HOMEWORKS® 8 Series

Installation Instructions

8 Series™ Processor

H8P5-CE, H8P5-MI-CE,
H8P5-H48-CE, H8P5-MI-H48-CE
220/240 V~ 50/60 Hz 1 A

English

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

1. **Install processor in the enclosure:** The HomeWorks® *8 Series* Processor is attached to the enclosure using three mounting keyholes (see Figure 4).
   a. **For H8P5-MI-CE** and **H8P5-MI-H48-CE -** Install in HWI-PNL-8-CE 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 83 mm (3 1/4 in.) above the bottom wall of the enclosure when it is positioned properly.
   b. **For H8P5-CE** and **H8P5-H48-CE -** Install in HWI-LV32-CE enclosure in location shown in Figure 2, using the three screws provided with the enclosure.
2. **Set processor address.** Set processor address using the Configuration Switch (see Figure 3). The *HomeWorks* Illumination™ Software will prompt the programmer if any subsequent changes to the configuration switches are required. For H8P5-MI-CE and H8P5-MI-H48-CE, the Module Interface is already set to address "0" and cannot be changed. For H8P5-H48-CE and H8P5-MI-H48-CE, the Dimmer Hub (HWI-H48-CE) is already set to address "1" and cannot be changed.
3. **Connect to *HomeWorks* lighting controls.** For H8P5-MI-H48-CE or H8P5-H48-CE models only, connect the communication wiring from the *HomeWorks* Maestro® Dimmers to the factory installed Dimmer Hub (see Figure 4). Connect the buses according to the bus assignments that were made using the *HomeWorks Illumination* Software. Gray and violet connections are marked on the printed circuit board.
4. **Connect Dimmer Hub links:** For H8P5-MI-H48-CE and H8P5-H48-CE, the Dimmer Hub is internally connected to Link 4. If additional HWI-H48-CE or HWI-Q96 boards are to be controlled by this processor, the communication link to those boards should be connected into the terminal block for Link 4. Do not connect +15V wire (terminal 2) to an HWI-H48-120. If the Dimmer Hub link has a cable length of 15 m (50 ft.) 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-D48 instructions.

Note - Links 4, 5, 6, and 8 are configurable for use as Keypad, GRAFIK Eye®/WPM, or H48/Q96 links. These links are configured by the *HomeWorks Illumination* Software.

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 +15 V 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-CE

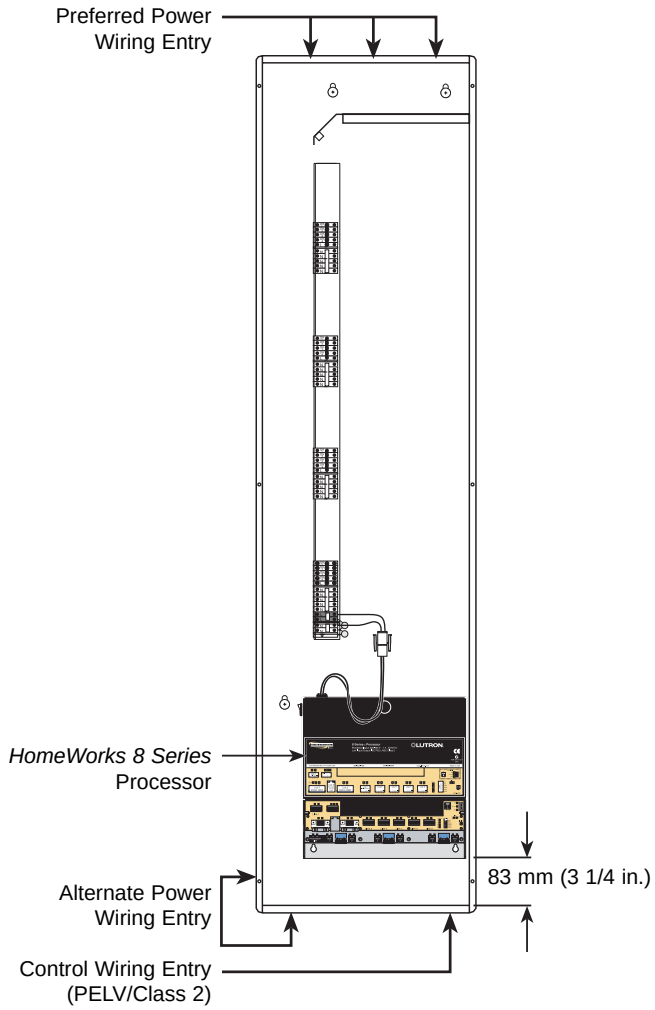
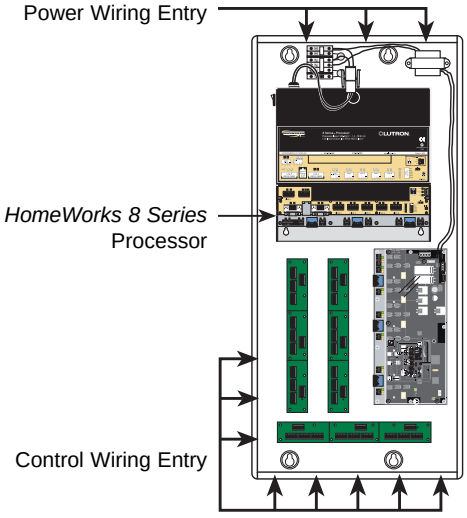


Figure 2 - HWI-LV32-CE



LUTRON®

6. **Connect RPM harness and Module Interface link:** If this processor is going to control Remote Power Modules (RPMs) installed in the same panel as the processor, plug in the RPM harness' four-pin connectors to each of the RPMs.
   If this processor is going to control RPMs in additional Remote Power Panels, connect the Module Interface communication link (Link 1) to the processor. Only Module Interfaces that are assigned to this processor in the HomeWorks™ Illumination™ Software should be connected. Do not connect the +15 V terminal (terminal 2) to Module Interfaces. If the Module Interface link has a cable length of 50 feet (15 m)or more, an LT-1 link terminator must be installed across MUX and MUX terminals (terminals 3 and 4) of the last Module Interface. Refer to HWI-MI- instruction sheet.

   Note - Links 4, 5, 6, and 8 are configurable for use as Keypad, GRAFIK Eye®/WPM, or H48/Q96 links. These links are configured by the *HomeWorks Illumination* Software.

7. **Connect *GRAFIK Eye* links**: If *GRAFIK Eye* preset dimming controls or Wallbox Power Modules (WPMs) are to be controlled by this processor, connect the communication wires to link(s) 4, 5, 6, or 8 as configured in the *HomeWorks Illumination* Software. Do not connect the +15 V 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, 6, or 8 as configured in the *HomeWorks Illumination* Software.
9. **Connect Hybrid Repeater link:** For the H8P5-H48-HRL-CE and H8P5-HRL-CE models only, connect the Hybrid Repeater communication wires to Link 8. Note: DO NOT connect the +15 V terminal (terminal 2) if the Hybrid Repeater(s) will be powered by the plug-in 9 V⎓ adapter provided with the repeater(s).
10. **Connect external input closures (if applicable)**. The processor accepts three low-voltage dry contact closures. **Important:** Use only the terminal block connector that is provided with the processor.

    When using the input closures: Verify compatibility of external devices. The input closures are intended for use with devices that provide dry contact closures. The inputs may be used with ground-referenced, solid-state closures if the closures have an on-state saturation voltage of less than 2 V⎓ and an off-state leakage of less than 50 µA. Dry contact or solid-state closures must be capable of switching 15 V⎓ at 10 mA. The closures must stay in the closed or open states for at least 40 msec in order to be recognized by the processor. If there is any question as to whether the contact closure device is compatible with these specifications, contact the manufacturer of that device.
    The Contact Closure Input Status LEDs will illuminate when a contact closure is closed on the corresponding input.
11. **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.
12. **Turn power ON.** Restore the supply breaker to the ON position. Turn the processor power switch ON (see Figure 4, page 4).
13. **Verify operation.**
    a. **Confirm that the unit is powered**. Check that the "PWR" LED is ON (see Figure 5, page 4). 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 "Link Short" LED is ON (see Figure 5, page 4). This indicates that there is a short somewhere in the control wiring for links 4, 5, 6, or 8, between the +15 V terminal (2) and the Common terminal (1). Remove the terminal blocks one link at a time to identify the shorted link. The "Link Short" LED will turn OFF when the shorted link is removed.
    c. **Additional information** is available from the *HomeWorks* Dealer/Installer webpage.
14. **Connect Serial Links (if applicable).** 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 via the serial link using a laptop. If the processor is connected to a modem, a null modem adapter is needed between the processor and the attached modem. See Figure 7, page 6 for serial port configuration details.
15. **Connect Ethernet Link (if applicable).** Connect a standard RJ45 connector to the Link 9 Ethernet jack on the processor for system programming or communications with other equipment. A crossover cable is required for a direct connection to a computer. If plugging in to a network, a standard cable is used (See Figure 8, page 6). The orange LED (ACT) will illuminate when there are any Ethernet signals being transmitted or received on Link 9. The green LED (CON) will illuminate when the Link 9 is connected to a hub/switch/router or a computer. For help configuring a laptop to talk to the processor, see Help in the *HomeWorks Illumination* Software.
16. **Connect Manual Override for processor with an integral Module Interface.** The Manual Override Scene (as programmed in the *HomeWorks Illumination* Software) is activated for all RPMs connected to the Module Interface by closing the Manual Override switch that is wired between the two terminals (see Figure 4, page 4). A toggle switch is provided with each *HomeWorks* 8 Series™ 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, page 4).

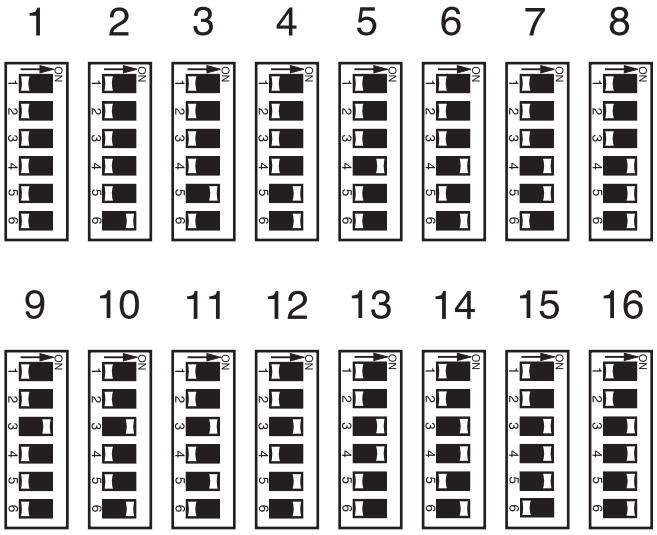
    Note: Proper polarity must be maintained across all units. For manual override cable runs less than 1000 feet (300 m) that are connected to a single Module Interface, 24–16 AWG (0.5–1.5 mm^2) wiring can be used. For Manual Override cable runs exceeding

1000 feet (300 m) or those that are connected to multiple Module Interfaces, 18–16 AWG (1.0–1.5 mm^2) wiring must be used. If the installer chooses to use their own switch, the switch must be rated for switching 50 mA @ 28 V⎓. 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 300 mA @ 28 V⎓).

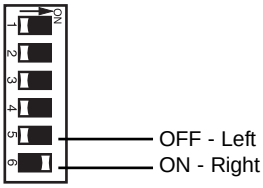
17. **Program Manual Override Scene.** The Manual Override levels can be programmed using the HomeWorks™ Illumination™ Software in the Load Schedule screen.

Figure 3 - *HomeWorks* 8 Series™ Processor Address Settings

Address Number and Switch Setting



Example: Setting Switch #6 ON.



Configuration DIP Switches

DIP Switch	OFF	ON
1	Normal Mode	Boot Mode
2	User-Configured RS-232 Baud Rate	9600 Baud
3-6	Address	

Figure 4 - HomeWorks™ 8 Series™ Processor with label

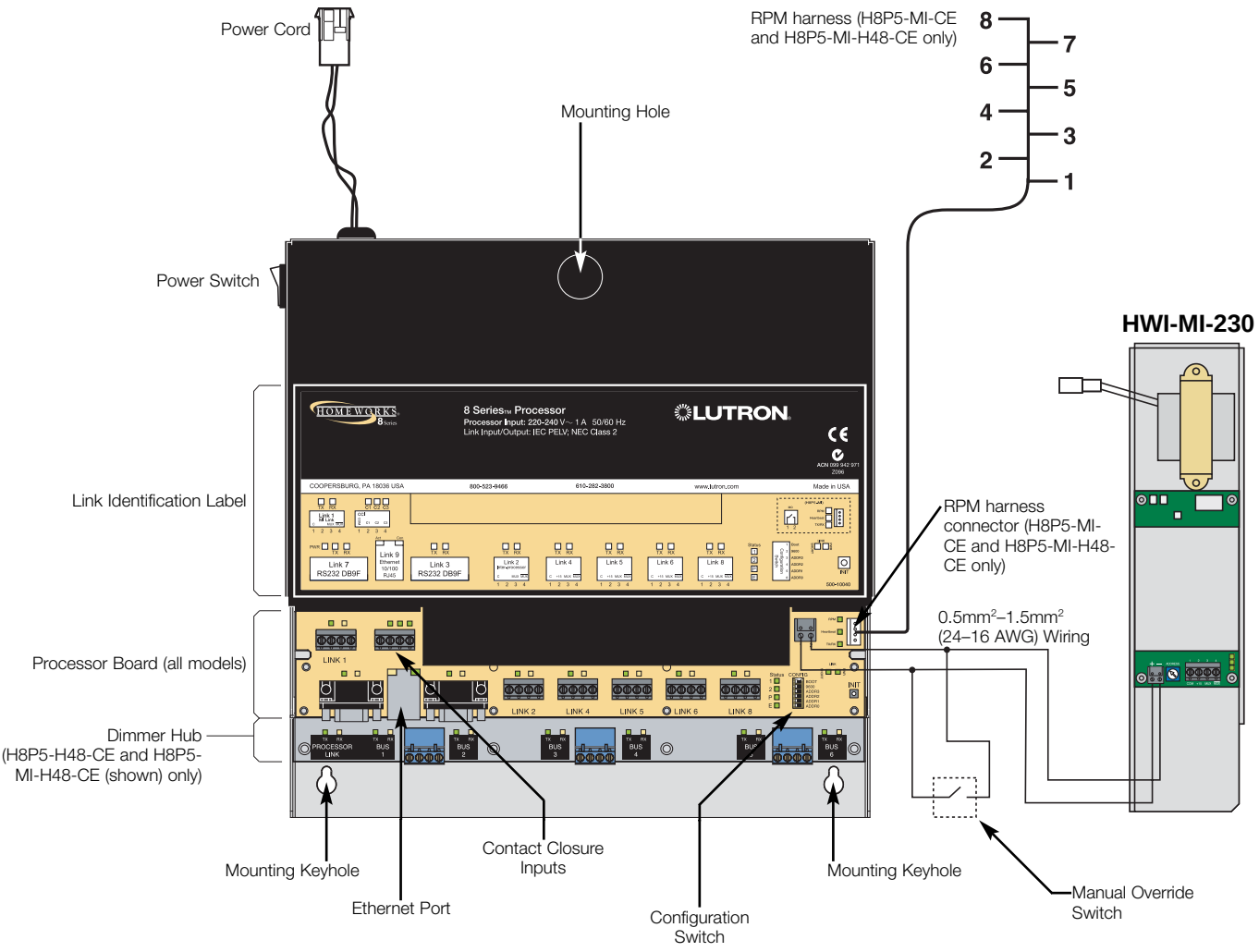


Figure 5 - Link Identification Label

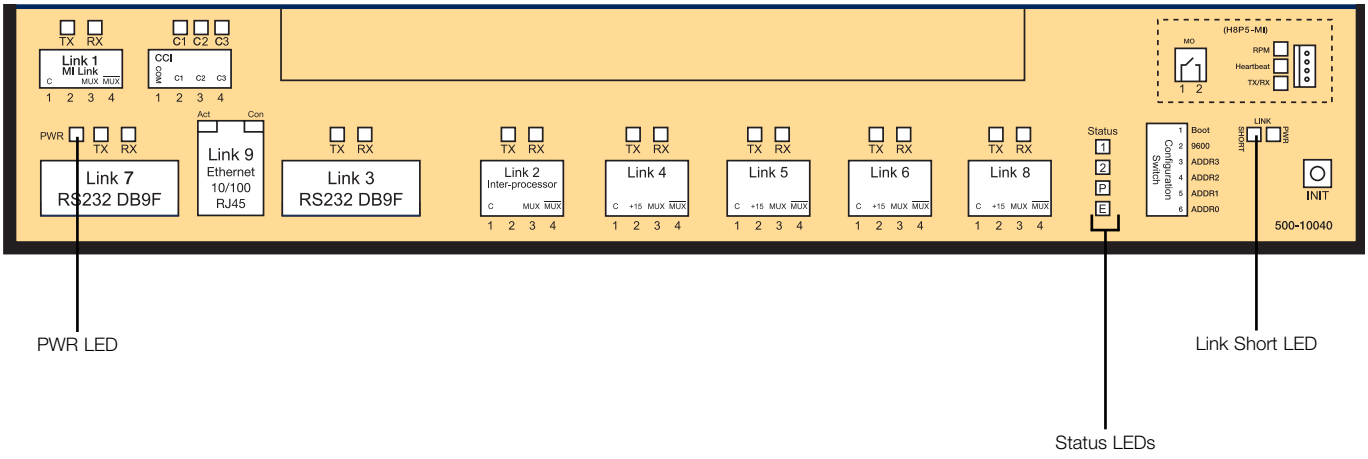


Figure 6 - Daisy Chained HomeWorks™ Processors

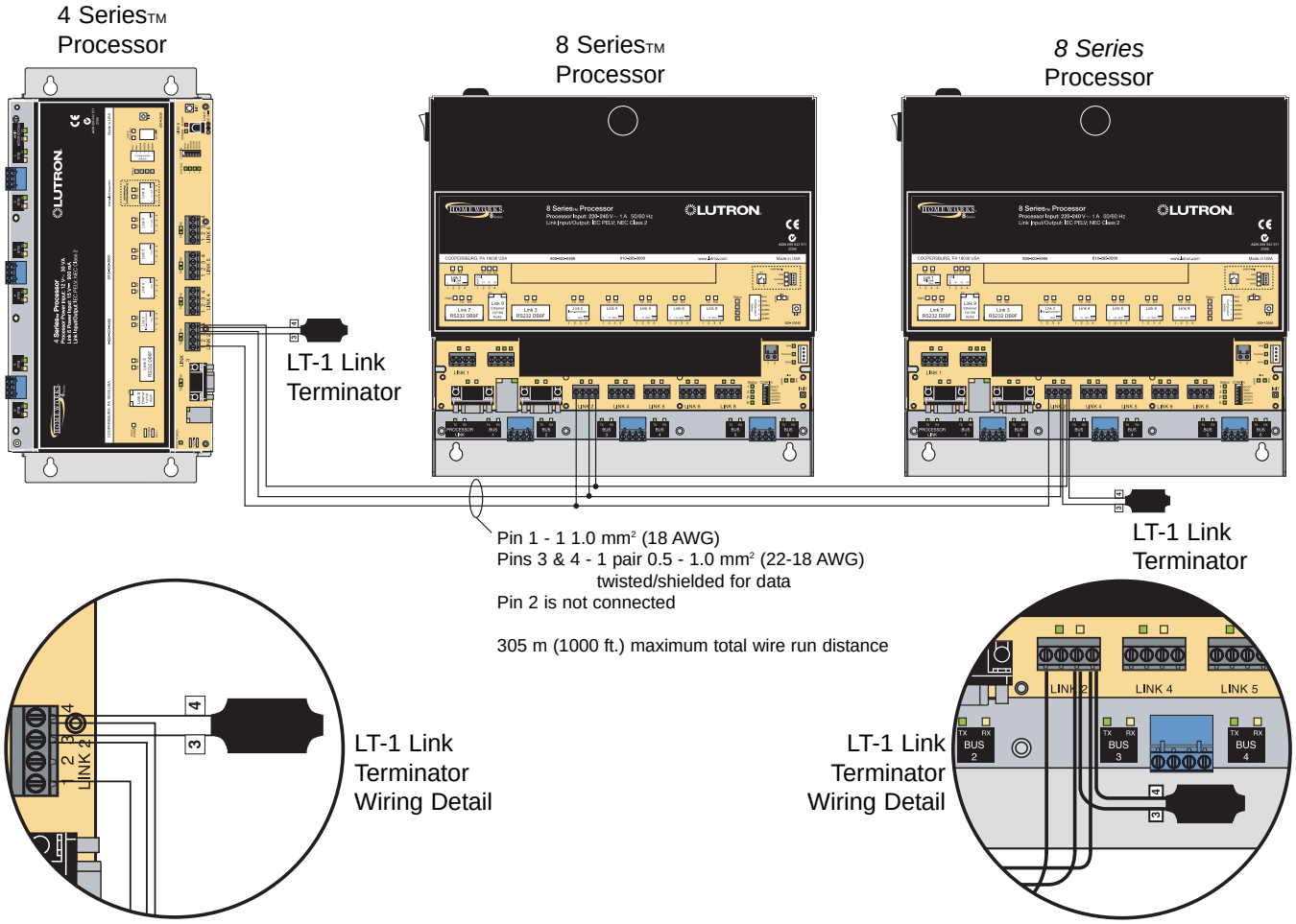
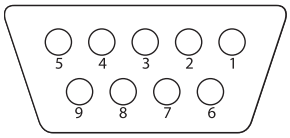
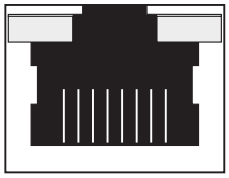


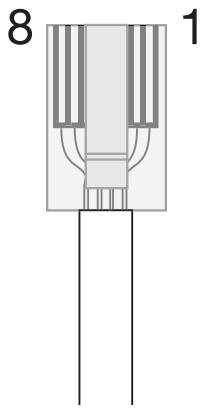
Figure 7 - RS-232 Port Configuration



HWI Pin Number	HWI Pin Name	Description for HWI Processor	Required for Hardware Handshaking	Required for Simple Communications (Hardware Handshaking Disabled)
1	DCD	Data Carrier Detect (input)		
2	TXD	Transmit Data (output)	X	X
3	RXD	Receive Data (input)	X	X
4	DSR	Data Set Ready (input)	X	
5	GND	Ground	X	X
6	DTR	Data Terminal Ready (output)	X	
7	CTS	Clear To Send (input)	X	
8	RTS	Request To Send (output)	X	
9	RI	Ring Indicate (input)		

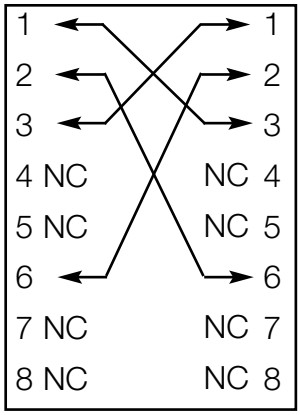
Figure 8 - Ethernet Port and Cable Configuration





Pin	Processor	Ethernet Hub/Switch
1	Transmit +ve	Receive +ve
2	Transmit -ve	Receive -ve
3	Receive +ve	Transmit +ve
4	*No Connection*	*No Connection*
5	*No Connection*	*No Connection*
6	Receive -ve	Transmit -ve
7	*No Connection*	*No Connection*
8	*No Connection*	*No Connection*

Crossover Cable Configuration
A crossover cable is used when connecting the processor directly to a laptop or other non-hub device (a/v systems, HVAC, etc.)



Notes:

English
For installation instructions in different languages, please go to the link below:

Español
Si desea instrucciones de instalación en otros idiomas, visite el siguiente enlace:

Français
Pour obtenir des instructions d'installation dans d'autres langues, veuillez utiliser le lien suivant :

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Para obter instruções de instalação noutros idiomas, visite:

Deutsch
Installationsanweisungen in verschiedenen Sprachen finden Sie unter:

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Per le istruzioni d'installazione in una lingua diversa, selezionare il link sottostante:

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欲阅读不同语言的安装说明书，请进入以下链接:

www.lutron.com/hwi

Technical Assistance

If you have questions concerning the installation or operation of this product, call ***Lutron's European Headquarters***. Please provide exact model number when calling.

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