Intellitec’s Energy Management Module (EMM) is designed to be used in RV’s to share the power available from a single circuit breaker between two large loads. The EMM allows the operation of both loads until the primary load draws a current exceeding 6 Amps (+/- 2 Amps) from the 120Vac source. It then disables operation of the secondary load to prevent the circuit breaker from being overloaded. This function is particularly useful for sharing power between the microwave oven and another “sheddable” or postpone-able appliance such as a washer dryer, A/C compressor, or water heater. Typically, this function has been previously performed with selector switches, forcing the owner to manually switch between the two appliances. The reason that this function is particularly useful when the microwave oven is the primary load is that power is always available to it, assuring that the user can use the microwave whenever needed, and its internal clock remains operating. While the microwave is in use the function of the secondary load is postponed until the microwave is finished. The secondary load controlled by the EMM must utilize a low voltage Class 2 control circuit, which is controlled by relay K1 on the module. The 120Vac supply line to the primary load must pass through the 00-00703-000 Current Transducer, which is connected to connector J1 on the module (see Typical Installation Figure).

The EMM is housed in a protective plastic enclosure for mounting in an interior controlled environment.

How Does It Work?

The Energy Management Module is powered by the vehicle’s +12Vdc supply. The 120Vac supply (hot) lead to the primary load passes through Intellitec’s part number 00-00703-200 Current Transducer. The EMM includes circuitry that continuously senses the current passing through the current transducer. When this current exceeds 6 Amps +/- 2 Amps the module energizes relay K1, causing the normally-closed contacts to open, and the normally-open contacts to close.

Versatility by Design - Both sets of contacts are available at Connector J2, allowing universal adaptability to control devices sensing the presence or absence of circuit continuity. A two-minute timer in the module is reset and started each time relay K1 is operated. This timer prevents the module from de-energizing relay K1 during the two minute period after it was energized, preventing short-cycling of the secondary load so that it is not damaged.

Diagnostics - The state of the LED provides two levels of Diagnostics, available at a glance. While the primary load is over-current, the LED displays steady illumination. If the primary load current is reduced below the shedding limit, and the two-minute timer is still running, the LED will flash at a rate of once per second until the two-minute period elapses.
Specifications:

- **Part Number:** 00-00951-000
- **Input Current Threshold (Using 00-00703-200 Current Transducer):** 6 Arms +/- 2 Arms
- **K1 Output Rating:** 100 Volt-Amps at 42.4V maximum
- **Standby Supply Current:** Less than 3 milliamps@12.6Vdc
- **Normal Supply Voltage Range:** 10 to 18 volts
- **Short Term Over Voltage Protection to:** +26 volts
- **Reverse Voltage Protection to:** -400 volts
- **Positive Voltage Spike Protection to:** +100 volts
- **Operating Environment:** Out of direct weather
- **Ambient Temperature Range:** -40°C to +85°C

Typical Installation Diagram: