

Installation Instructions

1. **Mount HWI-MI-120 in HWI-PNL-8 or HWI-PNL-5.** See Figure 2 for locations.
 - a. **For Surface Mounted Enclosures -** Use No. 8 nuts and bolts with washers (provided).
 - b. **For Recess Mounted Enclosures -** Use No. 12 self-tapping screws (provided).



Danger - Locate and lock supply circuit breaker in the OFF position before connecting power.

2. **Connect Module Wire Harness.** Connect the 4 conductor wire harness that is shipped inside the module interface assembly to the module harness connector on top of the circuit board (see Figure 1). Note that the end of the harness that has the longest length of cable between the end and the second connector is the correct end to attach to the module interface (this end will normally be indicated by a serial number). Feed the end of the harness through the module harness hole on the top end of the assembly (see Figure 1).

Figure 1 - HWI-MI-120

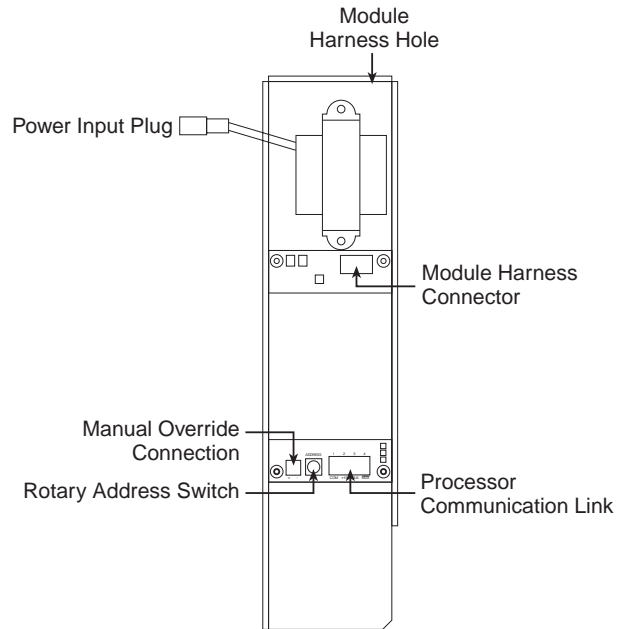
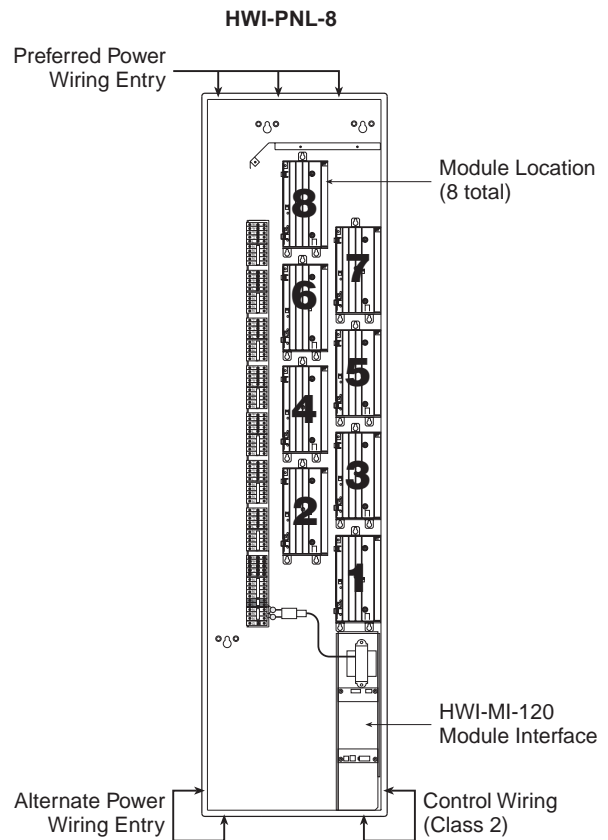
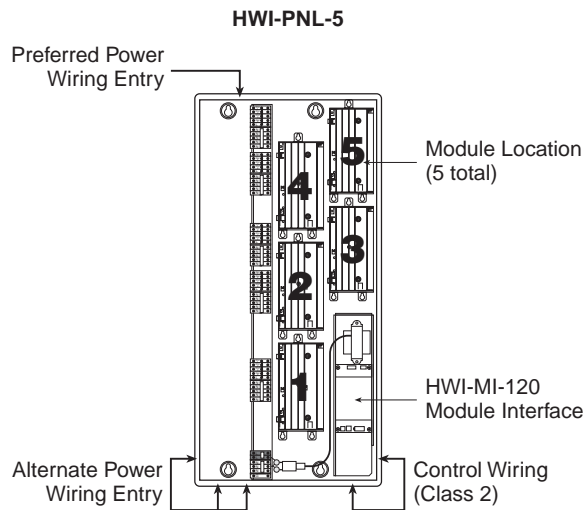


Figure 2 - Module Location



3. **Connect Harness to Modules.** Starting with module #1, connect the module harness to each module that is installed. Any harness connections that remain after all installed modules are connected should be coiled and secured above the last module.



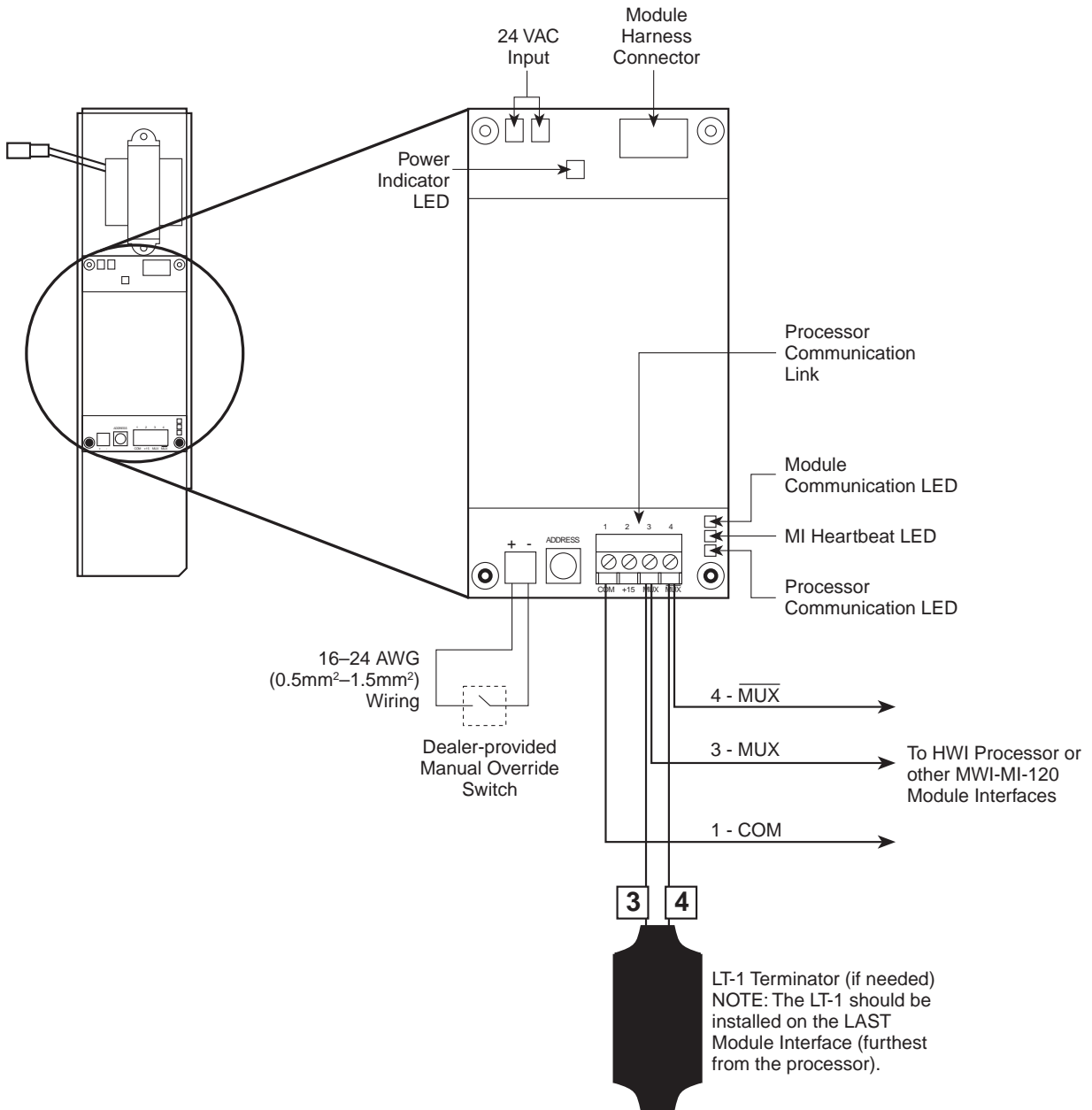
Danger - Harness must be secured such that it cannot come into contact with primary (line voltage) AC wiring.

4. **Set Enclosure Address.** Set the rotary switch on the module interface to the address assigned in the HomeWorks Interactive Utility.
5. **Connect Communication Wiring.** Connect the control wiring to the processor communication link terminal block on the lower end of the module interface board. See Figure 3. The processor communication link must be connected in a daisy chain configuration with a maximum total cable length of 1000 feet (300m). Connect terminals 1, 3 and 4 (Common, MUX, $\overline{\text{MUX}}$) to the 4-position terminal block. See Figure 3. DO NOT connect terminal 2 (+15V) because the module interface is powered from the transformer.
6. **Terminate the processor communication link on the last Module Interface.** If any of the module interfaces are located more than 50 feet (15.25m) from the processor, the last module interface on the chain must utilize a terminator across terminals 3 and 4. LT-1 terminators that are included with the processor may be used for this application. See Figure 3. If LT-1s are unavailable, a 1/4 Watt resistor between 100 and 150 ohms may be placed from terminal 3 to terminal 4 to provide termination. Termination at the processor end of the chain is included on the processor board so an LT-1 is not required.
7. **Connect Input Power.** Connect the power input plug (black and white wires) into the control feed harness that comes pre-installed in the enclosure.
8. **(Optional) Connect manual override cable to the terminal blocks as shown in Figure 3.** The manual override scene (as programmed in the HomeWorks Interactive Utility) is activated for all modules connected to the Module Interface by closing a switch that is wired between the two terminals (see Figure 3). The switch (or relay) contacts must be rated for switching 50mA @ 30VDC. Installing a separate switch for each MI gives the customer the maximum flexibility since it allows separate override scenes for each RPM enclosure. A single switch can be used if all of the MIs are wired to it in parallel, but proper polarity must be maintained across all units. In this configuration, 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 override switch would require a switch rated for 300mA @ 30VDC). For cable runs less than 1000 feet (300m) that are connected to a single Module Interface, 16–24 AWG (0.5–1.5mm²) wiring can be used. For cable runs exceeding 1000 feet (300m) or those that are connected to multiple Module Interfaces, 16–18 AWG (1.0–1.5mm²) wiring must be used.

9. **(Optional) Program Override Scene.** The manual override levels can be programmed using the HomeWorks Interactive Utility. These levels are set in the load schedule screen by pressing function key F5 on the keyboard.
10. **Turn Power ON.** Restore the supply circuit breaker to the ON position.
11. **Verify that the power LED is ON (see Figure 3).** If the power LED is ON, proceed to step 12. If it is not ON, and other LEDs on the Module Interface are ON, terminal 2 in the processor communication link terminal block is connected when it shouldn't be. Remove the connection to terminal 2 before proceeding. If all LEDs on the module interface are OFF, verify that the 24VAC terminals from the transformer are connected to the board, the power plug for the module interface is plugged in and wired to the enclosure terminal blocks, and that the AC circuit breaker is turned ON.
12. **Verify that the module interface is functional.** The heartbeat LED should flash whenever the unit is powered (see figure 3).
13. **Verify processor and module communications.** The LEDs for processor and module communications will flash to indicate proper operation. Module communications are dependent upon processor communications. If the LEDs are not flashing, check the proper connection of the processor communication link terminal block at terminals 3 and 4, and verify that the processor connections are properly made and that it is powered and communicating. The processor must have a valid database uploaded from the HomeWorks Interactive Utility and the Module Interface must be properly addressed for the system to function properly.
14. **If the connected modules function intermittently, check link wiring and link termination.**

Figure 3 - HWI-MI-120 Detail



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

Technical and Sales Assistance

If you need assistance, call the toll-free **Lutron Technical Assistance Hotline**. 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

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

Warranty

Lutron will, at its option, repair or replace any unit that is defective in materials or manufacture within two years after the purchase. This warranty is in lieu of all other warranties, express or implied, and the implied warranty of merchantability is limited to two years from purchase. This warranty does not cover the cost of installation, removal or reinstallation, or damage resulting from misuse, abuse, or damage from improper wiring or installation. This warranty does not cover incidental or consequential damages. This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitation on how long an implied warranty may last, so the above limitations may not apply to you.

LUTRON®

Lutron Electronics Co., Inc.
7200 Suter Road
Coopersburg, PA 18036-1299
Made and printed in the U.S.A. 6/99 P/N 043-038 Rev. B