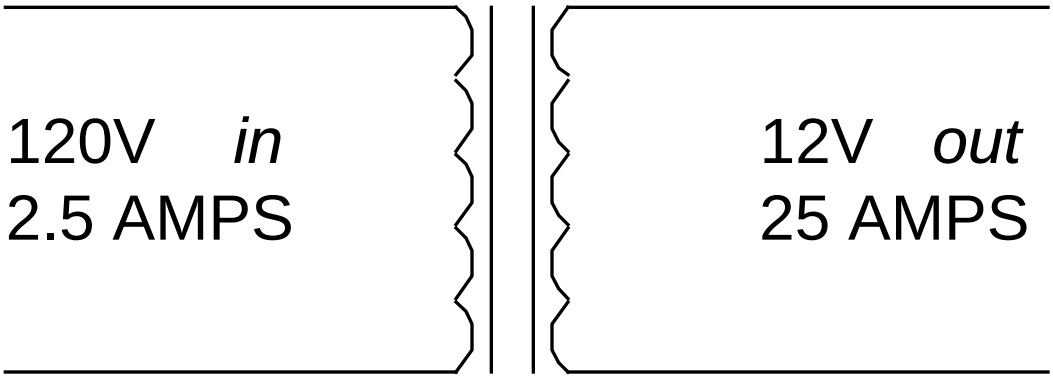
TRANSLITE

SONOMA

Power Supply Installation Guide

Sections:

1) General Safety Instructions
2) Power Supply Installation Considerations
3) Features & Operation
4) Power Supply Installation Details / Specs
5) Troubleshooting



300 Watt Transformer

TRANSLITE

SONOMA

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

Lighting systems from Translite Sonoma are supplied as complete systems. Use only factory supplied parts to preserve the validity of the UL listing and the manufacturer's warranty.

These instructions pertain to the safe installation of this Lighting System to reduce the risk of Fire or Electric Shock.

1) Do not install any part of this lighting system less than five feet above the floor. Do not install any fixture closer than six inches from any curtain or similar combustible material. Do not install this system in a damp or wet location.

2) All wiring should meet National Electric Code requirements. Local Codes may vary. Use minimum AWG#10 for 25 amp load on secondary side of power supply and AWG#8 for 40 amps. Translite's Teflon Coated power cable (AWG#8 with PTFE 200°C insulation) may be used for 12v power in a building without conduit only where local codes allow it.

3) Use only the specified lamp for the fixture. All MR16 types must have a protective front lens or be used with a fixture that provides one. A lighted lamp gets hot quickly! Turn off electrical power before modifying the lighting system in any way. Ensure that the mounting surface is suitable for the purpose. If mounting to metal substrates be sure to insulate conductive mounting hardware with Translite isolating products.

4) No part of the secondary circuit should be grounded.

5) NOTE: All connections on the secondary side of the power supply (the low voltage side) must be tight. Check particularly:

   A) The connections at the power supply.
   B) The power feed from the power supply that connects to the lighting system.

6) Most problems with low voltage lighting systems are due to poor or loose connections at the two points described above. Bad connections can cause overheating and a potential fire risk.

Power Supply Installation

Match all items shipped to packing slip. Call Translite Sonoma (800) 473-3242 with any questions or to report any discrepancies.

Considerations:

1) **Distance.** Power Supply(ies) should be located as close as possible to the lighting system. Unacceptable voltage drop may occur if the Power Supply is too far from the system. We recommend that the distance from the Power Supply to the last lamp in the lighting span should not exceed 30 feet. (Translite Sonoma manufactures a few Power Supply options that supply extra voltage to compensate for any voltage drop due to distance.)

2) **Wire Gauge.** Use only Translite Sonoma Power Feed Cable (502 or 503) for the 12V connection between the power supply and lighting system.
Failure to do so voids UL listings and ALL warranties.

3) **Power from center.** Ideally - power should be fed to the center of the run.
Power fed at one end of a run could possibly result in uneven voltage from close to distant fixtures.

4) **Main Panel Circuit Breaker.** Translite Sonoma power supplies are designed with a “soft start” to buffer the large initial current draw that a cold load of lamps needs to start. Even with this feature it is not wise to max out the circuit breakers on the main panel to capacity.

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Regarding PS2, PS2D, PS2-600, PS2R, or PS2-600R Power Supplies
- DO NOT install more than 3 power supplies on a 20 amp breaker
- DO NOT install more than 2 power supplies on a 15 amp breaker

PS6 Power Supplies
- DO NOT install more than 5 power supplies on a 20 amp breaker
- DO NOT install more than 3 power supplies on a 15 amp breaker

The breakers at the main panel used on the lighting circuits should be rated for “inductive loads”. The use of breakers not rated for inductive loads may result in nuisance tripping. (For example, Square D make an QOHM “high magnetic” series of breakers, which can used instead of the regular QO or QOB series.)

5) **Mounting.** If mounting many Power Supplies together - side by side - at a staging area, insure that there is at least 6” between them to facilitate access to the lid hold down screws. The lid of the chassis is removed by unscrewing the four flat head socket screws with the 5/64 hex key provided. The Power Supply should be installed in a place where it is easily accessible. The supporting wall should be in good condition and able to support 15 lbs. The chassis can be mounted to the wall by removing the rubber feet from the chassis with the same hex key. Four #8 screws can then be used in the four corner holes to securely mount the chassis. We recommend that you still use the rubber feet as spacers when mounting.

6) **Outdoors.** Translite Sonoma Power Supplies are not for use outdoors.

7) **Dimmers.** Use only low voltage inductive (aka magnetic) dimmers with the PS2 and PS6 families of Power Supplies. If a dimmer is used, it must installed in-line BEFORE the Power Supply (on the Line Voltage side of the transformer) The dimmer cannot be placed in-line AFTER the power has transformed to 12V. The voltage Regulating Power Supplies are incompatible with dimmers. Do not install a dimmer in conjunction with the PS2R or PS2-600R Power Supplies.

8) **Grounding.** The chassis of the power supply contains an attached green ground wire lead.
Ground at this point only.
DO NOT GROUND AT ANY POINT ON THE ISOLATED 12V SECONDARY CIRCUIT.

9) **ALL CONNECTIONS MUST BE TIGHT.**

Power Supply Features & Operation Notes

CMP - Safety Circuit The CMP (current monitoring protection) was developed by Translite to safely control the high current (amps) associated with open (uninsulated) low voltage circuits. The CMP is a microprocessor that automatically computes the electric load on the Power Supply and sets the load limit accordingly. In the event of a short or overload, the CMP instantaneously shuts down the lighting system.

Easy Reset An important feature of the Power Supplies is that they are simply reset by turning the wall switch or dimmer off and then on again. In the event of a system shutdown, there is no need to access the Power Supply (often remotely located), to reset a breaker, or to replace a fuse.

Bulb Life / Voltage Lamps rated to operate at a nominal 12 volts, give optimum performance if operated between 11.5 and 12 volts. Within this range the lamp delivers the optimum light output and operates for the rated lamp life. Operating a lighting system at the correct voltage is very important because too much voltage **(overvoltage)** causes premature lamp burnout; and too little voltage **(under voltage)** causes reduction in the quality of light output.

Common Causes of OVERVOLTAGE

1) Underloaded Power Supply: If a transformer is not fully loaded, the lamps on the system will be operating at a higher voltage than if the transformer is fully loaded. A 12 volt power supply that is underloaded by as little as 50 watts could increase its operating voltage by as much as 1/4 (.25) of a volt.

REMEDIES
1) Increase the load to the full capacity of the power supply
2) Install a dimmer switch. This typically trims 10% of the output voltage (even at full power).
3) Use a Regulating Power Supply from Translite Sonoma to insure proper voltage delivery

2) Lamp Burnout: Lamp burnout essentially causes the "underloaded transformer" problem. As lamps burnout on the system, the voltage is increased to the remaining lamps causing their early burnout.

REMEDIES
1) Always replace burned out lamps promptly
2) Always use a dedicated lighting circuit so as to protect, as much as possible, the circuit from spikes from heavy appliances turning off.
3) Use a Regulating Power Supply from Translite Sonoma to ensure proper voltage delivery

3) Primary Overvoltage: In some cases, especially in older buildings, the primary supply may surge or operate at voltages substantially higher than 120 volts. Since transformers usually step down the input by a ratio (120v in/ 12v out = ratio 10:1) the secondary voltage increases as the primary voltage increase.

REMEDIES
1) Always replace burned out lamps promptly
2) Always use a dedicated lighting circuit so as to protect, as much as possible, the circuit from spikes from heavy appliances turning off.
3) Use a Regulating Power Supply from Translite Sonoma to insure proper voltage delivery

Common Causes of UNDER VOLTAGE

1) Undersized Power Feed: If the Power Feed Cable from the Power Supply to the the lighting system is undersized (too nar row a gauge), because of the increased resistance, the voltage will drop significantly by the time it reaches the system.

REMEDIES
1) Only use Translite Sonoma 8 or 10AWG power feed cable.

2) Power Supply is too distant from Lighting: Voltage drop increases as the distance of the power supply to the lighting increases. A standard PS2 500W Power Supply should be at least 30 feet from farthest lamp in the lighting run.

REMEDIES
1) Move the Power Supply closer to shorten the power feed cable
2) Use a Multitap or Regulating Power Supply from Translite Sonoma to supply extra compensating voltage.

3) Primary Under voltage: In some cases, especially in older buildings, the primary supply may surge or operate at voltages substantially lower than 120 volts. Since transformers usually step down the input by a ratio (120v in/ 12v out = ratio 10:1) the secondary voltage decreases as the primary voltage decreases.

REMEDIES
1) Use a Multitap or Regulating Power Supply from Translite Sonoma to supply extra compensating voltage.
2) Always use a dedicated lighting circuit so as to protect, as much as possible,to protect the circuit from spikes from heavy appliances turning off.

PS2, PS2D, PS2P & PS2PD Power Supplies

500W 60hz 120/12 VAC toroidal magnetic transformer with Translite's current monitoring protection circuitry.

The PS2, PS2D, PS2P, PS2PD Power Supplies are ideal for simple installations (with or without a dimmer) We recommend that the distance from Power Supply to the last lamp in the lighting span should not exceed 30 feet or voltage drop will be evident. (See PS2-MT, PS2-MTD, PS2R for Power Supplies capable of delivering extra voltage to compensate for installations requiring a distant placing of the power supply)

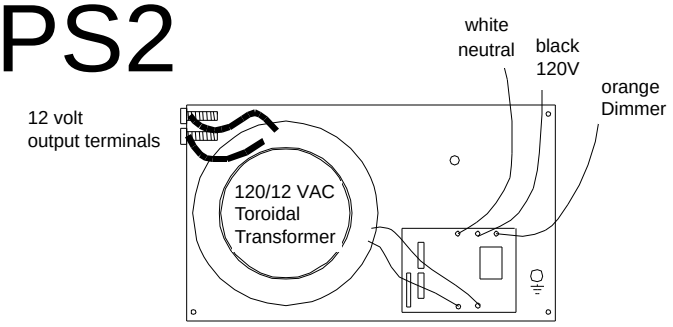
PS2 500W 60hz 120/12 VAC toroidal magnetic transformer / 120v Hardwire access
Capable of fully servicing a 500W load (10 - 50W lamps or equivalent)
weight = 11 lbs Dimensions = 12"x7"x3"

PS2P same w/ 3-prong plug-in cord

PS2D 500W 60hz 120/12 VAC toroidal magnetic transformer / 120v Hardwire access / noise reduction debuzzing choke
Capable of fully servicing a 500W load (10 - 50W lamps or equivalent)
weight = 11 lbs Dimensions = 12"x7"x3"

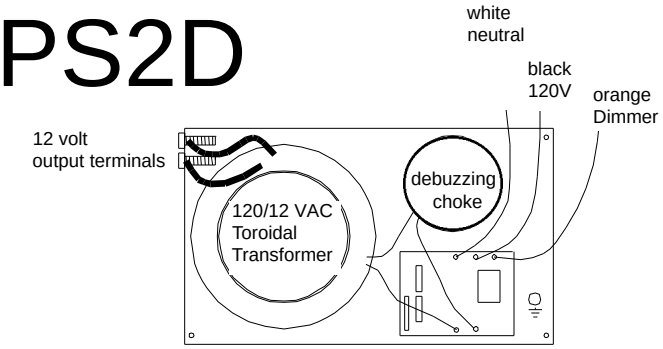
PS2PD same w/ 3-prong plug-in cord

PS2



PS chassis is equipped with 7/8"Ø knockouts

PS2D



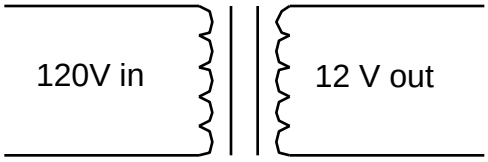
PS chassis is equipped with 7/8"Ø knockouts

Mounting. If mounting many Power Supplies together - side by side - at a staging area, insure that there is at least 6" between them to facilitate access to the lid hold down screws. The lid of the chassis is removed by unscrewing the four flat head socket screws with the 5/64 hex key provided. The Power Supply should be installed in a place where it is easily accessible. The supporting wall should be in good condition and able to support 15 lbs. The chassis can be mounted to the wall by removing the rubber feet from the chassis with the same hex key. Four #8 screws can then be used in the four corner holes to securely mount the chassis. We recommend that you still use the rubber feet as spacers when mounting.

The Power Supply is connected to the 120 volt mains supply by the two wires from the circuit board. Black is the hot, or live wire, and the white wire is the neutral, or common wire. Connect with wire nuts.

The 12 volt connection from the output terminals is made by using the heavy duty LUGS provided onto the low voltage cable suppling the track. Always use a minimum #8 wire size on the low voltage side of the transformer. Make sure all connections are tight. Failure to tighten the low voltage connections will result in overheating and become a potential fire hazard. Nearly all field problems with low voltage lighting are the result of improper wire sizes and loose connections.

If dimmer is used, it must installed in-line BEFORE the power supply (on the Line Voltage side of the power supply) The dimmer cannot be placed in-line AFTER the power has transformed to 12V. Reference the schematic page for wiring various types of dimmers.



PS2-600 & PS2-600D Dual Output Power Supplies

500W 60hz 120/12 VAC toroidal magnetic transformer with Translite's current monitoring protection circuitry.

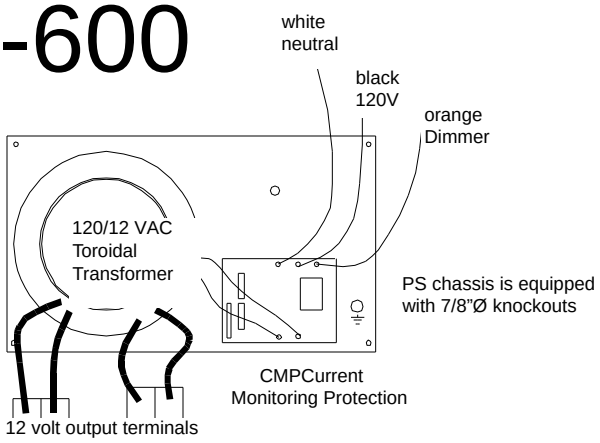
The PS2, PS2D, PS2P, PS2PD power supplies are ideal for simple installations (with or without a dimmer) We recommend that the distance from Power Supply to the last lamp in the lighting span should not exceed 30 feet or voltage drop will be evident. (See PS2-MT, PS2-MTD, PS2R for Power Supplies capable of delivering extra voltage to compensate for installations requiring a distant placing of the power supply)

PS2-600 600W (2x300W) 60hz 120/12 VAC toroidal magnetic transformer / 120v Hardwire access
Capable of fully servicing 2 x 300W loads { 2 x (6 x 50W lamps) or equivalent}
weight = 11 lbs Dimensions = 12"x7"x3"

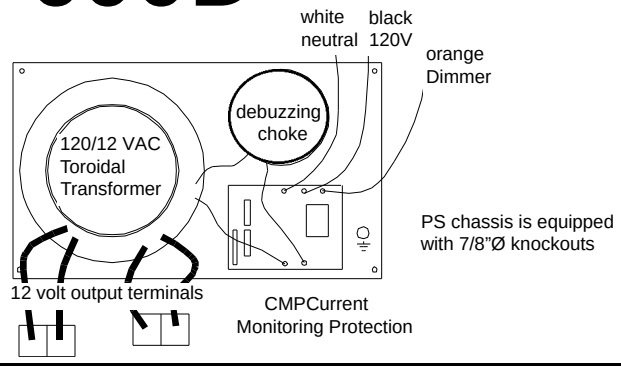
PS2-600P same w/ 3-prong plug-in cord

PS2-600D 600W (2x300W) 60hz 120/12 VAC toroidal magnetic transformer
120v Hardwire access / noise reduction debuzzing choke
Capable of fully servicing 2 x 300W loads { 2 x (6 x 50W lamps) or equivalent}
weight = 11 lbs Dimensions = 12"x7"x3"

PS2-600



PS2-600D



The Power supply is connected to the 120 volt mains supply by the two wires from the circuit board. Black is the hot, or live wire, and the white wire is the neutral, or common wire. Connect with wire nuts.

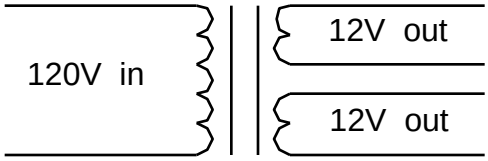
Always use a minimum #8 wire size on the low voltage side of the transformer. Make sure all connections are tight. Failure to tighten the low voltage connections will result in overheating and become a potential fire hazard. Nearly all field problems with low voltage lighting are the result of improper wire sizes and loose connections.

If dimmer is used, it must installed in-line BEFORE the power supply (on the Line Voltage side of the power supply) The dimmer cannot be placed in-line AFTER the power has transformed to 12V.

Reference the schematic page for wiring various types of dimmers.

Mounting. If mounting many Power Supplies together - side by side - at a staging area, insure that there is at least 6" between them to facilitate access to the lid hold down screws. The lid of the chassis is removed by unscrewing the four flat head socket screws with the 5/64 hex key provided. The Power Supply should be installed in a place where it is easily accessible. The supporting wall should be in good condition and able to support 15 lbs. The chassis can be mounted to the wall by removing the rubber feet from the chassis with the same hex key. Four #8 screws can then be used in the four corner holes to securely mount the chassis. We recommend that you still use the rubber feet as spacers when mounting.

dual output



PS2R & PS2-600R Voltage Regulating Power Supplies

Toroidal magnetic transformer with Translite's Voltage Regulating Current monitoring protection circuitry.

The PS2R & PS2-600R Power Supplies are ideal for installations when maximum bulb life is required. Also because the Power Supply can be preset to a voltage up to 15 volts, it can be more distantly located from the lighting. Both Power Supplies are not for use with a Dimmer.

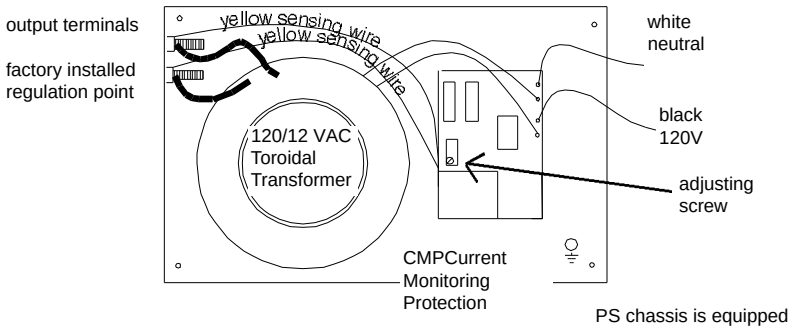
PS2R 500W 60hz 120/12 VAC toroidal magnetic transformer / 120v Hardwire access
Capable of fully servicing a 500W load (10 - 50W lamps or equivalent)
at a automatically regulated voltage of 1 to 15 volts.
weight = 15 lbs Dimensions = 12"x7"x3"

PS2PR same w/ 3-prong plug-in cord

PS2-600R 600W (2 x 300W) 60hz 120/12 VAC toroidal magnetic transformer / 120v Hardwire access
Capable of fully servicing 2 300W loads (2) x 6 - 50W lamps or equivalent)
at a automatically regulated voltage of 1 to 15 volts.
weight = 15 lbs Dimensions = 12"x7"x3"

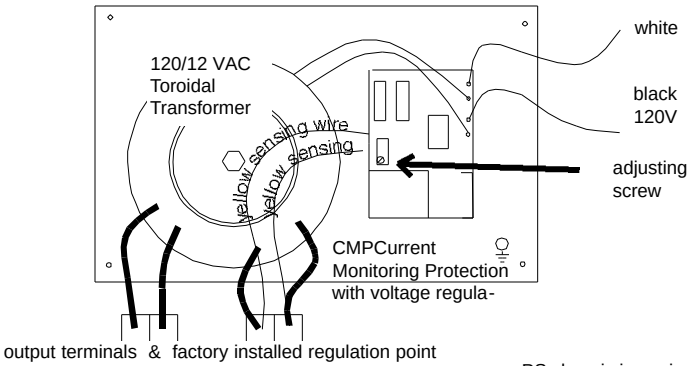
PS2-600PR same w/ 3-prong plug-in cord

PS2R



PS chassis is equipped with 7/8"Ø knockouts

PS2-600R



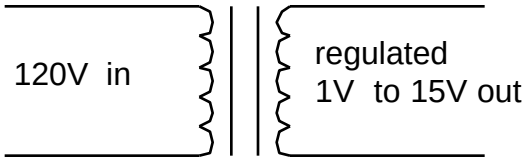
PS chassis is equipped with 7/8"Ø knockouts

The Power Supply is connected to the 120 volt mains supply by the two wires from the circuit board. Black is the hot, or live wire, and the white wire is the neutral, or common wire. Connect with wire nuts.

1) Regulation Point
The regulation point is where the yellow AWG #20 sensing wires connect to the AWG #8 output wires. At the factory this is set at the output terminal bolts. At this point the output is regulated to 11.8 volts. If the yellow sensing wires are extended and spliced, say 20 feet away at the start of the lighting run, then the voltage is now regulated at this point. This is the most accurate way to regulate.

2) Adjusting output voltage
The factor preset voltage of 11.8 volts can be increased by turning the adjusting screw. Using the screwdriver supplied the adjusting screw is turned clockwise to increase the voltage and counter-clockwise to decrease. It will take a few revolutions to effect a change. A true RMS Voltage meter must be used to measure the voltage.

Both PS2R and PS2-600R are NOT to be used with a dimmer.



Voltage Regulating

The PS2R regulates the output voltage to a preset value (example = 12 volts)
The benefit of the voltage regulation insures a consistently correct voltage resulting in greater bulb life. Bulb life is greatly reduced as voltage increases past 12 volts. If one or more bulbs burn out resulting in greater voltage to the remaining good bulbs, the voltage regulator automatically adjusts the voltage back to the preset value.

An added feature of the regulating circuitry is that the preset output voltage can be set past 12V all the way up to 15 V. This allows the power supply to be located at a greater distance from the lighting than is usually possible without an unacceptable voltage drop. A higher voltage setting could be preset to compensate for the additional distance with the intent of the voltage dropping to a useful 12V
after spanning the distance.

The PS2R and PS2-600R will regulate the output voltage so that it is maintained at a constant level no matter how the load varies. It leaves the factory set to output 11.6 volts at the output terminals. There are two key variables that can be set in the field.

1) Regulation Point The default setting is at the output terminals, but by extending the sensing wires this could be changed so that it regulates at the start of the track. SEE DIAGRAM BELOW

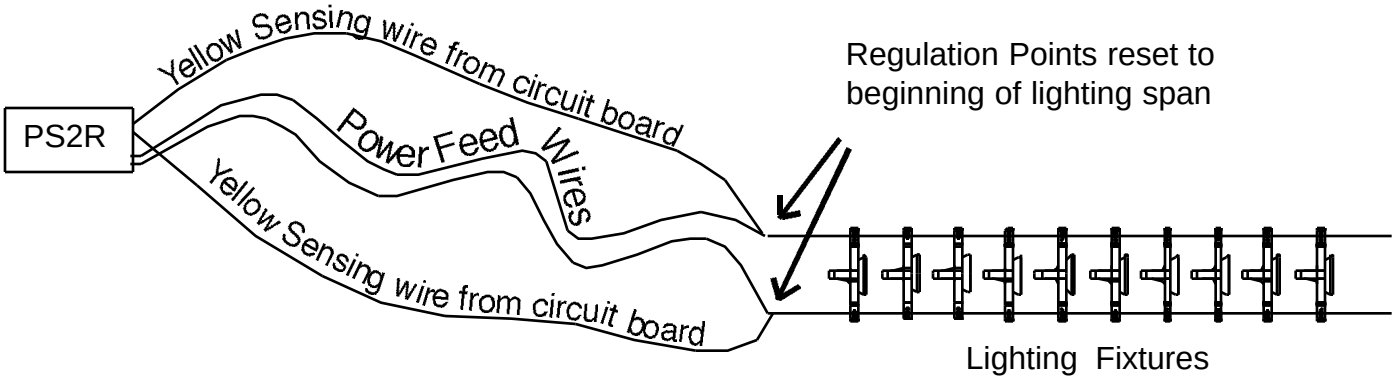
2) The output voltage can be increased or decreased. This is done by using the screwdriver provided to adjust the trimpot located on the circuit board.

The Power supply is connected to the 120 volt mains supply by the two wires from the circuit board. Black is the hot, or live wire, and the white wire is the neutral, or common wire. Connect with wire nuts.

The regulating circuit will automatically compensate for variations in the primary voltage, between 100 and 140 volts.

Note: There is a minimum load of 50 watt required on th PS2R in order for the unit to remain on for more that two seconds.

Mounting. If mounting many power supplies together - side by side - at a staging area, insure that there is at least 6” between them to facilitate access to the lid hold down screws. The lid of the chassis is removed by unscrewing the four flat head socket screws with the 5/64 hex key provided. The power supply should be installed in a place where it is easily accessible. The supporting wall should be in good condition and able to support 15 lbs. The chassis can be mounted to the wall by removing the



PS6, PS6D, PS6P & PS6PD power supplies

300W 60hz 120/12 VAC toroidal magnetic transformer with Translite's Current monitoring protection protection circuitry.

The PS6 Power Supplies are ideal for simple installations (with or without a dimmer) and are capable of fully servicing up to a full 300w load. (six 50w lamps or equivalent) Distance from Power Supply to the farthest lamp on the lighting span must not exceed 30 feet or voltage drop will be evident. (See PS6-MT, PS6-MTD, for Power Supplies capable of delivering extra voltage to compensate for installations requiring a distant placing of the power supply)

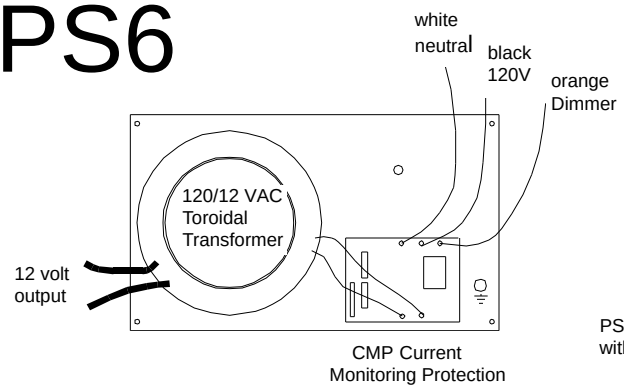
PS6 300W 60hz 120/12 VAC toroidal magnetic transformer / 120v Hardwire access
Capable of fully servicing a 300W load (6 x 50W lamps or equivalent)
weight = 10 lbs Dimensions = 12"x7"x3"

PS6P same w/ 3-prong plug-in cord

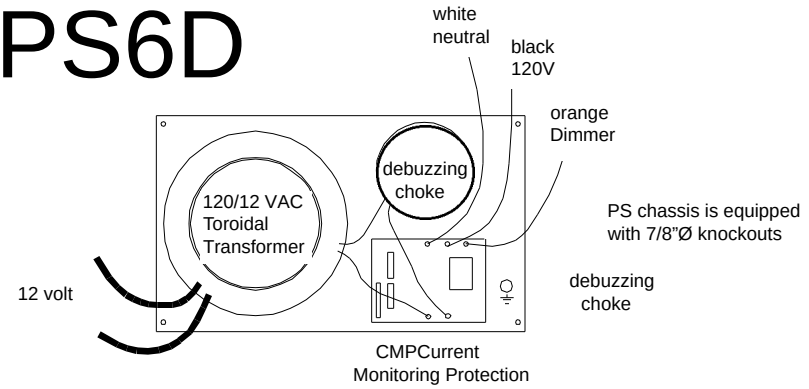
PS6D 300W 60hz 120/12 VAC toroidal magnetic transformer / 120v Hardwire access / noise reduction debuzzing choke
Capable of fully servicing a 300W load (6 x 50W lamps or equivalent)
weight = 10 lbs Dimensions = 12"x7"x3"

PS6PD same w/ 3-prong plug-in cord

PS6



PS6D



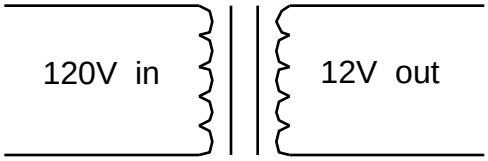
Mounting. If mounting many Power Supplies together - side by side - at a staging area, insure that there is at least 6" between them to facilitate access to the lid hold down screws. The lid of the chassis is removed by unscrewing the four flat head socket screws with the 5/64 hex key provided. The Power Supply should be installed in a place where it is easily accessible. The supporting wall should be in good condition and able to support 15 lbs. The chassis can be mounted to the wall by removing the rubber feet from the chassis with the same hex key. Four #8 screws can then be used in the four corner holes to securely mount the chassis. We recommend that you still use the rubber feet as spacers when mounting.

The Power Supply is connected to the 120 volt mains supply by the two wires from the circuit board. Black is the hot, or live wire, and the white wire is the neutral, or common wire. Connect with wire nuts.

Always use a minimum #8 wire size on the low voltage side of the transformer. Make sure all connections are tight. Failure to tighten the low oltage connections will result in overheating and become a potential fire hazard. Nearly all field problems with low voltage lighting are the result of improper wire sizes and loose connections.

If dimmer is used, it must installed in-line BEFORE the power supply (on the Line Voltage side of the power supply) The dimmer cannot be placed in-line AFTER the power has transformed to 12V.

Reference the schematic page for wiring various types of dimmers.



PS2 - MT & PS6 - MT Multitap Power Supplies

300W 60hz 120/12 VAC toroidal magnetic transformer with Translite's Current monitoring protection protection circuitry.

The PS2-MT or PS6 - MT Power Supplies are ideal for installations (with or without a dimmer) where the transformer must be located at a distance from the lighting system.

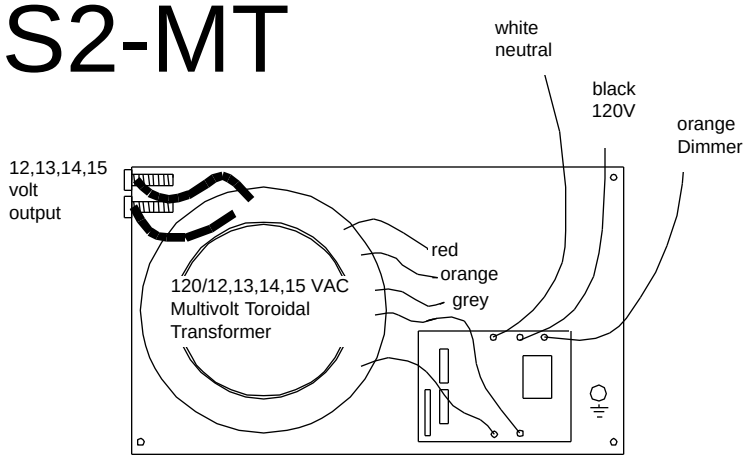
PS2 - MT 500W 60hz 120/12,13,14,15 multi volt toroidal magnetic transformer / 120v Hardwire access
Capable of fully servicing a 500W load (6 x 50W lamps or equivalent)
weight = 11 lbs Dimensions = 12"x7"x3"

PS6 - MT 300W 60hz 120/12,13,14,15 multi volt toroidal magnetic transformer / 120v Hardware access
Capable of fully servicing a 300W load (6 x 50W lamps or equivalent)

A special Multi-Tap feature allows the output voltage to be increased from 12V to (13V, 14V or 15V). These higher voltages can be chosen to compensate for an installation where the Power Supply must be remotely located at a distance from the lighting system.Higher voltage options can be chosen (in the field) as longer installation distances are nesassary - with the intention of the voltage dropping to a useful 12V after spanning the extra distance.

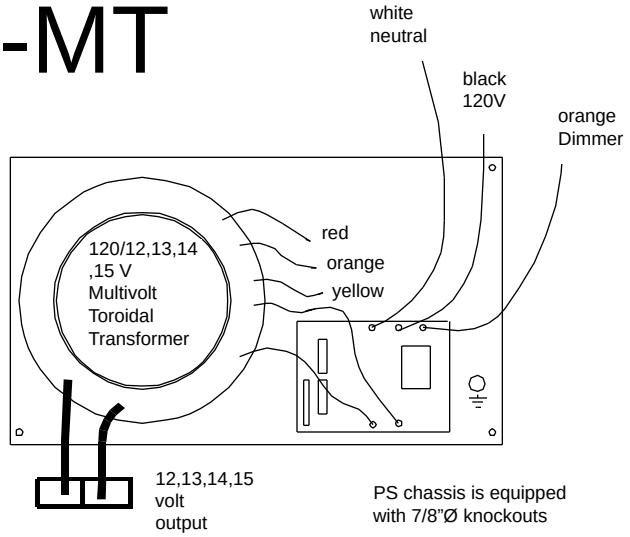
IMPORTANT: The lighting system should not receive over 12V at the start of the run. Overvoltage will result in greatly reduced bulb life.

PS2-MT



PS chassis is equipped with 7/8"Ø knockouts

PS6-MT



PS chassis is equipped with 7/8"Ø knockouts

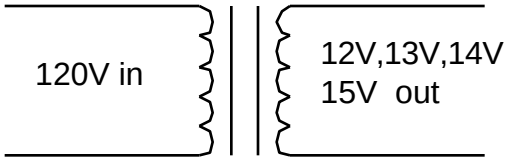
The Power Supply is connected to the 120 volt mains supply by the two wires from the circuit board. Black is the hot, or live wire, and the white wire is the neutral, or common wire. Connect with wire nuts.

Multi Volt feature
The Power Supply leaves the factory wired to the default voltage of 12 volts. Two red wires connect to the transformer from the circuit board. One wire connects to the white wire on the toroid transformer. The other wire normally connects to the black wire on the transformer. This is the default connection which will result in 12V out. To change the output voltage to 13v, 14v, or 15v follow the chart below for each model

PS2 - MT		PS6 - MT	
Grey	= 13V	Yellow	= 13V
Orange	= 14V	Orange	= 14V
Red	= 15V	Red	= 15V

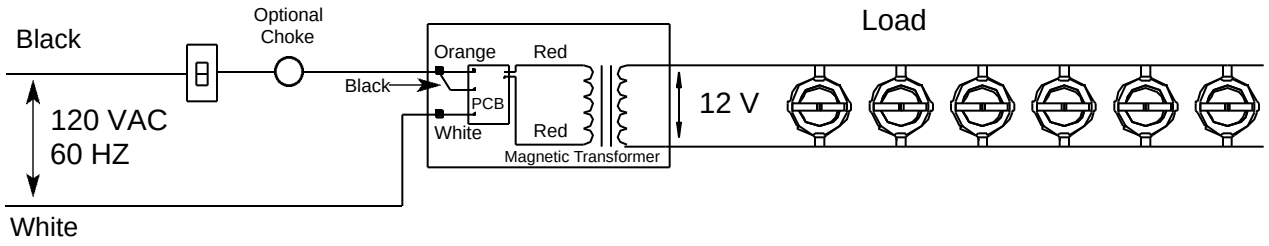
If dimmer is used, it must installed in-line BEFORE the Power Supply (on the Line Voltage side of the Power Supply) The dimmer cannot be placed in-line AFTER the power has transformed to 12V.

Reference the schematic page for wiring various types of dimmers.



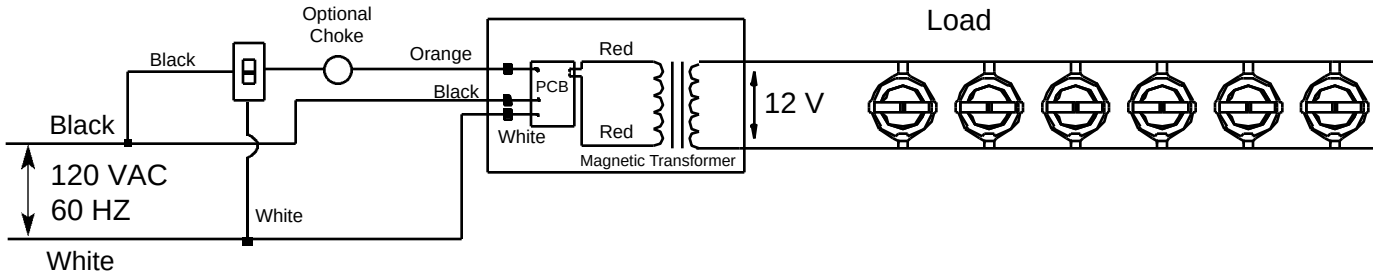
WIRING DIAGRAMS FOR DIMMING THE PS2 & PS6 FAMILIES OF TRANSLITE POWER SUPPLIES

TWO WIRE DIMMER (Basic Scheme) examples: Lutron Nova N-1000, Diva DVLV600P



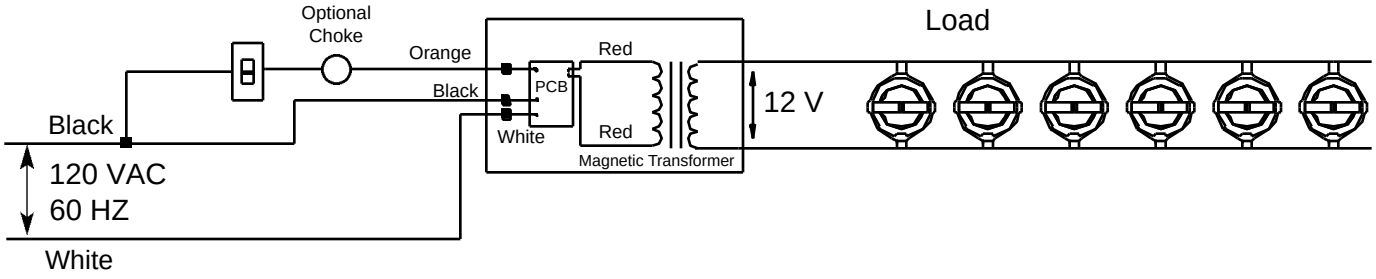
THREE WIRE DIMMER (where dimmer has its own neutral - white wire) examples: Lutron Nova NLV600, Lightolier Sunrise ZP600VA, ZP260QE, OS600VA.

Translite Power Supply has a permanent 120 volt supply - if the Control Board has tripped, then the appropriate circuit breaker for the permanent feed must be re-set at the main supply panel.



COMPUTERIZED DIMMER examples: Lutron Maestro, Grafik Eye, Radio Ra

Translite Power Supply has a permanent 120 volt supply - if the Control Board has tripped, then the appropriate circuit breaker for the permanent feed must be re-set at the main supply panel.



NOTE: The optional choke (debuzzing coil) must be wired (or re-wired) in after the Dimmer but in before the Control Board (PCB on diagram).

Call Translite Technical Support with questions at 800 473 3242

Troubleshooting

Problem: **Lights do not come on at all.**

Actions:

Step 1 **Turn power OFF then ON again.**

Translite Sonoma power supplies incorporate an automatic reset. If something had temporary shorted the 12V line, and the short has now been removed, the power supply will automatically reset (when power is cut and restored) without the need to manually reset a breaker or change a fuse at the Power Supply.

Still no lights?

Step 2 **Audibly monitor the Power Supply for a CLICKING sound when turning power on.**

That clicking sound means the Power Supply is working correctly but is detecting a short on the 12V line. (You are actually hearing two rapid clicks as it turns ON, senses the short, and instantaneously shuts OFF. If the lights were working it would only click once - for ON.)

- If you DO hear a clicking sound but the lights DO NOT come on, you need to find and correct a dead short across the 12 volt line.

- If you DO NOT hear a clicking sound but have verified that 120V is reaching the Power Supply: contact Translite Sonoma Tech Support at 800-473-3243

One common cause of a short is that the mounting hardware was mounted to METAL (without proper isolation) or the screws mounting the hardware sink through and are touching a common metal structure. Contact Translite Sonoma to obtain the proper isolating separators for your mounting hardware.

If this is not the problem you need to find and eliminate the short.
To find a short you need to do a continuity test.

1) Disconnect the 12v feed from the Power Supply to the lighting system.
2) Remove the lamps from all the fixtures (do not remove the fixtures, yet)
3) Place a continuity tester on both busbars of the 12V lighting system (positive continuity confirms the direct short)
4) Remove one fixture from the system and re-test for continuity.
5) Continue removing one fixture at a time and retesting until continuity is broken.
6) The last fixture removed is possibly damaged or was installed incorrectly. Many Translite Sonoma fixtures are designed to conduct 12V throughout the entire body of the fixture. If the fixture was installed incorrectly, twisted, or stressed in some way, it is possible that it was creating a temporary short.
7) Try reinstalling the fixture again.
8) If the fixture (without a lamp installed) continues to short the system please return it for repair. Call the factory for an RGA.

Final Note - If the following:

1) the Power Supply is disconnected from the system
2) all the fixtures have been removed in the course of the continuity test
3) the continuity test still shows positive continuity

then this concludes that the mounting hardware or system conductors are shorting.

The screws used to install the hardware to the surface are touching a common metal structure under the surface. Check to make sure all track connectors are properly installed and tightened.

Special attention for Liana & Basis Track – If track has been cut in the field it is possible that the cutting action could create a short across the two conductor halves of the track. Check that metal dust or rough edges are not creating the short at the point of a field cut.

General Troubleshooting cont.

Problem: **Lights were installed and operational with no problems.**
A few (days, weeks) pass and system has now started to shut itself off. Lights usually go off after a few hours of operation and problem is increasing in frequency.

Actions: This situation is indicative of a bad 12 volt connection between the Power Supply and the lighting. The connection is heating up, oxidizing, and eventually destroying itself. Check all 12V connections between the Power Supply and the lighting system. Inspect the Power Cable for discoloration or deterioration. Cut the damaged end section of the cable and rewire with the new fresh end. **Ensure that this new connection is secure.**

All 12 volt connections must be tightened securely due to the associated high current.

Problem: **Lamps are burning out with frequency.**

Actions: Short lamp life is always due to overvoltage.(or low quality lamps)
Major brand name lamps (GE, Osram, Phillips) should last at least 4000 hours.
A lamp rated for 12v operates optimally from 11.5v to 12 volts. Lamp life falls dramatically over 12 volts. (An MR16 lamp can burn out in a few minutes if receiving 15 volts.)

There are several ways to correct for Over Voltage:

1) The most efficient and accurate way is to install a Translite Sonoma voltage Regulating Power Supply. This will ensure that the proper voltage is consistently delivered to the lighting system. NOTE: Regulating Power Supplies are not compatible with dimmers

2) Replace the light switch with a dimmer switch. This typically cuts 10% of the output voltage when turned fully on. This is usually a very effective remedy.

3) Insure that the lighting is on a dedicated 120v line at the panel. If the lighting shares the line with a large appliance there may be voltage spikes as the appliance shuts off.

If the lighting system and fixtures are very high up or inaccessible you may elect to run them at a slightly lower voltage of less then 12 volts. This will be slightly dimmer but will greatly increase the bulb life.

Problem: **The breaker at the main panel trips when turning on the lights**

Actions: The breakers used on the lighting circuits should be rated for inductive loads. The use of breakers not rated for inductive loads may result in nuisance tripping. (For example, Square D make an QOHM “high magnetic”series of breakers, which can be used instead of the regular QO or QOB series.)
Translite Sonoma Power Supplies are designed with a “soft start” to buffer the large current draw that a cold load of lamps needs to start. Even with this feature it is not wise to max out the breakers to capacity.