains supply is restored, the device automatically returns to normal operation.

MANUAL TEST (TEST BUTTON)

The manual test is performed by momentarily pressing the optional test button connected to the corresponding terminals of the device. The unit simulates a mains failure and powers the luminaire from the battery. This allows the user to verify the correct operation of the entire emergency circuit. To perform the test, the mains supply must be present and connected, and the battery must also be connected. The charging indicator LED, if connected, remains OFF for the duration of the test.

AUTONOMY SELECTION

The device continuously measures the current drawn from the battery and regulates the output accordingly, ensuring that the selected autonomy duration is accurately achieved.

OUTPUT CIRCUIT

The output circuit supplying the luminaire can support luminaires with an operating voltage range of 50–300 V DC. All luminaires consisting solely of LEDs are directly supported by the output circuit, with a maximum output current of 300 mA and a maximum output voltage of 300 V DC. The output current is continuously regulated to primarily achieve the required autonomy in relation to the selected battery. The output circuit is protected against temporary or permanent short circuits, preventing damage to the device.The protection mechanism limits the output current to safe levels by disconnecting the output when necessary.

BATTERY STORAGE

- Lithium batteries must be stored at temperatures between –10°C and +45°C, in a clean, dry, and well-ventilated indoor environment.
- Keep batteries away from sources of fire and heat, as well as from strong magnetic fields.
- Avoid contact with corrosive materials and exposure to humidity, rain, or water.
- During storage, it is recommended to charge and discharge the battery through one full cycle every 6 months.

Terms of Sales - Technical Support

Help Center

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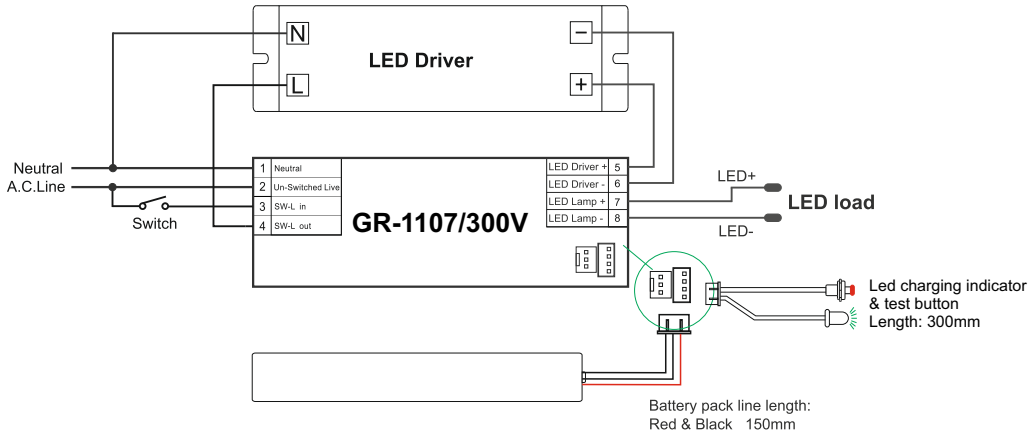
72nd km. O.N.R. Thessaloniki-Katerini
P.C. 60300 P.O. Box 06 Eginio Pierias Greece
www.olympia-electronics.com
info@olympia-electronics.com

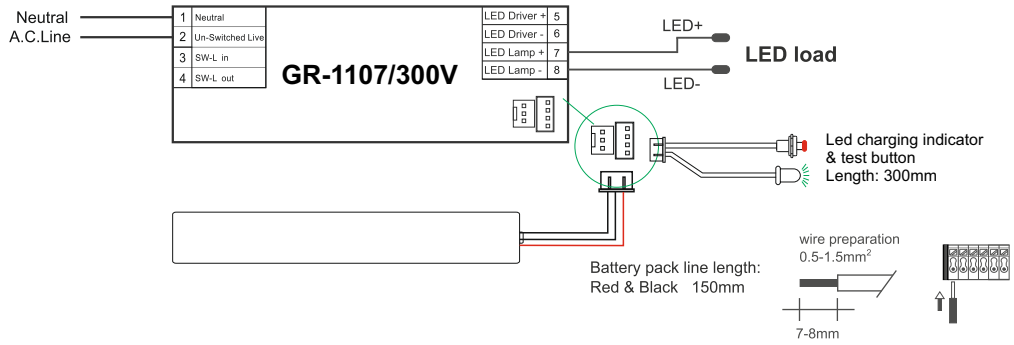
Installation

- Operations for installation, maintainance or testing must be done by authorized personnel only.
- Please confirm that the electrical parameters of this product match with the luminaire.
- Please check the wiring method carefully before installation.
- Power off mains supply before installation, and confirm the wiring is correct. Connect the battery and turn on mains supply.

Wiring Diagram
Maintained Operation



Wiring Diagram
Non-maintained Operation



LED indicator status

○	off: Battery disconnected or mains supply not disconnected
●	Green stable: Battery charging or fully charged