HOMEWORKS®

Installation Instructions

Wired Processor
HWI-PO-120, HWI-PM-120,
HWI-PO-H48-120, HWI-PM-H48-120
120 V~, 50/60 Hz, 2 A max.

English

Danger - Locate and lock supply breaker in the OFF position before installing processor assembly.

1. **Install processor in the enclosure:** The *HomeWorks* Wired Processor is attached to the enclosure using three mounting keyholes (see Figure 4).
   a. **For HWI-PM-120 or HWI-PM-H48-120** Install in HWI-PNL-8 enclosure in location shown in Figure 1 using the three screws provided. The processor mounts against the right-hand side of the enclosure. The bottom edge of the processor is 3 1/4" (8.25cm) above the bottom wall of the enclosure when it is positioned properly.
   b. **For HWI-PO-120 or HWI-PO-H48-120 -** Install in HWI-LV32 enclosure in location shown in Figure 2, using the three screws provided with the enclosure.
2. **Set processor address.** Set processor address using Config. Switch S1 (see Figure 3). All switches in Config. Switch S2 should be placed in the down position. The *HomeWorks* Utility will prompt the programmer if any subsequent changes to the configuration switches are required. For HWI-PM-120 or HWI-PM-H48-120, set the Module Interface address switch to “0”. For HWI-PO-H48-120 or HWI-PM-H48-120, the Dimmer Hub is already addressed to “1”.
3. **Connect to *HomeWorks* lighting controls.** For HWI-PM-H48- or HWI-PO-H48- models only, connect the communication wiring from the dimmers to the factory installed Dimmer Hub (see Figure 4). Connect the buses according to the bus assignments that were made using the *HomeWorks* Utility. Gray and violet connections are marked on the printed circuit board.
4. **Connect Dimmer Hub links:** For HWI-PM-H48- and HWI-PO-H48-, a factory harness connects Link 4 to the Dimmer Hub installed. It can be moved to Link 5 if it is assigned to that link in the *HomeWorks* Utility. If additional HWI-H48 boards are to be controlled by this processor, the communication link to those boards should be connected into the same terminal block. Do not connect +15V wire (terminal 2) to an HWI-H48. If the Dimmer Hub link has a cable length of 50 feet (15m) or more, LT-1 link terminators must be installed across MUX and $\overline{\text{MUX}}$ (terminals 3 and 4) at both ends of the link. Refer to HWI-H48 instructions.

Note - Links 4, 5 and 6 are configurable for use as Keypad, GRAFIK Eye®, or H48 links. These links are configured by the *HomeWorks* Utility.

5. **Connect Inter-processor link:** The inter-processor link is used for communication between *HomeWorks* Processors. Connect control wiring to the inter-processor link (link 2), if required. Do not connect the +15V terminal (terminal 2, see Figure 6). If this processor is to be the first or last processor in the daisy chain, attach one of the LT-1 link terminators provided across the MUX and $\overline{\text{MUX}}$ (terminals 3 and 4, see Figure 6). (If LT-1 terminators are unavailable, a 1/2 W resistor between 100 and 150 Ohms may be placed across terminals 3 and 4 to provide termination).

Figure 1 - HWI-PNL-8

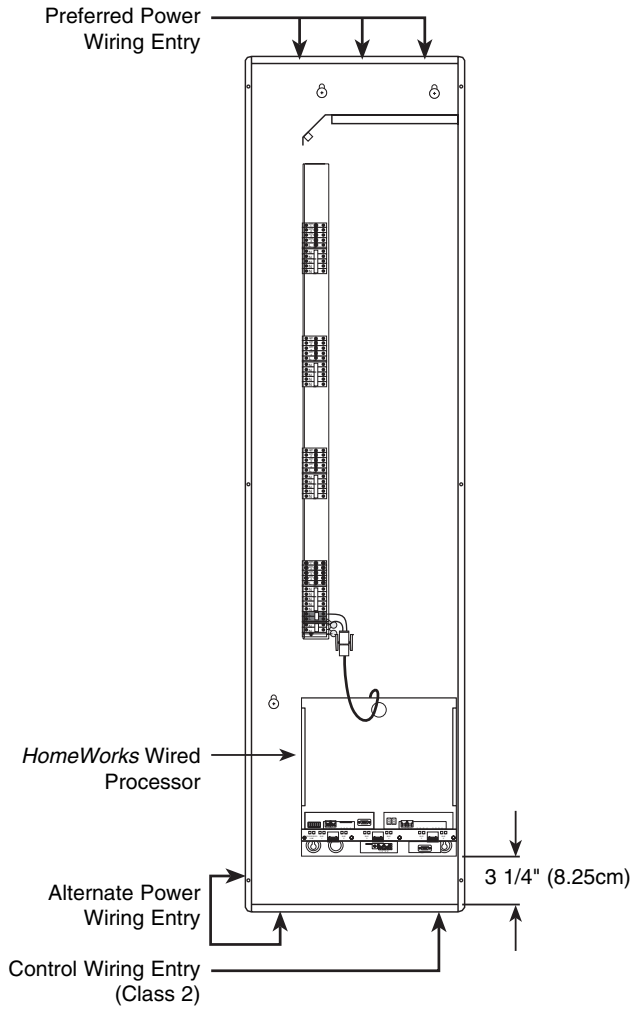
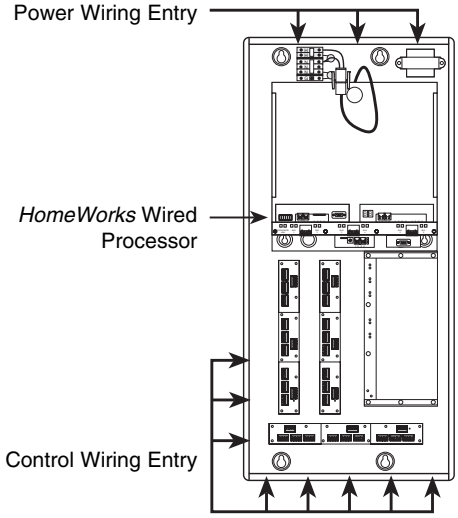


Figure 2 - HWI-LV32-120



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English

6. **Connect Module Interface link:** If this processor is going to control Remote Power Modules (RPM), connect the Module Interface communication link to the processor. Only Module Interfaces that are assigned to this processor in the *HomeWorks* Utility should be connected. For HWI-PO- or HWI-PO-H48- models, connect directly to the processor board terminal block (link 1). For HWI-PM-H48- or HWI-PM- models, connect to the terminal block of the installed Module Interface board. Leave all Lutron-provided harness connections in place. Do not connect the +15V terminal (terminal 2) to Module Interfaces that are not part of the processor assembly. If the Module Interface link has a cable length of 50 feet or more, an LT-1 link terminator must be installed across MUX and $\overline{\text{MUX}}$ terminals (terminals 3 and 4) of the last Module Interface. Refer to HWI-MI- instruction sheet.

Note - Links 4, 5 and 6 are configurable for use as Keypad, *GRAFIK Eye* or H48 links. These links are configured by the *HomeWorks* Utility.

7. **Connect *GRAFIK Eye* links**: If *GRAFIK Eye* preset dimming controls are to be controlled by this processor, connect the communication wires to link(s) 4, 5, or 6 as configured in the *HomeWorks* Utility. Do not connect the +15V terminal (terminal 2) at any time.
8. **Connect Keypad links:** For keypads or keypad link devices (e.g. HWI-CCO-8) that are to be controlled by this processor, connect the communication wires to link(s) 4, 5, or 6 as configured in the *HomeWorks* Utility.
9. **Connect power.** Plug the Power Input Harness (black and white wires) into the Power Feed Harness that comes pre-installed in the panels. The *HomeWorks* processor has battery-backed memory and timeclock devices. The battery provides power to these devices during power outages and other temporary power interruptions. In vacation homes and other residences which are not continuously occupied, the *HomeWorks* processor **MUST** be powered by a circuit that is never turned off even when the residence is unoccupied.
10. **Turn power ON.** Restore the supply breaker to the ON position. Turn the processor power switch ON (see Figure 4).
11. **Troubleshoot the unit.**
    a. **Confirm that the unit is powered**. Check that the "System Power On" LED is ON (see Figure 5). If it is not ON, check the processor power switch and supply breaker positions to confirm they are ON.
    b. **Check if any links are shorted.** Check if the "Power Shorted on Links 1, 2, 4, 5, or 6" LED is ON (see Figure 5). This indicates that there is a short somewhere in the control wiring for links 1, 2, 4, 5 or 6, between the +15V terminal (2) and the Common terminal (1). Remove the links one at a time to identify which contains the short. The Power Shorted LED will turn OFF when the shorted link is removed.
    c. **Additional troubleshooting information** is available in the *HomeWorks* Utility or from the *HomeWorks* Dealer/Installer webpage.
12. **Connect Serial Links.** Connect a standard DB9 male connector to the Link 3 and/or the Link 7 RS232 connector on the processor for system programming or communications with other equipment. A straight through cable (not a null modem) is required for programming the system using a laptop. If, at a later date, the processor is connected to a modem, a null modem adapter will be needed between the processor and the attached modem. Use Black Box® modem cable, BC00200 (consult the *HomeWorks* Utility online help for modem installation and configuration details).
13. **Connect manual override for processor with an integral Module Interface.** The Manual Override scene (as programmed in the *HomeWorks* Utility) is activated for all modules connected to the Module Interface by closing the Manual Override switch that is wired between the two terminals (see Figure 4). A toggle switch is provided with each *HomeWorks* Wired Processor for this purpose. For maximum reliability, group Module Interfaces on a single switch. This arrangement should have the switch and all of the Module Interfaces wired in parallel (see Figure 4).

    Note: Proper polarity must be maintained across all units. For manual override cable runs less than 1000 feet (300m) that are connected to a single Module Interface, 24–16 AWG (0.5–1.5mm^2) wiring can be used. For Manual Override cable runs exceeding 1000 feet (300m) or those that are connected to multiple Module Interfaces, 18–16 AWG (1.0–1.5mm^2) wiring must be used. If the installer chooses to use their own switch, the switch must be rated for switching 50mA @ 28VDC. For switching multiple Module Interfaces the switch must be rated for switching the sum of the current for all of the Module Interfaces connected (e.g., 6 Module Interfaces wired to a single Manual Override switch would require a switch rated for 300mA @ 28VDC).
14. **Program Manual Override Scene.** The Manual Override levels can be programmed using the *HomeWorks* Utility in the Load Schedule screen.

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Figure 3 - *HomeWorks* Wired Processor Address Settings (Config Switch S1)

Address Number and Switch Setting

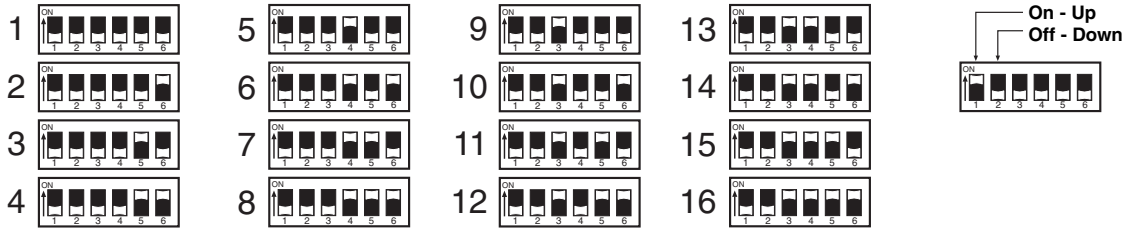


Figure 4 - *HomeWorks* Wired Processor with label

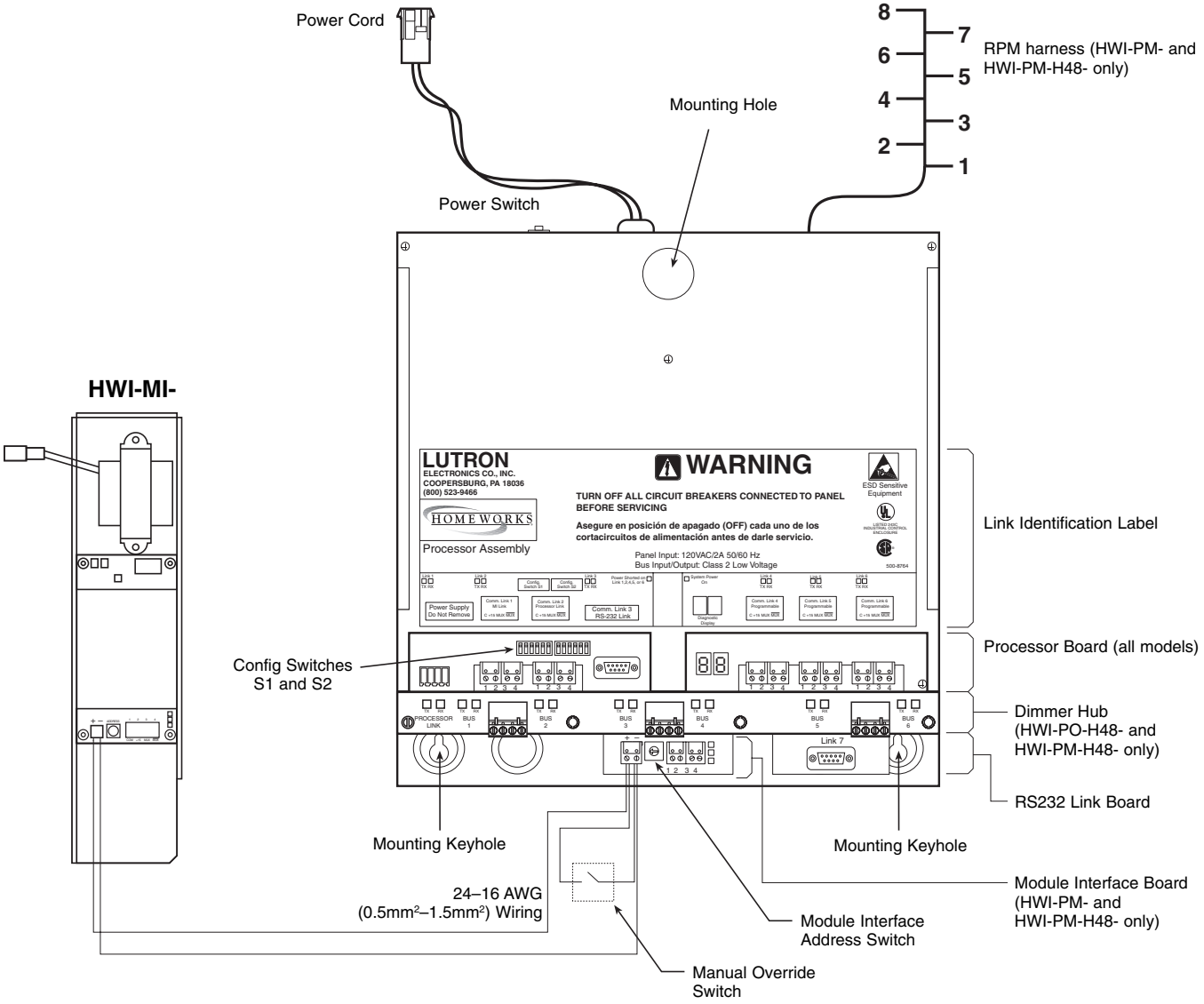
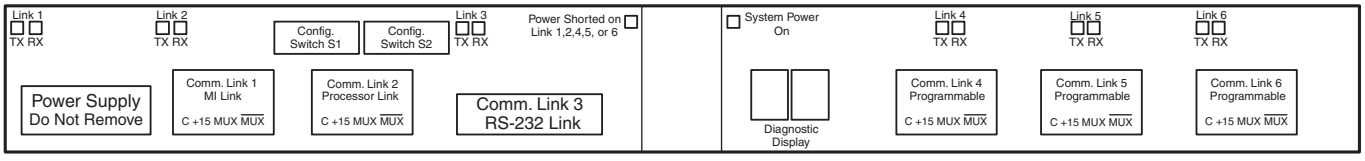
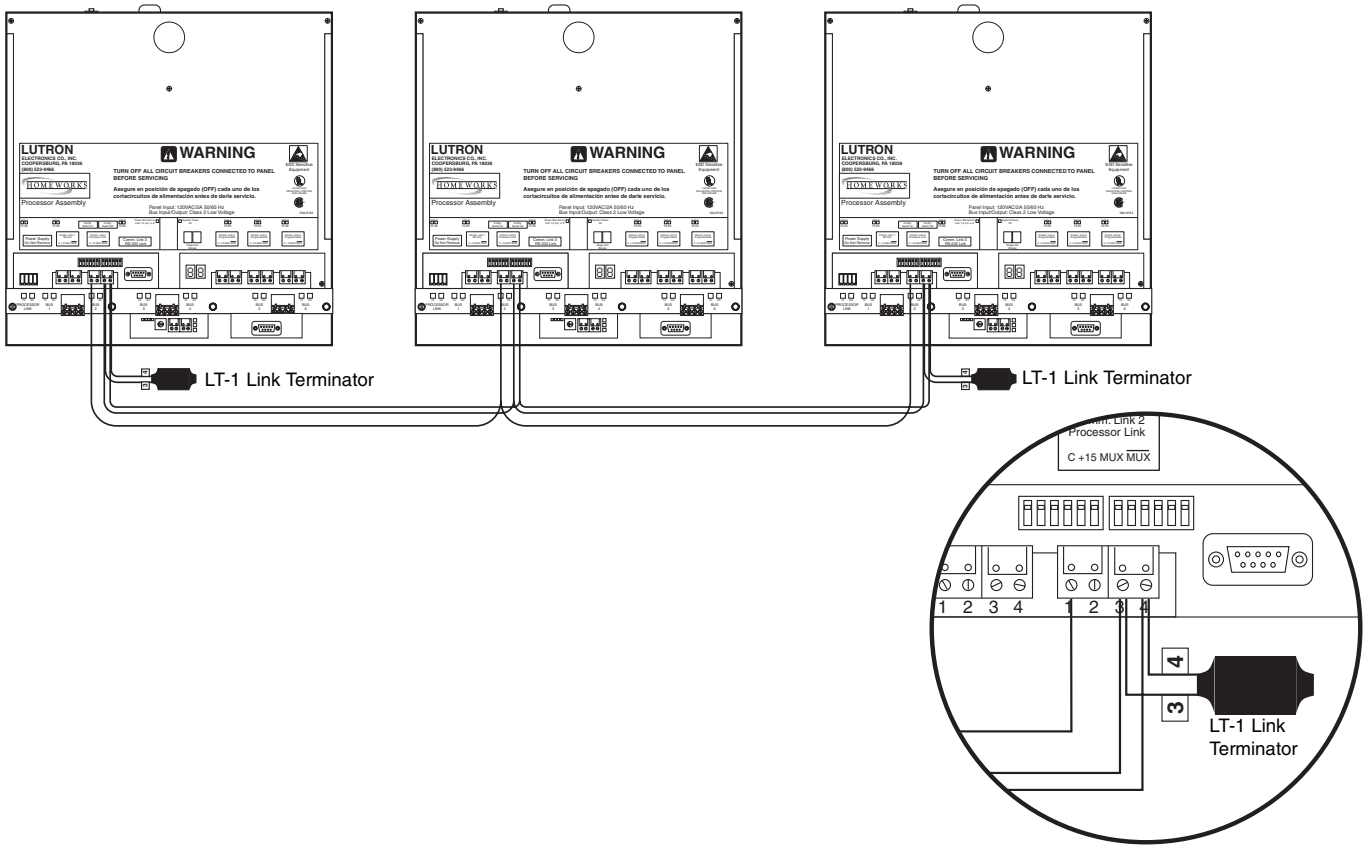


Figure 5 - Link Identification Label



English

Figure 6 - Daisy Chained *HomeWorks* Processors



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7200 Suter Road
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Made and printed in the U.S.A. 2/03 P/N 043-128 Rev. A