

Saturn™ 3




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Warnings & Cautions

- Read all instructions before operating controller.
- Do not put your controller in an area where it can get wet or sprayed.
- Mount your controller securely to the wall using hardware provided.
- When using “bug bombs” in area, cover controller completely to avoid corrosion.
- There are no serviceable parts in controller. Do not attempt to repair the unit.
- Breaking “warranty” seal will void your warranty.
- Do not put paper clips, tools, etc. into unit. Possible electrocution may occur.
- Plug controller into surge protector to avoid potential damage to the unit.
- Make sure to verify your power source prior to plugging controller into outlet.
- Check that all equipment that will be activated by this controller is the proper voltage.
- Verify that your equipment does not exceed a total of 12 Amps.
- This controller is designed for inside use only.
- Avoid placing the controller near heat generating sources.
- Use caution when operating controller in extremely humid environments.
- Do not use controller for purposes other than the unit was designed to function.
- Use controller within defined environmental specifications.
- Ask your Dealer for tips and techniques regarding the use of this controller.
- Be conscientious when disposing of any products.
- Enjoy your Titan Controls® environmental controller for years to come.

How to Operate your Saturn™ 3:

BASIC 120V OUTPUTS: MAX 12A. TOTAL OF THE 3 OUTPUTS

	<p>FAN OPERATION</p>	<p>For Day/Night “COOLING ONLY” <i>or</i> “COOLING AND DEHUMIDIFYING” set by the slide switch. 12 Amp maximum if used alone.</p>
	<p>HUMIDITY / DEHUMIDIFY EQUIPMENT</p>	<p>For Day/Night “HUMIDIFYING” <i>or</i> “DEHUMIDIFYING” set by the slide switch (and type of equipment used). 12 Amp maximum if used alone.</p>
	<p>CO2 GENERATOR / TANK</p>	<p>For Day only “CO2 ENRICHMENT” using either a CO2 generator <i>or</i> CO2 tank. ½ Amp maximum for inductive load, if used alone.</p>

WARRANTY SERVICE: Please read warranty information first.

If after reviewing the troubleshooting tips the unit will still not work, you should return it to the Dealer where you purchased the controller. They will be able to further evaluate the unit and test its various components and quite possibly will be able to identify and/or fix any problems. If the Dealer is unable to fix the unit, they will return it to us for factory repair.

If there are no Dealers in your area, you may contact us directly for technical support. If we cannot help you resolve the problem over the phone, we will issue you a RMA # (Return Merchandise Authorization) authorizing you to return the unit to us for factory reconditioning (if the unit is under warranty). Contact the number below for a RMA and shipping address. Complete the form below and include it with your unit. Also please write the RMA # on the outside of the box.

Please package the unit in its original packaging. If it is damaged in shipment we cannot be responsible.

Once we receive the unit back, we will repair or replace the controller within 48 hours (business) and return it to you freight prepaid via UPS ground shipment.

Include the following if returning directly to Titan Controls®

- Proof of purchase • This completed form • RMA # on the outside of the box

Return Merchandise Authorization Number (Required): _____

Dealer/Customer Name: _____

Dealer/Customer Contact Name: _____

Shipping Address: _____

Phone #: _____

Email address: _____

What is the nature of the problem? Please provide as much information as possible. _____

Send to your nearest location – shipping address will be given when the RMA # is issued.



www.titancontrols.net

For technical assistance call us at 1-888-80-TITAN or 1-888-808-4826.



Warranty Information, Continued:

- Defective controllers are required to be returned with the “proof of purchase/ receipt” for warranty coverage.
- For additional warranty information, contact the Titan Controls® Technical Service Representative or your local Dealer.
- NOTE: Titan Controls® is a Manufacturer of environmental, timing, lighting, ventilation and CO2 controls. All sales offerings to the public are done through a nationwide group of Dealers. No sales offerings will be made directly to the general public.

Service & Repair Program:

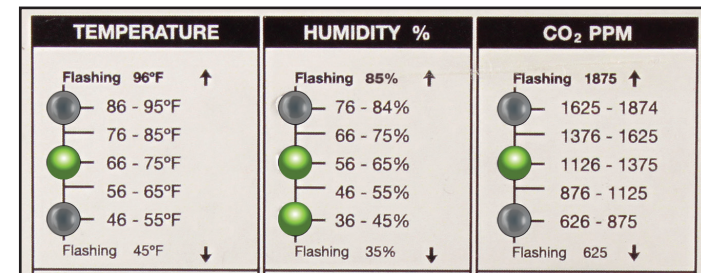
- For all service and repairs, please contact by our Technical Service Representative for troubleshooting your gear and attaining a Return Merchandise Authorization (RMA) number, if applicable.
- All factory service & repairs will be completed within 48 hours of receipt of controller at the factory.
- Titan Controls® will, at its discretion, repair or replace the controller.
- Factory calibration services are available for all Titan Controls®.
- Returning Units: Please contact your retail store for information regarding returns.

AUX 120V OUTPUTS

	AUX HEATING	For Day/Night “HEATING”. User needs to connect an optional Auxiliary Output Box (AOB) with 25 ft telephone cable. 12A MAX for this output only, because it is connected to a different 120v outlet.
	AUX HIGH TEMP SHUT-OFF	User needs to connect an optional Auxiliary Output Box (AOB) with 25 ft telephone cable. Used for deactivating your trigger controlled lighting controller in the event of a high temperature situation in your room.

LED Indicators:


AMBIENT TEMPERATURE, HUMIDITY AND CO₂ PPM



Example of LEDs indicating a temperature of 66°F to 75°F, a humidity level of 46% to 55% and a CO₂ level of 1126 to 1375 PPM

LED INDICATORS	TOP LED FLASHING	TOP LED	TOP & MIDDLE LED'S	MIDDLE LED	MIDDLE & LOWER LED	BOTTOM LED	BOTTOM LED FLASHING
TEMP IN °F	96° and above	86° - 95°	76° - 85°	66° - 75°	56° - 65°	46° - 55°	45° and below
HUMIDITY %	85% and above	76% - 84%	66% - 75%	56% - 65%	46% - 55%	36% - 45%	35% and below
CO2 PPM	1875 PPM and above	1626 - 1874	1376 - 1625	1126 - 1375	876 - 1125	626 - 875	625 and below

SENSOR WARM-UP PERIOD

MINIMUM TIME REQUIRED FOR WARM-UP	TEMPERATURE	HUMIDITY	CO ₂
	Not applicable values sensed with power ON	Not applicable values sensed with power ON	30 second warm-up time at power up. CO ₂ sensor needs 30 second warm-up before reading valid values.

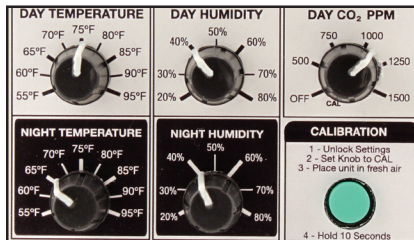
SENSOR FAILURES (TEMPERATURE, HUMIDITY OR CO₂)

	TEMPERATURE	HUMIDITY	CO ₂
	Top and bottom temperature LED's flash if temperature sensor fails	Top and bottom humidity LED's flash if humidity sensor fails	Top and bottom CO ₂ LED's flash if CO ₂ sensor fails

SHOW OUTPUT STATES

OUTPUTS	OUTPUT INDICATOR OFF	OUTPUT INDICATOR ON
	Output relay IS NOT activated, receptacle DOES NOT supply 120V.	Output relay IS activated, receptacle DOES supply 120V.
	Output relay IS NOT activated, receptacle DOES NOT supply 120V.	Output relay IS activated, receptacle DOES supply 120V.
	Output relay IS NOT activated, receptacle DOES NOT supply 120V.	Output relay IS activated, receptacle DOES supply 120V.
	Auxiliary Output Box (AOB) is NOT connected, OR AOB is NOT activated, receptacle DOES NOT supply 120V.	AOB relay IS activated, AOB receptacle DOES supply 120V. Note: Indicator will remain ON if AOB is disconnected while activated. Indicator will not turn ON anymore once it turns OFF.
	AOB is NOT connected, OR AOB is connected and outlet relay DOES supply 120V. Room temperature is lower than 95°F.	AOB is connected, Outlet relay DOES NOT supply 120V when temperature in your room has exceeded 95°F.

Knob Settings:



KNOB RANGES

Day And Night Temperature Settings: 55°F To 95°F

Day And Night Humidity Settings: 20% To 80%

Day Only CO₂ Settings: 500 to 1500 PPM

Note: If Day CO₂ PPM knob is set below 500PPM, the Saturn™ 3 will operate as if it has been set to 500PPM (unless the knob is in the OFF position).

Controller Specifications:

Size = 4.5”H x 7.5”W x 3”D

Weight = 1.5 lbs

Input Voltage = 120 VAC

Output Voltage = 120 VAC

Maximum Amps = 12 Amps total

Hertz = 60 Hz.

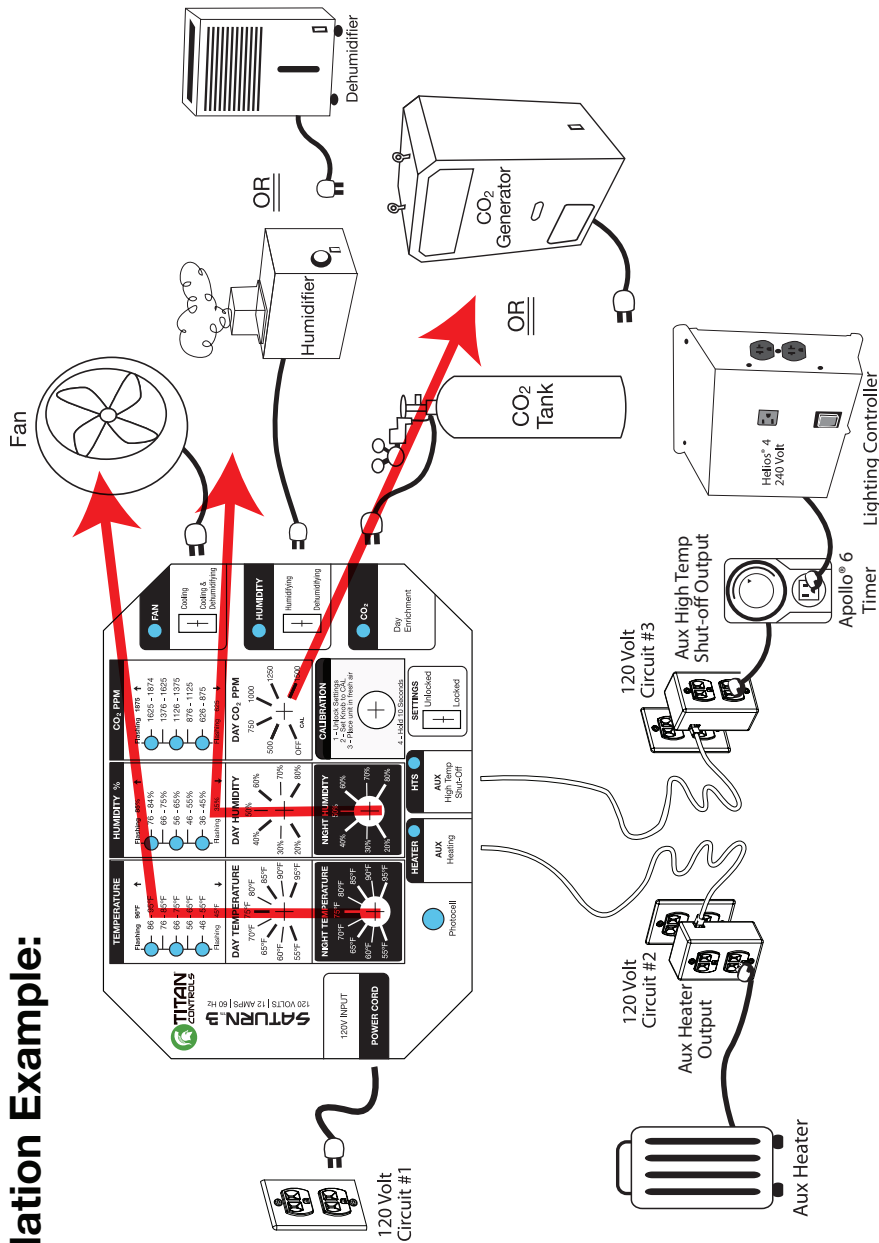
Storage Temperature = 40°F to 110°F

Operating Temperature = 45°F to 105°F

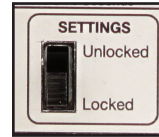
Warranty Information:

- Titan Controls® warrants the original purchase of this product against defects in material and workmanship under normal use for three (3) years from the date of purchase.
- During the warranty period, Titan Controls® will, at our option, and without charge, repair or replace this product if the controller or any of its components fail or malfunction.
- All returns or repairs must be accompanied by a Return Merchandise Authorization (RMA) number prior to any service of the product.
- This warranty is in lieu of all other warranties, expressed or implied, including the warranties of merchantability and fitness for use, and of all other obligations or liabilities on the part of the seller.
- This warranty shall not apply to this product or any part thereof which had been damaged by accident, abuse, misuse, modification, negligence, alteration or misapplication.
- Controllers with serial numbers or date tags that have been removed, altered or obliterated; broken seals that show evidence of tampering; mismatched PCB serial numbers or nonconforming parts, are excluded from coverage.
- Titan Controls® makes no warranty whatsoever in respect to accessories or parts not supplied by Titan Controls®.
- Monetary refunds of the warranty will not be given.
- The Buyer assumes all responsibility regarding the proper use & installation of this controller.
- All warranty service is provided through the Titan Controls® factory.
- This warranty shall apply only to the United States, including Alaska, Hawaii and territories of the United States.

Installation Example:



LOCK SETTINGS



- Place slide switch to UNLOCK (top position) to set your knob values.
- Place slide switch to LOCK (bottom position) to save your knob values.

IMPORTANT NOTICE: ONCE LOCKED, VALUES WILL BE PRESERVED EVEN IF KNOBS ARE ROTATED BY ACCIDENT

CO₂ Sensor Calibration:

CO₂ Sensor Calibration is performed in 4 easy steps



1. Place the LOCK/UNLOCKED slide switch to the UNLOCKED position (Top position).
2. Set the DAY CO₂ PPM set point to the CAL position (fully counter clockwise).
3. In order to get a VALID CALIBRATION, the unit must be placed temporarily outdoors or in fresh air, where natural CO₂ level is close to 400 PPM. (Away from people/animals/vehicles, etc.)

4. Push and hold button for 10 seconds: the three CO₂ PPM LED Indicators will blink every second for 10 times. The Indicators will remain LIT until you let the pushbutton go.

If the CALIBRATION is good, the indicators will blink 4 times.

If the CALIBRATION is bad, the indicators will blink only once.

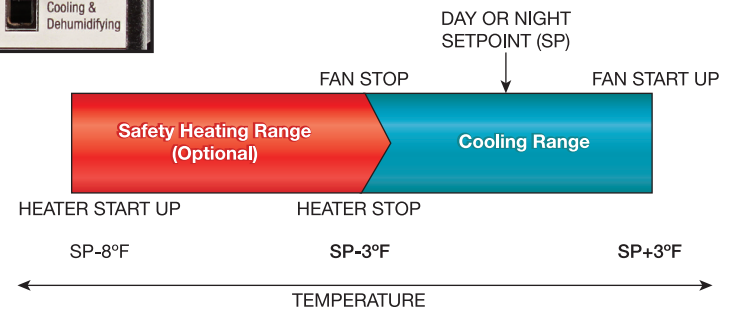
The unit returns to normal operation after calibration.

Individual Control Settings:

TEMPERATURE CONTROL WITH FAN

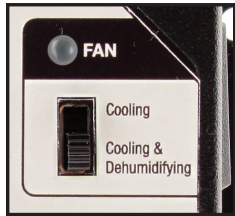


To use this mode, you connect your cooling Fan into the FAN 120V Output, set the slide switch to the "Cooling" position.

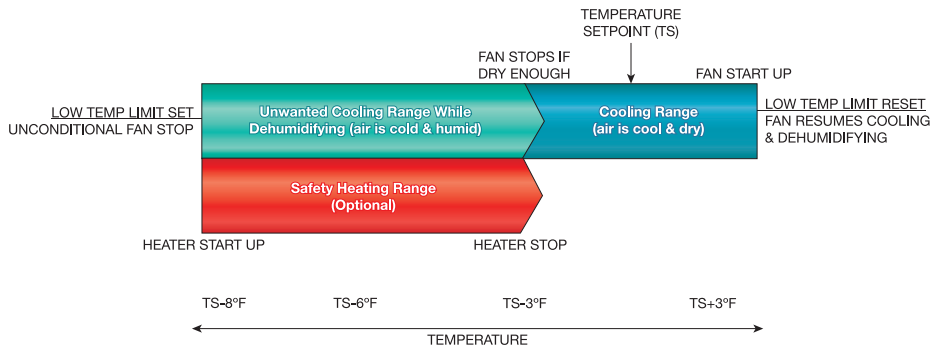
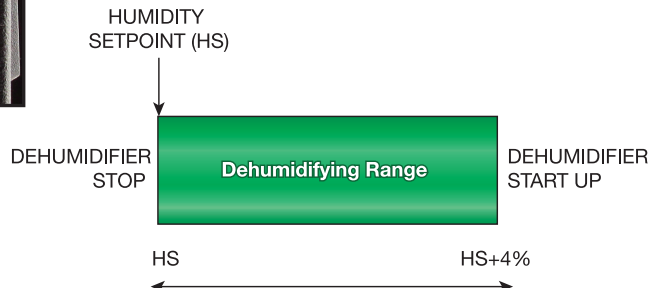


NOTE: If the heater generates undesired fan start-up at the end of 2 consecutive heating cycles, then the gap between the heating and cooling ranges is automatically widened (by 4°F cooler) to avoid complementary equipment to compete.

**TEMPERATURE AND HUMIDITY CONTROL WITH FAN
(AND OPTIONAL HEATER)**



To use this mode, you connect your cooling Fan into the FAN 120V Output, set the slide switch to the “Cooling & Dehumidifying” position.

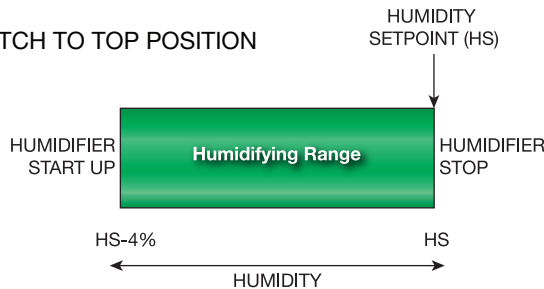


NOTE: If the heater generates undesired fan start-up at the end of 2 consecutive heating cycles, then the gap between the heating and cooling ranges is automatically widened (by 4°F cooler) to avoid complementary equipment to compete.

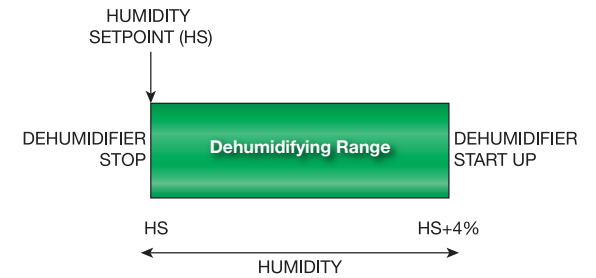
HUMIDITY CONTROL WITH A HUMIDIFIER OR DEHUMIDIFIER:

To use this mode, you connect your humidity equipment (Humidifier or Dehumidifier) into the HUMIDITY 120V Output, set the slide switch to either “Humidifying” or “Dehumidifying” according to your equipment type.

HUMIDIFYING - SLIDE SWITCH TO TOP POSITION

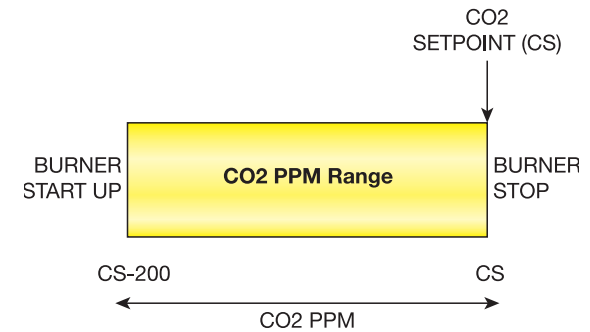


DEHUMIDIFYING - SLIDE SWITCH TO BOTTOM POSITION



CO2 ENRICHMENT WITH A BURNER OR A TANK:

To use this mode, you connect your CO2 Generator into the CO2 120V Output. CO2 Enrichment operates during the DAY ONLY.



USING YOUR AUXILIARY OUTPUTS

Heater Auxiliary Output

The auxiliary heater output is used for an emergency heating situation. When an auxiliary output box (AOB) is connected to this output it will activate if your temperature drops “8°F below the setpoint ” at any time, regardless if the controller is in Day or Night mode. The heater will then stay on until the temperature has warmed up to “3°F below the setpoint”.

High Temperature Shut-Off

This feature is for a high temperature situation when your lights are not being cooled sufficiently. To use this function, an AOB must be connected to the HTS output. A controller is then plugged into the AOB and the trigger cord from your lighting controller is then plugged into the 24 hour timer. The AOB will provide power as long as the temperature in the grow room stays below 95°F. If your temperature exceeds 95°F the controller will turn off power to your lighting controller’s trigger, which in turn shuts off your lights. It will then enter a standby mode until the temperature is below 85°F or 15 minutes has passed.