



mackwell
electronics

High Technology Emergency Lighting

PRIMIAN-2™ Modules



- Reduced module height: 30mm
- SmartStart™ with cathode heating for 30 seconds, (lamp starts immediately)
- SmartStart™ improves operation from low power batteries
- SMPS runs cooler than wire wound transformers
- Selectable 3 hour or 1 hour duration (not including AT4)
- Use with 4 Ah or 1.5 Ah cells
- Use with NiCd or NiMH cells
- Maintained 5 pole ballast switching
- Small size enables simple installation
- CE marked – 3 year warranty
- Optimisation link for wide range of lamps
- Optional AutoTest AT4, including DALI and Potential Free

PRIMIAN-2™ SmartStart™ Modules

The Mackwell SmartStart™ feature is built into the PRIMIAN-2™ range of emergency lighting modules, and provides improved starting from low power batteries, immediate lamp strike with cathode heating for 30 seconds to minimise lamp damage, and cooler module operation.

PRIMIAN-2™ SmartStart™ modules operate a wide range of 4 pin fluorescent lamps, and each module is fitted with a lamp optimisation link to ensure the best output and duration across the lamp range.

Please refer to technical section of www.mackwell.com for lamp link details as failure to remove the link wire when required will result in reduced emergency duration and could cause permanent damage to the module.

The 5th pole ensures satisfactory re-starting of “cut-off” ballasts after emergency lighting test or function. The PRIMIAN-2™ SmartStart™ modules are also fitted with a link to select 3 hour or 1 hour duration, with appropriate batteries. (Not including AutoTest, which are supplied for 1 hour or 3 hour duration)

PRIMIAN-2™ SmartStart™ 5 pole modules are available as follows:

S2C: 2 cell module for lamps of 4 to 8 watts,
S3C: 3 cell module for selected lamps up to 24 watts
S4C: 4 cell module for selected lamps up to 36 watts
S5C: 5 cell module for selected lamps up to 55 watts, (excluding amalgam)

Please refer to our selection chart or web site for detailed applications and BLFs.

For AutoTest versions add prefix A, For DALI and Potential Free versions add /D1 or /P

PRIMIAN-2™ SmartStart™ modules are supplied in a plastic ‘A’ can (Ap). Dimensions shown below.

Please note that for non-DALI AutoTest® products, the start times of the tests are set automatically to ensure random testing of the units at times of minimum risk. As a consequence tests may occur at any time, and caution should be exercised in situations where this may be inconvenient, such as hotels and hospitals.

All versions are fitted with five pole relays to switch all four lamp connections from ballast to inverter, and to switch off the power to the ballast during emergency lighting test. The modules can therefore be safely connected into a circuit containing an electronic HF ballast, and will provide total isolation to the control gear; especially useful in satisfying EMC test requirements.

Switch Mode Power Supply:

Mackwell Switch Mode Power Supplies are designed to comply with the relevant parts of BS EN 61558.

Leads supplied with indicator

Leads 1x0.6mm high temperature LSF orange and pink (AutoTest red and green)

Various lead lengths available upon request.

Indicator

The LED indicator is illuminated when a charge is flowing to the cells. Flexible orange and pink leads connect the indicator to the module. The indicator requires an 8mm hole. The indicator supplied with AT4 modules are bi-colour red and green, with red and green wires.

Voltage Sensing Circuit

The AC power supply is sensed so that switching occurs at between 60% and 85% of the nominal mains as required by BS EN 60598-2-22.

Deep Discharge Protection

All Modules are fitted with deep discharge protection (DDP) as standard

During installation it is common for the mains to be connected, and then disconnected several times, and DDP will prevent any damage to the cells under these circumstances.

Connections

Connections are made to the modules by push wire terminals with push-to-release points, which will accept 0.5mm² to 1.5mm² solid or stranded conductors, using the push-to-release points to insert stranded conductors. Battery conductors may be shortened at the module end, taking care to observe polarity, as REVERSING POLARITY WILL CAUSE DAMAGE.

Specifications

| | |
|--------------------|---|
| Mains Input: | Standard 230V ± 10% ac 50/60 Hz |
| Mains Current: | 80 mA Max. |
| Charge Current: | For 3 hour application: 200 mA, (Duration link in) (Min / Max 190 / 210 mA) For 1 hour application: 90 mA, (Duration link out) (Min / Max 80 / 100 mA) AutoTest versions do not have a duration link. |
| Discharge Current | 1.10 A nominal. |
| Temperature Range: | 0 - 50°C ambient, maximum case temperature 70°C at any point |
| Dimensions | L150 x W44 x H30mm, |
| Fixing Centres | 140mm |

Do not insulation test this product. We reserve the right to alter specifications without prior notice. WP0075 Issue 04, October 2011



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