

TROUBLESHOOTING MODULAR POWERCENTERS™ IN THE FIELD

NECESSARY TROUBLESHOOTING TOOLS:

- Volt meter indicating 120 and 12 volts AC (NOT a test light).
- Additional fustats of same size and type or a fustat tester.
- Flat & Phillips screwdrivers.
- Needle-nose pliers.

GENERAL TROUBLESHOOTING PROCEDURE:

1. Test power source for 120 volt AC power.
2. Remove ALL low voltage cables from the low voltage terminal blocks.
3. Insert new fustat(s) of the same size and type, or use fustat tester. Make sure fustat(s) is snug in the fustat holder (hand tighten only).
4. Check the following items before testing:
 - Black 4 position switch is in the HI, MED, or LO position...not all the way to the right in the OFF position. Make sure it is securely in one of these positions. If switch sets in-between any position, it could produce a false "no power" reading.
 - Stainless steel toggle switch, if present, must be in the OFF position for normal operation.
5. After all above conditions have been met, manually flip the stainless steel toggle switch to the ON position. If stainless steel toggle switch is not present, proceed to #7.
6. Test each set of low voltage terminal blocks for 12 volt AC power using volt meter. Place volt meter leads INSIDE the low voltage terminal blocks where the low voltage cables install. DO NOT test on top of the screws of the low voltage terminal blocks. This may produce a false "no power" reading.
 - If power, proceed to #7.
 - If no power, repeat the above process 2-3 more times until it is determined that there is absolutely no power at the low voltage terminal blocks.
7. Follow troubleshooting instructions for specific module installed in powercenter:
 - If power after troubleshooting module, powercenter and module have been determined to be working properly. Re-connect low voltage cables, system is working properly.
 - If no power after troubleshooting module, proceed to #8.
8. UNPLUG POWERCENTER FROM POWER SOURCE! Remove screws holding module in place and pull module out from module compartment, but DO NOT remove module wiring. Make sure module is properly wired to powercenter.
 - If improperly wired, re-wire per specific module wiring diagram and repeat step #7.
9. MAKE SURE POWERCENTER IS UNPLUGGED FROM POWER SOURCE! Remove module completely, including wiring, from the module compartment. Make sure there are NO wires connected to any of the 120 volt terminals of the powercenter inside the module compartment.
10. If stainless steel toggle switch is present, Cover module compartment and plug powercenter in. Turn toggle switch to ON position. If stainless steel toggle switch is not present, UNPLUG POWERCENTER FROM POWER SOURCE! Use one wire from the module (with spade lugs on BOTH ends) to jump between 120 volt powercenter terminal #1 and 120 volt powercenter terminal #2. Cover module compartment and plug powercenter in. Test each set of low voltage terminal blocks for 12 volt AC power using volt meter.
 - If power, powercenter is working properly, module is bad. Replace module. DO NOT REPLACE ENTIRE POWERCENTER, REPLACE MODULE ONLY.
 - If still no power, repeat steps 9 & 10 until it is determined that there is absolutely no power at the low voltage terminal blocks. If repeat processes produce no power and all above steps and conditions are met, powercenter may be bad. Call factory for service.

MOST "NO POWER" POWERCENTER PROBLEMS ARE A RESULT OF BAD FUSTATS OR BAD TIMER/PHOTOCELL. A FUSTAT WILL NOT ALWAYS "LOOK BURNT" IF BAD. TEST FUSTAT(S) FOR CONTINUITY TO DETERMINE GOOD OR BAD. FOLLOW ALL TROUBLESHOOTING PROCEDURES THOROUGHLY. MOST LIKELY IT IS ONLY THE CONTROL MODULE THAT NEEDS REPLACEMENT RATHER THAN RETURNING THE ENTIRE POWERCENTER. THOROUGH AND COMPLETE TROUBLESHOOTING WILL SAVE CONSIDERABLE TIME & MONEY.

SS MODULE: If stainless steel toggle switch is present, turn toggle switch to ON position. If stainless steel toggle switch is not present, UNPLUG POWERCENTER FROM POWER SOURCE! Remove module compartment cover. Use one wire from the module (with spade lugs on BOTH ends) to jump between 120 volt powercenter terminal #1 and 120 volt powercenter terminal #2. Cover module compartment and plug powercenter in. Test each set of low voltage terminal blocks for 12 volt AC power using volt meter.

- If power, powercenter is working properly.
- If no power, repeat above process 2-3 times until it is determined that there is absolutely no power at the low voltage terminal blocks. If repeat processes produce no power and all above steps and conditions are met, powercenter may be bad. Call factory for service.

ANALOG TIMER:

1. Set timer properly:
 - White pins/no switch inside dial: Pull series of pins AWAY from clock center.
 - Red pins: Pull series of pins UP from clock face.
 - White pins/switch inside dial: Push series of pins IN towards clock center.
 - Green & Red pins: Green is ON pin, Red is OFF pin.
2. Spin analog timer clockwise until ON pin(s) "click ON". Test each set of low voltage terminal blocks for 12 volt AC power using volt meter.
 - If power, powercenter and module are working properly.
 - If no power, repeat above process 2-3 times until it is determined that there is absolutely no power at the low voltage terminal blocks.

DIGITAL TIMER:

1. Set timer properly per digital timer instructions.
2. Press digital timer manual ON button. Test each set of low voltage terminal blocks for 12 volt power using volt meter.
 - If power, powercenter is working properly.
 - If no power, proceed to #3.
3. Set a dummy program on the digital timer to turn ON within a few minutes. Set the program to turn OFF after 5 minutes. Once digital timer has turned ON, test each set of low voltage terminal blocks for 12 volt AC power using volt meter.
 - If power, powercenter and module are working properly.
 - If no power, repeat above process 2-3 times until it is determined that there is absolutely no power at the low voltage terminal blocks.

PHOTOCELL:

1. Cover photocell with black electrical tape to simulate darkness. Covering the photocell with black electrical tape WILL NOT disable the photocell.
2. Test each set of low voltage terminal blocks for 12 volt AC power using volt meter. It may take as long as 10 minutes for the photocell to adjust and turn the system on.
 - If power, powercenter and module are working properly.
 - If no power, repeat above process 2-3 times until it is determined that there is absolutely no power at the low voltage terminal blocks.

NOTE: If photocell is installed with analog or digital timer, photocell MUST be covered with black electrical tape to simulate darkness and it may take as long as 10 minutes for the photocell to adjust and turn the system on.

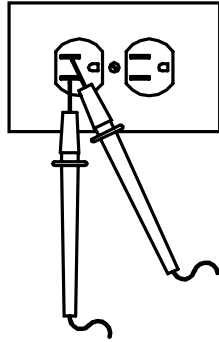
ALL OTHER MODULES: UNPLUG POWERCENTER FROM POWER SOURCE & remove module from module compartment. Follow troubleshooting procedure for SS Module.

- If power, powercenter is working properly. Replace module.
- If no power, repeat above process 2-3 times until it is determined that there is absolutely no power at the low voltage terminal blocks.

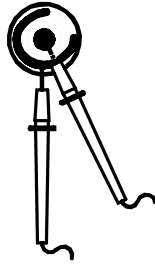
If repeat processes produce no power and all above steps and general troubleshooting conditions are met, and power is derived from the powercenter WITHOUT the module in place (see SS module troubleshooting instructions), module is bad. Replace ONLY the control module. DO NOT replace the entire powercenter.

NIGHTSCAPING® 6 STEP SYSTEM CHECKUP

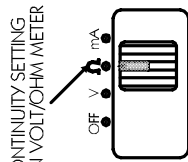
① TEST OUTLET FOR 120 VOLT A.C. POWER



② TEST FUSTAT FOR CONTINUITY



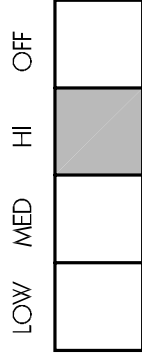
FUSTAT MUST BE GOOD & SCREWED TIGHTLY BY HAND INTO FUSTAT HOLDER



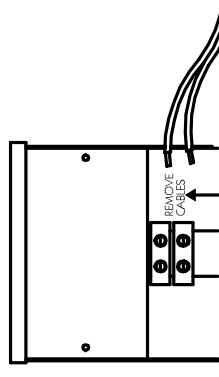
FUSTATS ARE SPECIFIC TO EACH TRANSFORMER.

- 100 WATT = 10 AMP FUSTAT
- 150 WATT = 15 AMP FUSTAT
- 950 WATT = 95 AMP FUSTAT
- 500 WATT = 2 - 25 AMP FUSTATS
- 1000 WATT = 4 - 25 AMP FUSTATS

③ PUT 4 POSITION SWITCH IN THE HIGH POSITION



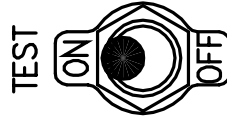
④ REMOVE LOW-VOLTAGE CABLES FROM TRANSFORMER



ISOLATE TRANSFORMER BY REMOVING LOW-VOLTAGE CABLES FROM TERMINAL BLOCKS

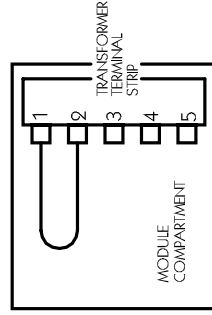
⑤ TURN TRANSFORMER ON

PUT TOGGLE SWITCH IN ON (TEST) POSITION



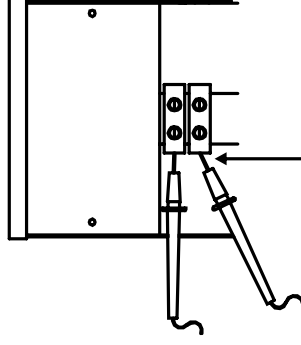
NORMAL

IF NO TOGGLE SWITCH - PUT JUMPER WIRE IN MODULE COMPARTMENT BETWEEN TERMINALS 1 & 2



NOTE: MODULE COMPARTMENT IS 120 VOLTS INSIDE. UNPLUG TRANSFORMER BEFORE ACCESSING

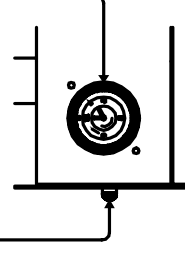
⑥ TEST FOR 12 VOLT A.C. POWER



IF NON-MODULAR:

1. COVER PHOTOCELL (IF PRESENT) WITH BLACK ELECTRICAL TAPE

2. SPIN TIMER INTO ON POSITION



Nightscaping.

1705 E. COLTON AVE - REDLANDS, CA 92374 - (800) 544-4840 - www.nightscaping.com