



# Energy Management Switch

## User's Guide

**PART #: EMS18A**



# SAFETY PRECAUTIONS

## WARNING!

Risk of Electrical Shock. Disconnect or isolate all power supplies before making electrical connections. More than one disconnection or isolation may be required to completely de-energize equipment. Contact with components carrying hazardous voltage can cause electric shock and may result in severe personal injury or death.

## CAUTION!

This product should be installed by an experienced technician. CAUTION and care must be taken when servicing this equipment. To prevent severe shock or electrocution, consult your servicing dealer.

All wiring must conform to local, national, and regional regulations. Use copper conductors only for all wire connections. Do not exceed the electrical ratings for the EMS or the equipment connected to it.

The EMS employs components that can produce arcs or sparks. To prevent fire or explosion, do not install in compartments containing gaseous batteries or flammable materials (LP gas). This product is NOT ignition protected.

# PRODUCT DESCRIPTION

The Energy Management Switch (EMS) provides a cost effective solution for power management and added protection for applications using inputs from an inverter, shore OR generator that have a single 20A branch circuit. The EMS is designed to be used anywhere where two loads share the power from a single 20A branch circuit that normally require their own breaker. Most common applications are mid to large appliances that may kick on at the same time, overloading the circuit. The EMS applies power to both loads until the total loaded current exceeds approximately 18 Amps AC. It then cuts the power to the secondary load to prevent the 20A circuit breaker from tripping, while maintaining power to the primary load. The secondary load will be restored automatically when the total loaded current drops below a preset level (~5A).

The EMS has one input and two outputs. The primary (priority) branch is Circuit A. The secondary load (which may be shut off) is to be wired to Circuit B.

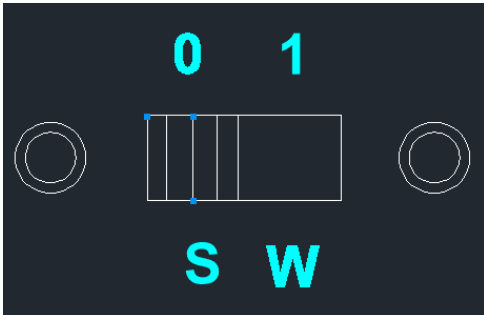
# SPECIFICATIONS

- AC input voltage and frequency: 120 VAC 50/60 Hz
- AC input current: 18 A (max)
- AC output voltage and frequency: 120 VAC 50/60 Hz
- AC output current: 18 A (max)

Recommend wire size: 12 AWG minimum and 8 AWG maximum

# EMS MODES

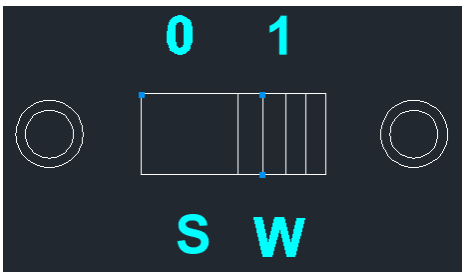
## EMS Power Relay Mode Short Delay: (DIP SW IN POSITION “0”)



This mode is to be used when two appliances (without compressors) are sharing the same circuit breaker (for example: a microwave and water heater).

Power is applied to the EMS through the “AC INPUT”. After a few seconds, power will be allowed to flow to both outputs. The EMS constantly monitors current levels and will shut down the secondary circuit once levels reach approximately 18A. Once the current levels have dropped below approximately 5A for four seconds, power will return to the secondary circuit.

## EMS Power Relay Mode Long Delay: (DIP SW IN POSITION “1”)



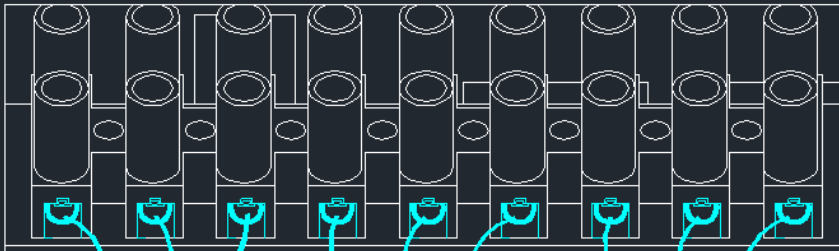
This mode is to be used when attempting to combine two loads, usually appliances with compressors that are not set up to use logic relays. Power is applied to the EMS through the “AC INPUT”. After a few seconds, power will be supplied to both the primary and secondary circuits (loads). The EMS constantly monitors current levels and will shut down the secondary circuit once levels reach approximately 18A. The “OFF time delay timer” is then triggered. Once the timer has expired at approximately 3 minutes, and the current levels have dropped below approximately 5A, power will return to the secondary circuit.

# EMS Diagrams



**HIGH VOLTAGE.** Only a qualified technician should access this terminal. Read instructions before operating this product.

AC INPUT			AC OUTPUT1			AC OUTPUT2		
⊕	L	N	⊕	L1	N1	⊕	L2	N2

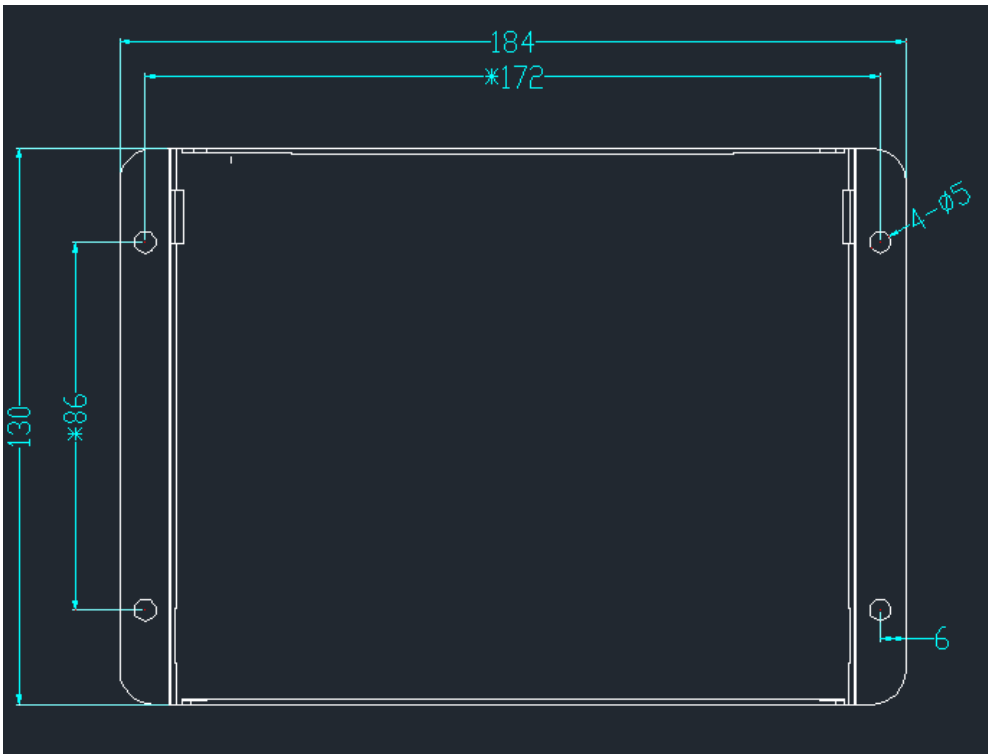


**AC INPUT**

**AC OUTPUT1**

**AC OUTPUT2**

**NOTE:** Do not loosen the screws on the case. This will void the warranty. User will only need to loosen screws on the terminal block.



## WARRANTY

This product is designed using the most modern technology and under very strict quality