

MARITIME LIGHTING

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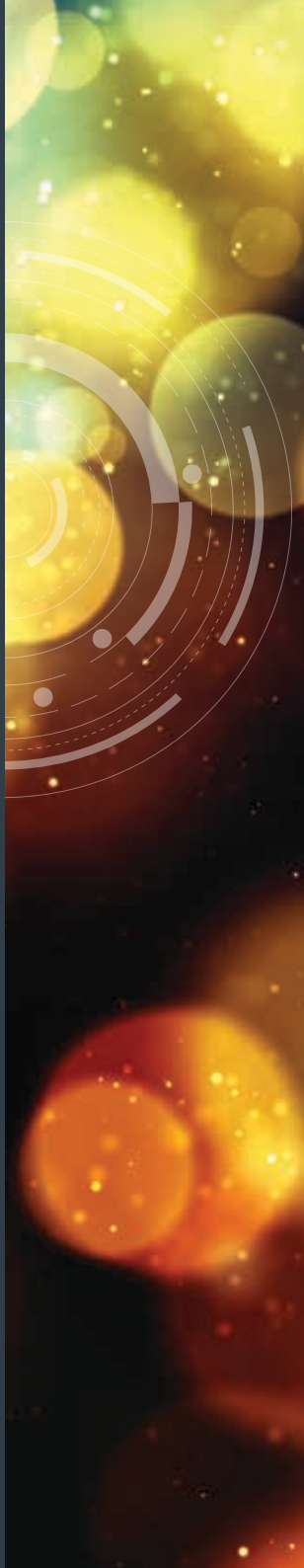
MARL
INTERNATIONAL



MARL International Ltd has been adapting LED technology to provide innovative, attractive and functional solutions for over five decades.

Backed by world class in-house design and manufacturing facilities, we are recognised internationally as experts in both the electronics and LED lighting industries. Our design and manufacturing competences are truly wide-ranging and cover sectors that include defence, rail, marine, off-shore, industrial control, water treatment and specialist lighting.

- Dedicated research, design and manufacturing facility
- Quality Systems approved: BS EN ISO 9001:2015
- In house design, prototyping, manufacturing and testing capability
- Semi-custom and bespoke product design service and consultancy
- Electro-mechanical capability (sub-contract design and assembly)
- Mechanical, electrical and electronic design & assembly
- Full SMT (surface mount technology) PCB design and component placement
- Standard and semi-custom LED components and systems
- Darkroom and optical measurement capability



INTERNAL LIGHTING

GENERAL LUMINAIRE

The luminaire is a surface mounted 25W LED to provide general illumination of compartments. The product consists of a base unit, LED white module, diffuser lens lid, single output power supply and external fixing brackets.



Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56

RECESSED MOUNTED GENERAL LUMINAIRE

The luminaire is a flush mounted 25W LED to provide general illumination of compartments. The product consists of a base unit, LED white module, diffuser lens lid, single output power supply, anti-vibration gasket and external fixing brackets.



Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56

EMERGENCY GENERAL LUMINAIRE

The luminaire is a surface mounted 28W LED to provide general illumination of compartments. The product consists of a base unit, LED white module, diffuser lens lid, single output power supply with EM mode, manual override switch, emergency battery pack with charging circuit, fault indication, emergency test button and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



RECESSED MOUNTED EMERGENCY LUMINAIRE

The luminaire is a flush mounted 26W LED to provide general illumination of compartments. The product consists of a base unit, LED white module, diffuser lens lid, single output power supply with EM mode & manual override switch, emergency battery pack with charging circuit, fault indication, emergency test button, anti-vibration gasket and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



GENERAL LUMINAIRE HAZARDOUS AREA

The luminaire is a surface mounted 15W LED to provide general illumination of weapons compartments, paint and oil stores. The product consists of an ATEX rated aluminium body with polycarbonate tube, LED white module, single output power supply and external fixing brackets.

Shock Tested to UK MOD Standards.

Main Body: Aluminium body with high impact polycarbonate tube

Bracket: Steel

IP Rating: 66



EMERGENCY LUMINAIRE HAZARDOUS AREA

The luminaire is a surface mounted 15W LED to provide general illumination of weapons compartments and paint and oil stores. The product consists of an ATEX rated aluminium body with polycarbonate tube, LED white module, single output power supply, emergency battery pack with charging circuit & fault indication and external fixing brackets.

Shock Tested to UK MOD Standards.

Main Body: Aluminium body with high impact polycarbonate tube

Bracket: Steel

IP Rating: 66



GENERAL LUMINAIRE DUAL OUTPUT

The luminaire is a surface mounted 25W LED to provide general illumination of compartments. The product consists of a base unit, LED white module, diffuser lens lid, choice of output power supply and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



RECESSED MOUNTED GENERAL LUMINAIRE DUAL OUTPUT

The luminaire is a surface mounted 25W LED to provide general illumination of compartments. The product consists of a base unit, LED white module, diffuser lens lid, choice of output power supply and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



EMERGENCY LUMINAIRE DUAL OUTPUT

The luminaire is a surface mounted 28W LED to provide general illumination of compartments. The product consists of a base unit, LED white module, diffuser lens lid, choice of single output power supply with EM mode & manual override switch, emergency battery pack with charging circuit, fault indication, emergency test button and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



RECESSED MOUNTED EMERGENCY LUMINAIRE DUAL OUTPUT

The luminaire is a surface mounted 28W LED to provide general illumination of compartments. The product consists of a base unit, LED white module, diffuser lens lid, choice of single output power supply with EM mode & manual override switch, emergency battery pack with charging circuit, fault indication, emergency test button and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



GENERAL LUMINAIRE DUAL OUTPUT NVG

The luminaire is a surface mounted 25W LED to provide compartment illumination of passageways, flight crew rooms and night duty areas. The product consists of a base unit, LED NVIS white module, diffuser lens lid and external fixing brackets. A choice of output power supply can provide either general illumination or reduced level illumination suitable for use with Night Vision Goggles.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



EMERGENCY LUMINAIRE DUAL OUTPUT NVG

The luminaire is a surface mounted 28W LED to provide compartment illumination of passageways, flight crew rooms and night duty areas. The product consists of a base unit, LED NVIS white module, diffuser lens lid, choice of output power supply with EM mode & manual override switch, emergency battery pack with charging circuit, failure indication, test button, reduced level illumination suitable for use with Night Vision Goggles and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



RECESSED MOUNTED GENERAL LUMINAIRE DUAL OUTPUT WARM WHITE

The luminaire is a flush mounted 23W LED to provide general illumination of compartments. The product consists of a base unit, LED warm white module, diffuser lens lid, choice of output power supply for general & reduced level illumination, anti-vibration gasket and external fixing brackets.



Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

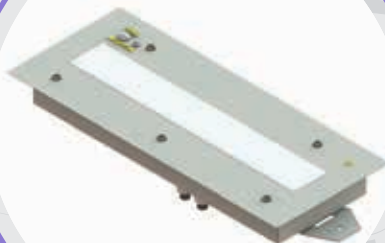
Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56

RECESSED MOUNTED EMERGENCY LUMINAIRE DUAL OUTPUT WARM WHITE

The luminaire is a flush mounted 26W LED to provide general illumination of compartments. The product consists of a base unit, LED warm white module, diffuser lens lid, choice of output power supply for general & reduced level illumination with EM mode, emergency battery pack with charging circuit & fault indication, test button, anti-vibration gasket and external fixing brackets.



Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56

STEP LIGHT NVG

The luminaire is a flush mounted dimmable 24V DC NVIS White LED with downward facing louvre to provide a low level output to illuminate the stairway tread only and not be visible from any other angle. The product consists of a base unit, LED NVIS white module and diffuser lens lid. The fitting includes 120mm flying leads with an Aqua Safe plug and socket connector kit 185-9000 for connection to a junction box which houses the dimmable PSU.

Shock Tested to UK MOD Standards.

Main Body: Aluminium

Front Support Plate: Aluminium

Louvre: Aluminium with strengthening webs

Lens: Polycarbonate Palsun

IP Rating: 66



COMPACT RECESSED LUMINAIRE

The luminaire is a flush mounted 10W LED to provide general illumination of compartments. The product consists of a base unit, LED white module, diffuser lens lid, choice of single output power supply, anti-vibration gasket and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 1x 18w

IP Rating: 45



BULKHEAD LUMINAIRE

The luminaire is a surface mounted 10W LED to provide general illumination of compartments. The product consists of a base unit, LED white module, diffuser lens lid, choice of single output power supply and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



EMERGENCY BULKHEAD LUMINAIRE

The luminaire is a surface mounted 12W LED to provide general illumination of compartments. The product consists of a base unit, LED white module, diffuser lens lid, choice of single output power supply, emergency battery pack with charging circuit and fault indication.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



BUNK LUMINAIRE

The luminaire is a surface mounted 3W dimmable LED to provide general illumination of compartments. The product consists of a base unit with gooseneck & bezel fitting, 3K 90CRI Nichia LED module with Ledil reflector, clear lens and choice of single output power supply providing an isolated SELV DC output to the LED.

Shock Tested to UK MOD Standards.

Back Box: Steel

Front Lid: Brushed stainless steel with black fill engraved text

LED Bezel: Aluminium naturally anodised

Goose Neck: Stainless steel with halogen-free wrap

Lens: Polycarbonate

IP Rating: 44



UNDER-SHELF LUMINAIRE

The luminaire is a surface mounted linear 24V DC LED to provide general illumination of up to 400 lux at a distance of 500mm from the shelf surface. The product consists of an LED module fitted to an aluminium extrusion, with aluminium end caps mounted to galvanised steel saddle brackets and 5m of pre-terminated cable to connect to the PSU junction box.

Shock Tested to UK MOD Standards.

Main Body: Aluminium extrusion

End Caps: Aluminium

Mounting Brackets: Galvanised steel

IP Rating: 44



DESK LIGHT

The luminaire is a surface mounted 3W LED to provide general illumination of compartments. The product consists of a base unit with extended gooseneck & bezel fitting, 4K 90CRI Nichia LED module with Ledil reflector, clear lens and choice of single output power supply providing an isolated SELV output to the LED.

Shock Tested to UK MOD Standards.

Back Box: Steel

Front Lid: Brushed stainless steel with black fill engraved text

LED Bezel: Aluminium naturally anodised

Goose Neck: Stainless steel with halogen-free wrap

Lens: Polycarbonate

IP Rating: 44



AMENITY LIGHT

The luminaire is a dual-purpose combined light and shaver socket surface mounted LED to provide compartment illumination. The light is controlled by a pull cord switch. The product consists of a base unit, LED white module, diffuser lens lid, choice of single output power supply, isolating transformer and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 1x 18w

IP Rating: 45



CABIN LUMINAIRE

The luminaire is a flush mounted 23W LED to provide general illumination of compartments. The product consists of a base unit, LED warm white module, diffuser lens lid, choice of dual output power supply for general & reduced level illumination, user settable darkness-adapted dimming levels, override switch for night light, anti-vibration gasket and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



EMERGENCY CABIN LUMINAIRE

The luminaire is a flush mounted 26W LED to provide general illumination of compartments. The product consists of a base unit, LED warm white module, diffuser lens lid, choice of dual output power supply for general & reduced level illumination, user settable darkness-adapted dimming levels, override switch for night, emergency battery pack with charging circuit & fault indication, test button, anti-vibration gasket and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



MEDICAL AREA LIGHT

The luminaire is a flush mounted 23W LED to provide general illumination of compartments. The product consists of a base unit, LED warm white & medical white module, diffuser lens lid, choice of dual output power supply for general & reduced level illumination, anti-vibration gasket and external fixing brackets.



Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

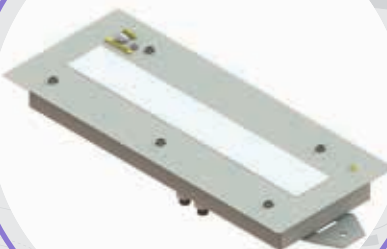
Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56

EMERGENCY MEDICAL AREA LIGHT

The luminaire is a flush mounted 26W LED to provide general illumination of compartments. The product consists of a base unit, LED warm white & medical white module, diffuser lens lid, choice of dual output power supply for general & reduced level illumination, EM Mode with user settable darkness-adapted dimming levels, emergency battery pack with charging circuit & fault indication, test button, anti-vibration gasket and external fixing brackets.



Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56

GENERAL LUMINAIRE DUAL OUTPUT RED & WHITE

The luminaire uses a flush mounted 23W LED module to provide general illumination of compartments. Under general operation the luminaire output is red. When medical mode is activated the luminaire switches to a medical white output. The product consists of a base unit, red & medical white LED module, diffuser lens lid, choice of dual output power supply for general & reduced level illumination, anti-vibration gasket and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



EMERGENCY LUMINAIRE DUAL OUTPUT RED & WHITE

The luminaire uses a flush mounted 23W LED module to provide general illumination of compartments. Under general operation the luminaire output is red. When medical mode is activated the luminaire switches to a medical white output. The product consists of a base unit, red & medical white LED module, diffuser lens lid, choice of dual output power supply for general & reduced level illumination, EM Mode with user settable darkness-adapted dimming levels, emergency battery pack with charging circuit & fault indication, test button, anti-vibration gasket and external fixing brackets.

Shock Tested to UK MOD Standards.

Body & Lid: Steel

Lens: Polycarbonate

Voltage: 115VAC or 230VAC, 24VDC or 48VDC

Tube Equivalent: 2x 18w

IP Rating: 56



MARL COLOUR CHANGE AMBIENT

The High and Low Level RGBW lighting strip is ideal for creating colour changing lighting effects, utilising a compact, surface mounted aluminium profile with high quality LEDs for dynamic colour changing effects and a semi-diffused protection cover for excellent light mixing. The combination of red, green, blue and white LEDs creates vivid, bright colours and projects a cool shade of white. Adding white to any standard colour can achieve soft relaxing pastel colours or boost general lighting levels when required. High reliability is achieved by the best quality LED devices from Nichia and Philips and the combination of excellent heatsinking from the aluminium profiles.

Tested to UK Commercial Standards

Main Body: Aluminium Extrusion, Anodised

Lens: Perspex Opal

IP Rating: 56



MARL DOWNLIGHT

The luminaire is a 4W 24VDC recessed downlight to provide a crisp directional beam of illumination from a high-quality light with minimal glare, housed within a black anodised aluminium machined housing for cool operation. The fitting is smoothly dimmable from 0-100% using a PWM driver and can be operated in a group via a touch dimmable wall panel switch. It is perfect for table lighting or general room illumination requiring a dimmable lighting scheme and low glare. The luminaire incorporates a push-in rear connector and terminals for through wiring in a simple daisy chain arrangement. Easy fit with two locating tension springs with optional bonding strap for shock captivity retention.

Tested to UK Commercial Standards.

Main Body: Aluminium, Black Anodised

Lens: PMMA 24° Beam

IP Rating: 56



EXTERNAL LIGHTING

FLOODLIGHT NVG

The luminaire is a surface mounted external dimmable 48VDC NVIS White LED with angle adjustable bracket to provide illumination of areas such as the RAS Decks and Mission Bay Side Doors and other areas, for areas where reduced level NVG is required. The product consists of a Heatsink unit with LED NVIS white module suitable for use with Night Vision Goggles, RCS shield deflectors and diffuser lens. The unit is supplied with a 2m screened flying lead. The dimmable PSU is located in the PSU Junction Box.

Shock Tested to UK MOD Standards.

Main Body: Aluminium

Frame: Stainless Steel

Lens: Polycarbonate

IP Rating: 67



EXTERNAL FLOODLIGHT

The luminaire is a surface mounted 48VDC, 10,000 lumen 4000k white 80CRI LED floodlight to provide illumination to external areas. The product consists of a base unit, LED white module, diffuser lens, RCS shield, 2m screened flying lead and lockable tilt brackets to allow alignment. The PSUs are housed in the external Junction Box.

Shock Tested to UK MOD Standards.

Main Body: Aluminium

Frame: Stainless Steel

Lens: Polycarbonate

IP Rating: 67



INTERNAL FLOODLIGHT

The luminaire is a surface mounted 48VDC, 10,000 lumen 4000k white 80CRI LED floodlight to provide general illumination for compartments with increased deck head heights. The product consists of a base unit, LED white module, diffuser lens, 2m screened flying lead and lockable tilt brackets to allow alignment. The PSU is housed in the external Junction Box.



Shock Tested to UK MOD Standards.

Main Body: Aluminium

Frame: Stainless Steel

Lens: Polycarbonate

IP Rating: 67

WEATHERDECK LUMINAIRE NVG

The luminaire is bulkhead surface mounted with rear cable entry 12V DC NVIS White LED. The light is designed to illuminate downwards only, unseen from outboard of the ship with light output suitable for use with Night Vision Goggles and Radar Deflection housing for open deck illumination. The product consists of a base unit, LED NVIS white lid unit, through bulkhead threaded mounting pipe and external anti rotation fixing lug.



Shock Tested to UK MOD Standards.

Main Body: Aluminium

Lens: Polycarbonate

Shock Grade Zone: D

Shock Class: 4

IP Rating: 67

MES FLOODLIGHT

The luminaire is a surface mounted 48V DC LED to provide illumination for 18m FWD and 14m aft from the waterline to provide adequate evacuation lighting. The product consists of a base unit, LED white module, RCS shield, diffuser lens, 5m shielded cable and lockable tilt brackets to allow alignment. The PSU is housed in the external UPS Unit.



Shock Tested to UK MOD Standards.

Main Body: Aluminium

Frame: Stainless Steel

Lens: Polycarbonate

IP Rating: 67

SECURITY FLOODLIGHT

The luminaire is a surface mounted 48VDC LED to provide illumination to 10m from the hull waterline around the perimeter of the ship to provide adequate security lighting. Illumination level of 15 Lux average white light at a maximum distance 15m below the luminaire. The product consists of a base unit, LED white module, diffuser lens lid, 5m flying lead with an Aqua Safe plug and fixed brackets for mounting to boom arms. The PSU is housed in the external junction box.



Shock Tested to UK MOD Standards.

Main Body: Aluminium

Frame: Stainless Steel

Lens: Polycarbonate

IP Rating: 67

JUNCTION BOX PSU

FLOODLIGHT PSU JUNCTION BOX

The junction box is surface mounted with 2 internal 60W power supply units, M20 EMC metal cable glands and a WAGO terminal block for mains through termination. The junction box converts to DC supply for internal & external floodlights.



Shock Tested to UK MOD Standards.

Main Body: 1.2mm Mild Steel

Lid: 1.2mm Mild Steel

Bracket: 3mm Zinc Plated Steel

IP Rating: 66

NVG FLOODLIGHT PSU JUNCTION BOX

The junction box is surface mounted with an internal 30W power supply unit with 0-9 dimmer adjustable settings to adjust the area illumination level from the NVG floodlight, M20 EMC metal cable glands and a WAGO terminal block for mains through termination. The junction box will convert to DC supply for NVG floodlights.



Shock Tested to UK MOD Standards.

Main Body: 1.2mm Mild Steel

Lid: 1.2mm Mild Steel

Bracket: 3mm Zinc Plated Steel

IP Rating: 66

SECURITY PSU JUNCTION BOX

The junction box is portable and surface mounted with an internal power supply with chassis mounted female Aqua Safe socket for mating with LGHT0101 Aqua Safe plug. Two 0.5m long AC 3-core un-screened marine cables pre-terminated with MK Commando style waterproof 230Vac rated Plug and Socket allow for daisy-chaining of other JUNC0136 boxes. The junction box is for DC supply to the Security Flood Light.

Shock Tested to UK MOD Standards.

Main Body: Glass Fibre Reinforced Thermoset Polyester

Mount Bracket: Stainless Steel



STEP LIGHT PSU JUNCTION BOX

The junction box is surface mounted with an internal 30W dimmable power supply and WAGO terminal blocks for mains through termination and DC output terminations to power three Step light luminaires. The junction box converts to 24DC supply for Step lights.

Shock Tested to UK MOD Standards.

Main Body: 1.2mm Mild Steel

Lid: 1.2mm Mild Steel

Bracket: 3mm Zinc Plated Steel

IP Rating: 66



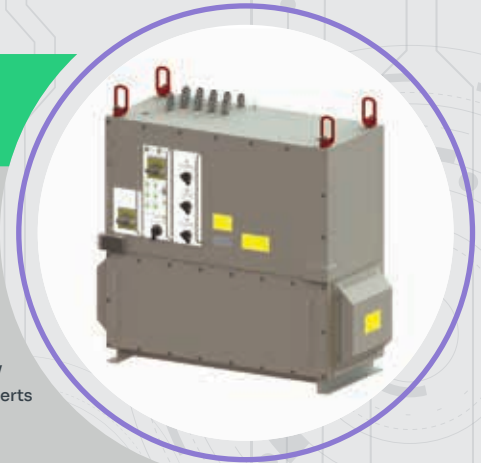
CUSTOM LIGHTING CONTROL PANELS

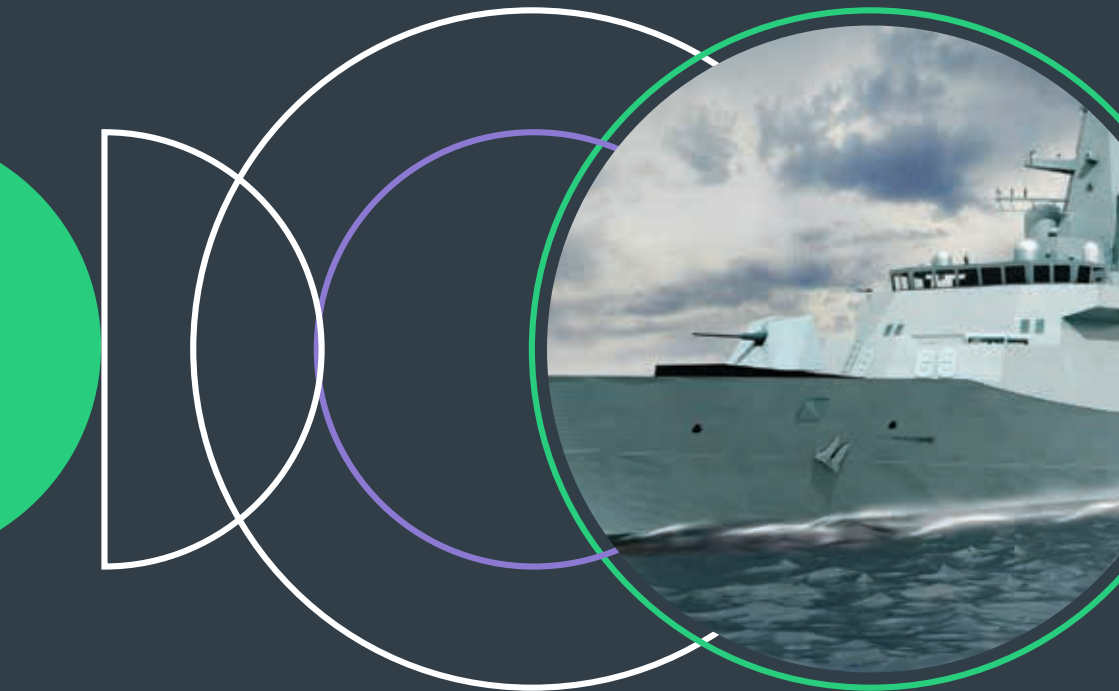
Designed to provide reliable electro-mechanical relay switching of AC/DC voltage signals for control of multiple lighting groups. Fitted with a backlit front mounted IP rated, NVIS Cat B1 compliant switch panel that is fully dimmable and comes with a scratch resistant black surface finish. Switch panel design and layout is fully customisable to the user's lighting group requirement. Shock and vibration tested to ensure reliable long-term operation. The panels are wall mounted with high-strength bracketry with a hinged lid that allows easy replacement of standard DIN rail parts for ease of maintenance and through-life operation.



EMERGENCY EGRESS SYSTEMS

Emergency Egress systems designed to provide reliable and safe battery backup operation of remote standalone lighting groups for guaranteed operation times with safe and environmentally friendly Lead Crystal battery technology to suit Lloyds emergency lighting requirements. Housed in a custom manufactured stainless steel enclosure with an independently vented battery compartment that is water, shock and vibration resistant. Lighting groups are operational under normal AC supply with local and remote switching provided that automatically converts to battery operation following a supply failure to guarantee emergency or evacuation lighting under all conditions.





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