



Temperature Sensor

## 1. Thermostat Display

Room temperature



T-Stat status = Off ..... = On-standby ..... = On-Call for Heat  
 Set temperature

**\*The temperature Up and Down buttons are locked.** To change the 'Set temperature', hold the Up button (or Down button) until the 'Set temperature' display changes color. While that display is white, you can change the set point (1 degree per tap). After 4 seconds of inactivity the color will change to blue and the buttons are locked again.

Display will dim after 15 seconds, tap any of the 3 thermostat buttons to return to full illumination.

## 2. Thermostat ON/OFF

Tap the On/Off button to toggle between On or OFF. Display will either show "OFF" or show the Set temperature together with a pictogram for heater status.

## 3. Heat Source Selection

**Not all heat sources are equal.**

- a. **Engine** - only applicable when the engine is running.
- b. **Electric** - only works when 120V AC is available (i.e shore power is plugged in). Note: If your RV is wired so that an inverter provides 120V AC from the battery, **Do Not Use It.** Electric heat will drain your battery quickly.
- c. **Furnace** - will always work

Any combination of heat sources will work, but in practice only the combination of Furnace & Electric is practical. The Electric element can provide 1500 Watts, which can be supplemented with the Furnace (1300-5000 Watts), if ambient temperature drops low enough that the Electric can not keep up with demand. If the demand (for heat) can be satisfied by the Electric, then the furnace will never start. With Electric and Furnace selected, the Furnace will be on standby (i.e. until it is needed).

## 4. Constant Heat - Hot Water

Preamble: The MCS-6 is a hydronic heating system. Hydronic systems work in two stages:

- Step 1: Available heat (by Furnace, Electric or Engine) is transferred into a fluid (antifreeze Glycol/Water mix). This fluid is circulated by a pump in a closed loop.
- Step 2: On Demand, the heat in the fluid is transferred to air or domestic water.

By default, the MCS-6 operates in what can be called “Economy Mode”. Heat is only produced, and the fluid pumped, when the Thermostat demands it. You can set your desired temperature on the Thermostat, select your heat source (Furnace and/or Electric) and forget about it. The system will only run (use fuel and electricity) when the room temperature falls below the set point.

There are situations, however, where it is desirable (or necessary) to keep the fluid hot at all times.

By activating the ‘**Constant Heat**’ switch, the selected heat source(s) will keep the fluid hot, ready to deliver that heat instantly. The two situations where this is advisable are:

1. Hot Water. When it is needed, you do not want the heat production to stop.
2. Cold weather. If heat is needed frequently, it makes more sense to keep the fluid hot. It is more comfortable and reduces the noise level.

## 5. Setup Programming options:

- a. Set display to Fahrenheit or Celsius
- b. Temperature sensor select:  
Internal (default) or  
External Sensor (Note: external sensor needs to be ordered separately)



To enter programming mode:

Hold the On/Off button until the display appears.

To toggle between Internal and external sensor tap the up arrow (only one sensor active at a time).

To toggle between Fahrenheit and Celsius tap the down arrow.

To leave programming mode tap the On/Off button.

## Wiring:

RJ45 connector, 8 conductor phone cable or Ethernet Crossover cable to MCS-6 Power Box.

## Dimension:

97mm (W) x 105mm (H) x 13mm (H)

## Mounting:

2x pems, see two options



### Pem style



drill 1/4" or 6mm holes



drill 9/32" or 7mm holes

Cable hole 1" or 25mm

## Mounting template:

Print template - verify that your printer did not scale the drawing

