

The ELP LDM-NFC range of emergency LED control gear allows maintained operation of high-power LED modules, when used in conjunction with the standard mains voltage LED control gear.

The emergency control gear incorporates a module/charger and a high temperature Lithium Iron Phosphate battery. In the event of a mains failure an integral 2-pole relay disconnects the LED lighting load from the mains control gear and then connects it to the emergency control gear which operates the LED module at an optimum light output for the rated duration.

Microprocessor enabled features

- The Near Field Communication (NFC) interface allows for the downloading of diagnostics to assist in any site issues.
- An App is available that can be downloaded onto a phone or tablet which can read stored operating parameters including information such operating hours, how many tests have been performed, module thermals, etc. This is a unique feature that highlights installation conditions and aids fault diagnostics.
- The LED current in emergency mode is automatically adjusted for maximum light output and is constant for the entire rated duration.
- The indicator LED provides fault information. Unlike most other manual test modules the LDM uses microprocessor technology to display various fault codes on the indicator LED which mirror the DALI codes ELP already have in place.
- Smart charging of the Lithium Iron Phosphate batteries which have protection circuit fitted including thermal sensing. NB: Lithium Iron Phosphate batteries offer long life (up to 10 years)

It is important to note that some LED mains control gear should not be operated with an open circuit load, to overcome this problem when first powering up the LDM range features a live in/ live out relay which ensures the load is in place before the mains driver is powered up.

LDM emergency control gear

To ensure the correct operation of each type of LED module the correct LDM equipment should be selected. The total forward operating voltages of the LED module / arrays connected should be used to determine the appropriate LDM control gear. For the appropriate battery, indicator LED etc. See the order codes on the last page.

Total Forward Operating Voltages

12V - 55V	LDM60, LDM60MO & LDM60HO	
15V - 55V	LDM606W	
50V - 300V	LDM300MO, LDM300HO & LDM3006W	

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LiFePO₄

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SPECIFICATION

Section	Subject	Plastic housed module
	Ingress protection	IP20
Environmental	Module rated operating ambient temperature	-20°C to 50°C
	Battery rated operating ambient temperature	0°C to 55°C
	Maximum case temperature	70°C
	Rated voltage supply	220/240V AC
	Mains frequency	50/60 Hz
	Mains supply current	
	LDM60, LDM60MO, LDM60HO, LDM300MO, LDM300HO	<27mA
	LDM606W, LDM3006W	<30mA
	Mains supply power	4W
Mains	Power factor	0.6C
Operation	Mains overvoltage protection	320V for 1 hour
	Indicator LED	2 wire red/green colour
	Maximum power that can be switched via relay contacts	150W
	Maximum current that can be switched via relay contacts	2A
	Maximum voltage that can be switched via relay contacts	450VDC
	The use of different phases for switched live and unswitched live is allowed	Note the unswitched live must fail if the switched live fails
	Emergency duration	1 or 3 hours
Emergency	Battery chemistry type	LiFePO₄
Operation	Number and type of high temperature cells	
	LDM60	2 x LiFePO4 1.8Ah 18650 cells
	LDM60MO, LDM300MO	2 x LiFePO4 2.3Ah 22650 cells
	LDM606W. LDM3006W	2 X LIFEPO4 3.4An 26650 cells
	Battery recharge period	<24 hours
	Time to full illuminance	<0.5 seconds
	Short-circuit-proof battery connection, over charge protection, over discharge	
	protection, polarity reversal protection, deep discharge protection and thermal protection	Battery is fitted with 3 wires/connector to enable the thermal protection
	Battery charge current LiFePO4 1.8Ah, 2.3Ah & 3.4Ah cells - voltage dependent, constant current	0-160mA
	Battery discharge current range (at nominal battery voltage) LiFePO₄ 1.8Ah 18650 cells LiFePO₄ 2.3Ah 22650 cells LiFePO₄ 3.4Ah 26650 cells	325mA to 500mA (375mA) 475mA to 735mA (550mA) 650mA to 1000mA (750mA)
	Module operating current - see graphs on following pages	
	LDM60	167mA to 38mA ±10%
	LDM60HO	312mA to 76mA ±10%
	LDM606W	380mA to 114mA ±10%
	LDM300MO	50mA to 9mA ±10%
	LDM300HO LDM3006W	96mA to 21mA ±10%
	Module output voltage range (nominal power)	
	LDM60	12V to 55V (2.0W)
	LDM60MO	12V to 55V (2.9W)
	LDM60HO LDM606W	12V to 55V (4.0W) 15V to 55V (6.0W)
	LDM300MO	50V to 300V (2.7W)
	LDM300HO	50V to 300V (4.0W)
la sul sti su	LDM3006W	Double or reinforced insulation
Insulation	Output voltage from LDM60 LDM60MO LDM60HO and LDM606W is SELV	
	A record is kent of the number and length of americanou/mains operations and	This information can be downloaded via
Recording	control gear/battery temperatures.	the NFC interface
Mechanical	Module outside dimensions	L178mm x W30mm x H21mm
	Fixing centers	1/Umm Push wire terminals
Standards	Electrical connections	
Compliance	IEC 62034	Yee
-	IEC 55015 & IEC 61547	Yes
	Marks UKCA	Yes
	Marks CE	Yes

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LED Module Emergency Control Gear



LDM NFC Range

EMERGENCY LIGHTING PERFORMANCE FOR LED MODULES WITH DIFFERENT OPERATING VOLTAGES NB: EOFI (Emergency output factor of the forward voltage) is given by: Emergency LED current / Rated mains LED current

> LEDs WITH FORWARD OPERATING VOLTAGES 12V - 55V









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> LEDs WITH FORWARD OPERATING VOLTAGES 50V - 300V







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	Order Codes	Description
Emergency lighting	LDM60	12V to 55V standard output module
control gear	LDM60MO	12V to 55V medium output module
	LDM60HO	12V to 55V high output module
	LDM606W	15V to 55V high output module
	LDM300MO	50V to 300V medium output module
	LDM300HO	50V to 300V high output module
	LDM3006W	50V to 300V high output module
	Kit options: /K	Geartray kit including LED indicator, clip, battery, battery lead, battery end-caps & terminal covers
		Geartray kit including LED indicator, clip, battery, battery lead
	/K/NC	& battery end-caps
	/K/TII	Remote kit including LED indicator, clip, battery in protective
Batteries	B091T (for LDM60)	1 x 2 cell stick - LiFePO₄ 1.8Ah 18650 cells (EN 62620 designation – IfpR1865[1P2S]E060NA)
	B092T (for LDM60MO & LDM300MO)	1 x 2 cell stick - LiFePO₄ 2.3Ah 22650 cells (EN 62620 designation – IfpR2265[1P2S]E060NA)
	B093T (for LDM60HO & LDM300HO)	1 x 2 cell stick - LiFePO₄ 3.4Ah 22650 cells (EN 62620 designation – IfpR2265[1P2S]E060NA)
	B099T (for LDM606W & LDM3006W)	1 x 3 cell stick - LiFePO₄ 3.4Ah 26650 cells (EN 62620 designation – IfpR2665[1P3S]E060NA)
	Options: /TU	Battery housed in remote polycarbonate tube
Battery Connectors	BL018/T	500mm battery connector for use with LiFePO4 18650, 22650 & 26650 cells
	BL019/T	100mm battery connector for use with LiFePO4 18650, 22650 & 26650 cells
Battery End-caps	B040	18650 cell end-cap (Note: 2 end-caps are required for B091T)
	 B050	22650 cell end-cap (Note: 2 end-caps are required for B092T)
	8035	26650 cell end-cap (Note: 2 end-caps are required for B093T & B099T)
Indicator LED	LED1000/GRN/RED	1000m high brightness bi-colour green/red charge indicator LED
		Indicator LED clip
		- P
Options for independent H222		Terminal covers / clamp set (2 supplied)

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