Wattstopper®

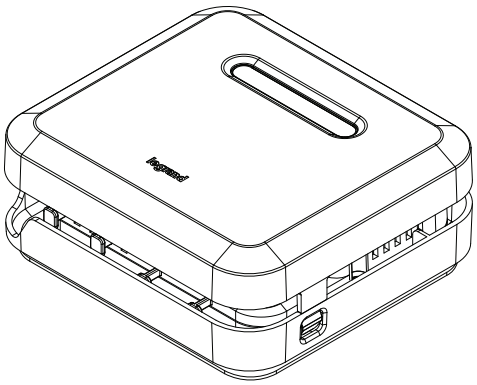
DLM Shade Controller Power Supply for Ten Shades

No: 29853 – 6/25 rev. 9

Installation Instructions • Instructions d'Installation • Instrucciones de Instalación

Catalog Number • Numéro de Catalogue • Número de Catálogo: LMSH-PS610

Country of Origin: Made in China • Pays d'origine: Fabriqué en Chine • País de origen: Hecho en China



SPECIFICATIONS

Input Voltage 120/277VAC, 50/60Hz
Maximum Power..... 115W; @120VAC,0.95A; @277VAC, 0.41A
Shade Bus Ports 2
Shade Bus Voltage.....36VDC, 1.5A, Class 2
Shade Capacity..... up to 10 DLM-based shade motors
Connection to the DLM Local Network..... 2 RJ-45 ports
Local Network Characteristics when using LMSH-PS610:

- Shade Bus provides low voltage power to shade motors over Shade Bus cables, up to 1,000' (no motor can be more than 500' from shade controller); don't intermingle Shade Buses from different controllers; Up to 64 loads (shade motors) on the shade bus
- Low voltage power provided over Cat 5e cable (LMRJ). Max current: 800mA. Max total cable: 1000' Cable added per device: 150'. Max loads: 64. Max communicating devices: 48. Max 10X-Series power supplies: 5.

Environment:
Operating Temperature .....32° to 131°F (0° to 55°C)
Storage Temperature .....23° to 176°F (-5° to 80°C)
Relative Humidity .....5 to 95% (non condensing)

UL 2043 Plenum Rated, ROHS Compliant

UL/CUL listed under UL60730.

Independently Mounted – Shade Controller, Type 1 Action, Pollution Degree 2, Impulse Voltage: 4000V, Maximum Duty Cycle: 15%, 255 sec.

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

a. READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
b. Do not use outdoors.
c. Do not mount near gas or electric heaters.
d. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
e. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
f. Do not use this equipment for other than intended use.
g. Installation should be performed by qualified service personnel.

SAVE THESE INSTRUCTIONS

This unit is pre-set for Plug n' Go™ operation, adjustment is optional.

Plug and Go (PnG) is a process used by Digital Lighting Management (DLM) systems to automate system configuration for room based lighting or shade control. PnG settings can be overridden by using an LMSH-CR or mobile app to customize configuration. The PnG is limited to room level control. The room is defined by all the devices connected together using the In-Room-Bus (IRB). For shading, a room can contain no more than 48 devices, defined by the number of shade motors, switches, and shade controllers connected on a single IRB. For best results using PnG, we recommend that rooms be kept small and defined by the type of control desired. For instance a room could be a single conference room, office, or window facing.

Installation shall be in accordance with all applicable regulations, local and NEC codes. Wire connections shall be rated suitable for the wire size (lead and building wiring) employed.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does not cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interface by one or more of the following measures.

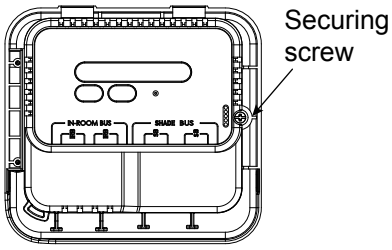
- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult an experienced radio/TV technician for help

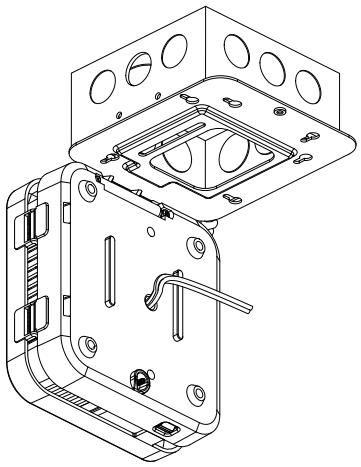
MOUNTING

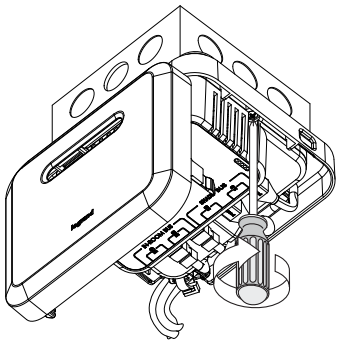
The LMSH-PS610 is a DLM-based shade controller which provides low voltage power and control for up to ten motorized shades. The controller accepts either 120/277VAC input line voltage from an unswitched circuit and is typically mounted in the ceiling onto any junction box with 1/2” knockouts.

Unlike a centralized panel system, the LMSH-PS610 is a decentralized low voltage shade system where the controller is installed in the ceiling near the area where shades will be installed. This allows for shorter cable runs that are easier to install and require less cable management.

To mount, first open the cover on the LMSH-PS610 and loosen the securing screw so that the hinge plate on the back can open. Next attach the hinge plate to a four inch square junction box. Wire the line voltage cables as shown in the wiring diagram. Swing the controller up and secure the controller to the hinge plate by tightening the securing screw. Finally, attach the shade bus and LMRJ cables and close the cover.





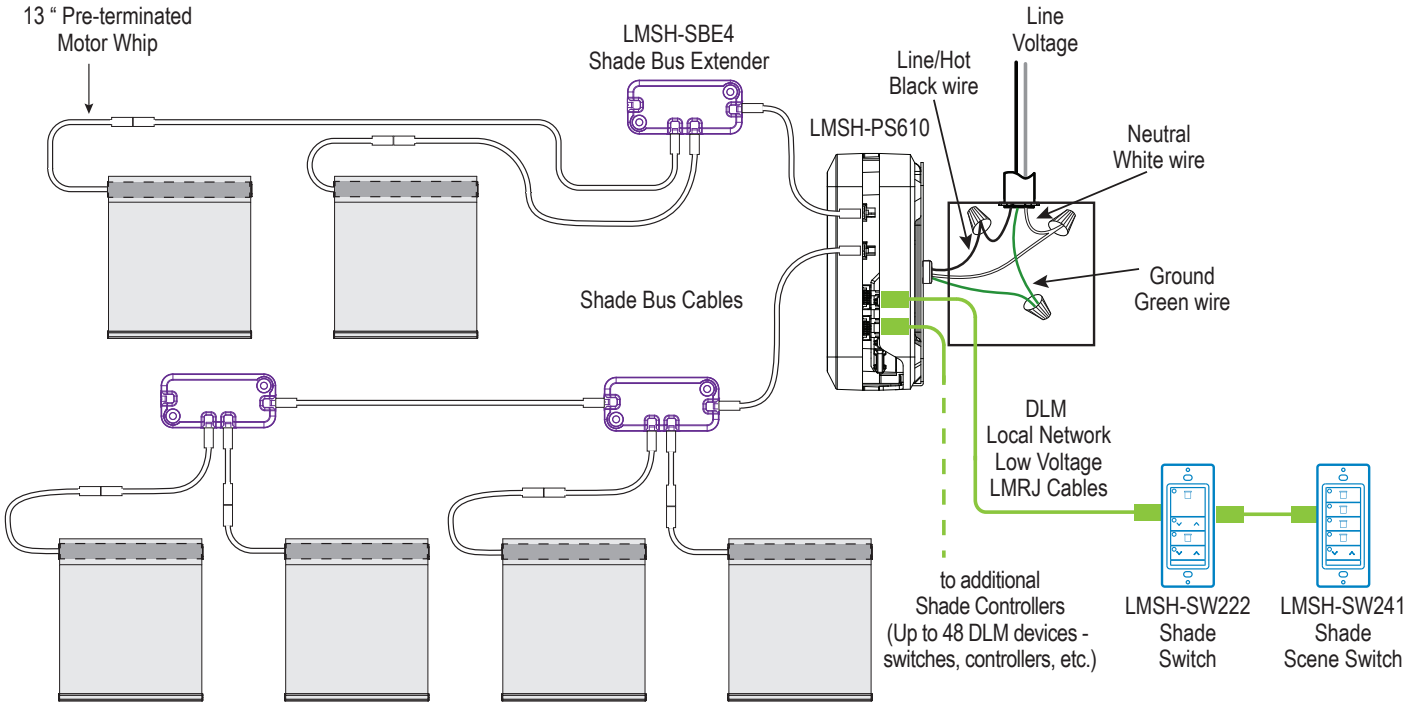


WIRING AND CONNECTING TO A DLM NETWORK

The LMSH-PS610 has a 4-wire shade bus for power and control of shades and an IRB network using Cat5e for connection to wall switches and other shade power supplies. Legrand offers preterminated cable assemblies for both the shade bus and local network for plug and play in a single room or area. Use the LMSH-SBE4 Shade Bus Extender to chain together multiple shades.

NOTE: Install power supplies so that switch and shade bus wire bus limits are not exceeded. The shade bus limit is 1000’ or 500 ft per port and the DLM limit is 1000’

WARNING: TURN THE POWER OFF AT THE CIRCUIT BREAKER BEFORE WIRING.



PLUG N' GO OPERATION (PNG)

The LMSH-PS610 will automatically configure all connected shade motors to all installed switches for default operation depending on the type of shade fabric and the type of installed switches. During testing, the factory will assign a value to the shade motor indicating the opacity of the installed shade fabric. This will used to determine the shade button assignments.

Two different sets of shade switches are available, the LMSH-SW1xx series and LMSH-SW2xx series, which come in a variety of different configurations, with various numbers of buttons and rockers. Some models are recommended for single zone or single fabric applications, while others are recommended for dual shade applications where one shade is a Blackout shade. They can also be used for dual zone applications, but will require using the LMSH-CR or LMCS software to edit the default PnG parameter values. The switches are shipped with engraved buttons that indicate their function. The engraving can be customized.

By using Push n' Learn (described later in this document) or the LMSH-CR configuration tool, you can assign individual buttons to control one or more specific shades

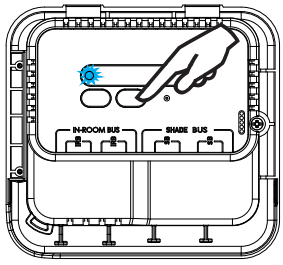
See the configuration charts in the installation instructions for your specific switch models for information on how PnG will configure the switches on the project.

For testing purposes, you can control the shades by pressing the shade control button on the LMSH-PS610, as shown in the diagram.

Press and hold the button to ramp shade up or down. Release to stop shade and press again to reverse direction.

If you press and release immediately (tap), shade will toggle between moving to the upper and lower limit.

Shade operation from shade controller



SHADE LIMIT ADJUSTMENT – PULL N' SAVE (PNS)

The Pull n' Save process can be used to reset the upper and lower shade limits, by pulling the shade to the desired limit. The initial PnG process will set a default upper and lower limit that can be adjusted using the PnS process.

There are three different methods you can use:

- The first method is useful for setting the upper and/or lower limit for one shade. (You can also set the limits for multiple shades but must set each shade one at a time.) This method also allows you to use the buttons on the switch in addition to pulling on the shade to adjust the limits.
- The second method allows you to group several shades together. You set the upper and/or lower limits for a single shade and it will be copied to the other shades in the group. This method is intended for use when shades are the same size and have the same motor ratio.
- The third method can be used when setting the lower limit for multiple shades at the same time, and is intended for use when the shades are different sizes, made of different materials, or have different motor ratios. Only the lower limit can be set with this method—the upper limit will remain at the default for each shade.

PnS requires a shade switch to help set and save the shade limits. See the installation instructions for the shade switches for details on each of the three methods.

BUTTON BINDING ADJUSTMENT - PUSH N' LEARN (PNL)

A configuration button allows access to our patented Push n' Learn™ technology to change the binding relationship between switch buttons and shades.

Step 1 Enter Push n' Learn

1. Press and hold the configuration button on the shade power supply or a switch for 3 seconds, until the Red LED on the red LED begins to blink. When you release the configuration button, the red LED on other communicating DLM Local Network devices begins to blink.
2. The red configuration LED on all devices will blink once per second to indicate the system is in PnL mode. The Red LEDs continue to blink until you exit PnL mode.
3. All shades in the room go to 100% (open) after entering PnL, except for Shade #1 which will move to 50%. Default bindings are described in the Plug n' Go Operation section. The Blue LED will be ON for all switch buttons that are bound to this shade.

   NOTE: Shade order is determined by the system based on motor serial numbers. Installers should note the location and number of the shade for future programming or troubleshooting.

Step 2 Shade Selection

1. Press and release the configuration button to step through the shades connected to the DLM Local Network. As each shade goes to 50% note which switch buttons are showing the blue LED. These buttons are currently bound to the shade at the 50% level.
2. To unbind a switch button from a shade, press the switch button while its blue LED is ON. The blue LED turns OFF to indicate the button no longer controls the shade that is currently at the 50% level.
3. Pressing the switch button again while the shade load is at 50% rebinds the shade load to the button and the blue LED illuminates.

   NOTE: If you are trying to bind a specific shade and don't want to step through selecting each one ,instead of pressing and releasing the configuration button, you can tug on the specific shade you want to bind and it will become the active shade.

Step 3 Exit Push n' Learn

1. Press and hold the configuration button until the red LED turns off, approximately 3 seconds.

TROUBLESHOOTING

LEDs on a shade switch or motorized shade don't light	1. Check to see that the device is connected to the DLM Local Network. 2. Check for 36VDC input to the device: Plug in a different DLM device at the device location. If the device does not power up, 36VDC is not present. • Check the high voltage connections to the shade controller. • If high voltage connections are good and high voltage is present, recheck DLM Local Network connections between the device and the room controller(s).
LEDs turn ON and OFF but shade doesn't move	1. Make sure the DLM local network is not in PnL or PnS programming mode. 2. Check shade bus connections between shade controller and DLM motorized shades.

WARRANTY INFORMATION

Limited Lifetime Warranty
Legrand offers a Limited Lifetime Warranty for window shade product, and/or specific components of the window shade product to be free from defects in materials and workmanship under normal use. There are no obligations or liabilities on the part of Legrand for consequential damages arising out of, or in connection with, the use or performance of this product or other indirect damages with respect to loss of property, revenue or profit, or cost of removal, installation or reinstallation. For full warranty details visit www.legrand.us/commercial-shading

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