



INSTALLATION INSTRUCTIONS

EMERGIPACK GEARTRAY WITH INTEGRATED MODULES & BATTERIES

MINI EMERGIPACK:	DM322 - for 16 & 21 watt lamps with 3 cells
	DM323 - for 28 watt lamps with 3 cells *
	DM324 - for 16, & 21 watt lamps with 4 cells
	DM325 - for 28 watt lamps with 4 cells
	DM326 - for 10 watt lamps with 3 cells
	DM328 - for 28 watt lamps (70% o/p) with 4 cells
COMPACT EMERGIPACK: (not illustrated)	DM422 - for 16 & 21 watt lamps with 3 cells
	* Rectified operation, may lead to mercury migration.

GENERAL DESCRIPTION

The unit comprises an integrated module containing high frequency ballast, battery charger, solid state automatic device operating a changeover relay, deep discharge protection circuit and LED charge indicator for use with 4Ah rechargeable NiCd cells. The method of connection is by terminal block and a quick release mechanism is fitted so that leads may easily be removed. Wires of cross sectional area 0.5 – 2.5mm² may be connected by pushing a solid conductor into the connection or operating the release mechanism to insert a stranded conductor. Earthing is achieved via the fixing screws.

TEMPERATURE

The ambient temperature range for the module is 0 – 55°C but in any event the centre side of can should not exceed 70°C.

BATTERIES

Mackwell supply a wide range of high quality battery packs for use with our products. They have all been designed to provide the 4 year life required by BS EN 60598-2-22 and ICEL 1001, when operated within the temperature range specified. The maximum operating temperature of Mackwell battery packs is detailed in our web site. This should not be exceeded, or the operational life of the cells will be reduced.

DEEP DISCHARGE PROTECTION

The module is fitted with a deep discharge circuit, which disconnects the battery after the cell voltage has dropped below the end of discharge level (1 volt per cell) and the circuit will remain inert until the supply is restored. This will protect the battery against the dangers of full and deep discharge.

FUSES

- Battery** A battery fuse is incorporated in the module to protect the battery from heavy discharge
- Charger** Although the charger is already short circuit protected a fuse should always be fitted in the luminaire to protect the system integrity against total failure of any unit. A suitable value is 2A.
- Ballast** Overload and short circuit protection is incorporated so that the ballast will safely shut down to standby mode when an abnormal load is detected in the lamp circuit. The unit will automatically reset to normal operating when the fault condition is cleared. However, a 2A fuse is recommended in the switched live feed to protect system integrity

DIMENSIONS

	MINI EMERGIPACK	COMPACT EMERGIPACK
Fixing centres	150mm x 156mm x 40mm deep Key hole slots: 160mm centres Tray diameter: 195mm	150mm x 150mm x 85mm deep 2 x 4mm holes at 140mm centres Tray diameter:175mm, glassware 180mm
Weight	1060g with 4 cells	1000g with 3 cells



ELECTRICAL INSTALLATION

Modules comply with the EMC directive in both modes of operation, mains and emergency. Compliance will be protected by keeping lamp leads away from mains leads to avoid transfer of RFI to the live and neutral connections. Fused terminal blocks should be situated so that incoming mains connections are kept short. To prevent premature lamp damage, after test the assembled luminaire should only be energised for a minimum of 24 hours to fully charge the batteries. The un-switched supply should be left undisturbed during the commissioning and installation period.

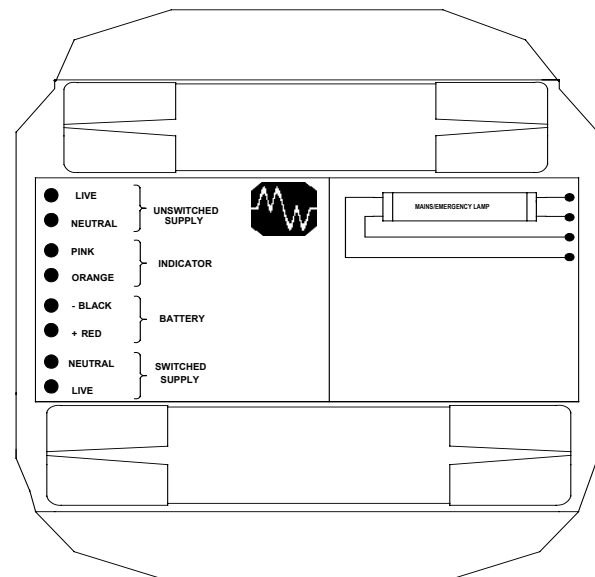
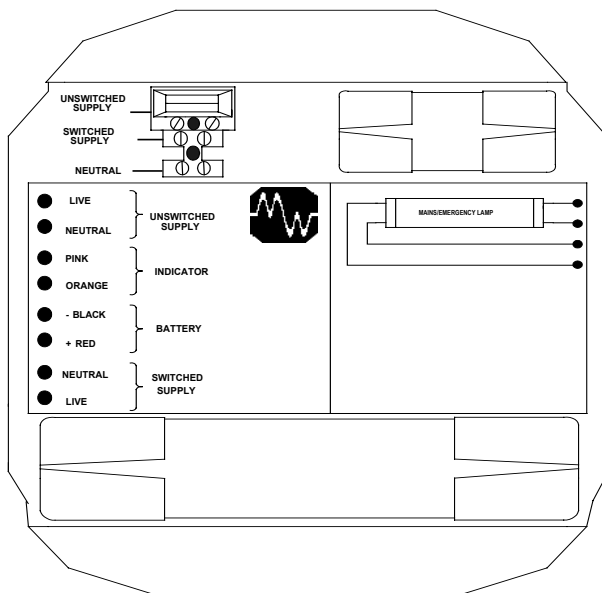
OPERATION

When the un-switched live and neutral are connected, the indicator will light to show that the battery is receiving charge and after a period of 24 hours the unit will be capable of achieving a 3 hour emergency duration. A charge time of 24 hours should be allowed before testing the unit for its rated duration. If it does not achieve well over its rated duration period the charge cycle should be repeated.

CONNECTIONS

DM322/3

DM324/5, terminal block not supplied



WARRANTY

All our electronic products are guaranteed for three years to cover both faulty workmanship and materials. This "Return to Base" warranty requires that the product is used within the terms and conditions stated above and in our literature, and in particular, modules must be used with the correct or approved battery pack. Items should be carefully checked thermally so that the specified temperatures are not exceeded under any conditions. Do not insulation test this product. Products returned to us under warranty must be carriage paid. Mackwell Electronics accept no liability for costs incurred. This does not affect your statutory rights.

Battery packs are guaranteed for one year, but when operating within the temperature specified in our web site have a design life in excess of four years as required by BS EN 60598-2-22.