

olympia electronics

High Quality Safety Systems



PROGRAMMABLE COMMON TO EMERGENCY LUMINAIRE CONVERTER



➤ User Programmable

- Suitable for T5 and T8 lamps (6W-80W)
 - Can accept 4,8V-8,4V batteries (1,5Ah to 4Ah)
 - Selectable power output
 - Selectable autonomous duration
 - Constant light output selection capability
 - Smart battery management
 - Microprocessor monitored functions
- Small height-width dimensions (22mmx31mm)

**NEW CONVERSION KIT
SUITABLE FOR
T5 FLUORESCENT LAMP
MAX. 80W**

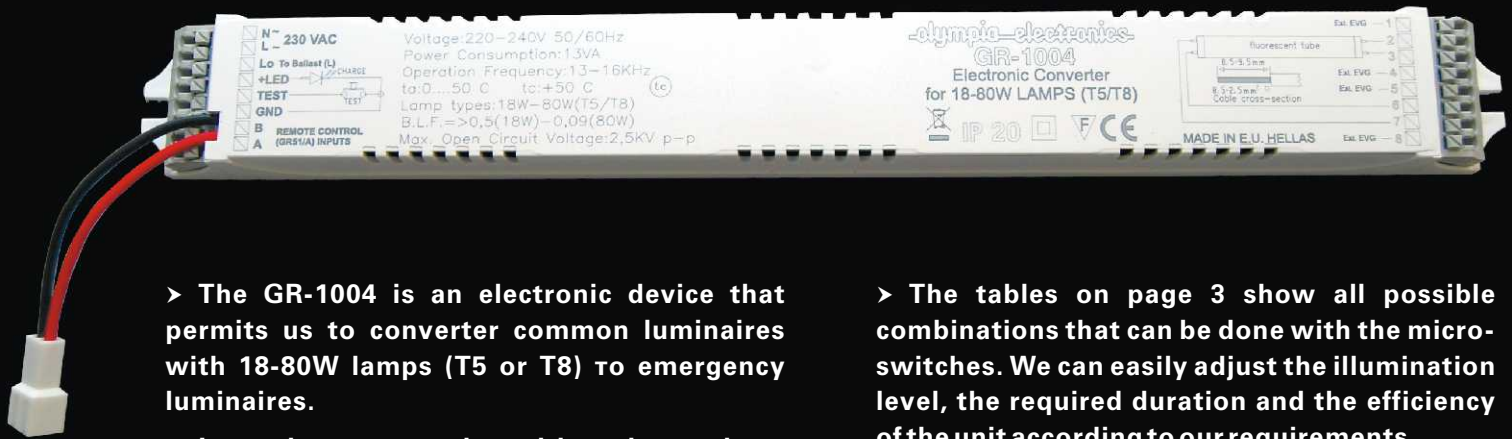
TYPE	LAMPS																				DURATION								
	T5 6W	T5 8W	T5 13W	T5 FQ 14W	T5 FQ 21W	T5 FQ 28W	T5 FQ 35W	T5 FH 24W	T5 FH 39W	T5 FH 49W	T5 FH 54W	T5 FH 80W	T8 18W	T8 36W	T8 58W	TCL 18W	TCL 24W	TCL 36W	TCL 40W	TCL 55W		TCD 13W	TCD 18W	TCD 26W	TCT 18W	TCT 26W	TCT 32W	TCT 42W	T5 80W
GR-1004/61	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	90 min.
GR-1004/62	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	3 h.
GR-1004/71																												●	90 min.
GR-1004/72																												●	3 h.



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CERTIFICATE VALID SYSTEM EN ISO 9001 : 2008

SYSTEM CERTIFICATE OF ENVIRONMENTAL MANAGEMENT



- The GR-1004 is an electronic device that permits us to converter common luminaires with 18-80W lamps (T5 or T8) to emergency luminaires.
- It can be connected to either electronic or mechanical ballasts.
- The incorporated charger manages the charging of the external Ni-Cd or Ni-MH battery in such a way that it ensures a full charge with controlled conditions and a maintenance in order to maintain the battery fully charged. The same circuit ensures that the battery discharge stays within safe levels.
- The micro-switch found under the unit is used to adjust the device in order to operate as required. his adjustment must be done before the GR-1004 is permanently mounted.

- The tables on page 3 show all possible combinations that can be done with the micro-switches. We can easily adjust the illumination level, the required duration and the efficiency of the unit according to our requirements.
- The TEST input is connected to an external push-button (push to make) and in optional. Pressing the TEST button causes the unit to enter emergency operation mode. In this state we can see to good operation of the lamp and the driving circuits.
- The +LED output is connected to an external LED indicator (supplied). This indicator lights when the unit is connected to the mains power supply and the battery is charging. In case of a fault the indicator remain OFF.

GR-1004 BATTERY, DURATION AND POWER SELECTIONS

Theoretical autonomous duration with constant output power

Constant output power	Battery voltage				Theoretical duration															
	4,8V	6V	7,2V	8,4V	4,8V 2Ah	4,8V 3Ah	4,8V 4Ah	6V 1,5Ah	6V 2Ah	6V 3Ah	6V 4Ah	7,2V 1,5Ah	7,2V 2Ah	7,2V 3Ah	7,2V 4Ah	8,4V 1,5Ah	8,4V 2Ah	8,4V 3Ah	8,4V 4Ah	
8W	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2h15'	3h
6,5W	-	-	●	●	-	-	-	-	-	-	-	-	-	-	3h	1h20'	1h45'	2h40'	3h30'	
5W	-	●	●	●	-	1h50'	2h40'	1h10'	1h40'	2h30'	3h20'	1h30'	2h	3h	4h	1h45'	2h20'	3h30'	4h40'	
3,5W	●	●	●	●	1h50'	2h40'	3h40'	1h45'	2h20'	3h30'	4h40'	2h10'	2h50'	4h20'	5h40'	2h30'	3h20'	5h	6h40'	

- Constant output power:** is the output power provided by the GR-1004 on it's lamp terminals. The power remains constant during all the duration of the emergency phase and is independent of the battery voltage. The constant output power is available until the end of the emergency cycle.
- Battery voltage:** Refers to the nominal battery voltage and is calculated as 1,2V per cell. The cell voltage can range from 1V to 1.45V
- Theoretical autonomous duration:** This duration calculation is based on the nominal battery capacity and can have a tolerance of 20%, depending on the current drawn. As the current increases, the capacity decreases.
- Lamp efficiency for T5/T8 lamps:** This percentage shows the relationship between the power supplied by the GR-1004 and the nominal lamp power. When we select constant output power then this percentage remains constant during the emergency phase.

Theoretical autonomous duration with constant battery current

Constant battery current	Battery Capacity 4,8V - 6V - 7,2V - 8,4V			
	1,5Ah	2Ah	3Ah	4Ah
1,40A	-	-	2h05'	2h50'
1,15A	-	1h45'	2h35'	3h30'
0,90A	1h40'	2h15'	3h20'	4h25'
0,65A	2h20'	3h05'	4h35'	6h10'

Percentage of the output power in relation to the nominal lamp power

Constant output power	Power percentage for T5/T8 lamps with nominal power:							
	14W	18W	21W	28W	35W	49W	54W	80W
8W	57%	45%	38%	28%	23%	16%	15%	10%
6,5W	46%	36%	31%	23%	18%	13%	12%	8%
5W	35%	28%	24%	18%	14%	10%	9%	6%
3,5W	25%	20%	17%	13%	10%	7%	6,5%	4,5%

Constant battery current: In this mode of operation the GR-1004 draws a constant current from the battery during all the emergency phase. This permit a more precise calculation of the required autonomous duration. In this mode the output power on the lamp terminal is not constant thus the lamp intensity varies (20%) depending on the battery voltage.

MULTI_SWITCH SETTINGS

OPERATION MODE (select the way that the GR-1004 draws current from the battery)



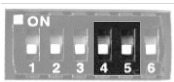
SW1	OFF	Constant battery current (remains constant during all the emergency phase)
	ON	Constant output power (the current varies depending on the battery voltage)

BATTERY VOLTAGE SELECTION (refers to the nominal voltage)



SW2	SW3	4,8V	6V	7,2V	8,4V
OFF	OFF	●			
OFF	ON		●		
ON	OFF			●	
ON	ON				●

SETTINGS FOR CONSTANT BATTERY CURRENT (when Sw1 is in the OFF position)

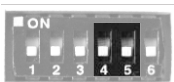


SW4	SW5	CONSTANT CURRENT
OFF	OFF	0,65A
OFF	ON	0,9A
ON	OFF	1,15A
ON	ON	1,4A

The value of the current does not contain the initial inrush current which can be a great deal bigger.

The battery cables should be as short as possible and the diameter should be that largest possible in order to minimize voltage drops.

SETTINGS FOR CONSTANT OUTPUT CURRENT (when Sw1 is in the ON position)

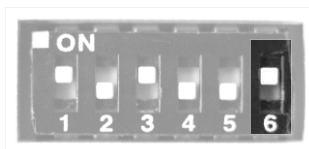


SW4	SW5	BATTERY VOLTAGE			
		4,8V	6V	7,2V	8,4V
OFF	OFF	3,5W	3,5W	3,5W	3,5W
OFF	ON	3,5W	5W	5W	5W
ON	OFF	3,5W	5W	6,5W	6,5W
ON	ON	3,5W	5W	6,5W	8W

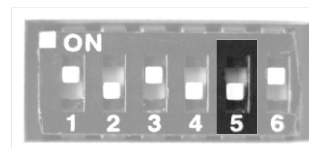
SELECTING BATTERY CAPACITY (required in order to set the charge current of the battery)



SW6	OFF	1,5 to 2 Ah Nickel-Cadmium (Ni-Cd) or NiMH
	ON	3 to 4 Ah Nickel Cadmium (Ni-Cd) or NiMH



Switch in the ON position



Switch in the OFF position



2 years guarantee

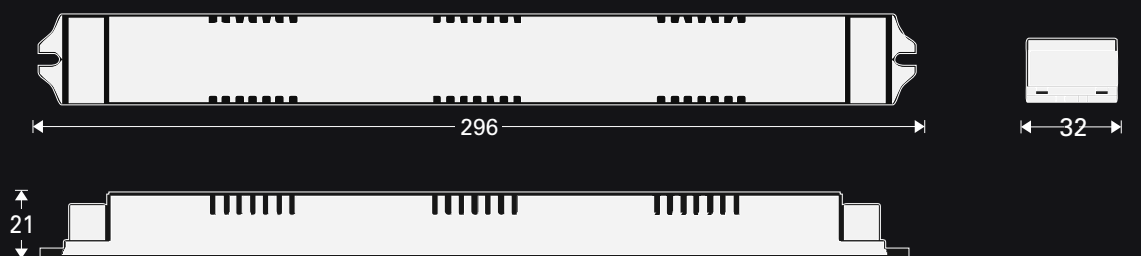
PRODUCED IN ACCORDANCE WITH: EN 60598-1, EN 60598-2-22

GR-1004

IP 20

OPERATION VOLTAGE	220-240V AC/50-60Hz
MAXIMUM CONSUMPTION	13 VA
LAMP OPERATION FREQUENCY	13-16KHz
BATTERIES Ni-Cd & Ni-MH	Cooperates with battery sets (4,8V, 6V, 7,2V, 8,4V)
CHARGE CURRENT	200mA 1,5 or 2Ah / 250mA for 3 or 4Ah
DURATION	Depends on the battery set
OUTPUTS/INPUTS	Outputs for charge indicator LED, Test button and input for Remote
LAMP TYPES T5 or T8	18-80W
EMERGENCY LAMP ILLUMINATION	Depends on the lamp used and the selections
EFFICIENCY	>70%
OPERATION TEMPERATURE RANGE	0 to 60 °C
CONSTRUCTION MATERIAL	ABS-polycarbonate (flame retardant)
TYPICAL WEIGHT	160gr.

DIMENSIONS



220210



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