



Saturn 4-wire Display Sensor UCC-DTH Manual



Thank you for the purchase of the Saturn 4-wire Display Sensor, the UCC-DTH. This advanced sensor will provide the user with access to the Saturn’s many functions that will permit them to adjust their comfort settings. (If enabled)

Sensor Functions

The UCC-DTH temperature and humidity sensor has been designed to permit the user to see and control room temperature. Further, if enabled by the installer, the UCC-DTH will permit the control of several other functions such as setpoint adjustments or the ability to turn the air conditioning on or off.



Turning the Air Conditioning On or Off and Changing Mode

If enabled by the installer, this function will permit you to turn the air conditioning off, (overriding any UCC Saturn time clock functions) or to change modes. Tap the button to toggle between all available functions.



Using the After Hours Run Function

If enabled by the installer, this function will permit you to start the afterhours run timer so your air conditioning can be operated outside of normal operating hours. This function operates for a pre-set time before turning off. The After-Hours function is only available outside of normal operating hours. To use the afterhours run function, tap the AH Timmer button when the text “After Hours” is shown.



Adjusting Set Temperature

If enabled by the installer, you will be permitted to adjust the set temperature by tapping the temperature Up/Down buttons for the available heating or cooling modes. These setpoints shown on the UCC-DTH sensor adjust the setpoints stored in the UCC Saturn controller. If Single Setpoint adjustment mode is enabled, then the setpoint adjustment will apply equally to both the heating and cooling setpoints that have been set in the UCC Saturn.



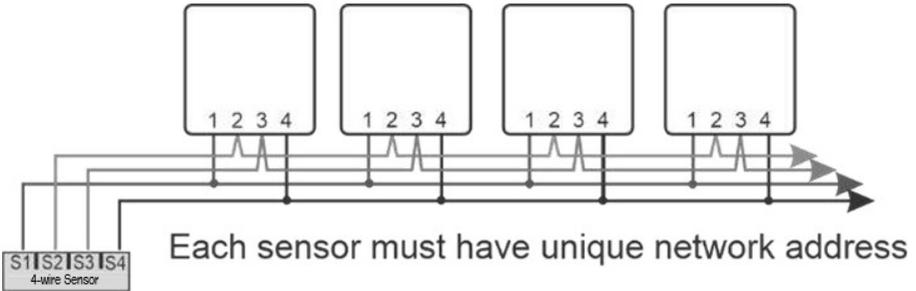
Fan Mode Adjustment

If enabled by the installer, you will be permitted to adjust the mode of the air conditioning Fan. Available modes will be shown and adjustable by tapping the Fan button.

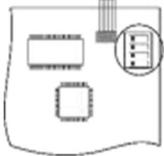


Installing the Sensor

The wiring overview shown (below) indicates how each sensor in the network of sensors is wired. S1, S2, S3 & S4 on the sensor is wired to S1, S2, S3 & S4 on the UCC Saturn.



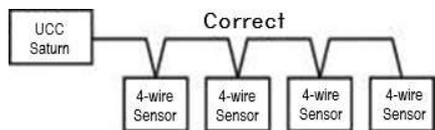
Each sensor is fitted with a set of switches on the printed circuit board, they set the address of the sensor. It doesn't matter what address you select but no two sensors connected to any one UCC Saturn should share the same network address.



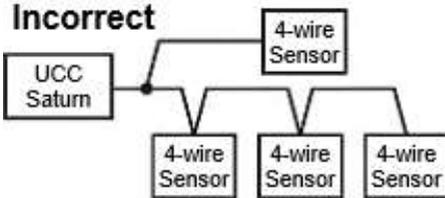
Address Dip Switch Do not set all DIP switches ON

Up to 15 4-wire Sensors can be installed on to any single UCC Saturn. The individual 4-wire Sensor will show its local temperature and humidity however the UCC Saturn will control to the average temperature of all 15 sensors.

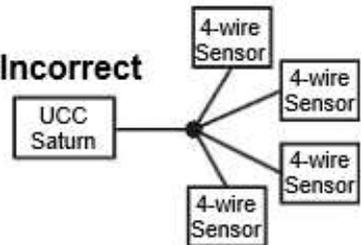
Further, Hi or Low select can be used if set by the installer within the UCC Saturn installer menu.



Incorrect

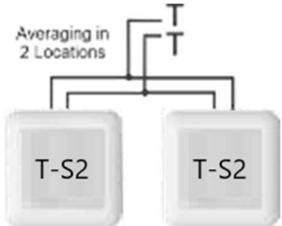
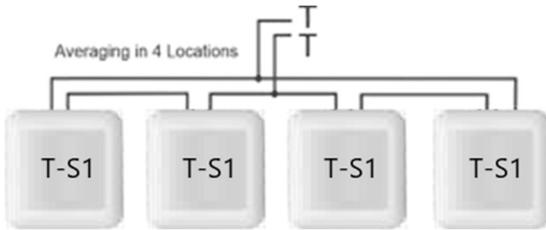
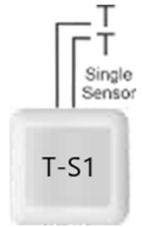


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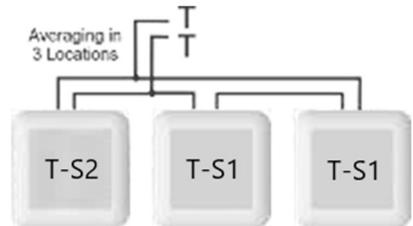


Remote 2 wire Temperature Sensor

The UCC-DTH room temperature sensor can be disabled and a standard iO HVAC Controls 2-wire remote sensor (T-S1/ T-S2) can be used should you wish to measure room temperature at a different location than the UCC-DTH location. Wire the T-S1/T-S2 into the UCC-DTH "TT" terminals.



Do not enable Display Only mode if you intend to use 2 wire remote sensors connected to the UCC-DTH

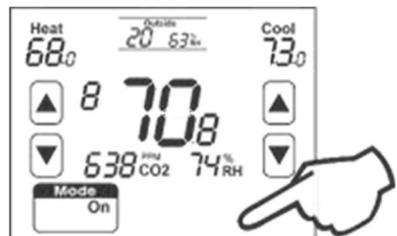


Installer Options Menu

The UCC-DTH has an Installer Options menu that permits you to control or adjust various sensor functions.

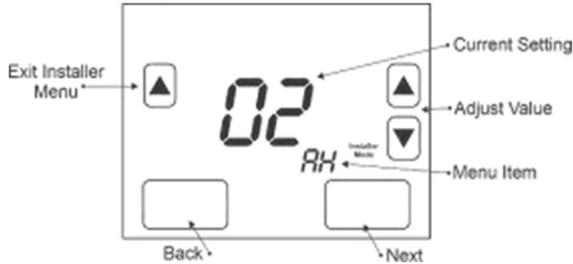
To Enter the Installer Menu

Press and hold the lower right corner of the LCD until the display changes and shows you the number "15". Use the Up/Down button to adjust the display to show "21", the factory default PIN or your previously set PIN if changed from the factory default.



Tap the lower right corner to enter the Installer menu. If the PIN is correct you will enter the menu. If you enter an incorrect PIN you will be exited from this menu.

Tap the lower right corner to advance forward through the menu options, tap the lower left corner to step backwards through the menu. Tap the arrow pointing up on the left of the display to exit the Installer menu and use the Up/Down buttons on the right of the display to adjust the menu options.



Installer Options Menu

<p>AH</p>	<p>After Hours Run Period - This function is used as a countdown timer when the UCC Saturn is in Manual mode, or an afterhours run timer when the UCC Saturn time clock function is used.</p> <p>Adjustable from 0 to 12.0 hours in 0.5 hour increments. Default 2 hours. Setting this value to OFF disables the afterhours run timer function.</p>
<p>OO</p>	<p>On – Off Function - Permits the user to turn the UCC Saturn on or off.</p> <p>In Programmable mode – This function <u>overrides</u> the program to OFF.</p> <p>In Manual mode - This function acts as a manual ON / OFF. Default is ON</p> <p>This function if enabled, adds the On/Off function to the mode function below.</p>
<p>nn</p>	<p>User Modes Available - Sets the mode(s) available to the user by pressing the Mode Select button.</p> <p>0 = Off or Auto mode (Default)</p> <p>1 = Off or Heat only</p> <p>2 = Off or Cool only</p> <p>3 = (Off), Heat or Cool</p> <p>4 = (Off), Heat, Cool, Auto</p> <p>NOTE - to enable the OFF function from the above settings, you need to ensure the OO (on Off function above is set to on)</p>

St	Set Temp Mode Enable - This function permits the user to adjust the set temperature for the selected modes. Off = Set temperature adjustments are not permitted (Default) 1 = Single setpoint mode - The sensor will show the average of the active heating and cooling setpoints and adjust both setpoints equally. (If heat set is 20 and cool set is 22, the UCC-DTH sensor will show a setpoint of 21. Adjusting the setpoint on the UCC-DTH will adjust both heating and cooling setpoints by the same amount. 2 = 2 Setpoint mode - The heating and cooling setpoints can be independently adjusted.
HL	Heating Setpoint Limit - Sets the maximum possible Heat Setpoint
CL	Cooling Setpoint Limit - Sets the minimum possible Cool Setpoint
RS	Sensor Speed of Response - This option adjusts the temperature sensor response time changes in room temperature. VS = Very slow S = Slow Nor = Normal Fst = Fast VF= Very Fast
SC	Temperature Sensor Calibration - Permits a +/- 10.0°F adjustment of room temperature sensor value.
rH	RH Sensor Calibration - Permits a +/- 20 % adjustment of RH sensor.
BL	Backlight Brightness 0 =Off 1 = Low 2= Medium 3 = High 4 = Always ON
DI	Display Only Mode - If enabled, this function disables the UCC-DTH sensor for temperature and humidity. This sensor will now only display the values (or average value if multiple sensors are used) reported by other 4-wire Sensors connected to the same UCC Saturn.
Pn	PIN - This is the number required to enter the Installer menu. Adjust with caution as a forgotten PIN will require factory reset. (Default is 21)
Bp	Beeper - Enables or disables the audible beep when buttons are pressed.
FA	Fan control – When connected to a temperzone™ air conditioner by the ModBus port (A & B) you can enable fan control on the UCC-DTH display. This will permit the user to select fan speeds.

Due to ongoing product improvement iO HVAC Controls reserves the right to change the specifications of the Saturn (or its components) without notice.

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