



## **CMT Internal Signs to ADR 44.9.5.2**

### **1.0: Introduction:**

The ADR requires that such signs be self-illuminating when the vehicle is in motion, and that the sign should remain illuminated for more than 15 minutes:

- After the vehicle stops.
- In the event of the failure of the main vehicle battery.

The C.M. Technology EMERGENCY EXIT sign is a small ( 195 mm x 116 mm x 30 mm) sign that satisfies these requirements of the ADR. It uses the latest super bright Light Emitting Diodes (LED's) and a self contained Nickel-Metal-Hydride (NiMH) battery. The time duration is set by a quartz crystal and an internal microprocessor.

### **2.0: Technical Specification:**

#### **2.1: Mechanical Assembly:**

The case of the sign is a small plastic box that supports an acrylic sign. The legend is reverse screen printed onto a lexan label attached to the diffuser. This results in a sign that is very difficult to deface. All screws are hidden from view. All the electronics are contained in the case, with three connecting wires coming out of the back face.

The connecting wires are supplied with a small 3 pin plug to snap into the connecting bus loom.

(Battery plus, Ground, Ignition)



#### **2.2: Mounting:**

An access hole (20mm) is required for the 3 pin socket supplied on the fly leads. The unit is held in place by four plastic push rivets.





### 2.3: Electrical Connection:

Two wires are needed. All Exit signs can be connected together. The two connections are

- Vehicle Battery Plus ( 12 or 24 volts)
- Vehicle Battery Negative

This connection ensures that the super capacitor in the sign is always fully charged.

### 2.4: Operation:

The operation of the sign is as follows:

- Ignition On: Sign On
- Ignition goes Off: Sign on for 15 minutes after.
- Battery connection Broken: Sign on for 15 minutes

The internal Quartz clock guarantees compliance with the ADR. When the time period elapses, the sign goes into a "sleep" mode to preserve the internal battery. It is quite safe to disconnect the vehicle battery for extended periods. The NiMH battery does not have any memory effect like the cheaper Nickel Cadmium battery.

### 2.5: Battery Capacity:

The internal battery has a capacity 4 times that required for the 15 minute on period required.

### 2.6: Battery Life:

The manufacturers state that their battery life is in excess of 5 years when under the specified trickle charge conditions.

### 2.6: Protection:

The sign is fully protected against reverse connection, and the transients found in automotive applications.

### 2.7: Temperature Rating:

The Exit sign is rated from -10 C to +60 C.

