EMERGI-LITE

EMERGENCY LIGHTING & FIRE DETECTION SPECIALISTS

EMEX Central Battery Systems

Thomas&Betts

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The professionals...

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BFPSA British Fire Protection Systems Association

ICEL Industry Committee for Emergency Lighting

A member of the LIGHTING INDUSTRY FEDERATION

BSI REGISTERED UKAS QUALITY MANAGEMENT 003
FM09470

Emergi-Lite Safety Systems

As part of the international Thomas & Betts corporation, Emergi-Lite Safety Systems is an established manufacturer of Emergency Lighting and Fire Detection Systems.

Products and Services

Emergi-Lite offers a single company solution from design to manufacture, installation, commissioning and after-sales care.

Systems are manufactured to high quality standards under procedures certified to BS EN ISO 9001:2000.

Our Central Battery System products include static inverter systems, AC/DC central battery systems, sub-circuit monitor relays, automatic testing systems and control panels.

Additionally, support services include expert technical advice, installation and commissioning, servicing and engineering support by dedicated UK engineers and a comprehensive worldwide network of highly trained agents and distributors.



What is a Central Battery System?

A Central Battery System (CBS) is essentially a large set of batteries at a single central location. In the event of a mains failure in the building, the batteries are used to provide power for emergency lighting purposes.

The CBS comprises the battery set, battery charger, control circuitry, alarms and instrumentation to ensure reliable provision of emergency power when required.

The CBS output will typically be 24V, 50V, 110V, or 220/230/240V, according to type.

Output is usually AC/DC for the lower voltages, and AC when mains voltage.

The CBS will be sized according to the load required. The battery will be rated to achieve a specified duration, typically 1, 2, or 3 hours.

A larger project may use one single large CBS, or a number of smaller CBS units.

How does it work?

The CBS effectively stores energy in the battery set whilst the mains supply is healthy, and draws upon this reserve when required in times of mains failure. If the failure is limited to part of the building (local), the CBS may provide power using its incoming supply without discharging the battery.

Mains failures are detected by sub-circuit monitoring relays to ensure the automatic, fail-safe operation of the emergency lighting. These are situated around the building where required, or may be located within the CBS itself.

Power from the CBS is distributed to dedicated emergency luminaires and exit signs, or converted mains luminaires. Standard, unmodified mains luminaires can be used on a mains-voltage CBS.

Distribution cables may need to be fire protected, according to local regulations and/or risk assessment.

Who decides?

The voltage of the CBS is influenced by the size and nature of the project. The final decision may be taken by the consultant, end user, or contractor.

The duration of autonomy in the CBS is often dictated by national Standards (eg BS 5266), or local authority requirements.

What are its benefits?

A CBS system gives a higher light output per point when compared to a self-contained installation, and therefore will use fewer emergency lights per area.

A CBS solution offers great savings in ongoing testing, maintenance, and replacement battery costs when compared to a self-contained emergency lighting installation.

Further detailed information is given on page 4.

Self-contained or centrally fed?

Principle types of emergency lighting system are “centrally fed” or “self-contained”

In a self-contained system, each emergency luminaire has an on-board battery and charger unit.

A Central Battery System operates on the principle that the luminaires are fed, via sub-distribution, from a single supply source.

Central Battery System

Batteries/charger at central location

Advantages

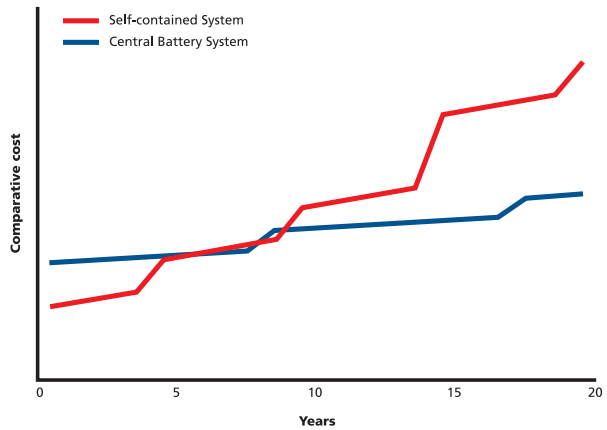
- Improved light output
- Centralised Maintenance, minimum disruption
- Battery replacement 8 – 10 years
- System design life 20+ years

Disadvantages

- Fire protected cable may be required (subject to local regulations)

A Central Battery System has a design life of 20 years or more, and would typically require battery replacement in 8 – 10 years (depending on battery type). Maintenance requirements are centralised, minimising costs and disruption to the occupier. Furthermore, when battery replacement is required, it is only needed at the single central location and can be accomplished in a single visit with minimum disruption to the occupier.

Taking a typical large installation it can be seen that the lower initial purchase and installation cost of a self-contained system is soon countered by the cost of maintenance requirements and frequent battery replacement, when compared to a central battery system.



Comparative cost of purchasing and running Self-contained and Central Battery Systems

Self-contained system

Batteries/charger contained in individual luminaires

Advantages

- Simple installation
- No special cabling

Disadvantages

- Limited light output
- Multi-point maintenance
- Battery replacement 3 – 5 years
- System design life 15 years maximum

In the first 3 years of life, few battery faults would be expected, provided a test and maintenance schedule (manual walk test at least) was in place.

A self-contained system is economic for smaller installations with a limited total number of luminaires. A typical self-contained emergency power pack has an operational design life of 10 – 15 years, and will require a replacement battery every 3 – 5 years. The installation is straightforward and, by definition, each luminaire is installed and maintained independently of all others on the site.

After this period the instance of battery failures may increase, resulting in the possibility of further unplanned maintenance visits to replace battery sets. After 5 years the incidence of such piecemeal activity may cause the client to consider a full battery replacement programme. However, the fact that some batteries may have been replaced already in recent times raises a dilemma. Either, you can replace all batteries ‘en masse’ ignoring the waste of potentially good batteries and previous labour efforts, or you could continue with the fragmented maintenance approach (causing irregular future disruption to the building occupier).

It can be considered that self-contained products will require 2 or more complete sets of replacement batteries during the first 10 years of operation. In less than 15 years the likelihood would be that a self-contained system would be ‘life-expired’ leading to the need for a completely new set of luminaires.

It should be noted here, that a more rigorous and beneficial planned maintenance schedule can be achieved, albeit at a higher initial product cost, utilising a suitable automatic or controlled test and monitoring system, to check the luminaires and their batteries (‘Centrel’ or IR2: available from Emergi-Lite).

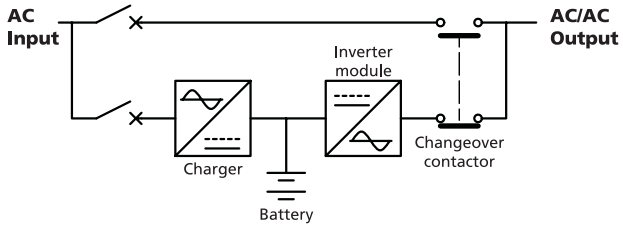


Central systems fall into two categories – AC/AC static inverter systems and AC/DC battery systems. Both types of central system operate on the same principle; that the fitting is fed, via emergency sub-distribution, from a single supply source (the central system). The term 'static inverter' is derived from the lack of moving parts within the equipment, as opposed to rotary motor/generator converter designs.

Central systems allow a wide range of batteries to be used, which offer different life expectancies against physical size and cost, localised battery/equipment maintenance, flexible lighting design and greater light output per luminaire.

Static Inverter systems (AC/AC)

Static inverter systems operate in a similar manner to AC/DC central battery systems, with the exception that the system constantly gives a 230V AC output. The advantages of this approach are numerous. Firstly, luminaires do not need to be converted, as any mains luminaire can be used (there are some restrictions to this on the grounds of suitability for emergency lighting). Luminaires also operate at full light output, as they are being fed from a full mains voltage supply, meaning fewer luminaires are required for equivalent light outputs.



Advantages

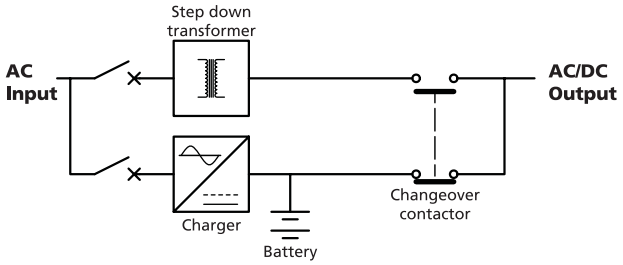
- Suitable for medium to large installations
- Almost any fitting may be used
- Easy to maintain
- 10 to 25 year design life batteries
- Distribution is standard 230V AC (standard DBs)
- Reduced volt-drop problems on output cabling
- Luminaires operate at full light output which makes inverter systems suitable for high risk task area lighting and installations where ceiling heights make low output luminaires unusable

Disadvantages

- Not cost effective for small installations
- Larger systems are physically large and may require special battery room

Central Battery Systems (AC/DC)

Central battery systems provide low voltage AC power (typically 24V, 48V or 110V AC) whilst mains to the system is healthy, and low voltage DC when mains fails. The battery voltage selected will depend upon the number of luminaires, the rating, their type and their distance from the central system. Central battery systems require each emergency luminaire to be converted for use on the low voltage supply.
The cost of this conversion may be prohibitive on larger installations. Another important factor is that converted luminaires only provide a small percentage of their normal light output when running in emergency mode.



Advantages

- Reduced cost for smaller installations
- Small physical size
- Easy to maintain
- 5 to 25 year design life batteries

Disadvantages

- Not cost effective for large numbers of luminaires
- Cable restrictions to avoid volt-drop
- Fittings must be converted for use on AC/DC
- Reduced light output in emergency mode

Choosing the right system

There are a variety of ways in which back-up power can be provided. However, even though certain methods are suitable for critical applications, they may not necessarily be suitable for Emergency Lighting.

This is because an Emergency Lighting system has unique load characteristics. And since Emergency Lighting is a critical life-safety installation it is vital that a Central Battery System provided to power it is designed with these load characteristics in mind.

EMEX Power central inverter systems are specifically designed to provide emergency power for lighting systems in a mains fail or evacuation situation.

In choosing the right AC system to support emergency lighting it is important to consider the following questions:

Overload performance

BS EN 50171 requires that an inverter must be able to start the full load without the mains supply present. How does the system perform in a total power failure (ie is the system able to start the load without the bypass supply being available)?

Repeat duty

BS EN 50171 requires a central battery system to fully recharge within 24 hours. Is the charger able to recharge the batteries sufficiently quickly (80% in 14 hours or 100% after 24 hours)?

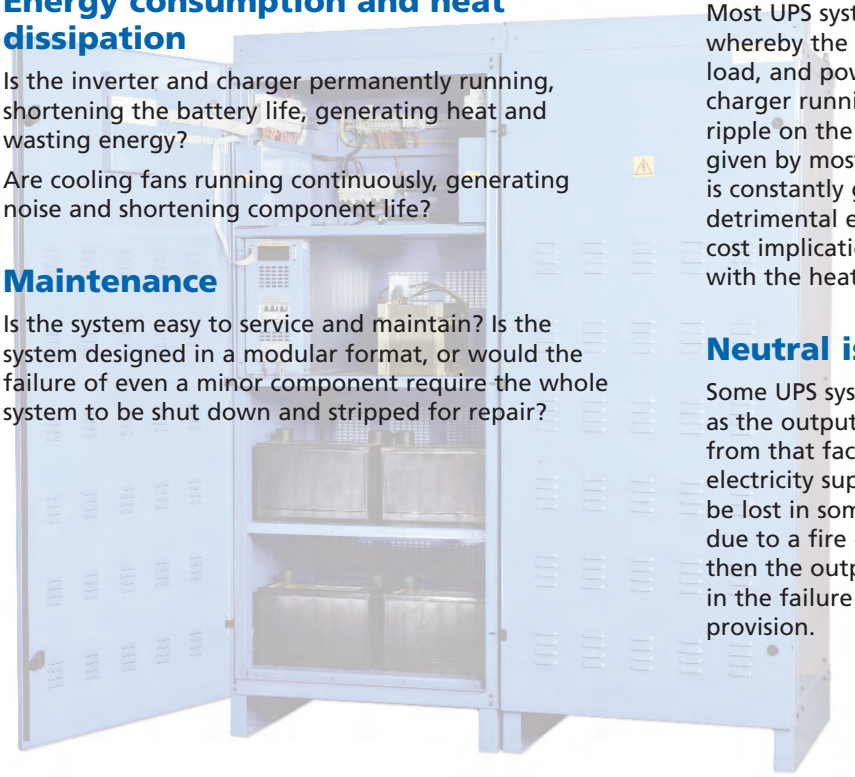
Energy consumption and heat dissipation

Is the inverter and charger permanently running, shortening the battery life, generating heat and wasting energy?

Are cooling fans running continuously, generating noise and shortening component life?

Maintenance

Is the system easy to service and maintain? Is the system designed in a modular format, or would the failure of even a minor component require the whole system to be shut down and stripped for repair?



General information on UPS systems, for guidance:

Recharge period

UPS systems which are designed primarily for computer back-up generally offer short back-up times, and consequentially employ small chargers. To provide the longer durations specified for emergency lighting, a much larger capacity battery is fitted. However, if the charger is not uprated then the system will not be capable of recharging sufficiently quickly. Hence the battery rating is sometimes increased even further so that it is not fully discharged at the end of the rated duration period (and is thus capable of "repeat duty" with limited further recharge). This results in a much larger system that is actually required for the load, increasing both the physical space required and future battery replacement costs.

Overload performance

An emergency lighting load imposes large 'in-rush' currents when starting lamps from cold. However, UPS systems are often designed to shut down at only 125% overload and revert to the incoming supply. During a total power failure situation, this could result in total failure of the emergency lighting system. Furthermore, a UPS may fail to clear a fuse on a lighting circuit, meaning that a single short circuit fault could result in loss of the entire emergency lighting provision.

Energy consumption and battery life

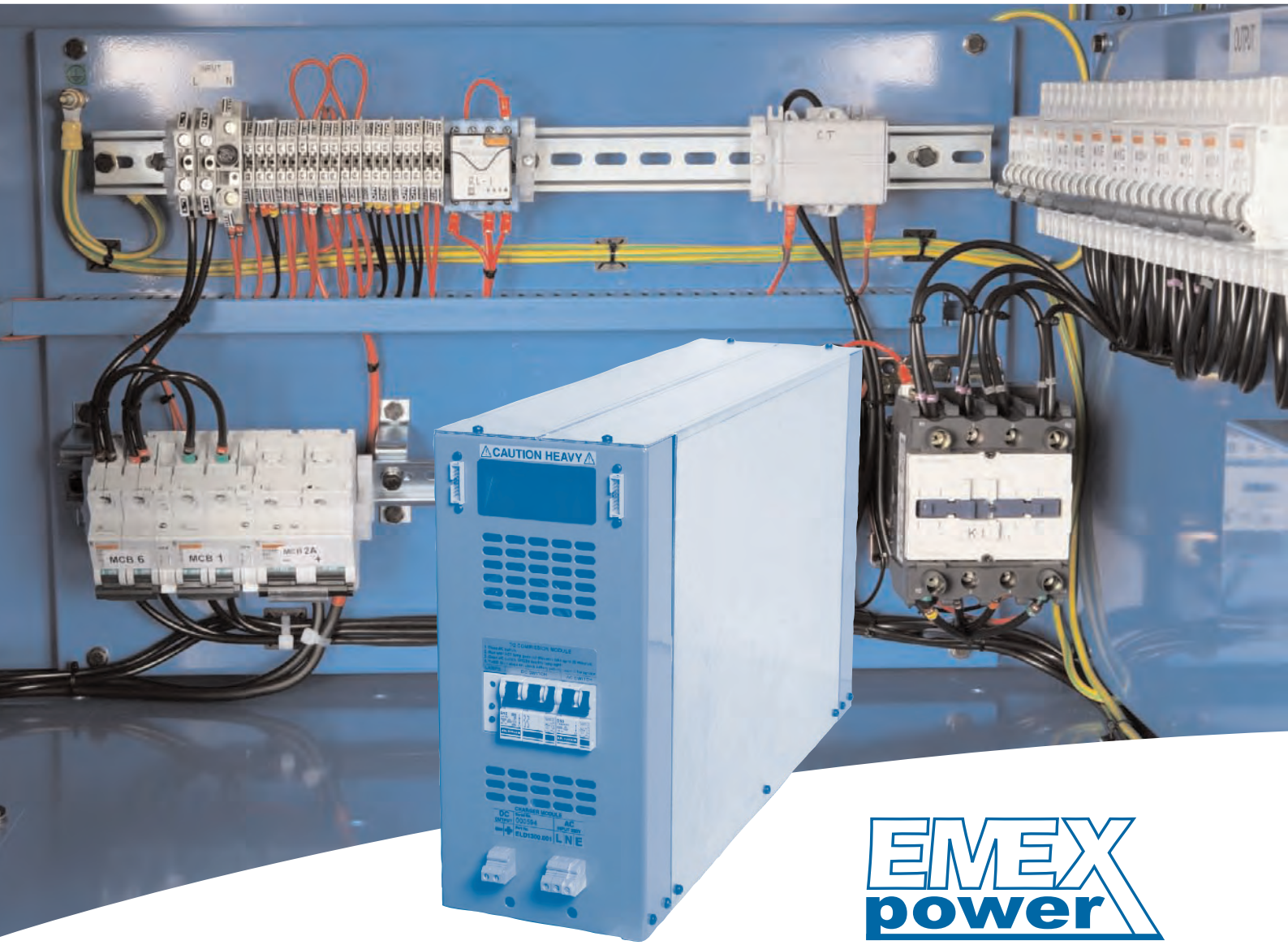
Most UPS systems operate in the 'on-line' mode, whereby the inverter runs constantly to supply the load, and power is taken from the battery with the charger running constantly. This places an excessive ripple on the battery (in contravention of the advice given by most battery manufacturers). Also, the system is constantly generating heat which has a further detrimental effect on battery life. There are energy cost implications to run an on-line system, and deal with the heat generated.

Neutral isolation

Some UPS systems use the incoming neutral conductor as the output neutral, with no isolation. Quite apart from that fact that this does not comply with electricity supply regulations, should the input neutral be lost in some way (for example if it were broken due to a fire or other physical damage to the building) then the output neutral would also be lost, resulting in the failure of the entire emergency lighting provision.

EMEX Power

Modular AC/AC Central Battery System



Modular AC/AC Central Battery System

System design

The EMEX Power inverter and charger modules utilise solid state electronics of the highest reliability to provide a rugged, easy to maintain system with exceptional performance for emergency lighting use. The system has been designed solely for emergency lighting, and not modified from other less essential power supply requirements. As such, the system has exceptional overload performance without the need to over-specify the rating of the inverter to ensure faults can be cleared.

Each module has input and output protection and each module 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 cabinets require no side ventilation therefore are easy to install in virtually any plant room



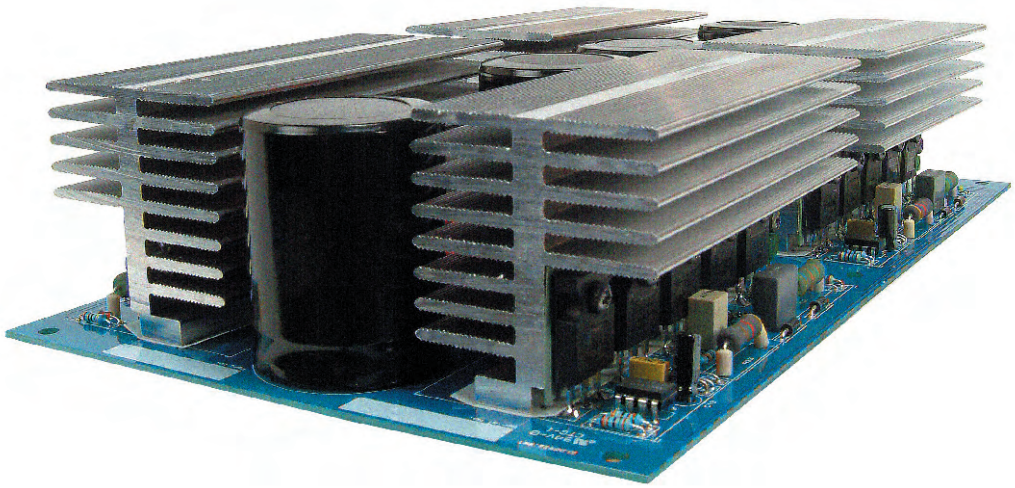
System performance

EMEX Power has been designed to operate solely as an emergency lighting power supply, and as such is equipped with the following features:

- An overload performance of 120% continuous, 150% for 1 minute and 200% for 10 seconds without reduction in output voltage
- Short-circuit currents of 350% for 10 seconds
- The ability to strike the full load on mains failure without using a bypass supply
- Four pole contactor complying with BS 5424
- Available in single phase input/output, true three phase input – three phase output (4 wire) or three phase input – combined three/single phase output (6 wire)

Quality assurance

Designed and manufactured in the UK, EMEX Power marries cutting edge design to quality components and assured build quality. This results in products providing both high performance and reliability. Constant product development by dedicated in-house engineers ensures Emergi-Lite Central Battery Systems will always meet even the most stringent demands.



"The Emergi-Lite EMEX Power central inverter systems are designed to provide safe, reliable operation and meet the relevant requirements of ICEL 1009 and British Standards"

The cabinet

The cabinet has been engineered to allow the housing of the inverter and charger modules, battery or a combination of both. Two cabinet sizes are used. The smaller (S) cabinet can house up to a 12KVA 3 hour system (with the battery housed remotely), greatly reducing plant room floor space.

All connections are in the top control section of the cabinet. A top entry gland plate is provided for ease of installation, as is inter-cabinet steel trunking to allow safe connection of battery cables between control and battery cabinets.

All cabinets have an integral lifting frame and are supplied with lifting eye bolts fitted to allow crane lifting. Cabinets also have an integrated plinth for fork-lift or pallet truck.

Entry to equipment is via the front door only, allowing the cabinet to be located directly against wall at sides and rear ie can be located in corner of room. Cubicle spacers are provided to prevent equipment located direct to wall with no ventilation space (75mm required at rear).

System modules

EMEX Power utilises standard modules to give reliable operation, reduces the need to carry extensive and costly spares and gives a 'low mean' time to repair.

Both the inverter AND the charger utilise this modular approach, allowing a much higher power density than similar non-modular systems. The number of modules fitted, together with the appropriate sized battery, determines the rating of the system.

All modules connect to a common control bus via IDC connectors. Main connections to modules are via five front panel terminals giving quick and easy access to terminations, allowing a module to be changed in a matter of minutes.

Each module has two recessed handles to aid lifting. No side or rear access is required.

"Modular design aspect allows flexible configuration of single phase input/output, true three phase input/output (4 wire) and combined three phase input/output (6 wire)"



Benefits for the installer

- EMEX Power installation is easy and trouble free. All tools required to install and maintain the system are included (battery spanner, petroleum jelly, Allen key, cell number sheets etc)
- All cables are provided
- Inter-cabinet trunking connects adjacent cabinets allowing battery cables to safely pass between battery and control cabinets without the need for an external cable tray. All cabinets are pre-drilled and rubber grommets are fitted for battery cables
- The battery voltage does not exceed 120V DC. Larger systems utilise banks of batteries in parallel, each with its own circuit breaker in the control cabinet. There is no high DC voltage (some inverter systems utilise battery voltages up to 600V DC)
- A large top entry gland plate provides enough room for all connection needs
- Cabinet levelling feet available to cope with uneven floors
- A comprehensive 12 page instruction manual is included showing all battery connections, full electrical schematic and commissioning instructions
- Cabinets can be supplied empty, allowing manhandling into awkward spaces
- All cabinets are supplied with lifting eyes and have been certified for crane lifting, even when full. Alternatively, a 110mm plinth is fitted to all cabinets to allow fork-lift access
- A very high energy density means more power is available in a smaller cabinet, reducing plant room floor space
- No side ventilation is required. Cabinets can be positioned directly adjacent to walls and other cabinets. This reduces floor space in the plant room
- Equipment is supplied 'Ready to install'. Simply connect the mains supply, battery and output circuits

Benefits for the end-user

- Emergi-Lite is the manufacturer of the system, providing a single source of technical support, spares, service and repair
- All equipment is designed and manufactured at our Leeds facility in the UK
- EMEX Power operates in a low power mode; the load is supplied via the incoming mains supply, with the inverter on standby for immediate start. This can provide substantial cost savings for the customer, as the inverter is not running continuously, generating waste heat that has an effect on battery life. Cooling fans only operate when on load and are high reliability types
- Minimal servicing is required on the inverter system, reducing maintenance costs. Greater savings on maintenance can be made if the inverter system is integrated with an automatic testing system
- EMEX Power is built around five major components; master inverter module, slave inverter module, charger module, changeover contactor and display unit. Regardless of the number of systems on a site, spares holding will be the same for all systems. This greatly reduces spares cost
- Owing to the modular nature of the entire system, any component can be replaced in approximately 15 minutes, reducing down time should a fault occur
- 'Distributed System' modular concept – It could be possible that all the emergency lighting is lost owing to a single Central Battery System failure. The EMEX Power modular format, however, allows the user to design different sizes of system into the scheme, thus overcoming the potential risk. This 'distributed' concept, where several smaller units (5KVA for example) replace a larger single 20KVA unit, is a worthy and practicable consideration where circumstances suit
- No fuses are used in the system. All fault devices are miniature circuit breakers. This gives easy correction of overload tripping without the need to search for replacement fuses. An alarm is raised if ANY circuit breaker trips. This scheme can be extended to remote distribution boards if required
- Equipment is designed solely for emergency lighting, and is not modified as a secondary consideration. This gives the customer peace of mind that the equipment is suitable for this important task
- Systems can be supplied part populated for expansion later, reducing initial capital cost

Standard features: EMEX Power system overview

EMEX Power offers a host of standard features and 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.

For further detail, please refer to the 'EMEX Power detailed specification' on page 84.

Performance

- True AC/AC 50Hz output
- Ability to use standard proprietary AC distribution and protection devices on outgoing circuits
- Compatibility with addressable test package using EMEX technology
- Excellent Overload Capability in full emergency mode: 200% for 10 seconds without reduction in output voltage
- Excellent recharge capability: 80% after 12 – 14 hours following rated discharge
- MCB protection throughout – no fuses
- EMEX Power true modular construction with common spares (inverter, 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 module 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 and inverter 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
- Inverter-inhibit engineers' switch
- Remote Alarm Unit option
- Battery earth leakage detection 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	ff	YY	ff
Ni-CAD	fffff	YYYYY	fffff
Planté	ffff	YYYY	ffff



System selection

EMEX Power systems are dual rated to allow selection of an appropriate system to either commercial or ICEL ratings.

ICEL rated systems are de-rated by 20% from their commercial equivalent system. To make system selection easier, the selection tables on page 14 show both ratings for each system.

To select an appropriate system:

- Decide on the scheme you require – ICEL or Commercial
- Calculate the required VA and wattage, ensuring accurate figures are used for total luminaire power consumption, not simply the tube power (The example below shows how to calculate these figures)
- Select the next largest system from the relevant table on page 14
- If the size required is not available as a single system, consider replacing with multiple smaller systems
- For comprehensive design support and quotations, please contact our Central Battery Department on +44 (0)113 281 0600

How to calculate required system VA and wattage

- Calculating the total required VA and wattage is simply a case of multiplying the number of luminaires by their 'true' VA and wattage for each circuit, summing all of the circuits together then adding 20% to this total figure
- Additional capacity calculations are based on compliance to BS EN 50171

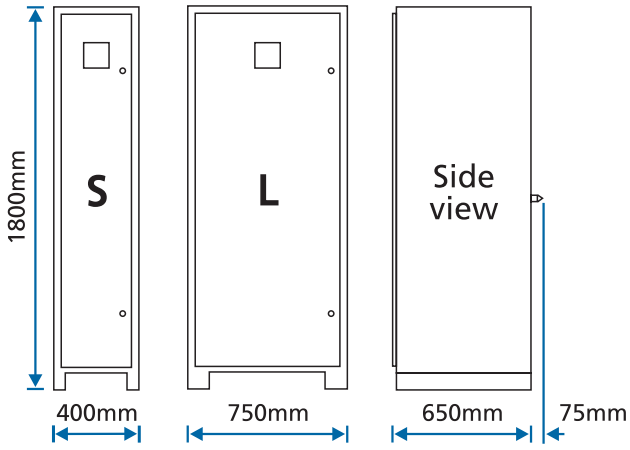
Luminaire	True VA/Watts	Quantity	Circuit VA/Watts
Day-lite 8 watt Bulkhead (XW1311HF)	10.7VA/9.2W	180	1,926VA/1,656W
Camarque 38 watt 2D	57.5VA/48W	36	2,070VA/1,728W
Navigator 8 watt Exit Sign	10.7VA/9.2W	60	642VA/552W
	Total circuit VA/W		**4,638VA/3,936W**
	+20% spare capacity		**5,797VA/4,920W**

Since the total requirement is 5,797VA/4,920W, select a 6.0KVA/5,100W system

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

Order codes

Having followed the guidance for System selection on page 13, use the figures obtained to find the relevant part number for your desired system. The cabinet configuration is also contained within these tables (Cabinet sizes on page 13 will enable you to determine the necessary amount of space required for the system).

3 hour Single Phase 220/230/240V 50Hz

Commercial Rating (ICEL Rating) KVA	Watts	Cabinet	Part No.
1.5 (1.25)	1,275 (1,060)	S	ELD9000.013
3.0 (2.5)	2,550 (2,125)	L	ELD9000.014
4.5 (3.75)	3,825 (3,188)	L + S	ELD9000.015
6.0 (5.0)	5,100 (4,250)	L + S	ELD9000.016
7.5 (6.25)	6,375 (5,310)	2 x L	ELD9000.017
9.0 (7.5)	7,650 (6,375)	2 x L	ELD9000.018
10.5 (8.75)	8,925 (7,430)	2 x L + S	ELD9000.019
12.0 (10.0)	10,200 (8,500)	2 x L + S	ELD9000.020
15.0 (12.5)	12,750 (10,625)	3 x L	ELD9000.021
18.0 (15.0)	15,300 (12,750)	4 x L	ELD9000.022
21.0 (17.5)	17,850 (14,875)	4 x L	ELD9000.023
24.0 (20.0)	20,400 (17,000)	5 x L	ELD9000.024

1 hour Single Phase 220/230/240V 50Hz

Commercial Rating (ICEL Rating) KVA	Watts	Cabinet	Part No.
1.5 (1.25)	1,275 (1,060)	S	ELD9000.001
3.0 (2.5)	2,550 (2,125)	S	ELD9000.002
4.5 (3.75)	3,825 (3,188)	L	ELD9000.003
6.0 (5.0)	5,100 (4,250)	L	ELD9000.004
7.5 (6.25)	6,375 (5,310)	L	ELD9000.005
9.0 (7.5)	7,650 (6,375)	L	ELD9000.006
10.5 (8.75)	8,925 (7,430)	L + S	ELD9000.007
12.0 (10.0)	10,200 (8,500)	L + S	ELD9000.008
15.0 (12.5)	12,750 (10,625)	L + S	ELD9000.009
18.0 (15.0)	15,300 (12,750)	2 x L	ELD9000.010
21.0 (17.5)	17,850 (14,875)	2 x L + S	ELD9000.011
24.0 (20.0)	20,400 (17,000)	2 x L + S	ELD9000.012

3 hour 3 Phase 400/415V 50Hz

Commercial Rating (ICEL Rating) KVA	Watts	Cabinet	Part No.
27 (22.9)	22,950 (19,500)	5 x L + S	ELD9000.090
36 (30.6)	30,600 (26,000)	6 x L + S	ELD9000.091
45 (38.2)	38,250 (32,400)	8 x L	ELD9000.092
54 (45.9)	45,900 (39,000)	9 x L + S	ELD9000.093
63 (53.5)	53,550 (45,400)	10 x L	ELD9000.094

3 phase systems are available from 4.5KVA upwards

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

2 hour Single Phase 220/230/240V 50Hz

Commercial Rating (ICEL Rating) KVA	Watts	Cabinet	Part No.
1.5 (1.25)	1,275 (1,060)	S	ELD9000.070
3.0 (2.5)	2,550 (2,125)	L	ELD9000.071
4.5 (3.75)	3,825 (3,188)	L	ELD9000.072
6.0 (5.0)	5,100 (4,250)	S + L	ELD9000.073
7.5 (6.25)	6,375 (5,310)	S + L	ELD9000.074
9.0 (7.5)	7,650 (6,375)	S + L	ELD9000.075
10.5 (8.75)	8,925 (7,430)	2 x L	ELD9000.076
12.0 (10.0)	10,200 (8,500)	2 x L	ELD9000.077
15.0 (12.5)	12,750 (10,625)	3 x L	ELD9000.078
18.0 (15.0)	15,300 (12,750)	4 x L	ELD9000.079
21.0 (17.5)	17,850 (14,875)	4 x L	ELD9000.080
24.0 (20.0)	20,400 (17,000)	4 x L	ELD9000.081

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.

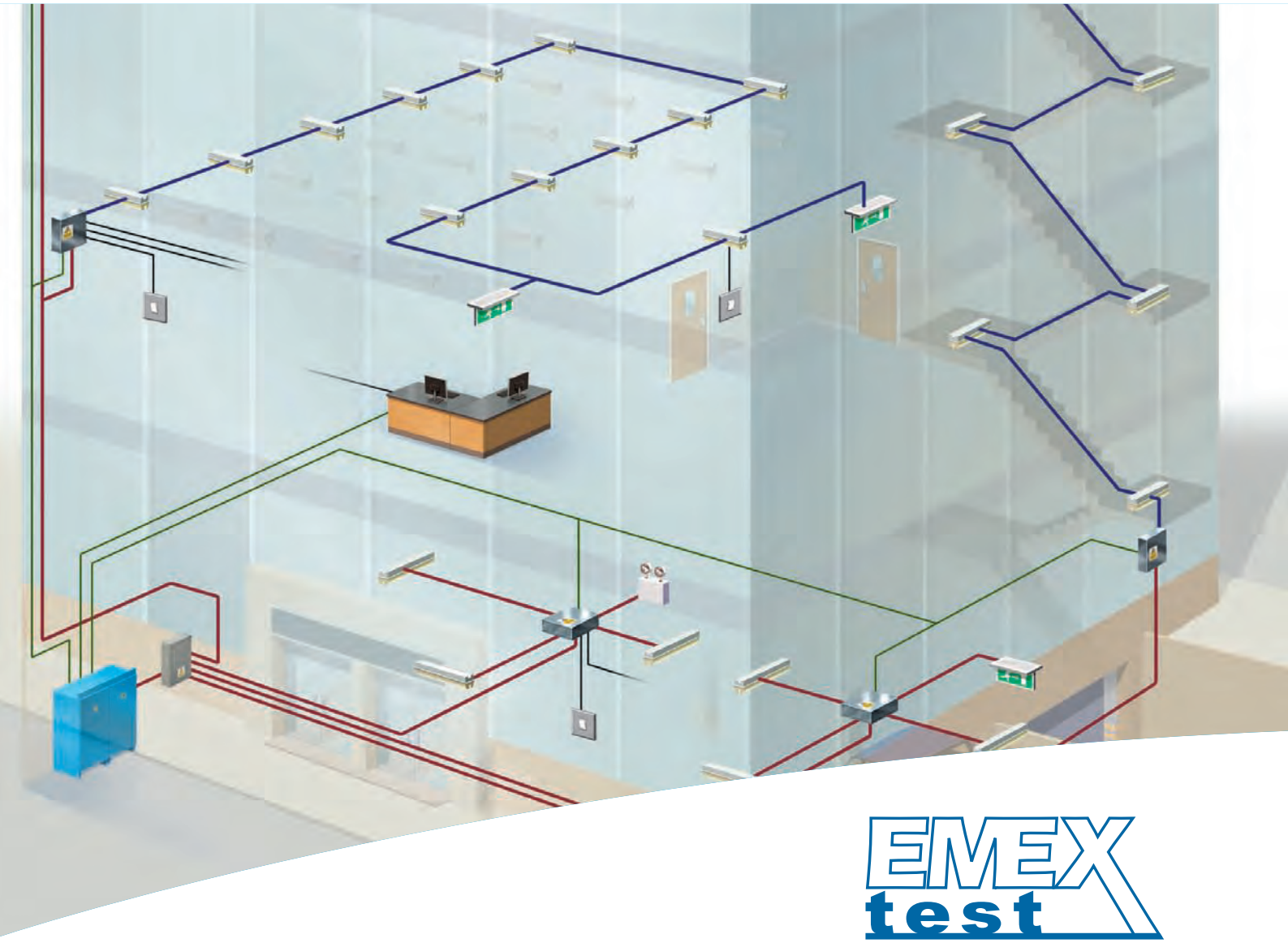
We offer an optional remote alarm unit (RAU), which will enable the user to perform the required daily check without the need to physically access the equipment.

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.

EMEX Test

The complete emergency lighting central system testing solution



The complete emergency lighting central system testing solution

Emergency lighting regulations state that periodic, mandatory tests must be carried out to verify the correct operation of any emergency lighting system.

Increasingly, changes in safety legislation, risk assessment, and the requirements of public liability insurance are placing responsibility for the testing of emergency lighting systems firmly with the owner or occupier of the building. Additionally, legislation states that records of this testing must be kept.

Automated testing solution

Manual testing (and record keeping) of emergency lighting systems can prove to be expensive, time consuming and disruptive (even dangerous) exacerbated by access problems caused by physical and commercial reasons.

The EMEX Test Central Testing System ensures peace of mind by automating the normal, periodic testing of emergency lighting lamps and control gear.

EMEX Test is simple to operate being controlled by a standard desk top PC or a dedicated touch screen control panel and is feature packed:

- Multiple static inverter Central Battery Systems (CBS) can be networked to a single control PC
- Remote access via a Local Area Network (LAN) or internet connection is straightforward
- Building Management System communication can be easily incorporated

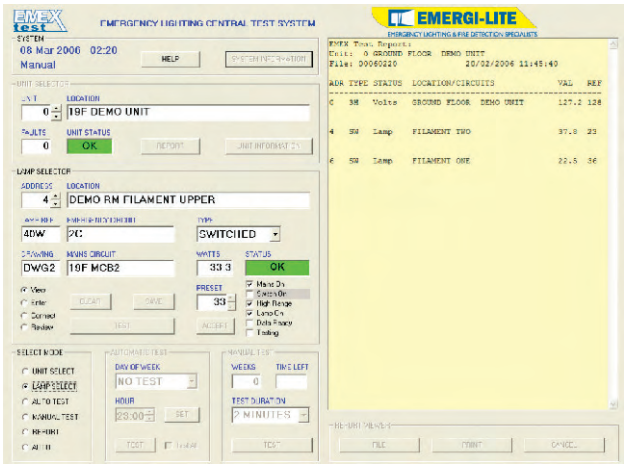


"The EMEX Test Central Testing System ensures peace of mind by automating the normal, periodic testing of emergency lighting systems"

Scheduled testing

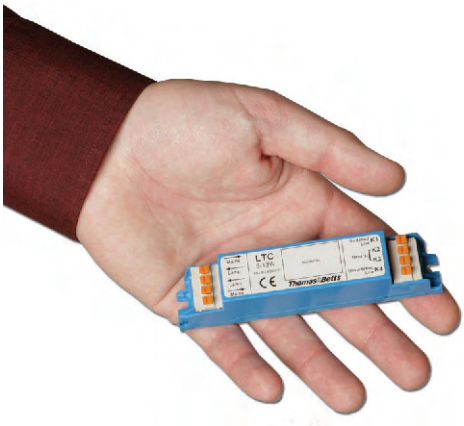
System tests are scheduled for periods of minimum disruption using EMEX Test.

Live luminaire data is compared against pre-programmed threshold data to identify any discrepancies. These are then duly highlighted in the test report which is generated and stored automatically.



The user has full control to access test reports locally or remotely at any time. Service personnel can then arrange a convenient time to access any faulty fittings – ready prepared with any necessary spares in order to further reduce the amount of time required to effect a repair.

In addition, EMEX Test can conduct discharge tests and monitor and record the status of the CBS and end battery voltage. Since discharge tests cannot be performed until visual condition checks have been undertaken by an engineer on site, these annual tests are initiated manually.



Two approaches, one solution

EMEX Test can utilise two different solutions to interface your emergency fittings, whatever the scenario:

MXC is ideal for use where a large number of fittings are situated in a relatively small area and where room for cable runs is restricted and the aesthetics are a primary concern.

The MXC sub-station solution employs compact LTC integral luminaire interfaces to support up to 40 fittings from a single sub-station. It allows mixed operation modes of the emergency luminaires on the same circuit without data cable. Multiple local switched and unswitched circuit monitoring is marshalled by the sub-station, or direct into the fittings. Sub-stations are connected together and back to the control PC by data cable connection.

Ideal for high-rise buildings, MXC provides savings in cable, containment and installation costs.

MX4 interface modules control fittings in groups of four with no modification to the mains fittings whatsoever. Data cable or mains-borne signalling provides communication to the CBS. A data cable connection exists between the CBS and the PC.

MX4 is ideal for use where a smaller number of fittings are to be situated in an environment where aesthetic cabling is not an issue, for example warehousing or car parks.

The complete emergency lighting central system testing solution

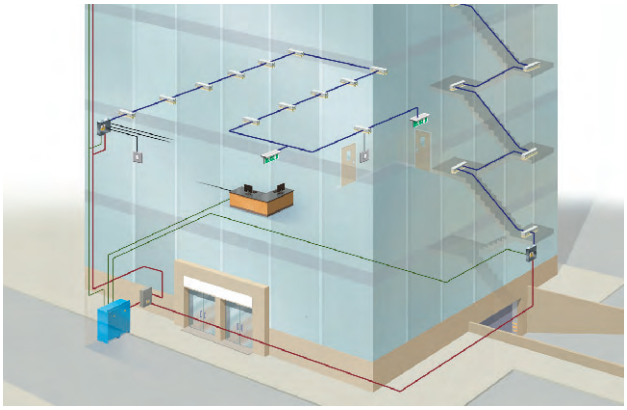
EMEX Test is the most flexible emergency lighting testing system available today. With the ability to support virtually any type of mains luminaire, including LED, EMEX Test affords freedom of choice for consultants, designers and end-users alike.

"When considering mains lighting, EMEX Test allows the consultant and end user to retain complete freedom of design. Specifying EMEX Test offers the most flexible and economic solution to providing addressable emergency lighting"

MXC

Features and benefits

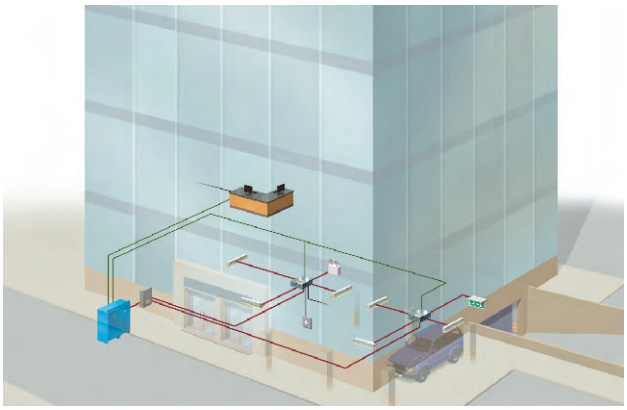
- Maintained, non-maintained and switched fittings on a single circuit
- Cable saving as a result of combined power and data lines
- High capacity sub-stations
- Flexible local circuit monitoring options
- Fully compatible with MX4



MX4

Features and benefits

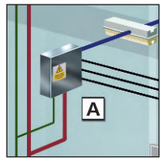
- Supports virtually any type of fitting – no modification required
- High switching capability
- Simple to install
- Compatible with digital and analogue dimming systems
- Fully compatible with MXC



Turn over to see 'How to apply EMEX Test MXC and MX4'

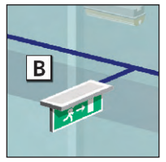
How to apply EMEX Test MXC and MX4 Emergency Lighting Testing Systems

MXC sub-station



Each MXC sub-station can control up to 40 fittings. Power and datalines feed the sub-station which in turn monitors & controls the fittings via a single combined power/data line. Each sub-station can monitor up to 8 local switched and/or unswitched circuits.
Luminaires operate in maintained, switched maintained, or non-maintained modes on the same circuit, according to the system programming.

MXC compatible fittings

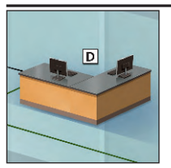


The MXC testing system requires fittings (luminaires, exit signs) to be MXC compatible. A comprehensive range of fittings can be found starting on page 23. In addition, virtually any standard mains fittings can be converted for use with the MXC system using an integral or remote LTC interface module. Contact Emergi-Lite for additional information regarding compatibility with digital and analogue dimming systems.

Switching

One switched and/or one unswitched local feed can be wired directly into the MXC System LTC module, in addition to the monitoring/switching provided via the MXC sub-station.

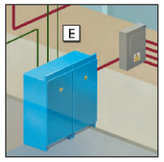
EMEX Test control station



EMEX Test software is installed on a standard desk top PC to initiate scheduled tests and collate test report data. Test reports can be accessed remotely over a Local Area Network (LAN), or via the internet.
EMEX Test can optionally export test reports in BACNET or LONWORKS format to a Building Management System.

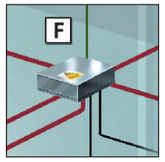
A network node enables the engineer to access test reports and control the system using a laptop PC from any point on the data cable.

EMEX Power



EMEX Power Central Battery System provides AC power to emergency luminaires via standard AC distribution boards. EMEX Test can support both MXC and MX4 systems simultaneously. Multiple EMEX Power CBS units can be used to power larger applcations, monitored from a single EMEX Test control point.

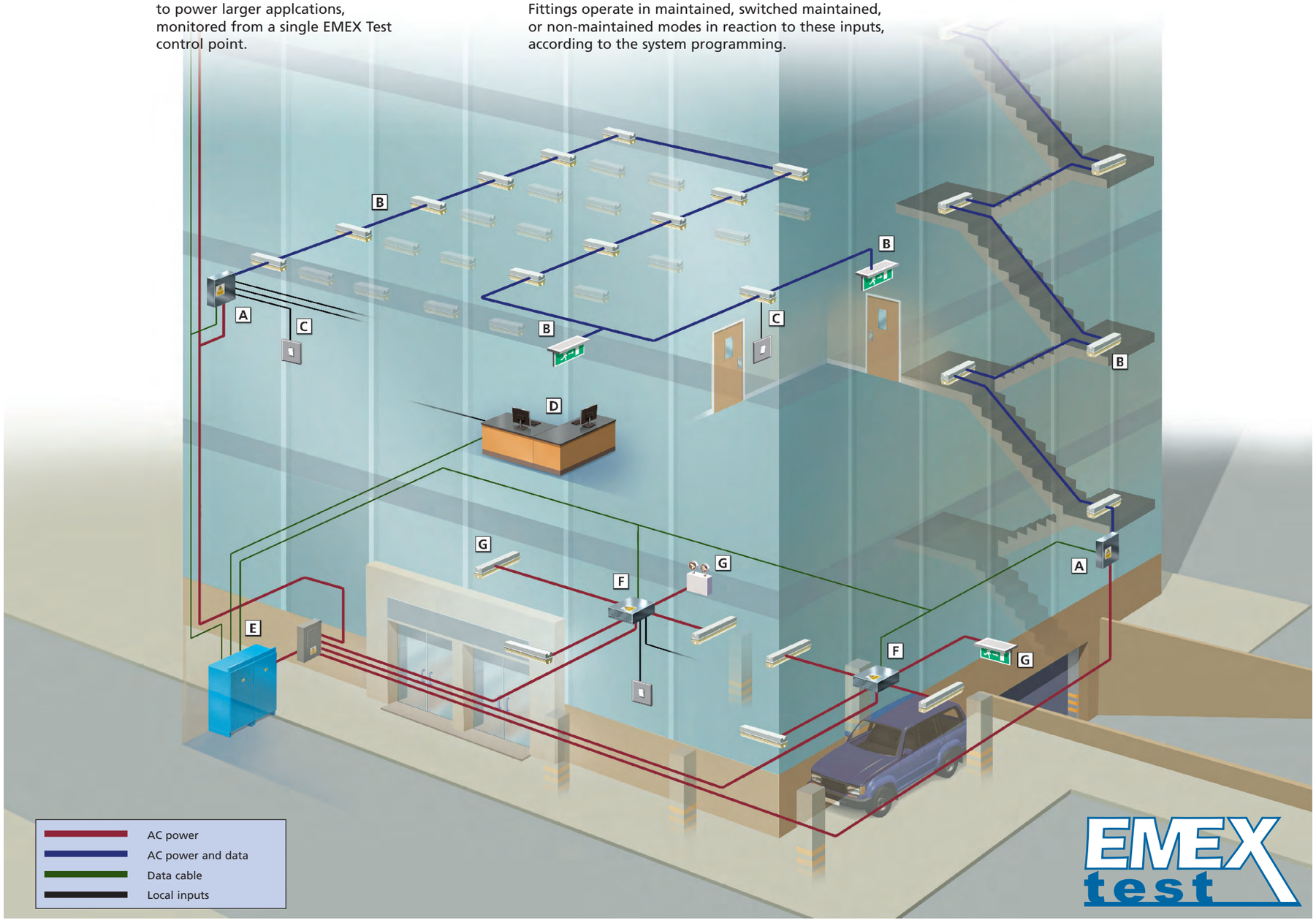
MX4



MX4 controls up to 4 unmodified mains fittings on an individual basis. Power and datalines feed the sub-station with individual power outputs to each fitting. Each MX4 can monitor one switched input and one unswitched input.
Fittings operate in maintained, switched maintained, or non-maintained modes in reaction to these inputs, according to the system programming.

MX4 fittings

MX4 can support virtually any fluorescent, LED, filament, or halogen luminaire, without modification. Each MX4 interface includes a single dimming control relay





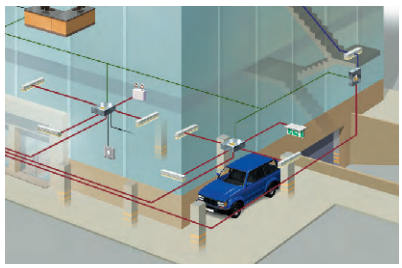
How to apply EMEX Test MXC and MX4 Emergency Lighting Testing Systems, example case: High-rise building

A typical high-rise installation will employ a variety of luminaire types in different areas. It will have varying switching arrangements and cabling restrictions according to the usage of each area and the fabric of the building.

When considering their mains lighting, the consultant and end user can retain complete freedom of design, assured in the knowledge that specifying EMEX Test will offer the most flexible and economic solution to provide addressable emergency lighting.

Underground car parks

In underground car parks and service areas the designer will prefer basic batten fittings or filament lamps. In this instance, where surface cabling is acceptable, MX4 interfaces are ideal. There is no modification to the mains luminaires whatsoever. This makes the installation very straightforward as the interfaces are identical no matter the wattage or operation of the fittings (interfaces can even be "first fixed" before the fittings arrive!), and has the great benefit that in the event of any damage or vandalism the mains luminaires can be replaced without interfering with the addressable emergency system.

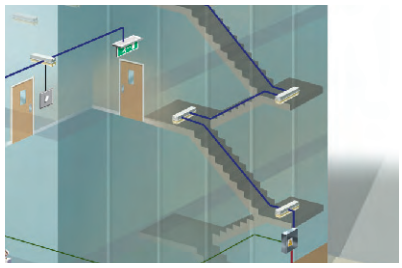


Open plan areas

For lower floors with typically open plan areas where suspended ceilings are employed and switching arrangements are uncomplicated, MX4 interfaces also offer benefits. In addition, the client would be free to refurbish at a later date, changing luminaires types at will, with only reprogramming of the EMEX Test software required to suit.

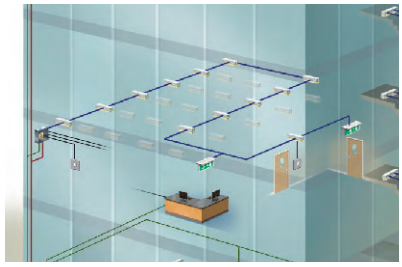
Stairwells

In stairwells, the MXC substation solution with LTC equipped luminaires offers great benefits in cable saving and installation costs. The MXC substation(s) can be mounted in risers at the foot of each stairwell, removing the need for data cable or remote boxes in the stairwell itself. The maintained Exit signs, switched luminaires, and even any non-maintained external units can all share a single supply cable. Monitoring feeds can all come to a single point at the substation, simplifying the cabling within the stairwell. Conversely, if it is inconvenient or impossible to wire a switched or monitoring feed back to the substation, it can be wired directly into the relevant luminaire.



Upper floors

Upper floors with a larger number of rooms per area (for example offices or hotel rooms), will also use MXC in order to take advantage of the large number of switched feeds that can be monitored by each substation. Coupled with the option to wire monitoring feeds directly into the luminaires, this will offer great savings in cable and simplify the installation, whilst retaining flexibility of programming should the mode of operation of the fitting change. For the installer, the ability to spur and tee the luminaire supply cable means that cable routes are dictated only by convenience and the layout of the building.



EMEX Test can accommodate this scenario – and more – whether the system is one large Central Battery System (CBS) feeding the whole building, one smaller CBS per floor, or any combination thereof.

EMEX Test system components

EMEX Test software

The focal point of an EMEX Test monitoring network is a PC running the EMEX Test software package (Part no. ELD9500.912).

EMEX Test software is Windows™ based and will run on any standard desktop PC running Windows™ 2000 or later. It provides detailed address information of all connected Central Battery Systems and fittings (luminaires, exit signs etc). Scheduled testing is configured quickly and easily – once set up it can be left to operate, without further input, in the background. Reports are created and collated automatically. These are date stamped and can be printed or distributed electronically.

EMEX Test modem and power supply unit (Part no. ELD9500.911)

MXKP station adapter (Part no. ELD9500.910)

The MXKP station adapter is required to integrate the EMEX Power static inverter with the EMEX Testing System. Ordered separately, the MXKP station adapter is factory fitted in the inverter cabinet.

- 4,000 luminaire address capability
- Maximum 255 MXKP units per control PC
- Output capacity of 100 x MXD/4 and/or MXC units per MXKP
- 2-core data bus to MXD/4 and MXC units and to/from MXKP units
- 2-core screened 240V, (1.0mm² minimum) data cable

MXD/4 4-way addressable interface (Part no. ELD9500.015)

The MXD/4 addressable interface controls up to 4 unmodified mains fittings. It can also monitor 8 switched or 8 unswitched inputs.

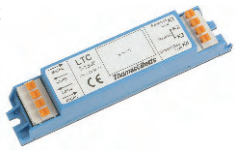
- 4 luminaires on individual circuits
- Maximum 270V AC, 1A per circuit
- Switching threshold of 230V -60% to -85%
- Address range of 4 to 3,999 (blocks of 4)
- Analogue and digital compatible dimming capability using on-board dimming relay to break dimmer control line
- Power consumption 4VA
- 2-core screened 240V, (1.0mm² minimum) data cable
- 2,500 metres maximum distance from MXKP to MXD4 transmitter
- 254mm x 210mm x 60mm

MXC sub-station (Part no. ELD9500.030)

The MXC sub-station controls up to 40 LTC equipped luminaires. It can also monitor 8 switched or unswitched inputs.

- 40 x LTC units over 2 radials
- Maximum 270V AC
- 2 x 1,150VA (5 amp nominal) maximum switching output power
- Power consumption 50VA
- 400 metres maximum distance (per output radial) to final luminaire
- 2-core screened 240V, (1.0mm² minimum) data cable
- 210mm x 253mm x 60mm

LTC addressable interface (Part no. ELD9500.036)



The LTC addressable interface unit is required when connecting standard mains fittings to the MXC sub-station system.

- Maximum 270V AC
- 75 watt maximum switching output power
- 2 control inputs configurable as local switched and unswitched monitoring
- 116.5mm x 24.5mm x 22mm

MXT data transmitters
MXT100 (Part no. ELD9500.120)
MXT200 (Part no. ELD9500.121)

The MXT data transmitter is used to increase the number of interfaces on an individual data line.

- Maximum 270V AC
- 2-core data inputs
- 2-core screened 240V, (1.0mm² minimum) data cable
- 300mm x 400mm x 120mm

MXIN test input node (Part no. ELD9500.039)

Provides an input point to allow roving access to the system using a laptop PC.

EMEX Test remote test input package (Part no. ELD9500.038)

Includes roving software, portable modem and node connector.

Mains luminaires

Energy saving cold cathode technology

“Stylish enough to look good in the most prestigious of projects, matched with leading edge technical design which will complement any building interior”

The Endurance range of emergency lighting exit signs combine stylish design with enhanced functionality and advanced energy saving technology

Utilising a cold cathode fluorescent lamp, with a life expectancy of over 50,000 hours, Endurance fittings also provide energy savings over comparable T5 8W tubes

Available in ‘standard white’, ‘smart silver’ and ‘classic black’ Endurance luminaires have a first-fix design which allows full wiring of the universal base unit with a positive snap-in fixing of the luminaire body

Specifications

- Cold Cathode Fluorescent Lamp (CCFL)
- 70 lumens output
- 9.62VA/5.4 watts consumption
- 220 – 240V 50Hz AC input voltage
- IP20 rated enclosure for indoor use
- Weight: 1.28kg (main unit, first fix, diffuser and legend panel)
- Operating temperature: 0 – 40°C
- Base unit dimensions: 310mm x 282mm x 53mm

Features

- High impact polycarbonate plastic body
- Available in white, silver and black
- Multiple fitting options

Mounting accessories

Wall bracket

Moulded bracket featuring a ratchet detail to allow the sign to be angled at virtually any angle to the wall, specifically parallel and perpendicular.

Horizontal

Allows the luminaire to be mounted horizontally with the legend panel hanging vertically – ideal for use above doors where space is limited.

Recessing kit

Consisting of a recessing cage, trim plate and fasteners. The cage is secured to the ceiling and the luminaire is simply installed by pressing it into place.

Suspension kits

The adjustable wire suspension kit is suitable where the mounting surface is angled.

The twin rod suspension kit is available in 3 lengths – 300mm, 500mm and 1,000mm.

Endurance is a range of exit signs and bulkheads. Here we are detailing the edge-lit sign model which is available with a variety of mounting options to complement any building interior.

For details of other signs and bulkheads not shown here, please contact our technical sales office in Leeds.

Order codes

Endurance Exit signs are modular – you must order a base unit, mounting accessory and legend panel (see below).

Endurance Exit Luminaires – White

Description	Part No.
Base Unit	ENV30-001
Wall bracket	EMV-001
Horizontal	EMH-001
Recessing kit	EMF-001
Rod suspension kit (300mm)	EMR300-001
Rod suspension kit (500mm)	EMR500-001
Rod suspension kit (1,000mm)	EMR1000-001
Wire suspension kit	EMS-001

Endurance Exit Luminaires – Black

Description	Part No.
Base Unit	ENV30-002
Wall bracket	EMV-002
Horizontal	EMH-002
Recessing kit	EMF-002
Rod suspension kit (300mm)	EMR300-002
Rod suspension kit (500mm)	EMR500-002
Rod suspension kit (1,000mm)	EMR1000-002
Wire suspension kit	EMS-002

Endurance Exit Luminaires – Silver

Description	Part No.
Base Unit	ENV30-003
Wall bracket	EMV-003
Horizontal	EMH-003
Recessing kit	EMF-003
Rod suspension kit (300mm)	EMR300-003
Rod suspension kit (500mm)	EMR500-003
Rod suspension kit (1,000mm)	EMR1000-003
Wire suspension kit	EMS-003

Legends

(single-sided)

ESS012

ESS010

ESS011

ESS013

(double-sided)

EDS021

EDS022

EDS020

(left/right)

Serenga Escape is a brand new LED emergency lighting exit and escape route sign

The control module, light source frames and legend panels are readily assembled using the Emergi-Lite Modulair principle. Frames and fixings are interchangeable. High brightness LED light sources provide superb soft illumination while achieving energy and space savings.

230V 50Hz for use with an AC/AC Central Battery System and Self-contained versions are available.

LED Exit signs and Downlighters

The intelligent choice

In addition to their compact design, Serenga Modulair© products have a high degree of flexibility. At any time during the construction phase, you can enhance the functionality and/or intelligence of your emergency exit and escape route signage system.

Contemporary and practical

Serenga is the ideal solution for contemporary interiors with a practical function, such as offices, schools, shops and hotels. The sturdy design is also perfectly at home in more demanding environments, such as light industrial settings and storage facilities.

Ready in three assembly steps

A variety of fixings and mounting options is available with normal assembly being achieved in three steps.

1 Electronic control module

Includes the electronics and first fix fittings

2 Pictogram frame

There are three frames available – back-lit, edge-lit and back-lit double-sided. All three are available with either 2 x or 4 x 1 watt LEDs.

3 Legend panels

A range of legend panels are available including blank, up, down, left and right. All are available in either curved or normal (flat) face.



Modular ease for every phase of the construction process

Whether you are an architect, designer, consultant, installer or maintenance provider, the Serenga range offers tremendous advantages.

Design

Exit sign options are available in one package to satisfy the directional escape sign requirements across a broad scope of applications.

Installation

The Serenga Modulair© principle lends itself well to step-by-step project implementation:

- First fix plate
- Electronic module and 'plug and play' LED frame during finishing

The unique SmartLocker© feature of the electronic control module makes it possible to secure the control module and light frame with the simple 'locate, click and fit' action.

Operational life

The control circuit drives and manages the LED light source allowing long life with low energy consumption. Sympathetic electronics and the type of LED employed will encourage a long lifespan (up to 12 years). An LED fixture of this type requires less maintenance attention in comparison to a fitting using a standard fluorescent tube, enabling the user to enjoy reduced cost benefits in material and labour.

Renovation and recycling

At the end of a life cycle, Serenga luminaires can be dismantled with ease, allowing compliance with recycling and disposal requirements. For example; plastic can be recycled, batteries can be disposed of through a registered handling plant with other sustainable materials being friendly to the environment.

"Escape route signage has never been so clear"

Electronic control module	Part no.
230 volt, 50Hz LED Sign Control Module	SER-230-003

LED light source frames	Part no.
Back lit 2 X 1 watt LED	SER-FB2
Back lit 4 X 1 watt LED	SER-FB4
Edge lit 2 X 1 watt LED	SER-FE2D
Edge lit 4 X 1 watt LED	SER-FE4D
Back lit double-sided 2 X 1 watt LED	SER-FS2D
Back lit double-sided 4 X 1 watt LED	SER-FS4D

Screen printed legend panel foils (curved face)	Part no.
Blank green	SER-SC00
Arrow left	SER-SC010
Arrow right	SER-SC011
Arrow down	SER-SC012
Arrow up	SER-SC013

Screen printed legend panel foils (normal face)	Part no.
Blank green	SER-SN00
Arrow left	SER-SN010
Arrow right	SER-SN011
Arrow down	SER-SN012
Arrow up	SER-SN013

Accessories	Part no.
Recess kit	SER-BZKIT
Rod suspension kit (150mm)	SER-RKIT150
Rod suspension kit (300mm)	SER-RKIT300
Rod suspension kit (500mm)	SER-RKIT500
Rod suspension kit (1,000mm)	SER-RKIT1000

Serenga downlighters

Unobtrusive and subtle LED downlighters

Specifications

- 230 volt, 50Hz
- Light housing manufactured from white high-grade polycarbonate
- IP40 rated ingress protection
- 2 x 1 watt (or 1 x 1 watt) high brightness LED set
- 45 lumens/watt output
- Operating temperature: 0 – 40°C
- Designed and manufactured to meet the standards of EN-IEC 60598-2-22
- 50,000 hours 70% light output LED lifetime
- Weight: 70 grams (1 x LED), 71 grams (2 x LED), 110 grams (electronic box)

Features

- Available in ‘wide’ or ‘spot’ light pattern versions
- Can be recess or surface mounted
- Recess version control gear can fit through a 60mm diameter hole
- Slim profile electronics module can be mounted easily behind false walls/ceilings

Spacing data

Spacing data for SER-DW-R230 and SER-DW-230 ‘wide’ LED downlighters, for a typical 2.5 metre ceiling height

Escape route (min 1 lux) normal risk			
Transverse to wall	Transverse spacing	Axial spacing	Axial to wall
0.6	1.6	8.0	3.5

Order codes

Recessed LED downlighter including electronic module

SER-DW-R230
2 x LED ‘wide’

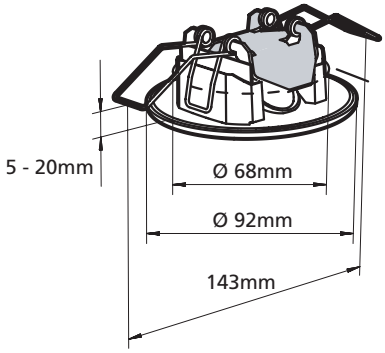
SER-DS-R230
1 x LED ‘spot’

Surface mounted LED downlighter including electronic module

SER-DW-230
2 x LED ‘wide’

SER-DS-230
1 x LED ‘spot’

Dimensions



Exit signs

Silver-Scape

A sleek recessed emergency sign luminaire suited to escape routes in premises with false ceilings where a good measure of style is preferred

Specifications

- MX4 or non-addressable compatible select -HF version (eg RB1311HF)
- MXC compatible select -LTC version (eg RB1311LTC)
- 8 watt lamp
- 300 lumens output
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP20 rated enclosure for indoor use
- Nominal weight: 1.4kg
- Operating temperature: 0 – 40°C
- Viewing distance: 27m

Features

- High-grade polycarbonate plastic body in white with white lip trim
- Light engineered diffuser for optimised spacing
- Wing fixings for securing in a normal ceiling tile
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Order codes

RB1311HF
8 watt recessed base fitting

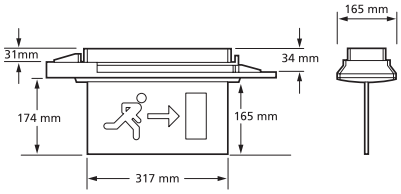
RB1311LTC
8 watt recessed base fitting with integral LTC

RE00
Silver-Scape recessed diffuser panel with sign panel slot (order legend panel separately, see below)

Options

Order recessed diffuser panel with sign panel slot and legend panel for exit versions. Use plain recessed diffuser panel for general luminaire version (see page 36).

Dimensions



Legends

Screen printed legend panel

XE02A31

XE03A31

XE06A31

XE05A31

XE03/6A32
Double-sided left/right

XE02/2A32
Double-sided down/down

Navigator Compact

Order codes

VE1311HF
8 watt exit sign fitting

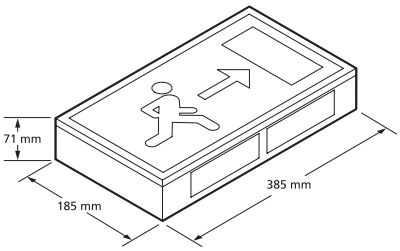
VE1311LTC
8 watt exit sign fitting with integral LTC

Order legend panel separately, see below.

Options

VEBACK
Rear trimplate for a flat back when required for ceiling mounting

Dimensions



Legends

Screen printed legend panel

XE02V31

XE03V31

XE06V31

XE05V31

A slim and compact emergency sign particularly suited where there is limited wall space above a door

Specifications

- MX4 or non-addressable compatible select -HF version (eg VE1311HF)
- MXC compatible select -LTC version (eg VE1311LTC)
- 8 watt T5 lamp
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP20 rated enclosure for indoor use
- Nominal weight: 2.0kg
- Operating temperature: 0 – 40°C
- Viewing distance: 32m

Features

- Folded metal enclosure finished in white epoxy
- Downlight panels provide illumination at floor level
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Navigator E/Performa

A larger, smart emergency sign for indoor use. Suited to all medium sized auditoria, larger hotel foyers, corridor spaces and premises with spacious and long walkways

Specifications

- MX4 or non-addressable compatible select -HF version (eg E1311HF)
- MXC compatible select -LTC version (eg E1311LTC)
- 8 watt T5 lamp
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP20 rated enclosure for indoor use
- Nominal weight: 2.7kg
- Operating temperature: 0 – 40°C
- Viewing distance: 36m

Features

- Folded sheet steel enclosure with white powder coat
- Opal resin downlight panels
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Navigator Performa has dual 8 watt lamps and a black powder coat housing
- Ideal for use in theatres, cinemas etc the Navigator Performa produces an unobtrusive green downlight under mains healthy conditions and a white light under emergency conditions

Order codes

Navigator E (white body)

E1311HF
8 watt exit sign fitting

E1311LTC
8 watt exit sign fitting with integral LTC

Navigator Performa (black body)

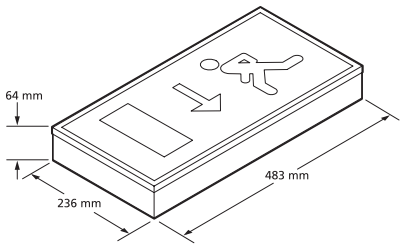
EJ323HF
2 x 8 watt exit sign fitting

EJ323LTC
2 x 8 watt exit sign fitting with integral LTC

Order legend panel separately, see below.

Double-sided versions are also available.

Dimensions



Legends

Screen printed legend panel (Navigator E)

XE02E31

XE03E31

XE06E31

XE05E31

Screen printed legend panel (Navigator Performa)

XE02E4

XE03E4

XE06E4

XE05E4

Order codes

AR13HF
8 watt recessed base fitting

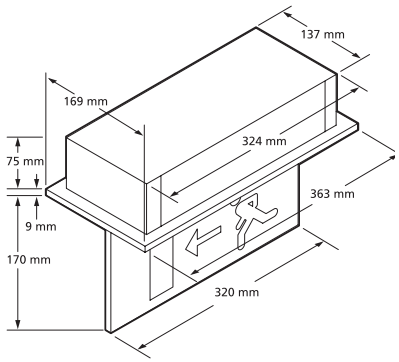
AR13LTC
8 watt recessed base fitting with integral LTC

Order trim and legend plate separately, see below.

Options

Trim plates:
AE01 – White
AE04 – Brass finish
AE05 – Polished stainless steel
AE06 – Brushed aluminium

Dimensions



Legends

Screen printed legend panel

XE02A31

XE03A31

XE06A31

XE05A31

XE03/6A32
Double-sided (left/right)

XE02/2A32
Double-sided (down/down)

A high quality recessed indoor sign for use in prestigious surroundings. Available with trim in smooth silver aluminium, plain white or mirror finish brass

Specifications

- MX4 or non-addressable compatible select -HF version (eg AR13HF)
- MXC compatible select -LTC version (eg AR13LTC)
- 8 watt T5 lamp
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP20 rated enclosure for indoor use
- Nominal weight: 2.7kg
- Operating temperature: 0 – 40°C
- Viewing distance: 27m

Features

- Recessed steel enclosure and metal trim plate
- White, brass finish, stainless steel and brushed aluminium slotted trim plate options
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Corniche

A distinctive example of the traditional edge lit luxury sign. The brass effect finish is suited to period or prestige settings and the white finish is striking where the décor is light and contemporary

Specifications

- MX4 or non-addressable compatible select -HF version (eg NB1311HF)
- MXC compatible select -LTC version (eg NB1311LTC)
- 8 watt T5 lamp
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP20 rated enclosure for indoor use
- Nominal weight: 2.6kg
- Operating temperature: 0 – 40°C
- Viewing distance: 27m

Features

- Body is hung by a hook and chain arrangement which is both aesthetically pleasing and practical. 0.5m chain supplied as standard

- The wall or ceiling mounted support pod conveniently contains the mains connector block
- Floating single sided Eurogram legend panel deploys light to enhance legend definition
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Order codes

Corniche 8 watt luxury exit sign including support pod (order legend panels separately, see below)

NB1311HF
white body

NB1311LTC
white body with integral LTC

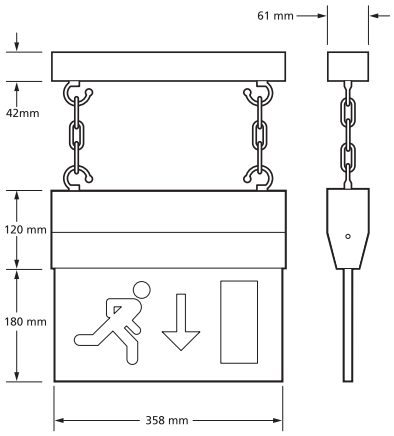
NB1314HF
brass body

NB1314LTC
brass body with integral LTC

NB1315HF
stainless steel body

NB1315LTC
stainless steel body with integral LTC

Dimensions



Legends

Polished edge lit screen printed legend panel

XE02NT31

XE03NT31

XE06NT31

XE05NT31

XE03/6NT32
Double-sided (left/right)

XE02/2NT32
Double-sided (down/down)

General luminaires

Silver-Scape

A sleek recessed emergency sign luminaire suited to escape routes in premises with false ceilings where a good measure of style is preferred

Specifications

- MX4 or non-addressable compatible select -HF version (eg RB1311HF)
- MXC compatible select -LTC version (eg RB1311LTC)
- 8 watt lamp
- 300 lumens output
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP20 rated enclosure for indoor use
- Nominal weight: 1.4kg
- Operating temperature: 0 – 40°C

Features

- High-grade polycarbonate plastic body in white with white lip trim
- Light engineered diffuser for optimised spacing
- Wing fixings for securing in a normal ceiling tile
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Order codes

RB1311HF
8 watt recessed base fitting

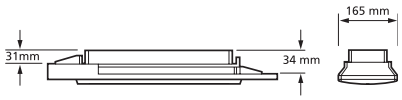
RB1311LTC
8 watt recessed base fitting with integral LTC

RB00
Silver-Scape recessed diffuser panel

Options

Order plain recessed diffuser panel for general luminaire version. Use recessed diffuser panel with sign panel slot and legend panel for exit versions (see page 30).

Dimensions



Order codes

XW13111HF
8 watt bulkhead luminaire

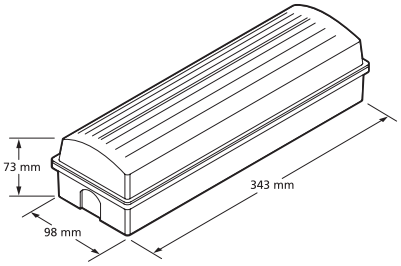
XW13111LTC
8 watt bulkhead luminaire with with integral LTC

Options

XTR
Semi-recessing bezel kit in white, complete with fixing bracket

VRKIT
Vandal resistant security screw kit

Dimensions



Legends

Self-adhesive legend sticker

RSE2X

RSE3X

RSE6X

RSE5X

The Day-Lite bulkheads are of a slim design with an optically sculpted diffuser for optimum light spread and are suitable for outdoor use

Specifications

- MX4 or non-addressable compatible select -HF version (eg XW1311HF)
- MXC compatible select -LTC version (eg XW1311LTC)
- 8 watt lamp
- 300 lumens output
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP65 rated enclosure
- Nominal weight: 1.0kg
- Operating temperature: 0 – 40°C
- Viewing distance: 23m (with optional legend)

Features

- High-grade polycarbonate plastic body in white
- Clear pc optically engineered diffuser
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Screw fix diffuser
- Use an optional self-adhesive legend sticker to convert the Day-Lite fitting for exit sign use
- The legend sticker is designed to provide a downlight from the bulkhead when used as an exit sign

IP65 EXIT

Weatherforce B

The Weatherforce B is a versatile and rugged luminaire for both indoor and outdoor use. Manufactured in tough polycarbonate to a simple vandal resistant design, options include a semi-recessed bezel, pictogram legend stickers and a protective wireguard

Specifications

- MX4 or non-addressable compatible select -HF version (eg B1311HF)
- MXC compatible select -LTC version (eg B1311LTC)
- 8 watt lamp
- 300 lumens output
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP65 rated enclosure
- Nominal weight: 1.7kg
- Operating temperature: 0 – 40°C
- Viewing distance: 24m (with optional legend)

Features

- Opal or clear prismatic screw-fix diffuser
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Use an optional self-adhesive legend sticker to convert the Weatherforce B fitting for exit sign use

Order codes

Opal diffuser

B1311HF
8 watt bulkhead luminaire

B1311LTC
8 watt bulkhead luminaire with integral LTC

Clear prismatic diffuser

B13111HF
8 watt bulkhead luminaire

B13111LTC
8 watt bulkhead luminaire with integral LTC

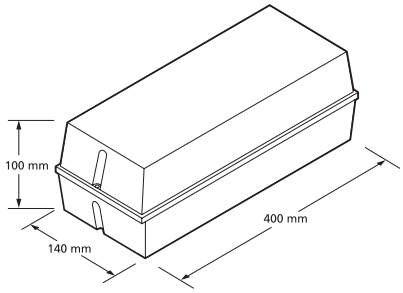
Options

BBZ
Semi-recessing bezel kit in white, complete with fixing bracket

VRKIT
Vandal resistant security screw kit

BWG
Protective wire guard

Dimensions



Legends

Self-adhesive sticker

RSE2120

RSE3120

RSE6120

RSE5120

Weatherforce DB

Order codes

8 watt double-sided exit sign

DB13HFXE22
with arrow down pictogram

DB13HFXE36
with arrow left and arrow right pictogram

DB13LTCXE22
with arrow down pictogram and MXC addressable interface

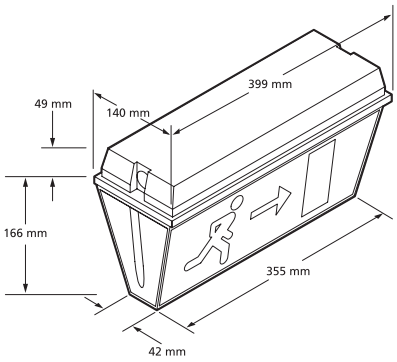
DB13LTCXE36
with arrow left and arow right pictogram and MXC addressable interface

Options

BBZ
Semi-recessing bezel kit in white, complete with fixing bracket

VRKIT
Vandal resistant security screw kit

Dimensions



A practical and robust double-sided sign suited to public walkways, enclosed car parks or educational establishments

Specifications

- MX4 or non-addressable compatible select -HF version (eg DB13HFXE22)
- MXC compatible select -LTC version (eg DB13LTCXE22)
- 8 watt T5 lamp
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP65 rated enclosure
- Nominal weight: 1.9kg
- Operating temperature: 0 – 40°C
- Viewing distance: 31m

Features

- Polycarbonate high grade white plastic enclosure
- Screw fixed diffuser
- Designed and manufactured to meet the standards of BS EN 60598.2.22

IP65

Weatherforce WA

The Weatherforce WA is a rugged, weatherproof vandal resistant luminaire. With an aluminium base and a tough polycarbonate diffuser, the Weatherforce WA is suited to a wide variety of sites including industrial complexes, public walkways and car parks

Specifications

- MX4 or non-addressable compatible select -HF version (eg WA1311HF)
- MXC compatible select -LTC version (eg WA1311LTC)
- 8 watt lamp
- 300 lumens output
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP65 rated enclosure
- Nominal weight: 1.9kg
- Operating temperature: 0 – 40°C
- Viewing distance: 24m (with optional legend)

Features

- Epoxy powder coated die cast aluminium base
- High-grade polycarbonate opal or clear prismatic screw-fix diffuser
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Use an optional self-adhesive legend sticker to convert the Weatherforce WA fitting for exit sign use

Order codes

Opal diffuser

WA1311HF
1 x 8 watt bulkhead luminaire

WA1311LTC
1 x 8 watt bulkhead luminaire with integral LTC

WA1321HF
2 x 8 watt bulkhead luminaire

WA1321LTC
2 x 8 watt bulkhead luminaire with integral LTC

Clear prismatic diffuser

WA13111HF
1 x 8 watt bulkhead luminaire

WA13111LTC
1 x 8 watt bulkhead luminaire with integral LTC

WA13211HF
2 x 8 watt bulkhead luminaire

WA13211LTC
2 x 8 watt bulkhead luminaire with integral LTC

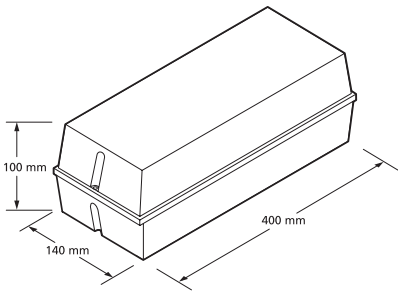
Options

BBZ
Semi-recessing bezel kit in white, complete with fixing bracket

VRKIT
Vandal resistant security screw kit

BWG
Protective wire guard

Dimensions



Legends

Self-adhesive sticker

RSE2120

RSE3120

RSE6120

RSE5120

IP65

Order codes

Opal diffuser

ES1311HF
8 watt luminaire

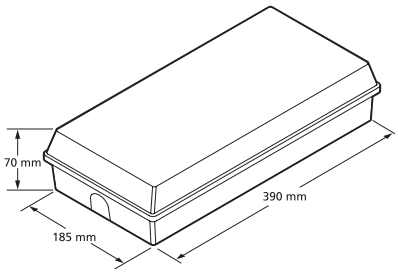
ES1311LTC
8 watt luminaire with integral LTC

Clear prismatic diffuser

ES13111HF
8 watt luminaire

ES13111LTC
8 watt luminaire with integral LTC

Dimensions



The Fine-Lite ES is a versatile, slim luminaire ideally suited to hotels, restaurants and offices. Opal or prismatic diffusers are available to suit the surroundings

Specifications

- MX4 or non-addressable compatible select -HF version (eg ES1311HF)
- MXC compatible select -LTC version (eg ES1311LTC)
- 8 watt lamp
- 300 lumens output
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP20 rated enclosure
- Nominal weight: 1.4kg
- Operating temperature: 0 – 40°C
- Viewing distance: 33m (with optional legend)

Legends

Self-adhesive sticker

RSE2S

RSE3S

RSE6S

RSE5S

Features

- High grade white plastic body with white painted steel geartray
- Snap fit diffuser cover
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Use an optional self-adhesive legend sticker to convert the Fine-Lite fitting for exit sign use

Horizon

The Horizon OH is a sophisticated and stylish, high performance luminaire. A gently shaped diffuser and contoured reflector produce exceptional light distribution and a unique clip on shaped legend panel produces a high quality sign

Specifications

- MX4 or non-addressable compatible select -HF version (eg OH13161HF)
- MXC compatible select -LTC version (eg OH13161LTC)
- 8 watt lamp
- 300 lumens output
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP20 rated enclosure
- Nominal weight: 1.5kg
- Operating temperature: 0 – 40°C
- Viewing distance: 25m (with optional legend)

Features

- Brushed aluminium modular base with white plastic body
- Clear polycarbonate broad delivery diffuser with contoured reflector
- Simple assembly and installation – base allows for pre-wiring and mounting. Main body is then screw-fixed to the base
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Use an optional clip-on legend panel to convert the Horizon fitting for exit sign use

Order codes

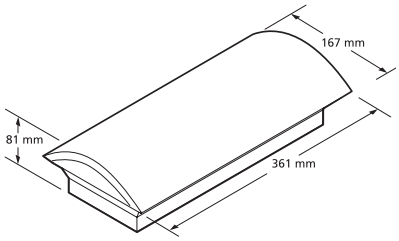
OH13161HF
8 watt luminaire

OH13161LTC
8 watt luminaire with integral LTC

Options

OHBZ
semi-recessing bezel in white

Dimensions



Legends

Clip on screen printed legend panel with aluminium frame

XE02H

XE03H

XE06H

XE05H

Decorative

Silver-Lite

The Silver-Lite AR is a simple, aesthetic recessed luminaire which is unobtrusive and complements its surroundings. Ideal for use in hotels and hospitals and applications where there is reduced headroom

Specifications

- MX4 or non-addressable compatible select -HF version (eg AR13HF)
- MXC compatible select -LTC version (eg RBAR13LTC)
- 8 watt lamp
- 300 lumens output
- 10.7VA/9.0 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP20 rated enclosure for indoor use
- Nominal weight: 2.7kg
- Operating temperature: 0 – 40°C

Features

- Recessed steel enclosure and metal trim plate
- Light engineered diffuser for optimised spacing
- Wing fixings for securing in a normal ceiling tile
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- White, brass finish, stainless steel and brushed aluminium diffuser panel trim plate options

Order codes

AR13HF
8 watt recessed luminaire

AR13LTC
8 watt recessed luminaire with integral LTC

Order a trim plate separately, see below.

Options

Trim plates

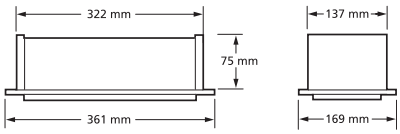
AR01 – White

AR04 – Brass finish

AR05 – Polished stainless steel

AR06 – Brushed aluminium

Dimensions



Order codes

CLQ28PHF
28 watt luminaire

CLQ28LTC
28 watt luminaire with integral LTC

Options

Decorative trims:

Angled trim

CLQ/GA – Gold
CLQ/SA – Silver
CLQ/WA – White
CLQ/BKA – Black

Banded trim

CLQ/GB – Gold
CLQ/SB – Silver
CLQ/WB – White
CLQ/BKB – Black

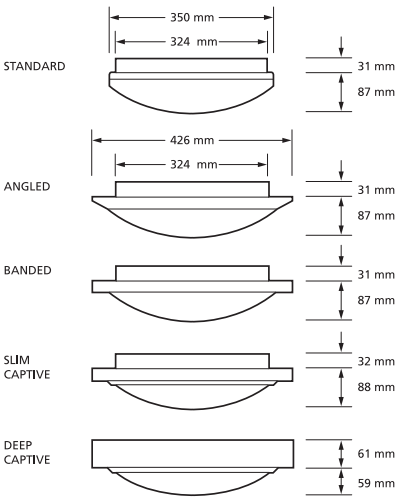
Captive trim

CLQ/GC – Gold
CLQ/SC – Silver
CLQ/WC – White
CLQ/BKC – Black

Deep Captive trim

CLQ/GD – Gold
CLQ/SD – Silver
CLQ/WD – White
CLQ/BKD – Black

Dimensions



A new concept in aesthetic and technical flexibility. An attractive and simple base envelope, enhanced by a variety of trim options, is matched to a choice of energy efficient lamps running on high frequency control gear

Specifications

- MX4 or non-addressable compatible select -HF version (eg CLQ28HF)
- MXC compatible select -LTC version (eg CLQ28LTC)
- 28 watt 2D lamp
- 1800 lumens output
- 34VA/32.6W consumption
- 38 watt 2D version available
- 220 – 240V 50Hz AC input voltage
- IP20 rated enclosure (IP40 for deep captive version)
- Nominal weight: 2.0kg
- Operating temperature: 0 – 40°C

Features

- Flame retardant PC base with opal PC diffuser
- 4 screw positions for surface mount or semi-recess kit
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Angled, banded, captive and deep captive trim style options available in white, black, silver and gold

Compass

A simple decorative, square section luminaire suitable for passageways and stairwells

Specifications

- MX4 or non-addressable compatible select -HF version (eg PS1711HF)
- MXC compatible select -LTC version (eg PS1711LTC)
- 28 watt 2D lamp
- 1800 lumens output
- 34VA/32.6 Watts consumption
- 16 watt 2D version available
- 220 – 240V 50Hz AC input voltage
- IP20 rated enclosure
- Nominal weight: 2.6kg
- Operating temperature: 0 – 40°C

Features

- Epoxy painted steel base
- Snap fit opal or clear prismatic polycarbonate diffusers
- 4 screw positions
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Order codes

Opal diffuser

PS1711HF
28 watt luminaire

PS1711LTC
28 watt luminaire with integral LTC

Clear prismatic diffuser

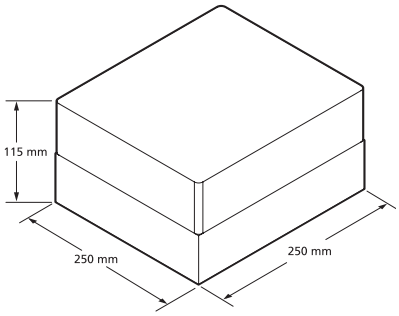
PS17111HF
28 watt luminaire

PS17111LTC
28 watt luminaire with integral LTC

Options

PSBZ250
semi-recessing bezel kit

Dimensions



Order codes

Circular 28 watt luminaire

Opal diffuser

APR28PFOHF – black

APR28PFOLTC
black with integral LTC

APR28PWFOHF – white

APR28PWFOLTC
white with integral LTC

Clear diffuser

APR28PHF – black

APR28PLTC
black with integral LTC

APR28PWHF – white

APR28PWLTC
white with integral LTC

Square 28 watt luminaire

Opal diffuser

APS28PFOHF – black

APS28PFOLTC
black with integral LTC

APS28PWFOHF – white

APS28PWFOLTC
white with integral LTC

Clear diffuser

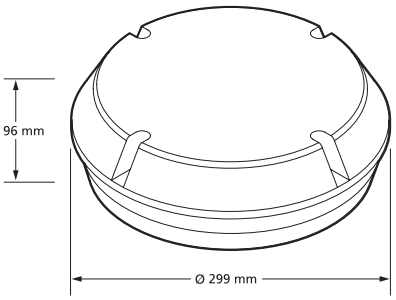
APS28PHF – black

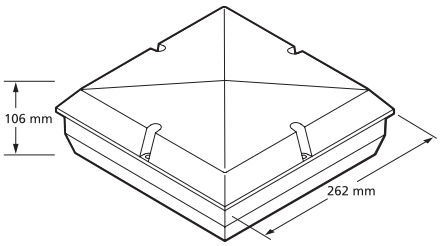
APS28PLTC
black with integral LTC

APS28PWHF – white

APS28PWLTC
white with integral LTC

Dimensions





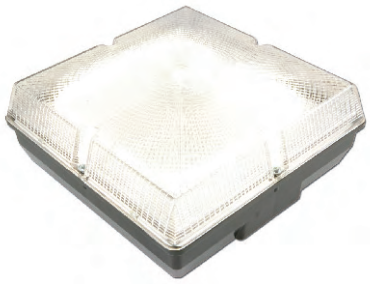
A sturdy, weatherproof luminaire suitable for outdoor use

Specifications

- MX4 or non-addressable compatible select -HF version (eg APR28PFOHF)
- MXC compatible select -LTC version (eg APR28PFOLTC)
- 28 watt 2D lamp
- 1800 lumens output
- 34VA/32.6 Watts consumption
- 16 watt 2D version available
- 220 – 240V 50Hz AC input voltage
- IP65 rated enclosure
- Nominal weight: 1.8kg
- Operating temperature: 0 – 40°C

Features

- Flame retardant PC base
- Snap fit opal or clear prismatic polycarbonate diffusers
- Supplied in white as standard, black is available as an option
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Available in circular or square fitting



IP65

Cite-Lite

A practical range of heavy-duty, vandal resistant luminaires ideal for use in walkways and tunnels

Specifications

- MX4 or non-addressable compatible select -HF version (eg AMR28PFOHF)
- MXC compatible select -LTC version (eg AMR28PFOLTC)
- 28 watt 2D lamp
- 1,800 lumens output
- 34VA/32.6 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP65 rated enclosure
- Nominal weight: 4.9kg
- Operating temperature: 0 – 40°C

Features

- Epoxy coated cast aluminium base
- Impact resistant PC diffuser with tamper resistant screws
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Available in circular or square fitting

Order codes

Circular

Opal diffuser

AMR28PFOHF
28 watt luminaire

AMR28PFOLTC
28 watt luminaire with integral LTC

Clear diffuser

AMR28PHF
28 watt luminaire

AMR28PLTC
28 watt luminaire with integral LTC

Square

Opal diffuser

AMS28PFOHF
28 watt luminaire

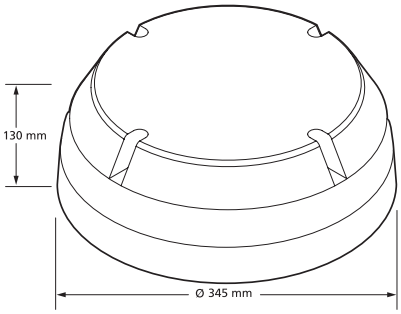
AMS28PFOLTC
28 watt luminaire with integral LTC

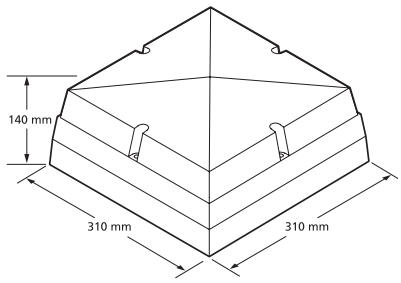
Clear diffuser

AMS28PHF
28 watt luminaire

AMS28PLTC
28 watt luminaire with integral LTC

Dimensions





Order codes

MTR28PHF
28 watt luminaire

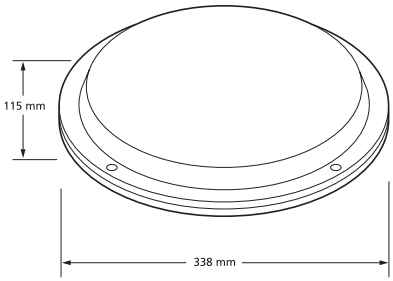
MTR28PLTC
28 watt luminaire with integral LTC

Options

MTCD1
Cross-hair diffuser screen

MTCD2
Downlight diffuser screen

Dimensions



A rugged, high specification bulkhead for use in exterior public areas and demanding environments

Specifications

- MX4 or non-addressable compatible select -HF version (eg MTR28PHF)
- MXC compatible select -LTC version (eg MTR28PLTC)
- 28 watt 2D lamp
- 1,800 lumens output
- 34VA/32.6 watts consumption
- 220 – 240V 50Hz AC input voltage
- IP55 rated enclosure
- Nominal weight: 4.5kg
- Operating temperature: 0 – 40°C

Features

- Black die cast aluminium base with opal polycarbonate diffuser
- A shaped diffuser screen can be provided to give a subtle downlight effect and reduce light throw in residential areas
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Vandal-resistant ‘cross-hair’ diffuser screen available as an option

IP65

Path-Lite

A rugged, energy efficient luminaire suitable for wall mounting in municipal areas such as covered walkways and precincts. The tamperproof prismatic lens cover offers uniform light distribution

Specifications

- MX4 or non-addressable compatible select -HF version (eg EWL28PHF)
- MXC compatible select -LTC version (eg EWL28PLTC)
- 28 watt 2D lamp
- 1800 lumens output
- 34VA/32.6 Watts consumption
- 38 watt 2D version available
- 220 – 240V 50Hz AC input voltage
- IP65 rated enclosure for outdoor use
- Nominal weight: 4.3kg
- Operating temperature: 0 – 40°C

Features

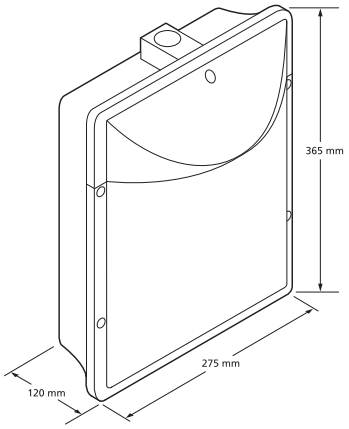
- Epoxy coated black aluminium base
- Impact resistant PC diffuser fitted with tamper resistant screws
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Order codes

EWL28PHF
28 watt luminaire

EWL28PLTC
28 watt luminaire with integral LTC

Dimensions



Industrial

Hazard-Lite

A compact explosion and water proof luminaire rated for zone 1 and zone 2 use

Specifications

- 8 watt T5 lamp
- 100 lumens output
- 34VA/32.6 Watts consumption
- 220 – 240V 50Hz AC input voltage
- IP66 to IEC529 rated enclosure
- Nominal weight: 5.0kg
- Operating temperature: 0 – 40°C

Features

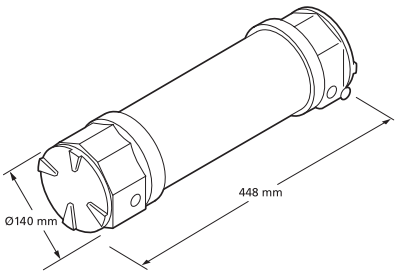
- Corrosion resistant light alloy body and end cap with a polycarbonate overtube finished in green polyurethane
- Internal light reflector
- Designed and manufactured to meet the requirements of Eex d IIC T6

Order codes

XP1312HF
8 watt zone classified luminaire

Note: for addressable testing use, use MXD4 4-way addressable interface (see page 22) mounted outside the zone classified area

Dimensions



Order codes

IP20 rated control enclosure, circular lamps

HVCB230HF
2 x 20 watt luminaire

HVCB230LTC
2 x 20 watt luminaire with integral LTC

IP65 rated control enclosure, remote rectangular lamps

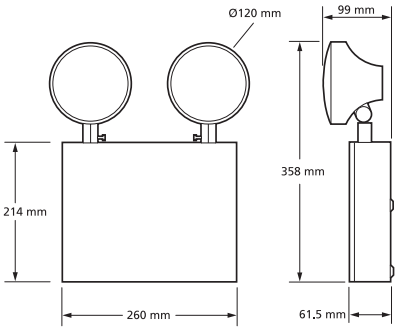
HLCB230E3HF
2 x 20 watt luminaire

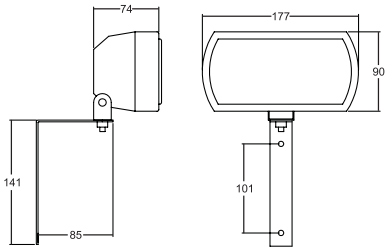
HLCB230E3LTC
2 x 20 watt luminaire with integral LTC

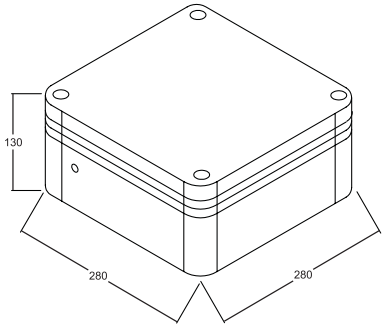
Options

HLWG – Overall wire guard

Dimensions







A range of 'twin-spot' luminaires for both indoor and outdoor use. Designed specifically for use in warehouses, factory spaces and sports facilities

Specifications

- HV – epoxy coated steel enclosure with white, direct mounted, circular lamps
- HL – polycarbonate IP65 enclosure with black, remote, rectangular lamps
- 2 x 20 watt tungsten halogen lamps supplied with each unit
- 55VA/42 Watts consumption
- 220 – 240V 50Hz AC input voltage
- Nominal weight: HV – 4.2kg, HL – 4.7kg
- Operating temperature: 0 – 40°C

Features

- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Lamp projectors are fully adjustable to illuminate the walkway
- Bodies are mountable upright on a wall or stanchion
- Polycarbonate lamp bodies and lenses are suitable for use in a food factory or store

Additional information

Alternative legends

Legends illustrated throughout this catalogue are "Eurogram" style based on the Signs Directive. Additionally, BS 5266 also permits the older BS 5499 style. Directional arrows only are not acceptable.

Emergi-Lite can supply BS 5499 signs where required. Contact our Sales Department or your local agent for details.

Emergi-Lite are pleased to offer signs in other language formats, to special order. Other types not illustrated here can be assessed for special quotation. Please contact us with your requirements.

Legend panels to comply with the Hospitals Technical Memorandum (HTM) requirements are also available.

Fitting compatibility

Suffix –HF (eg VE1311HF)

These luminaires are mains voltage units which employ high frequency control gear. They are suitable for non-addressable emergency use, or can be used in conjunction with remote MX4 4-way interfaces for addressable projects. They can equally be used for mains-only (non-emergency) use.

Suffix –LTC (eg VE1311LTC)

These luminaires are mains voltage units with high frequency control gear as above, and also include a factory-fitted integral LTC module for addressable use in conjunction with a MXC substation. As standard, these units also include direct inputs for switched and/or unswitched local monitoring.

Viewing distance

The relationship between the size of sign and the viewing distance to an observer is prescribed by the standard EN 1838 (BS 5266 Part 7:1999).

For a given pictogram height there is a maximum viewing distance derived from the following formulae:

Dmax < h x 200 for internally illuminated signs

Dmax < h x 100 for externally illuminated signs

D = viewing distance
h = pictogram legend height

For example, a permanently illuminated (maintained) exit sign of 120mm height offers a viewing distance of 24 metres (0.12m x 200 = 24m).

Viewing distances stated in this catalogue are based on internal illumination.

Key

This symbol denotes that the luminaire type is available with an optional add-on legend for use as an exit sign.

This symbol denotes that the luminaire is rated to IP65 suitable for wet area and outdoor use.

Sub-circuit monitoring

Hold-off and changeover relays

Hold-off/changeover relays

It is a mandatory requirement that Emergency Lighting is energised in the event of a local sub-distribution failure, not just on total building supply failure.

Hold-off and sub-circuit monitoring relays are used to energise luminaires in the case of local supply failure. They may be used to feed more than one luminaire on the same switched circuit and are available in 1.5 amp, 8 amp and 12 amp versions.

Hold-off relays

Hold-off relays are required to monitor the relevant lighting supply circuits such that a failure brings on the emergency luminaires automatically in the event of local supply failure.

Non-maintained luminaires are connected to a localised sub-circuit hold-off relay fed from a maintained battery system. These luminaires are only energised when the supply to the hold-off relay fails.

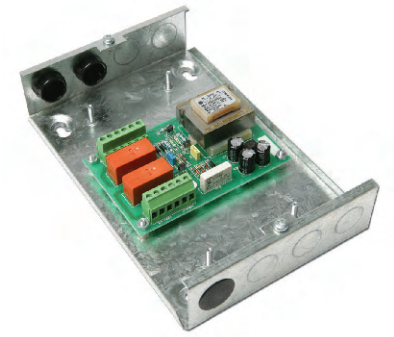
5, 10, 15 and 20 way sub-circuit monitors (with 12 amp hold-off relay) are available.

Description	Part code
5 way 12 amp hold-off relay	ELD9600.001
10 way 12 amp hold-off relay	ELD9600.002
15 way 12 amp hold-off relay	ELD9600.003
20 way 12 amp hold-off relay	ELD9600.004

Changeover relays

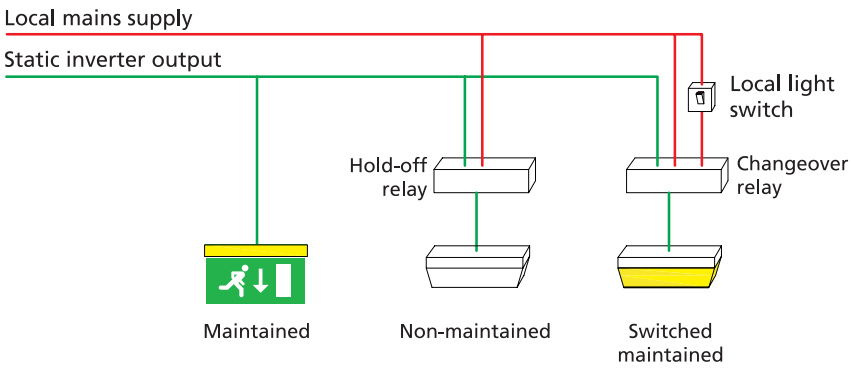
The basic use of a switched maintained system is to energise the emergency lighting when required by operation of the local switched supply but automatically illuminate in the event of local sub-circuit supply failure (irrespective of the position of the local switch).

When using a changeover relay, switched maintained emergency luminaires are energised whenever a local switched supply is present and, automatically, when a local sub-circuit failure occurs.



Description	Part code
230 volt 1.0 amp mains changeover relay	SI230DIM
230 volt 1.0 amp mains changeover relay in remote enclosure	SI230DIM-S
230 volt 8 amp mains changeover relay with 2 x 2.5mm² terminal capacity	ELD9600.010

Emergi-Lite offer a Conversion Service to install integral changeover relays into your free-issue mains luminaires



Maintained
Do not require sub-circuit monitoring or hold-off relays

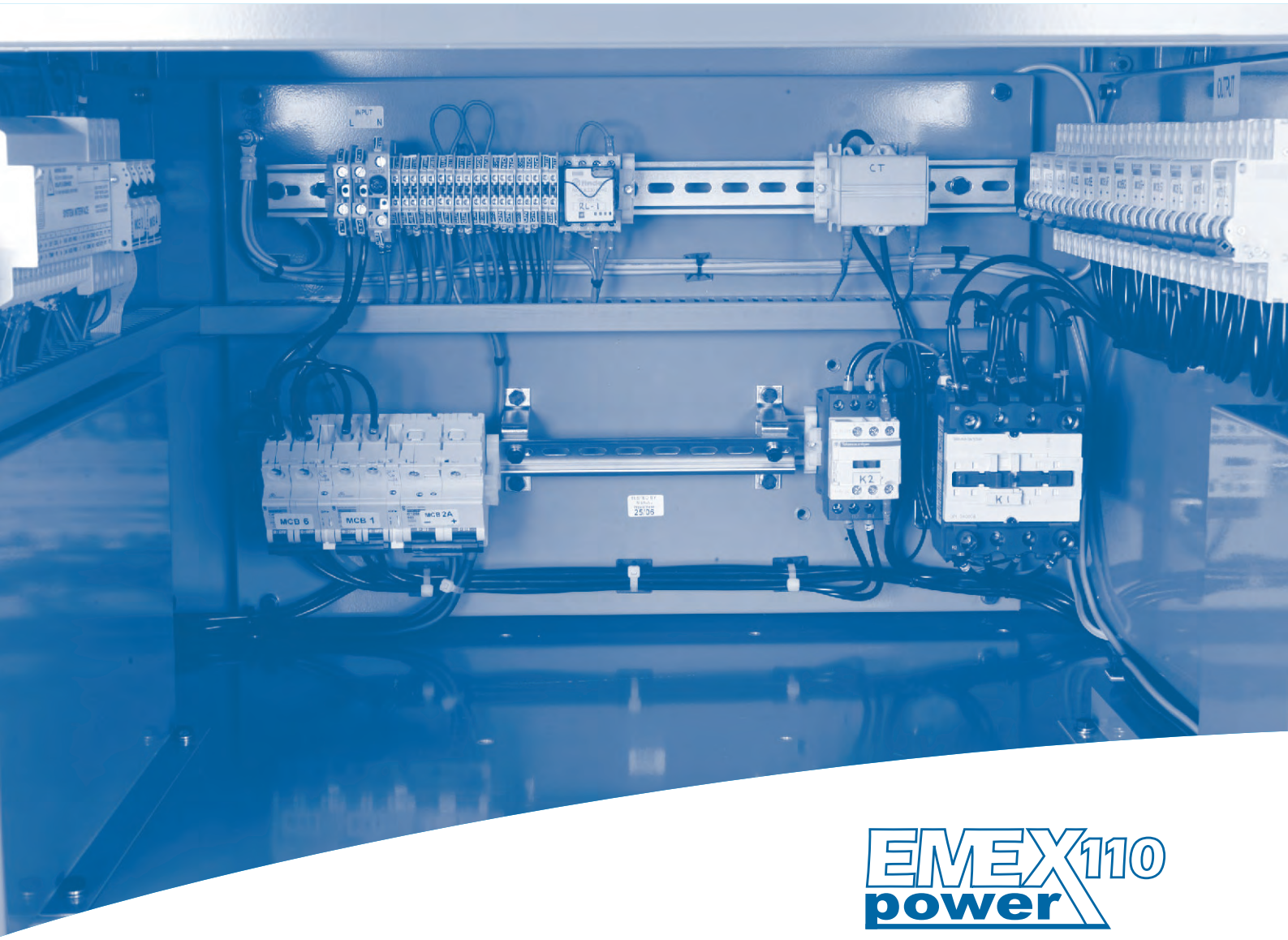
Non-maintained
Require a hold-off relay

Switched maintained
Require a changeover relay

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 throughtout, 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	ff	YY	ff
Ni-CAD	fffff	YYYYY	fffff
Planté	ffff	YYYY	ffff

Order codes

1 hour 110V AC/DC systems

Rating			
KVA	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

Rating			
KVA	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.

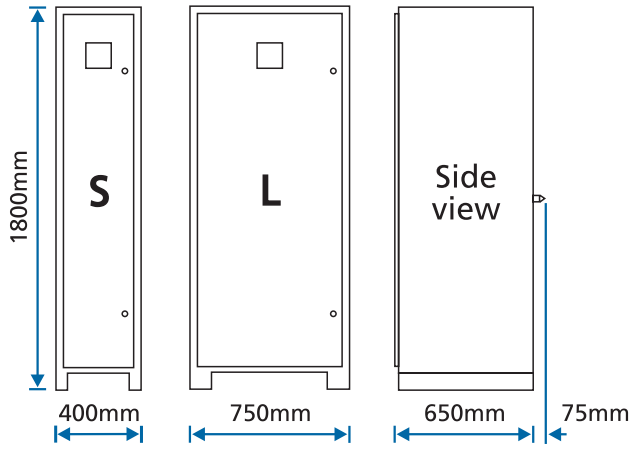
Remote Alarm Unit RAU/240 **ELD0075.003**

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

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
EMEL 50V AC/DC Standard	200W to 2,000W
EMEL 110V AC/DC Standard	600W to 3,500W

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)

AC/DC conversion modules

A conversion module is required for a conventional fluorescent mains luminaire when it is powered from a central battery system for emergency lighting use. This provides fail-safe emergency operation from the CBS supply upon failure of the local lighting circuit whilst retaining the switchable function of the luminaire under mains healthy conditions.

The MDG inverter module has been designed to efficiently operate 4 – 100 watt 4-pin fluorescent lamps, from 50 volt or 110 volt AC/DC central battery systems.

Features and benefits

- Ideally suited for individual local circuit failure monitoring via the connection of an unswitched supply
- Incorporates an integral five pole relay which disconnects the normal mains lighting ballast from the lamp when the monitored 230/240 volt mains supply is disconnected
- A delayed energy relay prevents the automatic protection circuit of the electronic ballast sensing an open circuit condition, in emergency test mode, thus enabling the lamp(s) to restrike without having to re-set the switched supply
- Electrical connections are made via screw terminals
- Remote boxes available where integral mount is not possible

Specifications

- 220/240 volts AC, 50Hz
- Changeover voltage in compliance with IEC 598.2.22
- Input voltage range
  50 volt systems: 45 – 55 volts
  110 volt systems: 99 – 121 volts
- Weight: 0.5kg
- Zinc coated steel enclosure

Order codes

MDG50
Conversion module suitable for 4 – 100W fluorescent, 50V AC/DC

MDG110
Conversion module suitable for 4 – 100W fluorescent, 110V AC/DC

For 24 volt AC/DC conversion modules, please contact our Sales Department.

Dimensions

230mm x 42.5mm x 29mm

CE marking & warranty

A modified luminaire must be compliant with the Electro-Magnetic Compatibility (EMC) and Low Voltage (LV) Directives, and carry a CE mark to signify the compliance.

The company modifying the general luminaire is legally responsible for the re-certification of the complete unit after modification.

In addition, the warranty provided by the mains manufacturer will be invalidated by the modifications.

Conversion service

Emergi-Lite offers a specialist conversion service backed by the highest level of expertise, from a number of strategic Conversion Centres in the UK.

Emergi-Lite is registered under ICEL1004 for luminaire conversion.

Specifying the conversion service to be performed by Emergi-Lite ensures full compliance. In addition, the warranty provided by the mains manufacturer is taken over by Emergi-Lite and provides complete peace of mind.

Note: Fittings to be converted to emergency must themselves carry a CE mark to be considered suitable for conversion.

Slave luminaires

Silver-Scape

A sleek recessed emergency sign luminaire suited to escape routes in premises with false ceilings where a good measure of style is preferred

Specifications

- 8W T5 lamp
- Output: 220 lumens (110V), 200 lumens (50V), 320 lumens (24V)
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP20 rated enclosure for indoor use
- Weight: 1.4kg (without legend panel)
- Operating temperature: 0 – 40°C
- Viewing distance: 27m

Features

- High-grade polycarbonate plastic body in white with white lip trim
- Light engineered diffuser for optimised spacing
- Wing fixings for securing in a normal ceiling tile
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Order codes

RB7311
8 watt recessed base fitting, 24V AC/DC

RB8311
8 watt recessed base fitting, 50V AC/DC

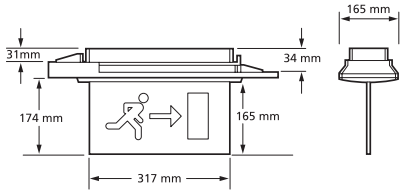
RB9311
8 watt recessed base fitting, 110V AC/DC

RE00
Silver-Scape recessed diffuser panel with sign panel slot (order legend panel separately, see below)

Options

Order recessed diffuser panel with sign panel slot and legend panel for exit versions. Use plain recessed diffuser panel for general luminaire version (see page 69).

Dimensions



Legends

Screen printed legend panel

XE02A31

XE03A31

XE06A31

XE05A31

XE03/6A32
Double-sided left/right

XE02/2A32
Double-sided down/down

Navigator Compact

Order codes

VE7311
8 watt exit sign, 24V AC/DC

VE8311
8 watt exit sign, 50V AC/DC

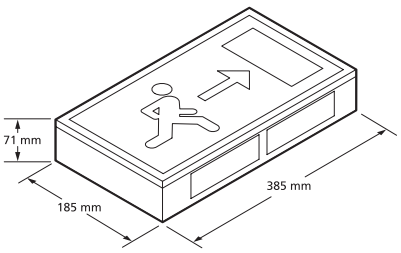
VE9311
8 watt exit sign, 110V AC/DC

Order legend panel separately, see below.

Options

VEBACK
Rear trimplate for a flat back when required for ceiling mounting

Dimensions



Legends

Screen printed legend panel

XE02V31

XE03V31

XE06V31

XE05V31

A slim and compact emergency sign particularly suited where there is limited wall space above a door

Specifications

- 8W T5 lamp
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP20 rated enclosure for indoor use
- Weight: 2.0kg
- Operating temperature: 0 – 40°C
- Viewing distance: 32m

Features

- Folded metal enclosure finished in white epoxy
- Downlight panels provide illumination at floor level
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Navigator E/Performa

A larger, smart emergency sign for indoor use. Suited to all medium sized auditoria, larger hotel foyers, corridor spaces and premises with spacious and long walkways

Specifications

- 8W T5 lamp
- Combined versions have a second 230V mains only lamp
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP20 rated enclosure for indoor use
- Weight: 2.7kg
- Operating temperature: 0 – 40°C
- Viewing distance: 36m

Features

- Folded sheet steel enclosure with white powder coat
- Opal resin downlight panels
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Navigator Performa has dual 8 watt lamps and a black powder coat housing
- Ideal for use in theatres, cinemas etc the Navigator Performa produces an unobtrusive green downlight under mains healthy conditions and a white light under emergency conditions

Order codes

8 watt exit sign

Navigator E (white body)

E7311 – 24V AC/DC

E8311 – 50V AC/DC

E9311 – 110V AC/DC

EA321Q – 230V AC/24V AC/DC

EB321Q – 230V AC/50V AC/DC

EC321Q – 230V AC/110V AC/DC

2 x 8 watt exit sign

Navigator Performa (black body)

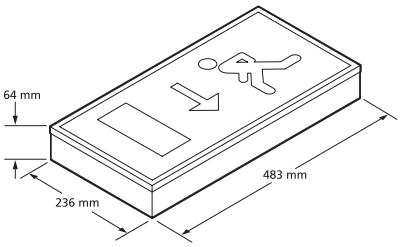
EA323Q – 230V AC/24V AC/DC

EB323Q – 230V AC/50V AC/DC

EC323Q – 230V AC/110V AC/DC

Order legend panel separately, see below.

Dimensions



Legends

Screen printed legend panel (Navigator E)

XE02E31

XE03E31

XE06E31

XE05E31

Screen printed legend panel (Navigator Performa)

XE02E4

XE03E4

XE06E4

XE05E4

Order codes

AR73
8 watt recessed base fitting, 24V AC/DC

AR83
8 watt recessed base fitting, 50V AC/DC

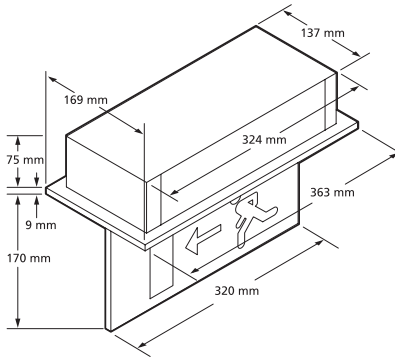
AR93
8 watt recessed base fitting, 110V AC/DC

Order trim and legend plate separately, see below.

Options

Trim plates:
AE01 – White
AE04 – Brass finish
AE05 – Polished stainless steel
AE06 – Brushed aluminium

Dimensions



Legends

Screen printed legend panel

XE02A31

XE03A31

XE06A31

XE05A31

XE03/6A32
Double-sided (left/right)

XE02/2A32
Double-sided (down/down)

A high quality recessed indoor sign for use in prestigious surroundings. Available with trim in smooth silver aluminium, plain white or mirror finish brass

Specifications

- 8W T5 lamp
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP20 rated enclosure for indoor use
- Weight: 2.7kg
- Operating temperature: 0 – 40°C
- Viewing distance: 27m

Features

- Recessed steel enclosure and metal trim plate
- White, brass finish, stainless steel and brushed aluminium slotted trim plate options
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Corniche

A distinctive example of the traditional edge-lit luxury sign. The brass effect finish is suited to period or prestige settings and the white finish is striking where the décor is light and contemporary

Specifications

- 8W T5 lamp
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP20 rated enclosure for indoor use
- Weight: 2.6kg
- Operating temperature: 0 – 40°C
- Viewing distance: 27m

Features

- Body is hung by a hook and chain arrangement which is both aesthetically pleasing and practical. 0.5m chain supplied as standard
- The wall or ceiling mounted support pod conveniently contains the mains connector block
- Floating single sided Eurogram legend panel deploys light to enhance legend definition
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Order codes

Corniche 8 watt luxury exit sign including support pod (order legend panels separately, see below)

NB7311
white body, 24V AC/DC

NB8311
white body, 50V AC/DC

NB9311
white body, 110V AC/DC

NB7314
brass body, 24V AC/DC

NB8314
brass body, 50V AC/DC

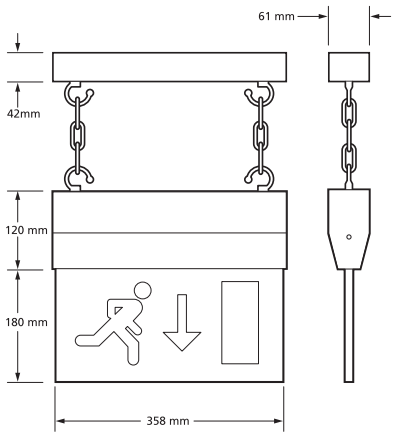
NB9314
brass body, 110V AC/DC

NB7315
chrome body, 24V AC/DC

NB8315
chrome body, 50V AC/DC

NB9315
chrome body, 110V AC/DC

Dimensions



Legends

Polished edge-lit screen printed legend panel

XE02NT31

XE03NT31

XE06NT31

XE05NT31

XE03/6NT32
Double-sided (left/right)
XE02/2NT32
Double-sided (down/down)

Order codes

RB7311
8 watt recessed base fitting, 24V AC/DC

RB8311
8 watt recessed base fitting, 50V AC/DC

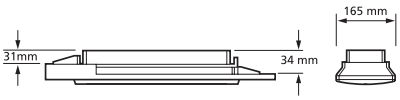
RB9311
8 watt recessed base fitting, 110V AC/DC

RE00
Silver-Scape recessed diffuser panel

Options

Order plain recessed diffuser panel for general luminaire version. Use recessed diffuser panel with sign panel slot and legend panel for exit versions (see page 64).

Dimensions



A sleek recessed emergency sign luminaire suited to escape routes in premises with false ceilings where a good measure of style is preferred

Specifications

- 8W T5 lamp
- Output: 220 lumens (110V), 200 lumens (50V), 320 lumens (24V)
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP20 rated enclosure for indoor use
- Weight: 1.4kg
- Operating temperature: 0 – 40°C

Features

- High-grade polycarbonate plastic body in white with white lip trim
- Light engineered diffuser for optimised spacing
- Wing fixings for securing in a normal ceiling tile
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Day-Lite

The Day-Lite bulkheads are of a slim design with an optically sculpted diffuser for optimum light spread and are suitable for outdoor use

Specifications

- 8W T5 lamp
- Output: 220 lumens (110V), 200 lumens (50V), 320 lumens (24V)
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP65 rated enclosure
- Weight: 1.0kg
- Operating temperature: 0 – 40°C
- Viewing distance: 23m (with optional legend)

Features

- High-grade polycarbonate plastic body in white
- Clear pc optically engineered diffuser
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Screw-fix diffuser
- Use an optional self-adhesive legend sticker to convert the Day-Lite fitting for exit sign use
- The legend sticker is designed to provide a downlight from the bulkhead when used as an exit sign

Order codes

XW73111
8 watt IP65 bulkhead, 24V AC/DC

XW83111
8 watt IP65 bulkhead, 50V AC/DC

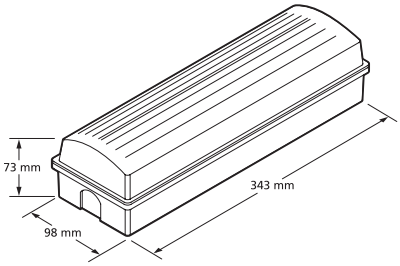
XW93111
8 watt IP65 bulkhead, 110V AC/DC

Options

XTR
Semi-recessing bezel kit in white, complete with fixing bracket

VRKIT
Vandal resistant security screw kit

Dimensions



Legends

Self-adhesive legend sticker

RSE2X

RSE3X

RSE6X

RSE5X

Weatherforce B

Order codes

8 watt IP65 bulkhead

Opal diffuser

B7311 – 24V AC/DC
B8311 – 50V AC/DC
B9311 – 110V AC/DC

With integral hold-off relay

B7311Q – 24V AC/DC
B8311Q – 50V AC/DC
B9311Q – 110V AC/DC
BA321Q – 230V/24V AC/DC
BB321Q – 230V/50V AC/DC
BC321Q – 230V/110V AC/DC

Clear prismatic diffuser

B73111 – 24V AC/DC
B83111 – 50V AC/DC
B93111 – 110V AC/DC

With integral hold-off relay

B73111Q – 24V AC/DC
B83111Q – 50V AC/DC
B93111Q – 110V AC/DC
BA3211Q – 230V/24V AC/DC
BB3211Q – 230V/50V AC/DC
BC3211Q – 230V/110V AC/DC

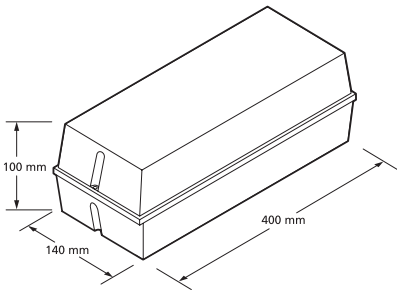
Options

BBZ
Semi-recessing bezel kit in white, complete with fixing bracket

VRKIT
Vandal resistant security screw kit

BWG
Protective wire guard

Dimensions



Legends

Self-adhesive sticker

RSE2120

RSE3120

RSE6120

RSE5120

The Weatherforce B is a versatile and rugged luminaire for both indoor and outdoor use. Manufactured in tough polycarbonate to a simple vandal resistant design, options include a semi-recessed bezel, pictogram legend stickers and a protective wireguard

Specifications

- 8W T5 lamp
- Combined versions have a second 230V mains only lamp
- Output: 220 lumens (110V), 200 lumens (50V), 320 lumens (24V)
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP65 rated enclosure
- Weight: 1.7kg
- Operating temperature: 0 – 40°C
- Viewing distance: 24m (with optional legend)

Features

- Opal or clear prismatic screw-fix diffuser
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Use an optional self-adhesive legend sticker to convert the Weatherforce B fitting for exit sign use

IP65

Weatherforce DB

A practical and robust double-sided sign suited to public walkways, enclosed car parks or educational establishments

Specifications

- 8W T5 lamp
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP65 rated enclosure
- Weight: 1.9kg
- Operating temperature: 0 – 40°C
- Viewing distance: 31m

Features

- Polycarbonate high grade white plastic enclosure
- Screw-fixed diffuser
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Order codes

8 watt IP65 exit sign

DB7311/XE22
24V AC/DC arrow down/down

DB7311/XE36
24V AC/DC arrow left/right

DB8311/XE22
50V AC/DC arrow down/down

DB8311/XE36
50V AC/DC arrow left/right

DB9311/XE22
110V AC/DC arrow down/down

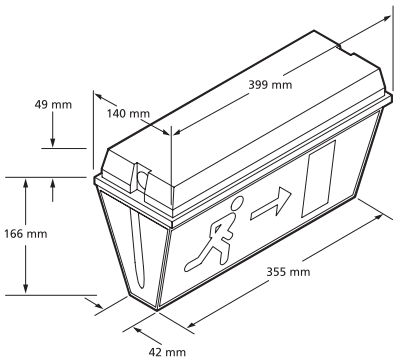
DB9311/XE36
110V AC/DC arrow left/right

Options

BBZ
Semi-recessing bezel kit in white, complete with fixing bracket

VRKIT
Vandal resistant security screw kit

Dimensions



Order codes

8 watt IP65 bulkhead

Opal diffuser

WA7311 – 24V AC/DC
WA8311 – 50V AC/DC
WA9311 – 110V AC/DC

With integral hold-off relay

WA7311Q – 24V AC/DC
WA8311Q – 50V AC/DC
WA9311Q – 110V AC/DC
WAA321Q – 230V/24V AC/DC
WAB321Q – 230V/50V AC/DC
WAC321Q – 230V/110V AC/DC

Clear prismatic diffuser

WA73111 – 24V AC/DC
WA83111 – 50V AC/DC
WA93111 – 110V AC/DC

With integral hold-off relay

WA73111Q – 24V AC/DC
WA83111Q – 50V AC/DC
WA93111Q – 110V AC/DC
WAA3211Q – 230V/24V AC/DC
WAB3211Q – 230V/50V AC/DC
WAC3211Q – 230V/110V AC/DC

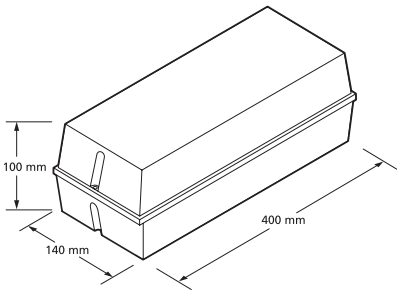
Options

BBZ
Semi-recessing bezel kit in white, complete with fixing bracket

VRKIT
Vandal resistant security screw kit

BWG
Protective wire guard

Dimensions



Legends

Self-adhesive sticker

RSE2120

RSE3120

RSE6120

RSE5120

The Weatherforce WA is a rugged, weatherproof vandal resistant luminaire. With an aluminium base tough polycarbonate diffuser, the Weatherforce WA is suited to a wide variety of sites including industrial complexes, public walkways and car parks

Specifications

- 8W T5 lamp
- Combined versions have a second 230V mains only lamp
- Output: 220 lumens (110V), 200 lumens (50V), 320 lumens (24V)
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP65 rated enclosure
- Weight: 1.9kg
- Operating temperature: 0 – 40°C
- Viewing distance: 24m (with optional legend)

Features

- Epoxy powder coated die cast aluminium base
- High-grade polycarbonate opal or clear prismatic screw-fix diffuser
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Use an optional self-adhesive legend sticker to convert the Weatherforce WA fitting for exit sign use

IP65

Fine-Lite

The Fine-Lite ES is a versatile, slim luminaire ideally suited to hotels, restaurants and offices. Opal or prismatic diffusers are available to suit the surroundings

Specifications

- 8W T5 lamp
- Output: 220 lumens (110V), 200 lumens (50V), 320 lumens (24V)
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP20 rated enclosure for indoor use
- Weight: 1.4kg
- Operating temperature: 0 – 40°C
- Viewing distance: 33m (with optional legend)

Features

- High grade white plastic body with white painted steel geartray
- Snap fit diffuser cover
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Use an optional self-adhesive legend sticker to convert the Fine-Lite fitting for exit sign use

Order codes

Opal diffuser

ES7311
8 watt IP65 bulkhead, 24V AC/DC

ES8311
8 watt IP65 bulkhead, 50V AC/DC

ES9311
8 watt IP65 bulkhead, 110V AC/DC

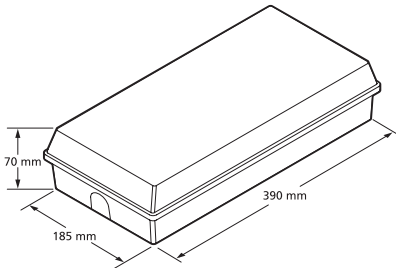
Clear prismatic diffuser

ES73111
8 watt IP65 bulkhead, 24V AC/DC

ES83111
8 watt IP65 bulkhead, 50V AC/DC

ES93111
8 watt IP65 bulkhead, 110V AC/DC

Dimensions



Legends

Self-adhesive sticker

RSE2S

RSE3S

RSE6S

RSE5S

Order codes

OH73161
8 watt luminaire, 24V AC/DC

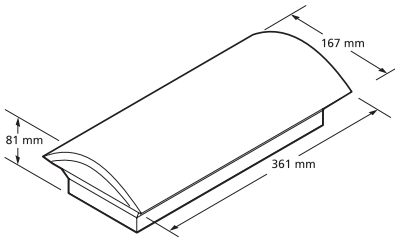
OH83161
8 watt luminaire, 50V AC/DC

OH93161
8 watt luminaire, 110V AC/DC

Options

OHBZ
semi-recessing bezel in white

Dimensions



Legends

Clip on screen printed legend panel with aluminium frame

XE02H

XE03H

XE06H

XE05H

The Horizon OH is a sophisticated and stylish, high performance luminaire. A gently shaped diffuser and contoured reflector produce exceptional light distribution and a unique clip on shaped legend panel produces a high quality sign

Specifications

- 8W T5 lamp
- Output: 220 lumens (110V), 200 lumens (50V), 320 lumens (24V)
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP20 rated enclosure for indoor use
- Weight: 1.5kg
- Operating temperature: 0 – 40°C
- Viewing distance: 25m (with optional legend)

Features

- Brushed aluminium modular base with white plastic body
- Clear polycarbonate broad delivery diffuser with contoured reflector
- Simple assembly and installation – base allows for pre-wiring and mounting. Main body is then screw-fixed to the base
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Use an optional clip-on legend panel to convert the Horizon fitting for exit sign use

Silver-Lite

The Silver-Lite AR is a simple, aesthetic recessed luminaire which is unobtrusive and complements its surroundings. Ideal for use in hotels and hospitals and applications where there is reduced headroom

Specifications

- 8W T5 lamp
- Output: 220 lumens (110V), 200 lumens (50V), 320 lumens (24V)
- Power consumption: 7.1VA/6.9W (110V), 6.5VA/6.3W (50V), 216VA/9.6W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP20 rated enclosure for indoor use
- Weight: 2.7kg
- Operating temperature: 0 – 40°C

Features

- Recessed steel enclosure and metal trim plate
- Light engineered diffuser for optimised spacing
- Wing fixings for securing in a normal ceiling tile
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- White, brass finish, stainless steel and brushed aluminium diffuser panel trim plate options

Order codes

AR73
8 watt recessed base fitting, 24V AC/DC

AR83
8 watt recessed base fitting, 50V AC/DC

AR93
8 watt recessed base fitting, 110V AC/DC

Order a trim plate separately, see below.

Options

Trim plates

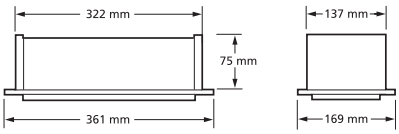
AR01 – White

AR04 – Brass finish

AR05 – Polished stainless steel

AR06 – Brushed aluminium

Dimensions



Order codes

CLQ28CB50
28 watt 2D 50V AC/DC

CLQ28CB110
28 watt 2D 110V AC/DC

Options

OHBZ
semi-recessing bezel in white

Angled trim

CLQ/GA – Gold
CLQ/SA – Silver
CLQ/WA – White
CLQ/BKA – Black

Banded trim

CLQ/GB – Gold
CLQ/SB – Silver
CLQ/WB – White
CLQ/BKB – Black

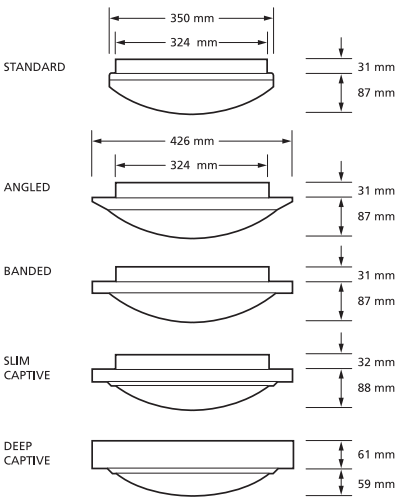
Captive trim

CLQ/GC – Gold
CLQ/SC – Silver
CLQ/WC – White
CLQ/BKC – Black

Deep Captive trim

CLQ/GD – Gold
CLQ/SD – Silver
CLQ/WD – White
CLQ/BKD – Black

Dimensions



A new concept in aesthetic and technical flexibility. An attractive and simple base envelope, enhanced by a variety of trim options, is matched to a choice of energy efficient lamps running on high frequency control gear

Specifications

- 28W 2D lamp
- Output: 840 lumens (110V), 800 lumens (50V)
- Power consumption: 14VA/13.75W (110V), 13VA/12.5W (50V)
- Input voltage: 110V AC/DC, or 50V AC/DC (according to type)
- IP20 rated enclosure for indoor use
- Weight: 2.0kg
- Operating temperature: 0 – 40°C

Features

- Flame retardant PC base with opal PC diffuser
- 4 screw positions for surface mount or semi-recess kit
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Angled, banded, captive and deep captive trim style options available in white, black, silver and gold

Compass

A simple decorative, square section luminaire suitable for passageways and stairwells

Specifications

- 28W 2D lamp
- Output: 840 lumens (110V), 800 lumens (50V), 575 lumens (24v)
- Power consumption: 14VA/13.75W (110V), 13VA/12.5W (50V), 14VA/14W (24V)
- Input voltage: 110V AC/DC, 50V AC/DC, or 24V AC/DC (according to type)
- IP20 rated enclosure for indoor use
- Weight: 2.6kg
- Operating temperature: 0 – 40°C

Features

- Epoxy painted steel base
- Snap-fit opal or clear prismatic polycarbonate diffusers
- 4 screw positions
- Designed and manufactured to meet the standards of BS EN 60598.2.22

Order codes

Opal diffuser

PS7711
28 watt 2D, 24V AC/DC

PS8711
28 watt 2D, 50V AC/DC

PS9711
28 watt 2D, 110V AC/DC

Clear prismatic diffuser

PS77111
28 watt 2D, 24V AC/DC

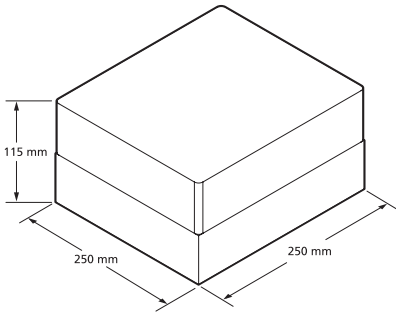
PS87111
28 watt 2D, 50V AC/DC

PS97111
28 watt 2D, 110V AC/DC

Options

PSBZ250
semi-recessing bezel kit

Dimensions



Order codes

Circular 28 watt luminaire

Opal diffuser

APR28CB50FO
black body, 50V AC/DC

APR28CB50FO
white body, 50V AC/DC

APR28CB11FO
black body, 50V AC/DC

APR28CB11FO
white body, 50V AC/DC

Clear diffuser

APR28CB50
black body, 50V AC/DC

APR28CB50W
white body, 50V AC/DC

APR28CB11
black body, 50V AC/DC

APR28CB11
white body, 50V AC/DC

Square 28 watt luminaire

Opal diffuser

APS28CB50FO
black body, 50V AC/DC

APS28CB50FO
white body, 50V AC/DC

APS28CB11FO
black body, 50V AC/DC

APS28CB11FO
white body, 50V AC/DC

Clear diffuser

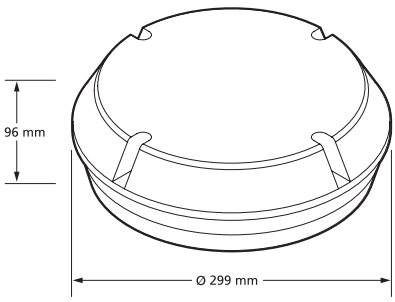
APS28CB50
black body, 50V AC/DC

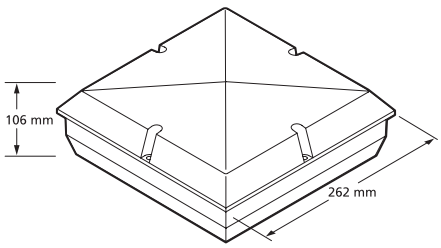
APS28CB50W
white body, 50V AC/DC

APS28CB11
black body, 50V AC/DC

APS28CB11
white body, 50V AC/DC

Dimensions





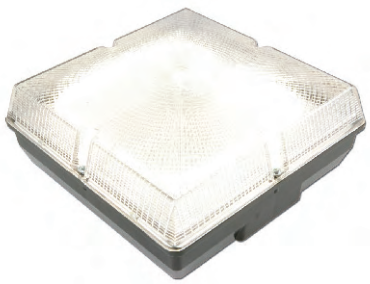
A sturdy, weatherproof luminaire suitable for outdoor use

Specifications

- 28W 2D lamp
- Output: 840 lumens (110V), 800 lumens (50V)
- Power consumption: 14VA/13.75W (110V), 13VA/12.5W (50V)
- Input voltage: 110V AC/DC, or 50V AC/DC (according to type)
- IP65 rated enclosure
- Weight: 1.8kg
- Operating temperature: 0 – 40°C

Features

- Flame retardant PC base
- Snap-fit opal or clear prismatic polycarbonate diffusers
- Supplied in white as standard, black is available as an option
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Available in circular or square fitting



IP65

Cite-Lite

A practical range of heavy-duty, vandal resistant luminaires ideal for use in walkways and tunnels

Specifications

- 28W 2D lamp
- Output: 840 lumens (110V), 800 lumens (50V)
- Power consumption: 14VA/13.75W (110V), 13VA/12.5W (50V)
- Input voltage: 110V AC/DC, or 50V AC/DC (according to type)
- IP65 rated enclosure
- Weight: 4.9kg
- Operating temperature: 0 – 40°C

Features

- Epoxy coated cast aluminium base
- Impact resistant PC diffuser with tamper resistant screws
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Available in circular or square fitting

Order codes

Circular

Opal diffuser

AMR28CB50FO
28 watt luminaire, 50V AC/DC

AMR28CB11FO
28 watt luminaire, 110V AC/DC

Clear diffuser

AMR28CB50
28 watt luminaire, 50V AC/DC

AMR28CB11
28 watt luminaire, 110V AC/DC

Square

Opal diffuser

AMS28CB50FO
28 watt luminaire, 50V AC/DC

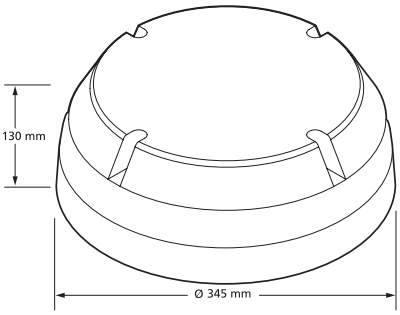
AMS28CB11FO
28 watt luminaire, 110V AC/DC

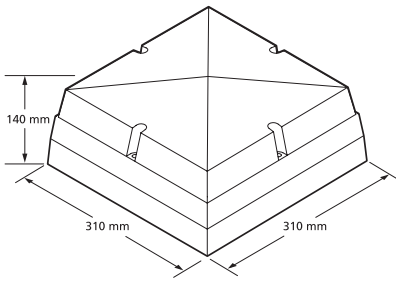
Clear diffuser

AMS28CB50
28 watt luminaire, 50V AC/DC

AMS28CB11
28 watt luminaire, 110V AC/DC

Dimensions





Order codes

MTC28CB50
28 watt 2D, 50V AC/DC

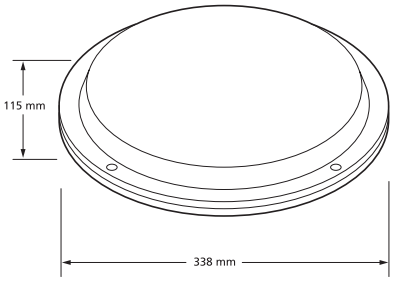
MTC28CB11
28 watt 2D, 110V AC/DC

Options

MTCD1
Cross-hair diffuser screen

MTCD2
Downlight diffuser screen

Dimensions



A rugged, high specification bulkhead for use in exterior public areas and demanding environments

Specifications

- 28W 2D lamp
- Output: 840 lumens (110V), 800 lumens (50V)
- Power consumption: 14VA/13.75W (110V), 13VA/12.5W (50V)
- Input voltage: 110V AC/DC, or 50V AC/DC (according to type)
- IP65 rated enclosure
- Weight: 4.5kg
- Operating temperature: 0 – 40°C

Features

- Black die cast aluminium base with opal polycarbonate diffuser
- A shaped diffuser screen can be provided to give a subtle downlight effect and reduce light throw in residential areas
- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Vandal resistant ‘cross-hair’ diffuser screen available as an option

IP65

Range-Lite

A range of 'twin-spot' luminaires for both indoor and outdoor use. Designed specifically for use in warehouses, factory spaces and sports facilities

Specifications

- HV – epoxy coated steel enclosure with white, direct mounted, circular lamps

  HL – polycarbonate IP65 enclosure with black, remote, rectangular lamps

- 2 x 20W tungsten halogen lamps
- Output: 2 x 300 lumens
- Power consumption: 55VA/45W (110V)
- Input voltage: 110V AC/DC
- Integral hold off relay (230V unswitched input required)
- Weight: HV – 4.2kg, HL – 4.57kg
- Operating temperature: 0 – 40°C

Features

- Designed and manufactured to meet the standards of BS EN 60598.2.22
- Lamp projectors are fully adjustable to illuminate the walkway
- Bodies are mountable upright on a wall or stanchion
- Polycarbonate lamp bodies and lenses are suitable for use in a food factory or store

Order codes

IP20 rated control enclosure, circular lamps

HVCB110
Direct mount lamps, 110V AC/DC

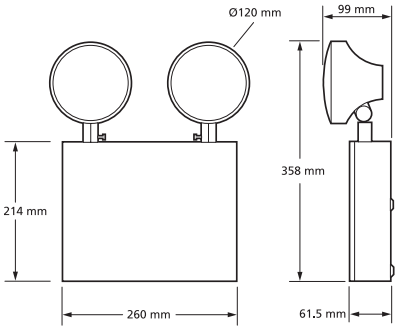
IP65 rated control enclosure, remote rectangular lamps

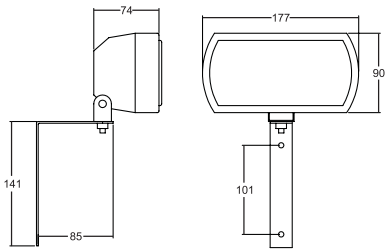
HVCB110E3
Weatherproof use, 110V AC/DC

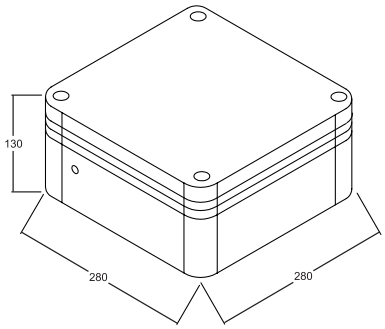
Options

HLWG – Overall wire guard

Dimensions







Appendix

Specifications, spacing data and layout schematics

EMEX Power detailed specification

1.0 General standards

The Emergency Lighting System and all of its components shall be manufactured to meet the requirements of BS EN 50171, ICEL 1009, and CE. The system shall be CE marked.

2.0 Central inverter system

The system should offer the following standard features as summarised below and further detailed in sections 3.0, 4.0, 5.0, 6.0 & 7.0:

1. True AC/AC 50Hz output
2. Ability to use standard proprietary AC distribution and protection devices on outgoing circuits
3. Compatibility with addressable test package using EMEX technology
4. Excellent overload capability in full emergency mode: 200% for 10 seconds without reduction in output voltage
5. Excellent recharge capability – 80% after 12 – 14 hours following rated discharge
6. MCB protection throughout – no fuses
7. EMEX Power true modular construction with common spares (inverter, charger, control PCB, and system interface common across the full system range)
8. Individual MCB protection for each module - AC and DC circuits
9. Individual cooling fans for all modules with on-demand operation (not continuously running)
10. 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)
11. Integral maintenance bypass facility (ability to support output load in bypass mode whilst maintenance is performed)
12. Temperature compensated charger
13. Comprehensive display
14. Charger and inverter alarm pack
15. Momentary "push to test" button
16. Fire alarm interface
17. Final exit interlock
18. Internal and external MCB monitoring
19. Local/remote maintained circuit control
20. Sub-circuit monitor connection
21. Two sets of volt–free alarm relay contacts
22. Inverter-inhibit engineers' switch
23. Remote Alarm Unit option
24. Battery earth leakage detection is available as an option
25. Easy front panel access
26. Inter-cabinet trunking for battery cables
27. Fork-lift plinth
28. Lifting eyes for crane lift as standard
29. Cabinet levelling feet available
30. Installation pack with all tools required
31. Detailed instruction manual

3.0 Static inverter specification

LED Indications

Mains healthy	Green
Maintained circuit on	Green
Battery high volts	Amber
Battery low volts	Amber
Supply from battery	Red
Charge fail	Red
System fault	Red
Common alarm	Red
Battery discharged	Red
System inhibited	Red

Metering

DC metering	Combined digital battery voltage and charge/discharge current
AC metering	Combined digital AC output Voltage and current

Alarms

Alarm outputs	Two sets of voltage free contacts 1A @ 230V AC 1A @ 28V DC Local audible alarm (mutable)

Controls

Final exit interlock	Requires volt-free contact
Sub-circuit monitor	24V control loop
Maintained circuit control	24V control loop
Fire Alarm Control	12/24V DC from fire panel
Remote MCB monitoring	24V control loop
Changeover device	Four pole contactor to BS 5424

Inverter Module(s)

Nominal output	220V – 240V 50Hz AC
Rating	1.5KVA or 3KVA rating with Master or Slave configuartion
Overload	120% continuous with full output 150% for 1 minute with full output 200% for 10 seconds with full output
Short Circuit	350% for 10 seconds
Cooling	Integral fan (on-demand operation)
Protection	AC 2 pole type D DC 2 pole type B
Module Dimensions	360mm x 170mm x 575mm
Handling	Recessed handles front and rear



Charger Module(s)

Constant voltage current limited with temperature compensation.

Voltage control to ±1% with full mains supply variations.

Rating	10 amp minimum
Cooling	Integral fan (on-demand operation)
Protection	AC 2 pole type D DC 2 pole type B
Module dimensions	360mm x 170mm x 575mm
Handling	Recessed handles front and rear

Protection Devices

Mains input Switch	2 pole switch
Charge circuit MCB	2 pole Type D
Battery MCB	2 pole Type B
DC control circuit MCB	2 pole Type Z
AC control circuit MCB	2 pole Type Z

Mechanical

Input / Output Terminals	10mm/50mm dependant on rating
Control Terminals	2.5mm

4.0 Battery

Battery should be comprised of one or more strings of not more than 120V nominal voltage.

The Batteries shall be maintenance free sealed lead acid, gas recombination type with a minimum design life of 10 years. They shall have extremely low gas generation, low self-discharge and have permanently sealed pressure release vents. Other battery technologies to be available upon special request.

The Batteries shall be sized to power the complete system for the rated duration following mains failure at 100% light output of all emergency lamps.

5.0 Environmental conditions

Ambient temperature of the installation (switch room) should be in the range 15 – 25°C. Air conditioning is required where normal ambient will exceed 25°C.

NOTE: Batteries must not be subject to prolonged extreme temperatures prior to installation and must be stored in a suitable environment.

Ambient Temperature (Nominal)	15 – 25°C
Extreme Temperature	0 – 40°C
Humidity	40 – 60%
Noise Level at 1 metre	55 dBA
Altitude without extra ventilation	2,500 metres

6.0 Inverter and battery cabinets

Material	2.0mm ZINTEC steel (side panels and rear 1.6mm)
Construction	Modular without welds; battery cubilces can be reduced to CKD form for ease of access to site
Ingress protection	IP21
Colour	RAL 5015 gloss (Medium Blue) Other RAL colour finishes available to special order
Lifting & handling	M12 lifting eyes and 110mm plinth
Levelling	Levelling feet available
Access	Single door with 8mm square block key Front access only required - opening angle 180° Key lockable doors on request Removable top gland plate
Ventilation	Ventilation in rear and front only – cubicles can be mounted adjacent to each other (no side ventilation)
Dimensions	1800mm x 750mm x 725mm and/or 1800mm x 400mm x 725mm (Dimensions are inclusive of 75mm ventilation back-stop)

7.0 Transient overvoltage protection

To protect against damage caused by transient overvoltages, factory fitted Furse ESP transient overvoltage protectors should be available as an option.

EMEX Test detailed specification

General

The system should use EMEX Technology to provide full addressable monitoring of the complete emergency lighting system including the EMEX Power Central Battery System(s).

The system must be capable of monitoring fluorescent, cold cathode fluorescent, filament, LED, or halogen luminaires.

Software

System should use EMEX Test software to schedule the automatic regular testing of emergency lighting system components. The system should automatically generate and collate test reports. These reports should be automatically date-stamped and should be available in a notepad format such that engineer's notes can be added.

Remote access

Software and test reports must be accessible remotely via a LAN or internet connection. The system must be capable of exporting data to a BMS in LONWORKS or BACNET format.

CBS capacity

The system should support up to 255 central battery systems (CBS). Each CBS must be able to communicate with up to 4,000 luminaires.

Communication

The system must use data cable to link the control computer to the CBS unit(s), and from each CBS to the associated luminaire interfaces only. Data cable must NOT be required direct to any luminaires.

MX4 interface

The system must offer remote MX4 interfaces having 4 separate outputs, each capable of monitoring up to 4 no. fluorescent, filament, LED, or halogen luminaires completely without modification to the luminaire. The systems should be capable of monitoring a lamp wattage of up to 150 watts.

The mode of operation of the luminaires (maintained, non-maintained, switched maintained) must be determined by the software programming.

MXC substation

The system must offer remote MXC substations each having 2 outputs, which are capable of monitoring up to 40 no. luminaires / 10 amps in total. The substation should provide minimum 8 no. monitoring inputs, free programmable switched or unswitched. Luminaires must share the same supply cable with mixed mode of operation (maintained, non-maintained, switched maintained). Cable route must be free with spurs and tees permitted.

LTC luminaire module

Luminaires for use with MXC each require a local LTC module. Each LTC must provide 1 no. switched and 1 no. unswitched local monitoring input to act directly on the luminaire in addition to any communication received from the substation. A full range of exit signs, bulkhead luminaires, decorative luminaires, and twinspot units must be available ready fitted with LTC modules. LTC modules must also be available loose and in remote enclosures for the adaptation of standard mains luminaires to the MXC system.
Each LTC must be capable of switching up to 70 watts. The LTC module must retain the existing mains ballast in the luminaire. It must not be necessary to order specific LTC units to suit the luminaire wattage.

Flexibility

The system must permit both MX4 and MXC solutions on the same system, controlled from a single PC.

Test input nodes

The system must offer test input nodes which allow the engineer to access test reports and control the system using a laptop PC, from any point on the data cable.

Spacing data

In the UK, Building Regulation 2000 regulation B1 covers the provision of safe and effective means of escape from a building. Approved Document B (2000) (ADB) is a published guide to the Building Regulations, which specifies that standards for the installation of escape lighting should be according to BS 5266 Part 1.

BS 5266 Part 1:2005 is the umbrella standard which refers to BS 5266 part 7:1999 (EN 1838), defining emergency lighting levels of minimum 1.0 lux on the centre line of an escape route, and 0.5 lux minimum for open areas larger than 60m².

British Standards are recognised worldwide, or are commonly used as the basis of local standards.

NFPA 101 Life Safety Code standards require an average of 10.8 lux with not less that 1.1 lux at any point for escape routes.

We recommend that a copy of relevant local standards are obtained prior to any design work.

We are pleased to supply data for any of our fittings in LUMDAT format, for use with Relux or similar lighting packages.

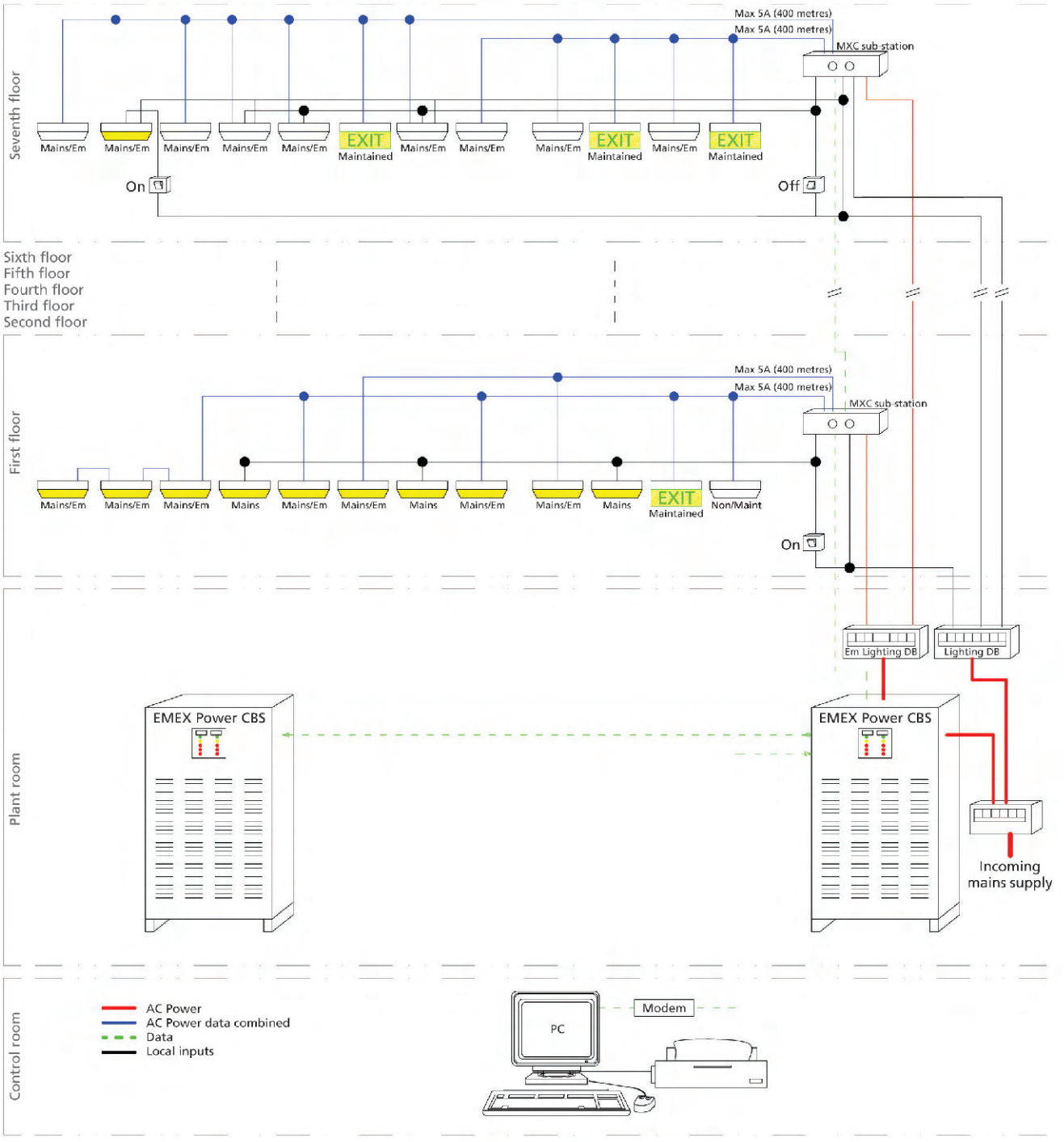
We offer the following data for guidance to assist with design work to BS 5266 requirements.

Data is shown for a selection of 8W luminaires, for a typical 2.5 metre ceiling height.

Mains luminaires

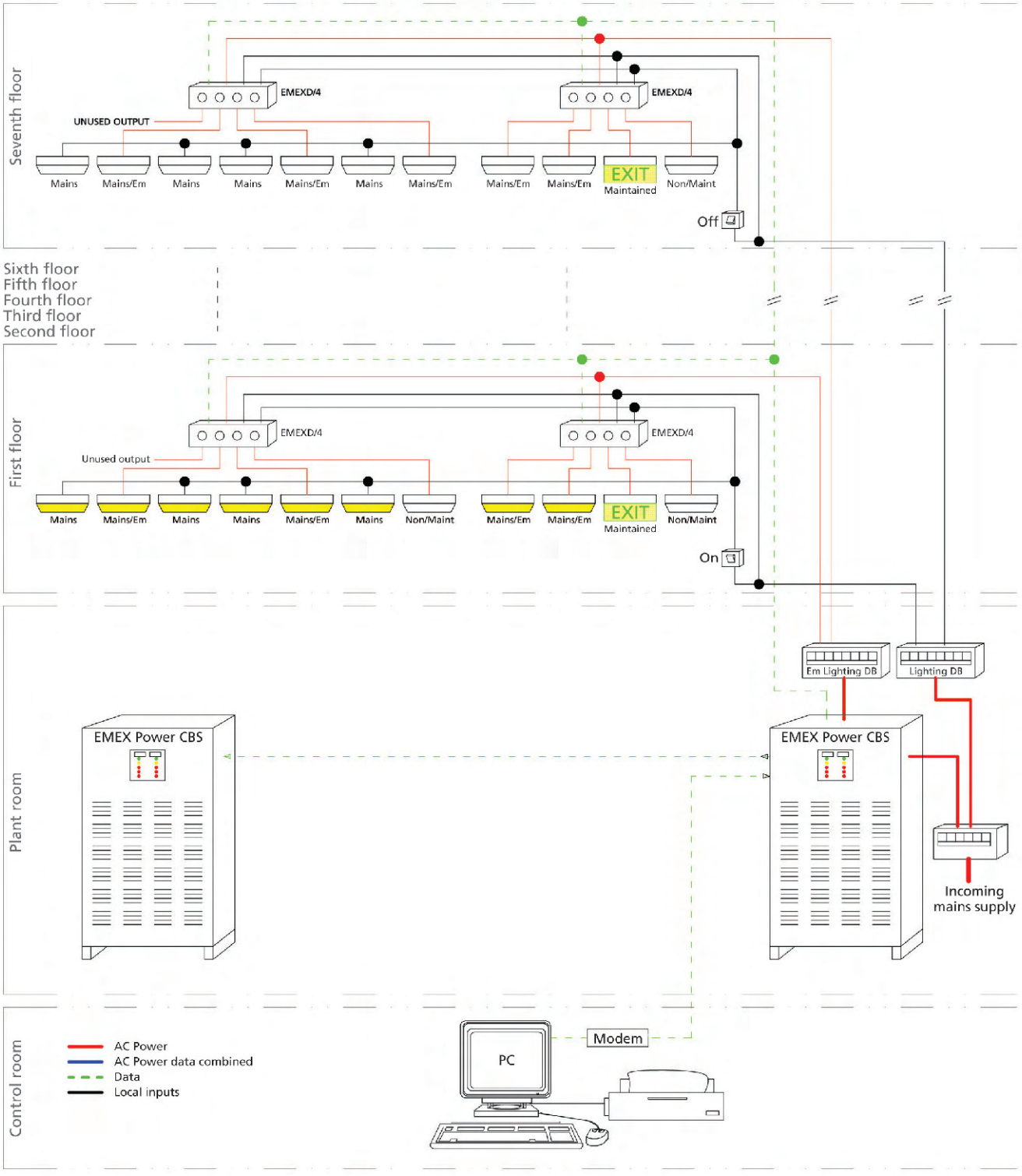
		Escape route (min 1 lux) normal risk				Anti panic (min 0.5 lux) open area			
	Page	Transverse to wall	Transverse spacing	Axial spacing	Axial to wall	Transverse to wall	Transverse spacing	Axial spacing	Axial to wall
Silver-Scape RB	38	4.4	11.4	6.9	2.6	5.6	13.2	8.5	2.7
Day-Lite XW	39	3.9	11.0	5.8	2.2	5	13.4	7.5	2.8
Weatherforce B and A (Opal)	40 and 42	2.8	7.5	6.4	2.4	3.3	8.7	7.3	2.7
Weatherforce B and WA (Prismatic)	40 and 42	2.8	9.7	5.9	2.5	4	12	7.6	3.2
Fine-Lite ES (Opal)	43	2.8	7.2	6.8	2.6	3.5	8.4	6.8	2.6
Fine-Lite ES (Prismatic)	43	2.9	7.4	6.6	2.6	3.75	9.1	7.3	2.6
Horizon OH	44	4.3	11.9	5.4	2.0	5.2	13.5	7	3.3
Silver-Lite AR	46	3.1	7.8	7.0	2.8	3.4	9.4	8.1	2.9

EMEX Test layout schematic – MXC substations



A version of this schematic in PDF format can be found at www.emergi-lite.co.uk/schematic

EMEX Test layout schematic – MXD/4 units



A version of this schematic in PDF format can be found at www.emergi-lite.co.uk/schematic

Testing

BS 5266 Part 8 (EN 50172) specifies the statutory requirements for testing the entire emergency lighting installation, and a copy of this standard should be obtained.

It should be noted that, immediately after a test, the battery might not have sufficient capacity to provide emergency lighting cover. For this reason all tests should be performed, where possible, at a time of minimum risk.

Record keeping

It is a requirement of BS 5266 Part 8 (EN 50172) that accurate records of testing are kept. Emergi-Lite have produced an Emergency Lighting Record Log Book designed to assist with these requirements. These are available to order – part code YLB-EL906.

General maintenance

Check the system has adequate ventilation. Louvres in the door, and grilles in the rear panel must not be obstructed.

The operating environment should be free from dust, which can accumulate inside modules.

Charger maintenance

A monthly check should be made of the charger output voltage to ensure it is set correctly. Consider the ambient temperature in the battery compartment, as this will affect the charger voltage.

Consult the System Specification section for correct charger parameters.

Any variation in charger voltage should be noted, and, if in doubt, contact the Service Department for advice.

Equipment should be dust free and clean to prevent premature failure.

Battery maintenance

The battery should be visually inspected each month to check that there is no evidence of damaged or leaking cells.

If a cell terminal or link shows signs of corrosion, any electrolyte spillage should be neutralised using an alkaline-soda solution, the affected area then cleaned with warm water and dried thoroughly. Replace all damaged cells. Contact our Service Department for advice and replacements.

Each quarter, record the individual cell voltages on the record sheets provided in this manual. A digital DC voltmeter is required for this purpose. Only record cell voltages when the battery is fully charged, which takes a maximum of 24 hours after a test.

Cell voltages should remain constant over the life of the battery. Cells showing a voltage differing from previous readings require investigation (please note charger is temperature compensated and cell voltages will vary with ambient room temperature changes).

Do not remove cells and re-commission the system. Remaining cells will be over charged and damaged.

Do not replace cells of one type with cells of a different type, even if both are from the same manufacturer. All cells within a battery must be identical.

Temperature extremes severely affect battery life. Always check and record the ambient temperature in the battery room. The optimum temperature is 20°C.

Handling

Most cells are heavy and difficult to handle. Care should be taken and the correct technique employed when using manual or other lifting methods.

Explosion hazard

Recombination (sealed) cells, when operated correctly, have negligible rates of gas evolution.

Repair/disposal

No attempt should be made to repair any cells, they should be treated as disposable when they have outlived their use.

Batteries must be disposed of in accordance with current waste disposal and pollution legislation. It is recommended that the following authorities are contacted before any attempt is made to dispose of cells; Environment Agency Local Office, Local Authority Environmental Health or Waste Handling Department.

EMERGI-LITE
EMERGENCY LIGHTING & FIRE DETECTION SPECIALISTS

Thomas&Betts

Home to many well-known brands and with over 100 years experience, Thomas & Betts provide a truly world-class level of quality, service and support. Thomas & Betts' Electrical Division provides the following key products:

Termination Systems

A wide range of termination systems for a variety of applications, including:

- **Shield-Kon®** for the earth termination of shielded cables
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- **Dragon Tooth®** insulation piercing connectors to splice, tap and terminate copper or aluminium wires

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A range of flexible and watertight conduits for industrial and commercial applications:

- **Shureseal™**: PVC or galvanised steel with robust jacket (IP rating up to IP67)
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- Quick and easy installation
- A wide range of fittings to a variety of standards

Cable Ties and Fasteners

From the pioneers of the 'Ty-Rap®' – a huge range of cable ties, including:

- **Ty-Rap®** premium two piece ties with integral steel locking barb
- **Ty-Fast®** high quality, one-piece all-plastic ties
- **Ty-Met™** self-locking stainless steel ties
- **Ty-Grip™** hook and loop releasable ties

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Shrink-Kon® multi-purpose heatshrink for use in insulation, protection, identification and strain relief:

- Manufactured from cross-linked polyolefin
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Sta-Kon®
Color-Keyed®
Dragon Tooth®
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In addition to their own core products, Thomas & Betts is also proud to be home to the following European brands:

furse

Furse is the UK's leading manufacturer of lightning protection products. Additionally, extensive ranges of earthing material, transient overvoltage protectors and exothermic welding equipment mean Furse is able to offer a 'Total Solution' to any earthing and lightning protection requirement.

E-Klips

The E-Klips® range of spring steel fasteners offers a quick, easy and reliable method of fixing services to steelwork without the need for bracket making, drilling holes or the use of nuts and bolts. They can be installed using a minimum of tools - usually only a hammer, screwdriver or pair of pliers.

KAUFEL
Systèmes de sécurité

With over 50 years experience, Kaufel are experts in emergency lighting. They provide a complete range of self-contained luminaires, central sources and slave luminaires as well as a complementary range of fire alarms.

EXISTALITE
EMERGENCY LIGHTING

Existalite are dedicated to providing superior equipment and services to the lighting industry. They have built a reputation for providing engineering solutions utilising high quality equipment at cost effective prices. Products include electronic ballasts, combined inverter ballasts and self-contained gear pods for a wide range of lamp types.

VanLien
EMERGENCY LIGHTING

With over 50 years of experience Dutch market leader VanLien develops and produces high quality emergency lighting products. The result is a wide range of outstanding user-friendly and highly reliable emergency lighting solutions with metal design signature. The product range includes luminaires for centralized and self contained systems, conversion units, mobile emergency lighting and central power and monitoring systems.

EMERGI-LITE
EMERGENCY LIGHTING & FIRE DETECTION SPECIALISTS

Emergi-Lite is an established name for self-contained emergency luminaires and analogue addressable and conventional fire detection products. Emergi-Lite products, like the infra-red emergency lighting testing system, have been installed in such prestigious buildings as the Savoy Hotel and the Palace of Westminster in London.

KAUFEL
Stromversorgungssysteme

From its formation about 80 years ago as a battery manufacturer, KAUFEL (formerly known as NIFE) has grown to become a leading manufacturer of emergency lighting products and safety power supply systems. Every power system is designed specifically to meet each customer's unique requirements.

EMERGI-LITE

EMERGENCY LIGHTING & FIRE DETECTION SPECIALISTS

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