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EMERGENCY LIGHTING INVERTER EM BOX M

Emergency lighting inverter for the conversion of LED luminaires

Scope

The EM BOX M emergency lighting inverter with integrated LFP battery adds emergency lighting and self-testing functionality to regular LED luminaires. The combination of the inverter and the battery in a single housing with strain relief makes work easier for the installer and is suitable for luminaires with limited space as well as for LED panels and downlights. A battery regeneration process for capacity optimisation is automatically initiated after commissioning and after each battery change to achieve maximum battery life.

Technical data

Mains voltage range	220…240 V
Mains frequency	50 / 60 Hz
Output voltage range	10…220 V
Max. output voltage (55 V variant)	60 V
Max. output voltage (105 V variant)	120 V
Max. output voltage (220 V variant)	300 V
Output power in emergency mode	approx. 2.5 W
Power consumption	max. 5 W / 7 VA
Mains to emergency switchover	< 0,5 s
Max. housing temperature tc	65 °C
Ambient temperature ta	5…50 °C
Functional test	random each 8 to 8.25 days
Duration test	4 annual battery discharges
Battery charging time	24h
Protection class	II
Protection type	IP20
Weight	190 g + battery
Dimensions	L 292 x B 81 x H 41 mm
Hole spacing	260 mm

The maximum LED current in maintained mode, i.e. in active operation, in the LED module must not exceed 2,5 A.

Characteristics

- Self-contained emergency lighting inverter for LED luminaires
- LED forward voltages ranging from 10 to 220V
- 1 h and 3 h emergency durations, others upon request
- Approx. 2.5 W of constant emergency output power, others upon request
- Automatic battery regeneration
- Deep discharge protection
- Selftest conforming to IEC 62034
- Bi-colour LED status indicator
- Compatible with all dimmable and non-dimmable LED drivers
- 3-pin technology: LED module changeover switching and delayed LED driver power switching
- Optional bus communication (DALI2, M-Bus or Wireless)
- Polycarbonate housing
- Suitable for protection class II luminaires
- 60 months warranty

Selftest

- Selftest conforming to IEC 62034
- Bi-colour battery and LED module status indicator

Batteries

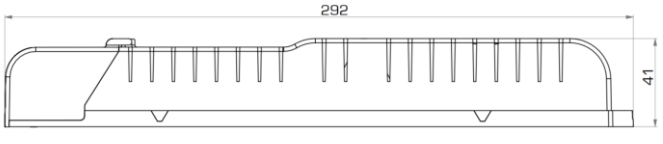
- High-temperature $LiFePO_4$ battery cells 5 to 60 °C
- Cell size 18650
- Charging time 24 h
- Automatic battery regeneration for capacity optimisation
- EN 62620 (Performance) and EN 62133 (Safety) certification
- Battery temperature monitoring (charging interruption at if temperature < 0 °C or > 60 °C)

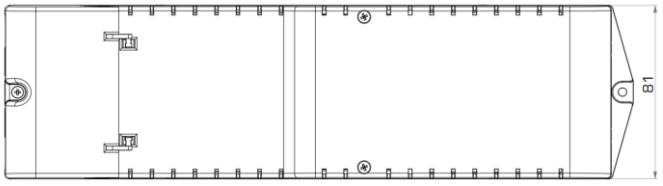
Safety

- Protection class II
- Protection type IP20
- SELV (55 V and 105 V variants)

Standards

- EN 60598-2-22
- EN 61347-2-7
- EN 61347-2-13
- EN 62384
- EN 62034
- EN 55015
- EN 61000-3-2
- EN 61000-3-3
- EN 61547
- EN 50172 (VDE 0108-100)





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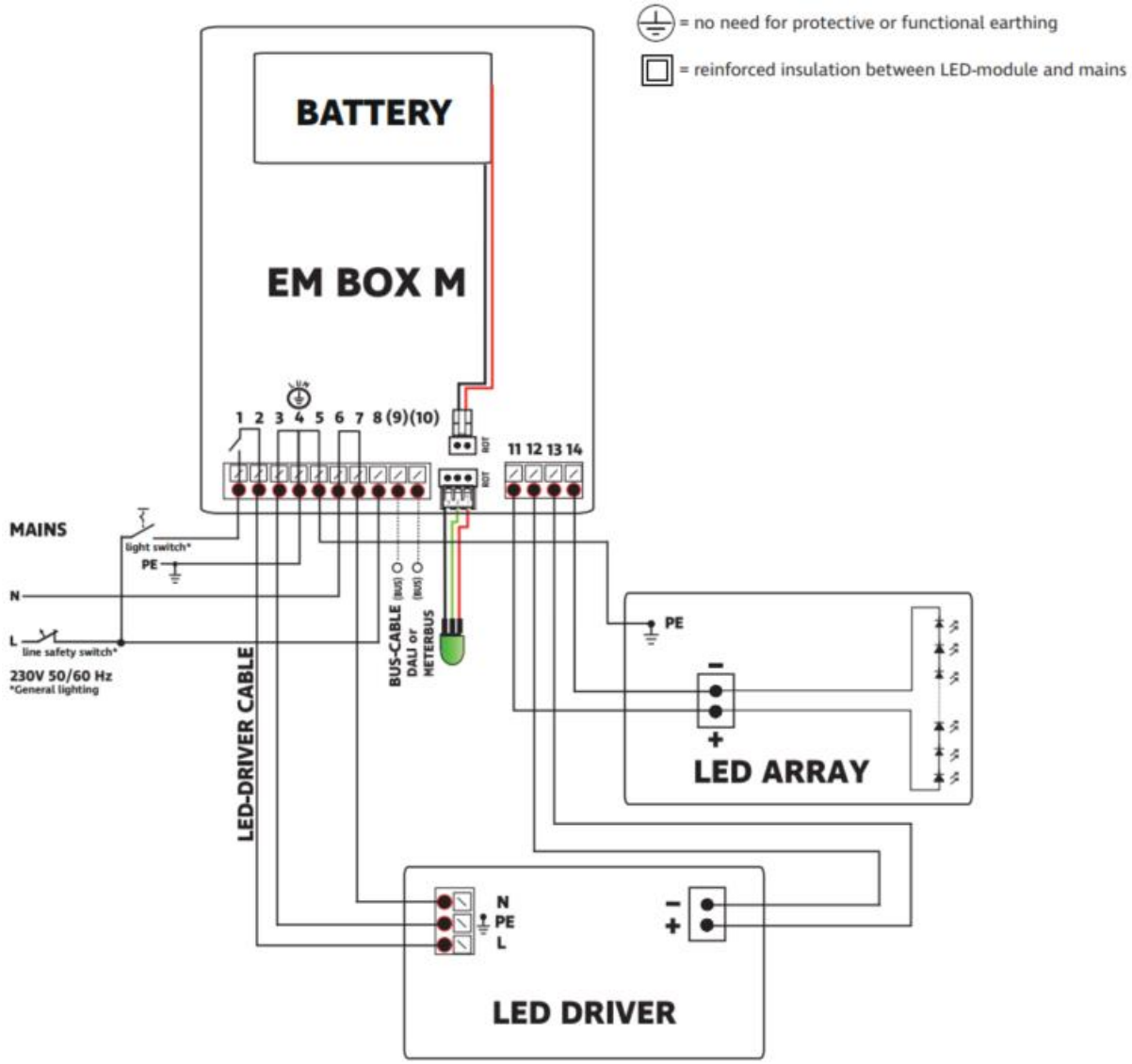
Product variants

Specifications \ Types	EMCU T product variants		
LED forward voltage	min. 10 V max. 55 V	min. 20 V max. 105 V	min. 100 V max. 220 V
Max. output voltage	60 V	120 V	300 V
SELV	touchable LEDs	isolated LEDs	non-SELV
Selftesting variants	EM BOX MS 55V	EM BOX MS 105V	EM BOX MS 220V
DALI2 variants	EM BOX MDS 55V	EM BOX MDS 105V	EM BOX MDS 220V
Wireless variants	EM BOX MW 55V	EM BOX MW 105V	EM BOX MW 220V
Batteries	18650 $LiFePO_4$ cells		

Wiring diagram



All information supplied without liability. Technical data subject to change without prior notice.