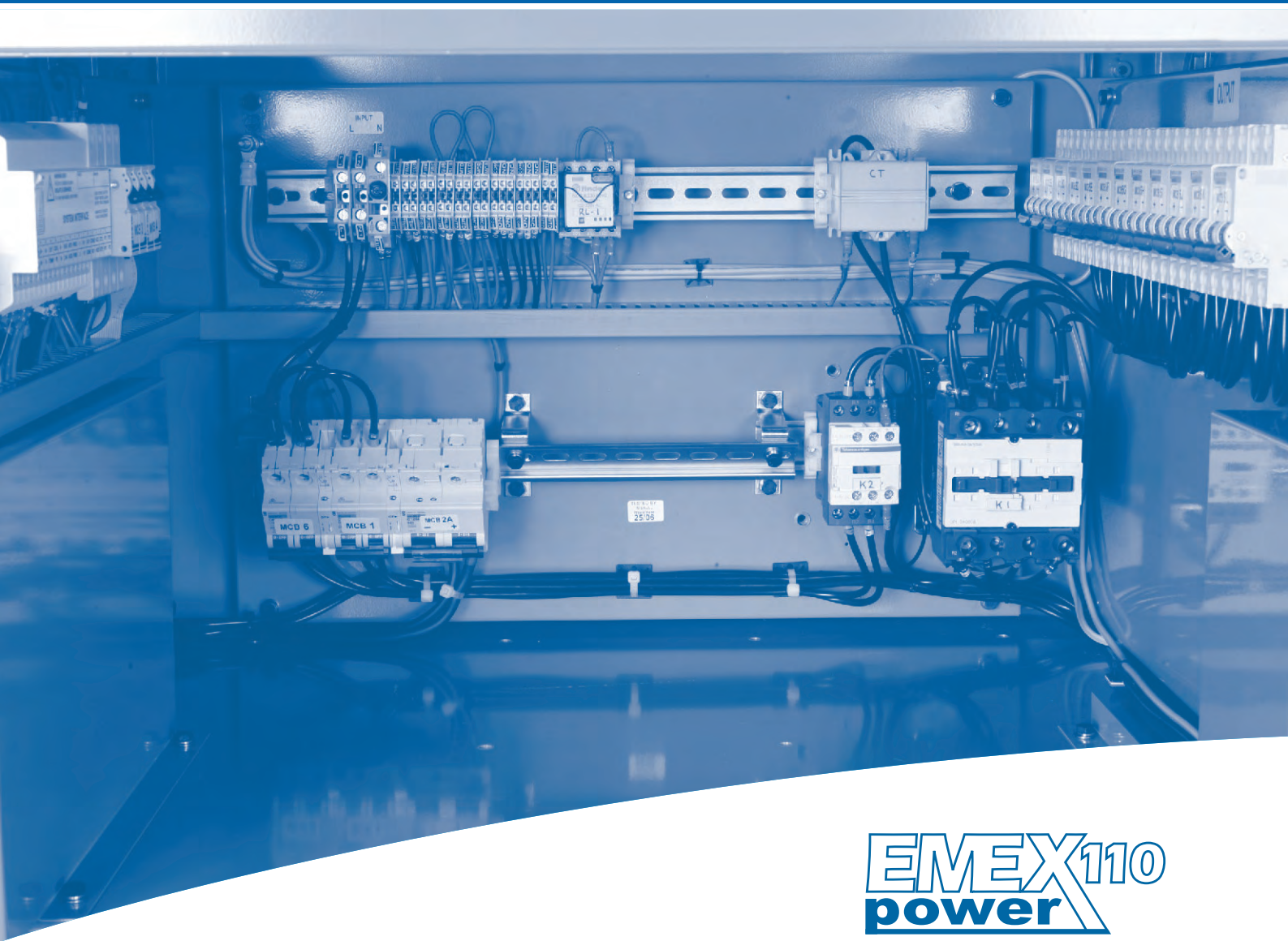




EMEX 110 and EMEL

110, 50 and 24 volt AC/DC Central Battery Systems

EMEL²⁴ EMEL⁵⁰ EMEL¹¹⁰ **EMEX¹¹⁰
power**



EMEX 110 – System design

EMEX 110 units provide 110V AC/DC to provide power to 110V slave fittings or converted mains luminaires.

Systems provide 110V AC continuously under mains healthy conditions, and battery back-up at 110V DC upon mains failure.

EMEX 110 units benefit from the same modular construction as the EMEX Power static inverter range. Charger modules utilise solid state electronics of the highest reliability. Units feature BS 5424 contactors and MCB protection throughout, to provide a rugged easy to maintain system with exceptional performance for emergency lighting use.

Each charger has input and output protection, and measures and limits its own current, making it a self-contained unit.

Alarms and status indicators are provided on the front panel display, which provides clear and concise information, rather than a long list of parameters, which may be confusing. EMEX Power is designed and manufactured in the UK.





Standard features: EMEX 110 system overview

EMEX Power offers a host standard features & benefits, as listed below. Note that some items will be optional, extra cost items on other systems, or may not be available at all if the system is not designed specifically and solely for emergency lighting use.

Performance

- 110V AC/DC output
- Excellent recharge capability – 80% after 12 – 14 hours following rated discharge
- MCB protection throughout; no fuses
- EMEX Power true modular construction with common spares (charger, control PCB, and system interface common across the full system range)
- Individual MCB protection for each module - AC and DC circuits
- Individual cooling fans for each charger with on-demand operation (not continuously running)
- Split parallel charger above 10 amps – enhanced integrity with the ability to operate with one or more charger modules isolated (subject to increased recharge time)
- Integral maintenance bypass facility (ability to support output load in bypass mode whilst maintenance is performed)
- Temperature compensated charger

Alarms and instrumentation

- Comprehensive display
- Charger alarm pack
- Momentary “push to test” button
- Fire alarm interface
- Final exit interlock
- Internal and external MCB monitoring
- Local/remote maintained circuit control
- Sub-circuit monitor connection
- Two sets of volt-free alarm relay contacts
- System-inhibit engineers’ switch
- Remote Alarm Unit option

Mechanical

- IP21 rated cabinet as standard
- Easy front panel access
- Inter-cabinet trunking for battery cables
- Fork-lift plinth
- Lifting eyes for crane lift as standard
- Installation pack with all tools required
- Detailed instruction manual



Batteries

Standard systems are supplied with Valve Regulated Lead Acid (VRLA) batteries, also known as 'Sealed Lead Acid'. These batteries are sealed for their design life of 10 years.

Lead Acid Plante and Nickel Cadmium batteries are available upon request, however, these batteries require a much larger physical area, and emit potentially explosive gasses, meaning the battery room must be adequately ventilated.

These reasons, along with the additional capital cost, generally outweigh the additional life obtained, as demonstrated below.

Battery	Initial cost	Design life	Maintenance
VRLA	££	YY	££
Ni-CAD	£££££	YYYYY	£££££
Planté	££££	YYYY	££££

Order codes

1 hour 110V AC/DC systems

KVA	Rating	Watts	Cabinet	Part No.
2.0		1,900	S	ELD9100.120
3.0		2,700	L	ELD9100.121
4.0		4,000	L	ELD9100.122
5.5		5,500	L	ELD9100.123

Other system sizes and ratings are available – please contact us if your requirements are not shown here.

3 hour 110V AC/DC systems

KVA	Rating	Watts	Cabinet	Part No.
2.0		1,000	S	ELD9100.130
2.0		1,600	S	ELD9100.131
2.0		2,000	L	ELD9100.132
3.0		2,700	L	ELD9100.133
4.0		3,600	L	ELD9100.134
5.5		4,860	S + L	ELD9100.135
5.5		5,400	S + L	ELD9100.136

Remote alarm

British Standard BS 5266 Part 8 (BS EN 50172) section 7.2.2 requires that a visual daily check of the central battery alarms is made. It is also a requirement that the CBS should be located in a secure area, which is typically a locked switch room in the basement.

We offer an optional Remote Alarm Unit (RAU), which will enable the user to perform the required daily check without the need to physically access the equipment.

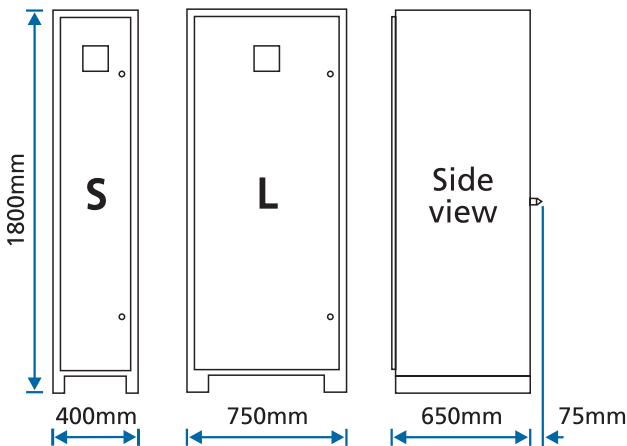
Remote Alarm Unit RAU/240 [ELD0075.003](#)

Remote alarm unit providing both audible and visual fault indication with mute facility. The RAU requires a local 240VAC supply and should be linked to the static inverter unit by a two core cable.

Cabinet sizes

Cabinets are available in two standard sizes – small (denoted below by S) and large (denoted below by L). Small is 400mm wide, large is 750mm wide.

Both cabinet sizes are the same height (1,800mm) and depth (650mm).



Overall depth of 725mm is required to allow a ventilation gap of 75mm (rubber back-stop provided ensures this distance is maintained).

Cabinets may be mounted side-by-side since no side ventilation is required.

EMEL mid-range

- 110V, 50V and 24V AC/DC central battery systems in 1, 2 or 3 hour durations
- Compatible with a range of AC/DC slave luminaires, converted mains fittings
- Suitable for small and medium sized installations, EMEL Light Duty provides an effective solution where self-contained fittings may not be appropriate, eg where ongoing maintenance may be disruptive
- Ideal for refurbishment of an existing installation, and is suitable for local authority specification work

EMEL Economy systems are supplied with 5 year design life valve regulated lead acid batteries. They include a mains on indicator and charge fail alarm as standard.

EMEL 24V AC/DC Economy	100W to 700W
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EMEL Standard systems are supplied with 10 year design life valve regulated lead acid batteries and include mains on indicator and charge fail alarm, together with a moving coil ammeter and voltmeter as standard.

EMEL 24V AC/DC Standard	400W to 800W
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EMEL 50V AC/DC Standard	200W to 2,000W
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EMEL 110V AC/DC Standard	600W to 3,500W
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For larger 110V systems, please refer to our EMEX 110 range

Option list (EMEL Standard only)

Remote Alarm Unit	(/RAU)
Phase Failure Relay	(/PFR)
Fire Alarm Relay	(/FAR)
Sub-Circuit Control Relay(s)	(/SCR)
Maintained Control Relay	(/MCR)
Digital Ammeter/Voltmeter	(/DM)
Time Switch	(/TS)
High/Low Volts Monitor	(/HL)
Earth Fault Monitor	(/EFA)
Common Alarm Relay	(/CAR)

