

Installation Instructions

Please Read Before Installing

Overview

The HWI-WPM-6D-120 and -240 are for use with *HomeWorks* systems. The modules are programmed with a personal computer using the *HomeWorks* Utility. Each module controls up to six zones of light.

Up to 8 Wallbox Power Modules, each with a unique address, can be linked together on a single configurable link of the *HomeWorks* Processor.

Important Notes

Codes: Install in accordance with all applicable electrical codes.

Overheat Damage: To reduce the risk of overheating and possibly damaging other equipment, do not install to control receptacles or motor-operated appliances.

Environment: Ambient operating temperature: 0-40°C, 32-104°F, 0-90% humidity, non-condensing. Indoor use only.

Spacing: If mounting one module above another, leave at least 4.5" (114mm) vertical space between them.

Lamp Type: Wallbox Power Modules are designed for use with permanently installed incandescent, magnetic low-voltage, or tungsten halogen lamps only. For electronic low-voltage, Lutron Fluorescent Dimming Ballasts, 0-10V control fluorescent dimming ballasts, or to increase zone capacity, a separate interface is required. See Interface Guide.

Input Voltage	Zone Capacity	Unit Capacity
100-127VAC	25 - 800W/VA	2000W/VA
220-240VAC	40 - 1200W/VA	3000W/VA

Low-Voltage Applications: Use the HWI-WPM-6D-120 and -240 with magnetic (core and coil) low-voltage transformers only. Not for use with electronic (solid-state) low-voltage transformers.

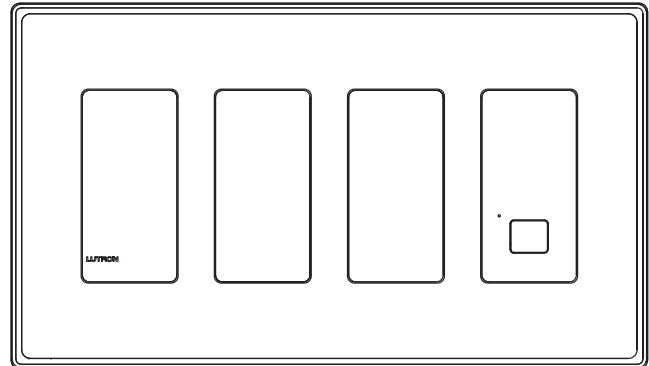
Operation of a low-voltage circuit with all lamps inoperative or removed may result in current flow in excess of normal levels. To avoid transformer overheating and premature transformer failure, Lutron strongly recommends the following:

- Do not operate low-voltage circuits without operative lamps in place.

Wallbox Power Module

HWI-WPM-6D-120	100-127VAC, 50/60Hz
HWI-WPM-6D-240	220-240VAC, 50/60Hz

HWI-WPM-6D-120
HWI-WPM-6D-240



- Replace burned-out lamps as quickly as possible.
- Use transformers that incorporate thermal protection or fuse transformer primary windings to prevent transformer failure due to overcurrent.

Cleaning: To clean, wipe with a clean damp cloth. **DO NOT** use any chemical cleaning solutions.

Wallboxes: Lutron recommends using 3.5" (89mm) deep wallboxes for easier installation.

Default Scene Remote: Use only an NTGRX-1S or a momentary switch rated for switching 120VAC (HWI-WPM-6D-120) or 240VAC (HWI-WPM-6D-240). See SSA Wiring Diagram.

Interface Guide

Load	120V Interface	240V Interface
Electronic Low-Voltage	ELVI-1000	NGRX-ELVI-AU-WH
Lutron Fluorescent	GRX-FDBI-16A-120	NGRX-FDBI-AU-WH
0-10V Control Fluorescent	GRX-TVI	GRX-TVI
Increase Zone Capacity	NGRX-PB-WH HP 2•4•6™	NGRX-PB-AU-WH

Installation

1. Turn power off to all feeds to the module.



DANGER - Locate and lock supply breaker in the OFF position before proceeding.

2. **Mount wallbox.** Use standard 4-gang U.S. wallbox (Lutron P/N 241-400 may be used), 3.5" (87mm) deep is strongly recommended, 2.75" (68mm) deep minimum. Always allow at least 4.5" (110mm) clearance above and below the module to ensure proper heat dissipation.
3. **Pull wires.** Use the rearmost knockouts when pulling wires into the wallbox. This will provide the most clearance when mounting the module.
4. **Line voltage wiring.** Strip 0.5" (12mm) of insulation from all line voltage wires in the wallbox and connect them to the appropriate terminals on the back of the module (as shown in the Line Voltage Wiring Diagram). Each terminal can accept up to two #12AWG (2.4mm²) wires (does not apply to Class 2/PELV terminal block). Secure wires using 9 in.-lbs. (1.0 Nm) for line voltage connections and 10 in.-lbs. (1.3 Nm) for the earth/ground connection. See Line Voltage Wiring Diagram (page 3).



CAUTION - Do not connect line voltage/mains wiring to Class 2/PELV terminals.



CAUTION - Proper short circuit and overload protection must be provided at the distribution panel. You can use up to a 20A (16A for 240V model) maximum circuit breaker/MCB with adequate short-circuit breaking capacity for your installation.

5. **Class 2/PELV wiring.** Strip 1" (25mm) of insulation from the Class 2/PELV cable. Strip 0.375" (8mm) of insulation from each wire in the cable. Connect the Class 2/PELV wires to the Class 2/PELV terminal block, making sure no bare wire is exposed after making the connections. Secure the wires using 3.5 in.-lbs. (0.4 Nm) of torque for Class 2/PELV connections. See Low-Voltage (Class 2/PELV) Wiring Diagram.



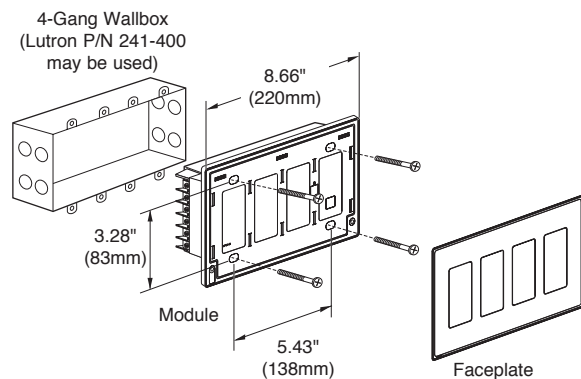
CAUTION - Do not connect the #2 wire to the Class 2/PELV terminal block. See Low-Voltage (Class 2/PELV) Wiring Diagram.



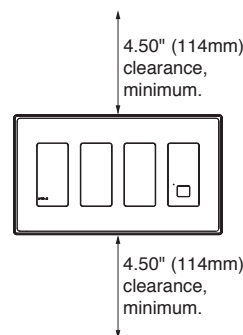
CAUTION - The Class 2/PELV cable and terminal block should be separated from the line voltage/mains cables by at least 0.25" (7mm).

6. **Mount the module** using the screws provided (see Mounting Diagram). When mounted in the wallbox, the Class 2/PELV cable and terminal block should remain separated from the line voltage/mains cables.
7. **Turn ON input feed circuit breaker and check that it does not trip.** For any feed circuit breaker that trips, locate the short or resolve the wiring problem before proceeding.
8. **Use the Address Switch to check the operation of each zone.** See Address Switch Operation (page 5).
9. **Set each address switch** to match the module's address on the link (as programmed in the *HomeWorks* Utility). See Address Switch Operation (page 5).
10. After the *HomeWorks* system is programmed, **check each module's diagnostic LED** (light emitting diode). See Diagnostic LED Status (page 5).

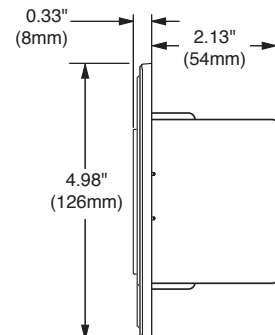
Mounting Diagram



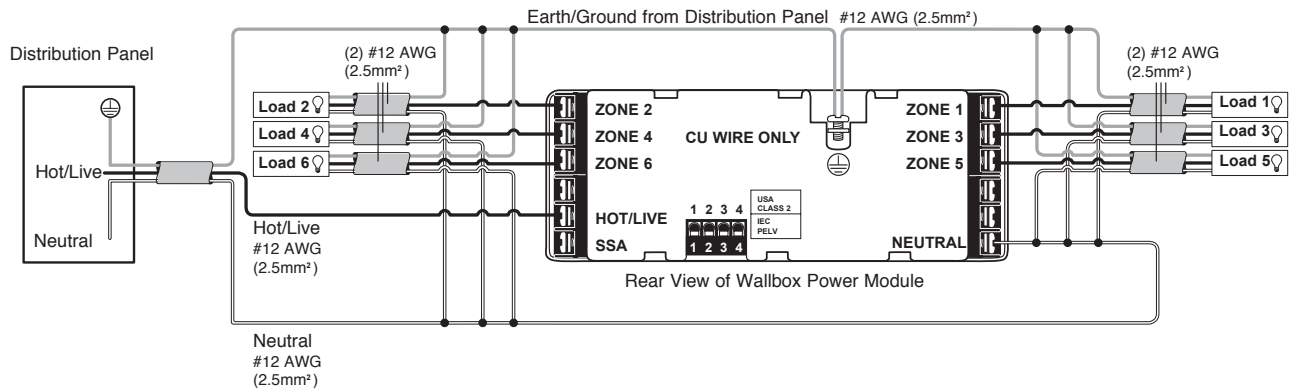
Clearance



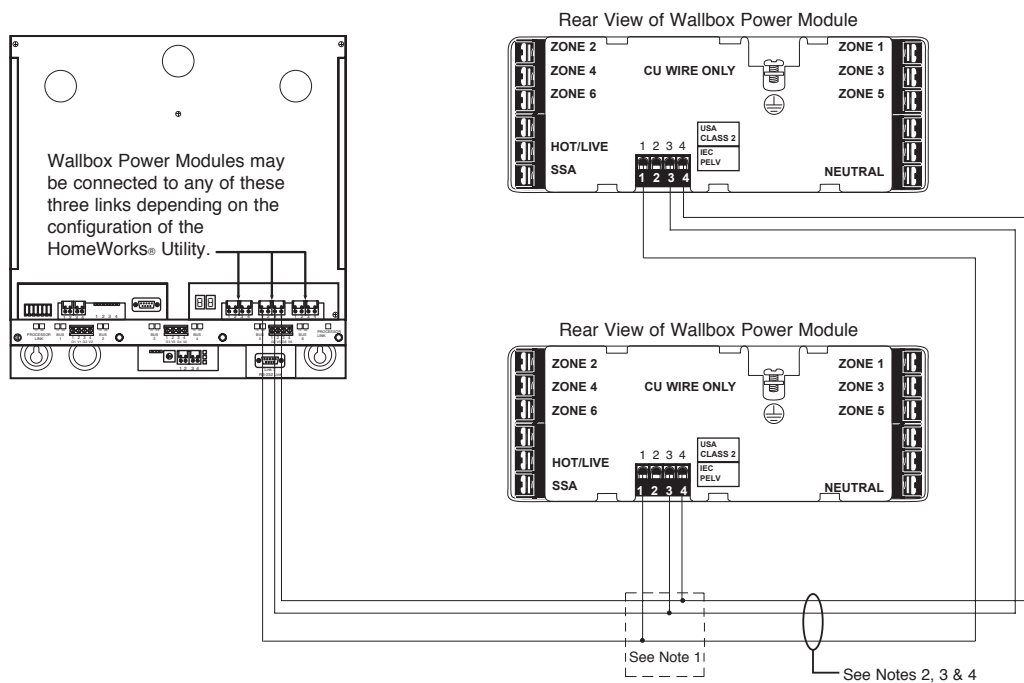
Side View



Line Voltage Wiring Diagram



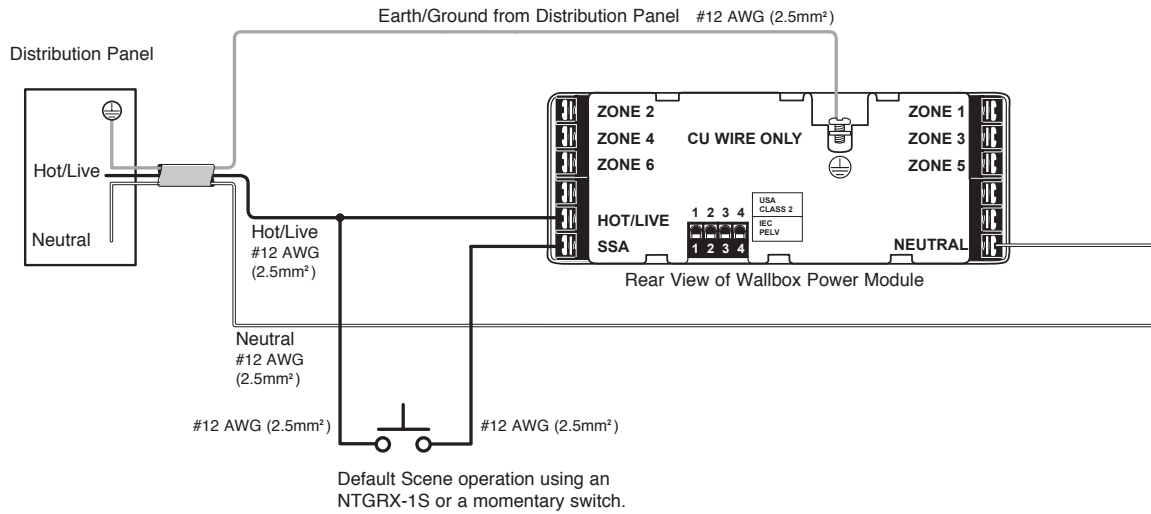
Low-Voltage (Class 2/PELV) Wiring Diagram



Notes

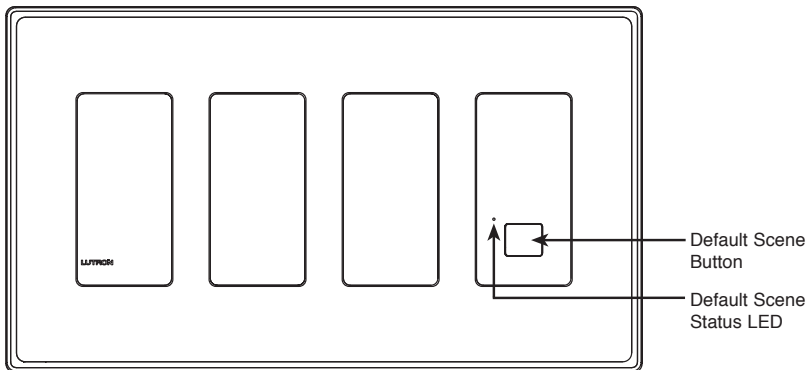
1. Connection between #2 terminals is not made between Wallbox Power Modules, GRAFIK Eye® Control Units, or the HomeWorks Processor.
2. Low-Voltage communications wiring must be daisy-chained.
3. Total length of wire on a single link may be up to 2000 feet (600m).
4. There may be up to a total of 8 Wallbox Power Modules and/or GRAFIK Eye Control Units per link.

SSA Wiring Diagram



Default Scene Operation

Pressing the Default Scene Button will toggle the module between the Default Scene and OFF. An NTGRX-1S or a momentary switch may be connected to the SSA terminal on the module to perform the same function as the Default Scene Button (See SSA Wiring Diagram). To program the Default Scene, use the *HomeWorks* Utility.



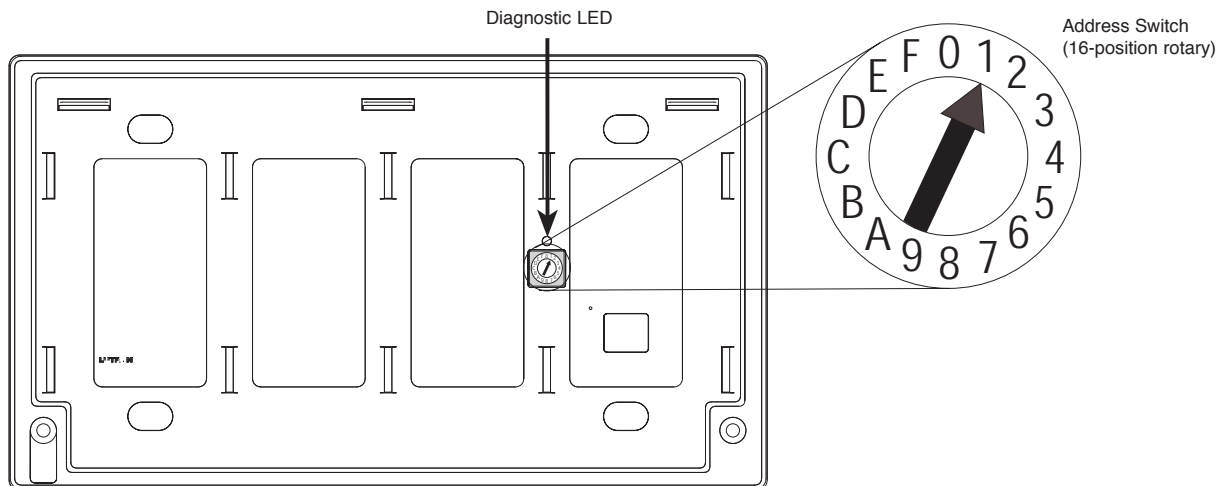
Address Switch Operation

Position	Module Output / Purpose
0	Internal relay ON, all zones OFF
1-8	Address for normal operation
9	Zone 1 Full ON, all others OFF
A	Zone 2 Full ON, all others OFF
B	Zone 3 Full ON, all others OFF
C	Zone 4 Full ON, all others OFF
D	Zone 5 Full ON, all others OFF
E	Zone 6 Full ON, all others OFF
F	All Zones Full ON

Diagnostic LED Status

LED Status	Mode / Possible Cause
Off	No power or defective module
1 blink per second	Heartbeat Mode; Normal Operation
1 blink per 7 seconds	Lighthouse Mode; Not communicating with processor or module set on diagnostic address
2 blinks in one second, 2 seconds OFF	Program Mode; Module is being programmed
5 blinks per second	Rapid Blink Mode; Hardware problem or duplicate address

Module Detail - Front View (Faceplate Removed)



Troubleshooting Guide

Symptom	Cause and Action
Diagnostic LED OFF	<p>Power is not present at module:</p> <ul style="list-style-type: none"> • Check to make sure the module circuit is powered • Remove module and check wiring
Diagnostic LED is in “Lighthouse” Mode	<p>The module is not communicating with the processor:</p> <ul style="list-style-type: none"> • Check for open Class 2/PELV wiring • Check for shorted Class 2/PELV wiring • Check Class 2/PELV wiring for mis-wire <p>Module is set at a diagnostic address (0, 9-F):</p> <ul style="list-style-type: none"> • Set address switch to valid module address (1-8) <p>System not properly configured or addressed in the HomeWorks® Utility:</p> <ul style="list-style-type: none"> • Check address in the <i>HomeWorks</i> Utility • Upload programming configuration from the <i>HomeWorks</i> Utility terminal
Diagnostic LED is in “Rapid Blink” Mode	<p>Two modules are at the same address:</p> <ul style="list-style-type: none"> • Set modules to proper addresses <p>A module is set to the same address as a GRAFIK Eye® Control Unit:</p> <ul style="list-style-type: none"> • Set module or <i>GRAFIK Eye</i> Control Unit to the proper address
Loads do not respond to keypad button presses	<p>Module is set at a diagnostic address (0, 9-F):</p> <ul style="list-style-type: none"> • Set address switch to valid module address (1-8) <p>Power is not present at loads:</p> <ul style="list-style-type: none"> • Verify individual zone output using the address switch (9-F) • Remove module and check line voltage wiring <p>Keypad is not programmed or addressed correctly:</p> <ul style="list-style-type: none"> • Check keypad programming and address in the <i>HomeWorks</i> Utility • Check keypad for proper address
Default Scene does not turn on loads properly	<p>Default Scene is not configured properly in the <i>HomeWorks</i> Utility:</p> <ul style="list-style-type: none"> • Check override levels for WPM zones in the <i>HomeWorks</i> Utility <p>Module set at a diagnostic address (0, 9-F):</p> <ul style="list-style-type: none"> • Set address switch to a valid module address (1-8) <p>WPM zone outputs are not assigned loads in the <i>HomeWorks</i> Utility:</p> <ul style="list-style-type: none"> • Assign loads to the WPM zone outputs in the <i>HomeWorks</i> Utility

Notes:

World Headquarters

Lutron Electronics Co., Inc.
7200 Suter Road
Coopersburg, PA 18036-1299, U.S.A.
TOLL FREE: (800) 523-9466 (U.S.A., Canada and the Caribbean)
Tel: (610) 282-3800; International 1 610 282-3800
Fax: (610) 282-3090; International 1 610 282-3090

European Headquarters

Lutron EA LTD
Lutron House
6 Sovereign Close
Wapping
London, E1 9HW England
FREEPHONE: (0800) 28 21 07 (U.K.)
Tel: (171) 702-0657; International 44 171 702-0657
Fax: (171) 480-6899; International 44 171 480-6899

Asian Headquarters

Lutron Asuka Corporation K.K.
2nd Floor, Kowa Shiba-Koen Bldg.
1-11 Shiba-Koen 1 chome
Minato-ku, Tokyo
105-0011 Japan
TOLL FREE: (0120) 083 417 (Japan)
Tel: (3) 5405-7333; International 81-3-5405-7333
Fax: (3) 5405-7496; International 81-3-5405-7496

Hong Kong Sales Office

Tel: 2104-7733; International 852-2104-7733
Fax: 2104-7633; International 852-2104-7633

Singapore Sales Office

Tel: 487-2820; International 65-487-2820
Fax: 487-2825; International 65-487-2825

Technical and Sales Assistance

If you need assistance, call the toll-free **Lutron Technical Support Center**. Please provide exact model number when calling.
(800) 523-9466 (U.S.A., Canada and the Caribbean)
Other countries call:
Tel: (610) 282-3800
Fax: (610) 282-3090
Visit our Web site at www.lutron.com

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