Panel Link Translator Installation Guide

Installation Instructions

NOTE: The panel link to QS link translator is one component of a total system upgrade from a legacy version of HomeWorks to HomeWorks QSX. The panel link translator allows legacy Remote Power Modules (RPMs) and specification-grade panels to communicate with QSX processors over the QS link.

All other incompatible legacy equipment, including legacy wired keypads and QED shade drives, MUST be replaced. Refer to Lutron Application Note #840 (P/N 048840) for more information on how to upgrade each type of legacy HomeWorks device that is not compatible with QSX.

Installation of the panel link translator varies based on the type of controller being replaced. After identifying the existing controller type, follow the applicable instruction procedure below. Use the Lutron Designer software to configure and commission the panel link translator after installation.

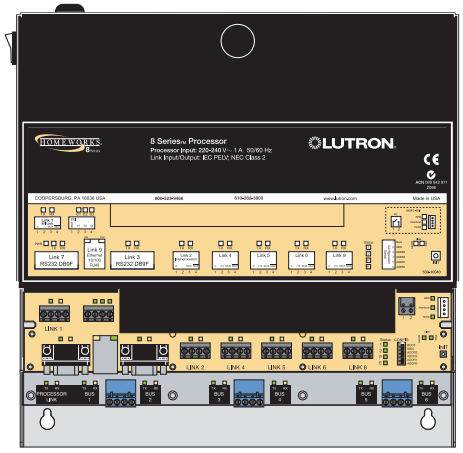
Find Your Current Product:

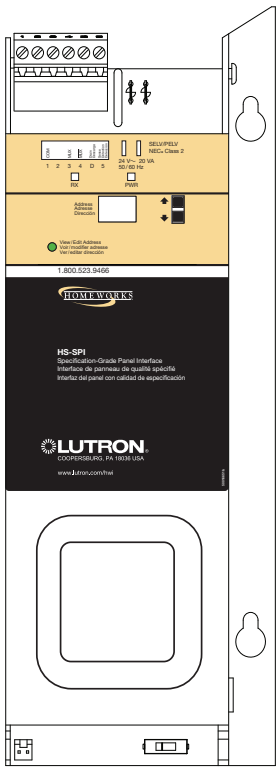
Click on the name or image of your existing product below to be taken to the instructions for replacement.

Module Interface (MI)
Pages 5 - 11

8-Series Processors with Internal Module Interface Link
Pages 12 - 15

Specification Grade Panel Interface (SPI)
Pages 16 - 20





Additional Information:

Click on the links below to be taken to each section.

Overview
Pages 2 - 4

Local Operations
Page 21

Troubleshooting
Page 22

Contact Us
Page 23

Overview

1: QS Link

Connects to the HomeWorks processor for wired communication

- Only connect terminals “1”, “3”, and “4”
- Counts as one device towards the QS link device limit
- Each switch leg on the control link(s) counts towards the switch leg limit
- Refer to Lutron Specification Submittal P/N 369821 at www.lutron.com for system rules

2: Switch

Locally configures the SENSE terminal

- : Reports a power outage on the SENSE terminal
- : Override/disable
- : Senses a power outage via the SENSE terminal
- Set to the center position if the SENSE terminal is unused or if the SENSE (“5” terminal) is not connected

3: LEDs

Provides feedback of the product status

- ⓘ: Provides general feedback
- QS: Indicates QS link communication
- ⏻: Indicates device is receiving power
- Refer to the **Troubleshooting** section on page 22 for additional information

4: Manual Override

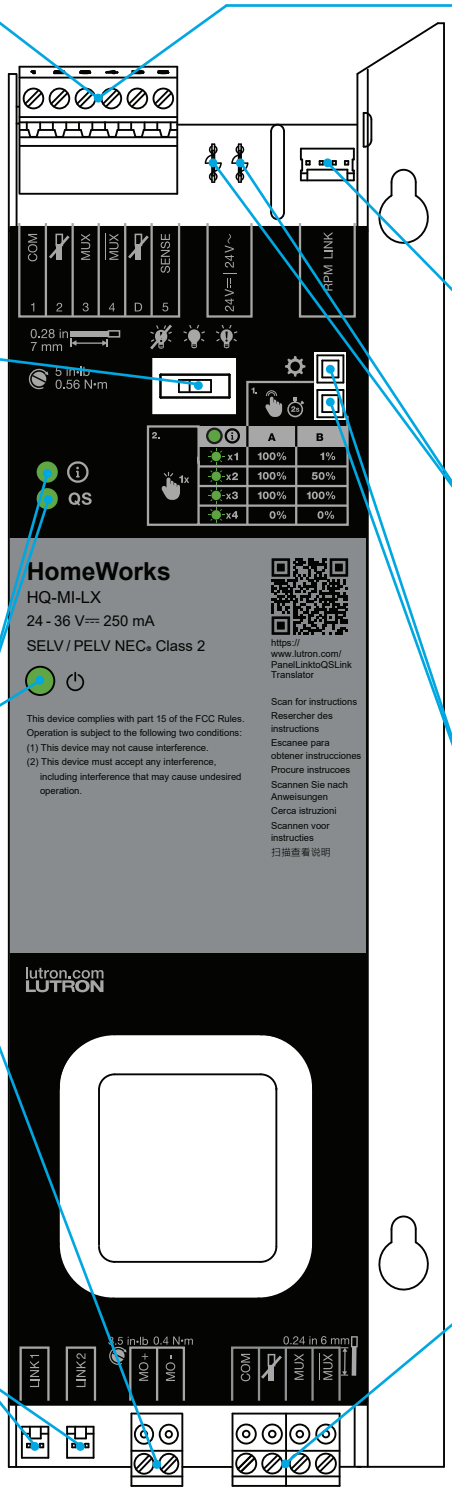
Used to override panel output

- Toggled by a dry contact switch or CCO module
- Device defaults to normal mode if not connected
- A maximum of 32 modules may be connected in parallel to a manual override device
- Refer to Lutron Application Note #701 (P/N 048701) at www.lutron.com for more information

5: Control Links

Wired connection to specification panel dimming cards for switch leg control

- LINK1 (left) and LINK2 (right)
- Only use LINK1 with specification grade dimming panels



6: SENSE Terminal

Connection for applications using the SENSE (“5”) terminal

- Configured by the switch (see **2: Switch** on left side)
- Applications that use the SENSE terminal require an additional 18 AWG (1.0 mm²) SENSE wire

7: RPM Control Link

Wired connection to RPMs for switch leg control

8: Power

Device input power

- 24 V~ from existing transformer or 24 V⎓
- Power terminals are polarity-free
- Maximum input current is 250 mA

9: Local Buttons

Local input for switch leg control and panel function testing

- Refer to the **Local Operations** on page 21 for additional information

10: Bottom QS Link

Second QS link connection point

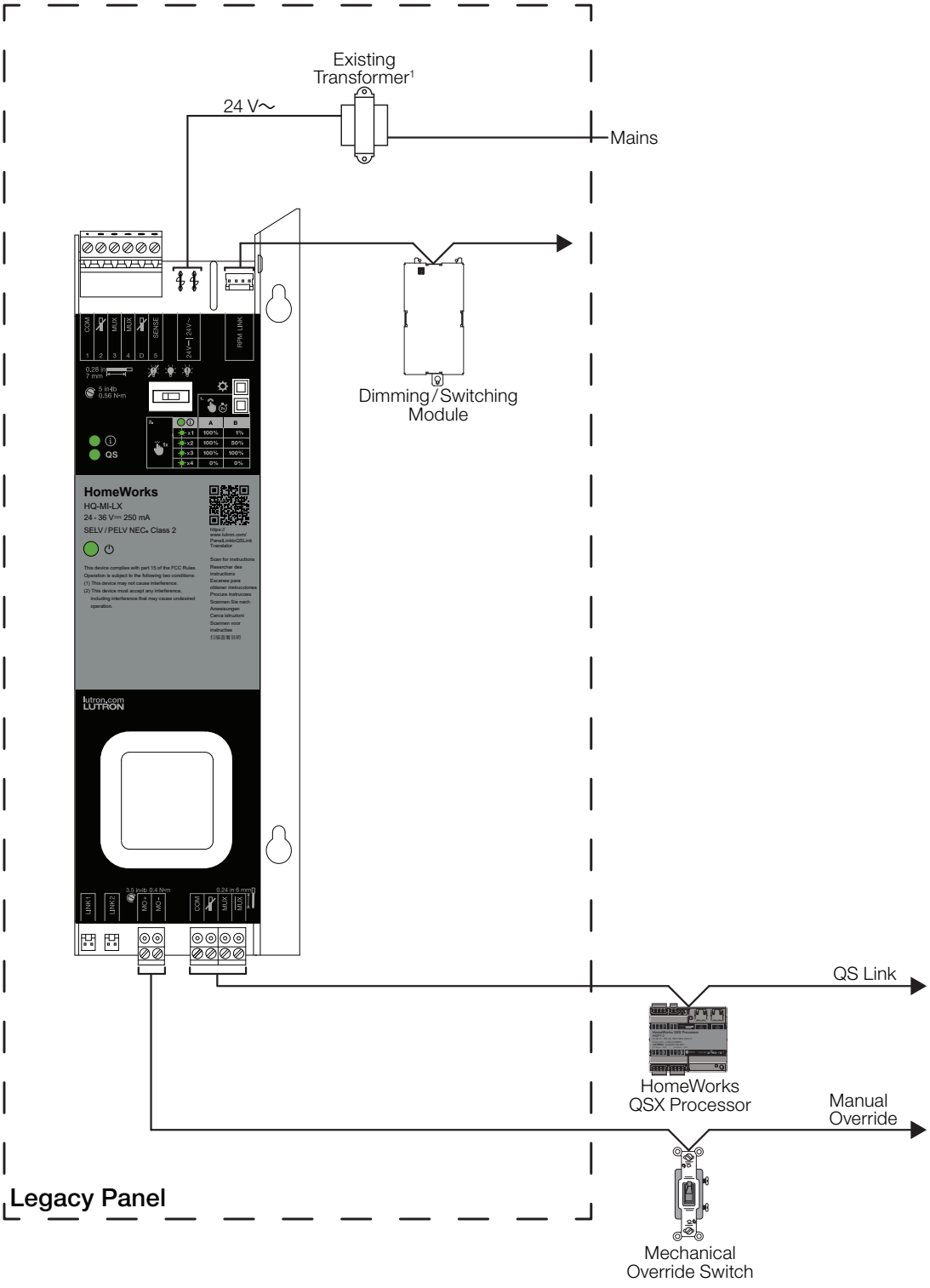
- Only connect terminals “1”, “3”, and “4”

NOTE: The power LED should always be lit when power is applied. Do not use the LED as a panel power indicator. Always remove power from the panel before handling terminals or connectors.

NOTE: All wiring is NEC® Class 2. Follow all applicable national and local codes for proper circuit separation and protection.

Overview *(continued)*

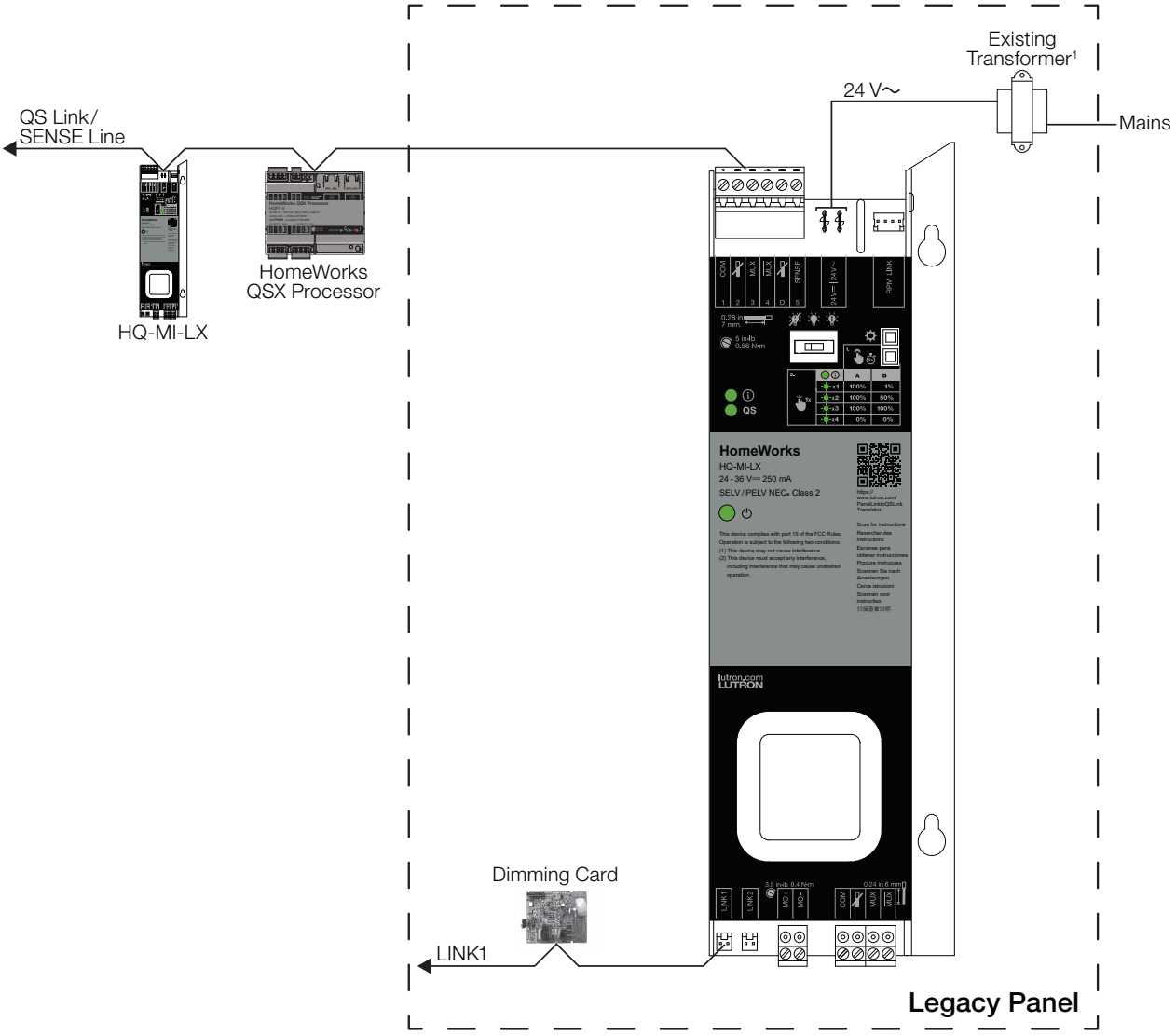
Remote Power Feed-Through Panel Wiring



[1] The panel link translator can also be powered by 24 V⎓.

Overview *(continued)*

Specification Grade Panel Wiring

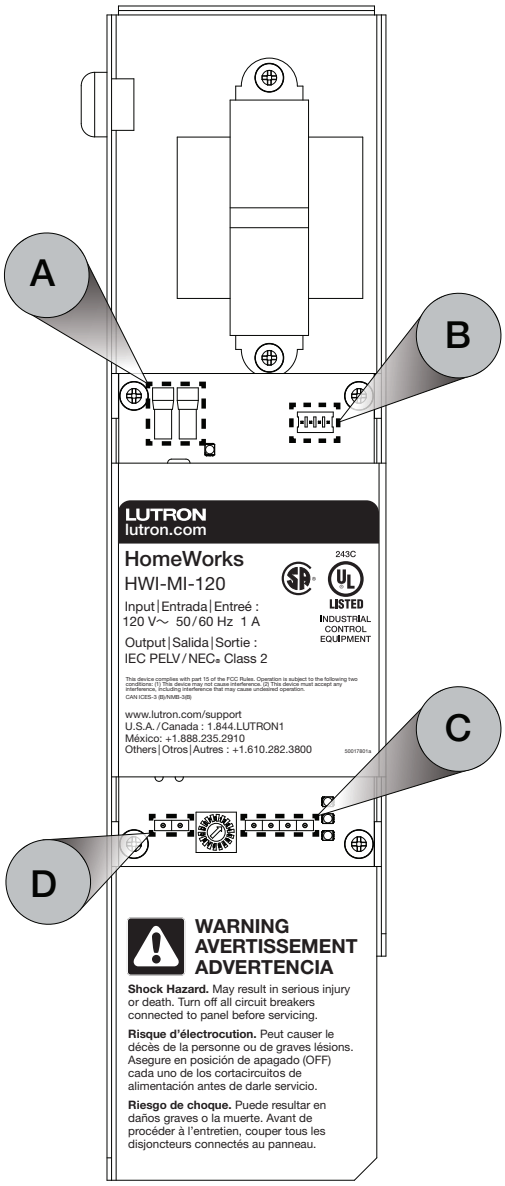


[1] The panel link translator can also be powered by 24 V⎓.

Module Interface (MI)

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

1	Remove the wiring from the existing module interface.
A	Disconnect the Class 2/PELV 24 V⁓ wiring.
B	Unplug the RPM control link harness from the existing module interface.
C	Unplug the MI link terminal block from the existing module interface.
D	Unplug the manual override terminal block from the existing module interface.



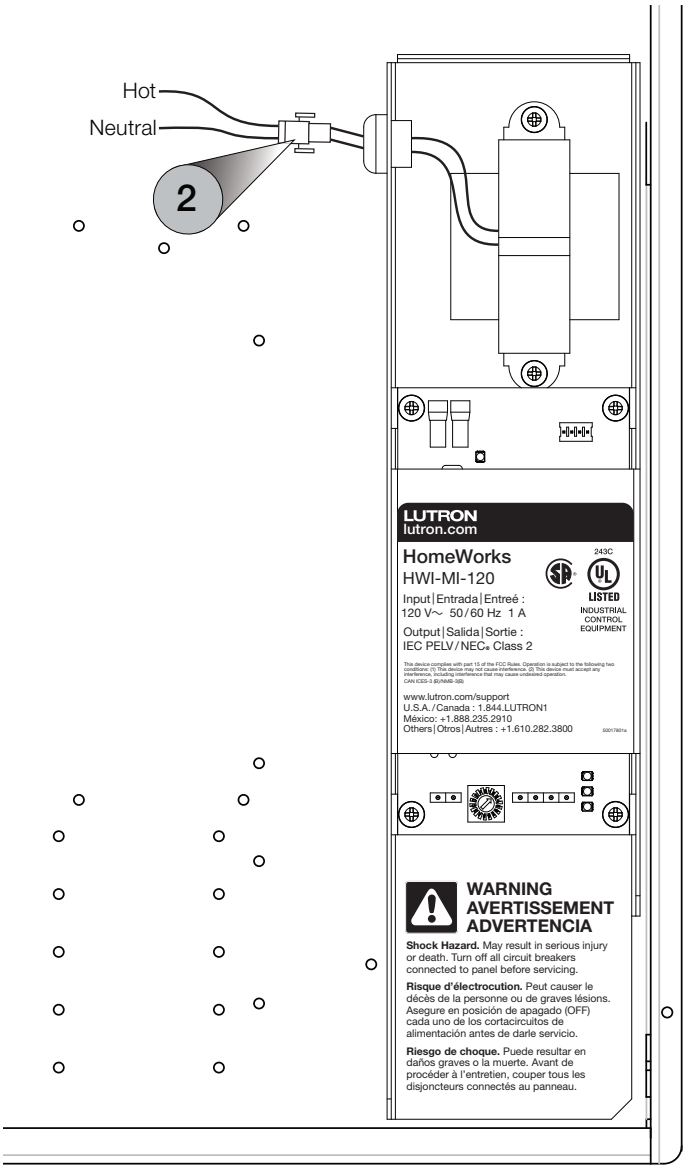
Click here to continue the replacement of a module interface on the next page...

Module Interface (MI) *(continued)*

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

2 Remove the connector that ties the primary wires of the existing transformer to mains power by cutting the wires on both sides.

Strip 11/32 in (9 mm) of insulation from all four wires.



Click here to continue the replacement of a module interface on the next page...

Module Interface (MI) *(continued)*

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

3 Remove the transformer by unscrewing the Philips head screws that are securing it.

Save these screws to use when remounting the transformer in step 6.

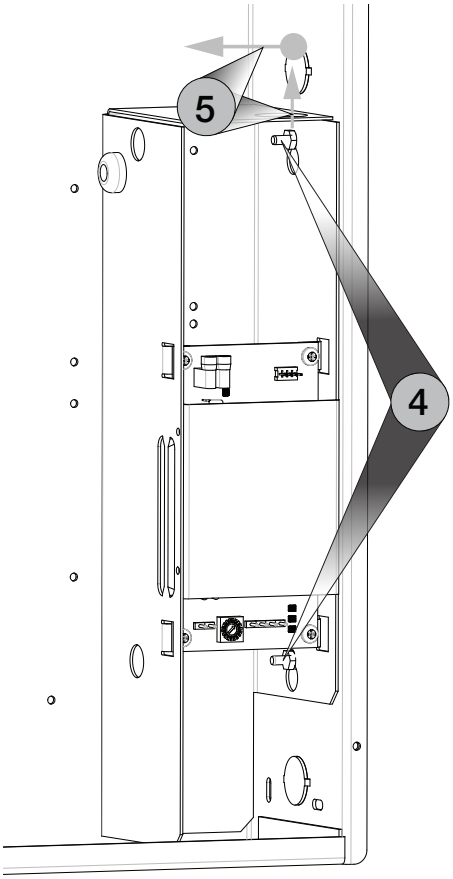
Click here to continue the replacement of a module interface on the next page...

Module Interface (MI) *(continued)*

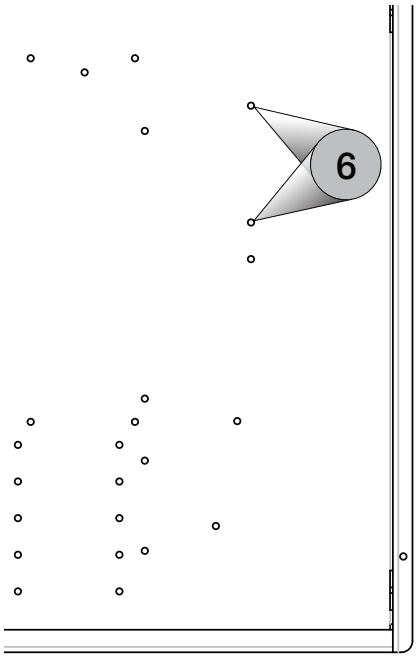
WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

4 Without removing them from the screw/stud, loosen the two 11/32 in (9 mm) nuts in the enclosure.

5 Remove the module interface by sliding it upwards and then pulling it away from the side of the panel.



6 Mount the transformer in the legacy panel using the transformer mounting holes.

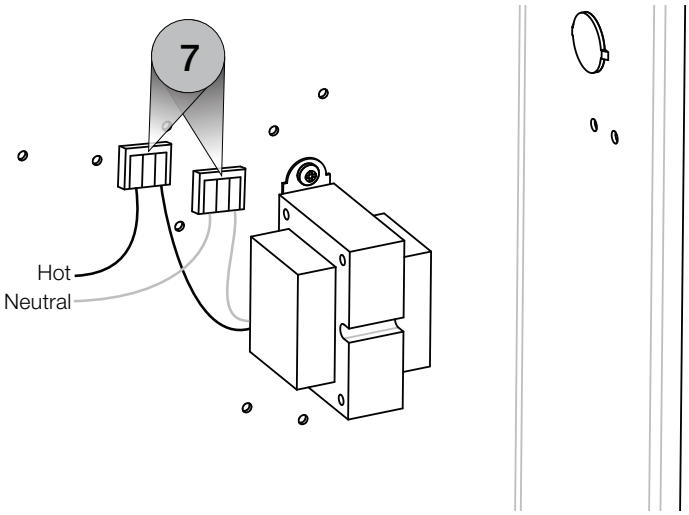


Click here to continue the replacement of a module interface on the next page...

Module Interface (MI) *(continued)*

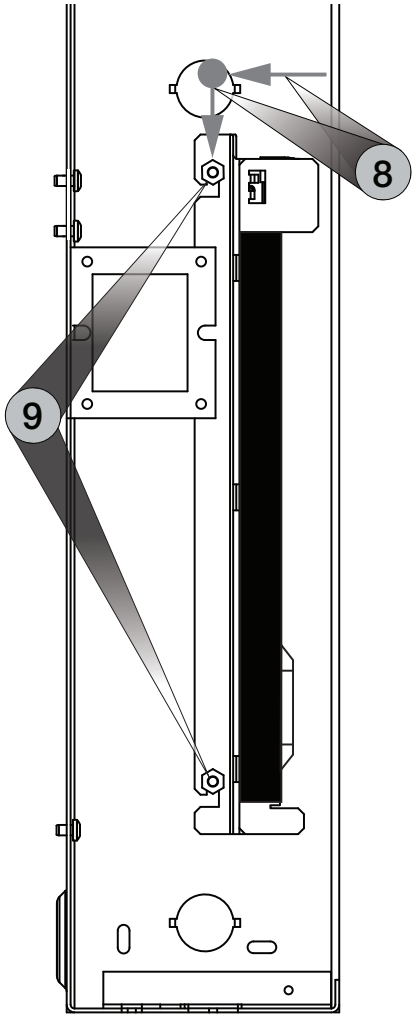
WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

7 Reconnect the transformer to mains power with the lever connectors (provided).



8 Mount the panel link translator by placing it over the screw/stud and then sliding it downward.

9 Firmly tighten both 11/32 in (9 mm) nuts and star washers.



Click here to continue the replacement of a module interface on the next page...

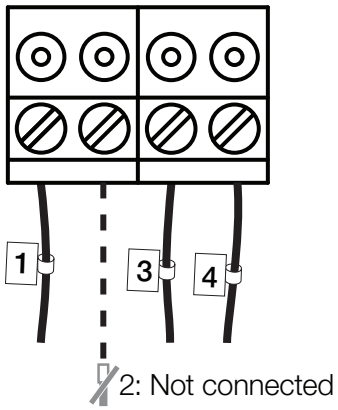
Module Interface (MI) *(continued)*

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

10 Remove and cap the “2” control wire from the bottom QS link terminal block.

This terminal block was removed from the existing controller in step 1C.

The “2” terminal on the terminal block of the panel link translator should not be connected.



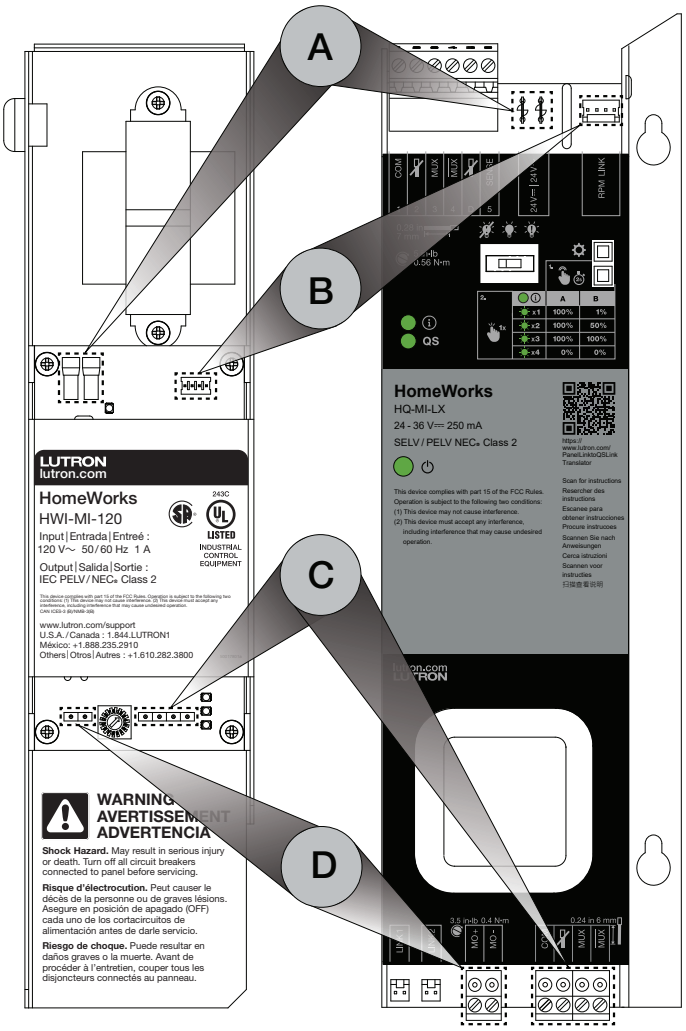
11 Connect the panel link translator to the existing wiring.

A Plug the Class 2/PELV 24 V⎓ wiring into the panel link translator.

B Plug the RPM control link harness from the existing module interface into the RPM control link header on the panel link translator.

C Plug the MI link terminal block from the existing module interface into the bottom QS link header on the panel link translator.

D Plug the manual override terminal block from the existing module interface into the manual override header on the panel link translator.

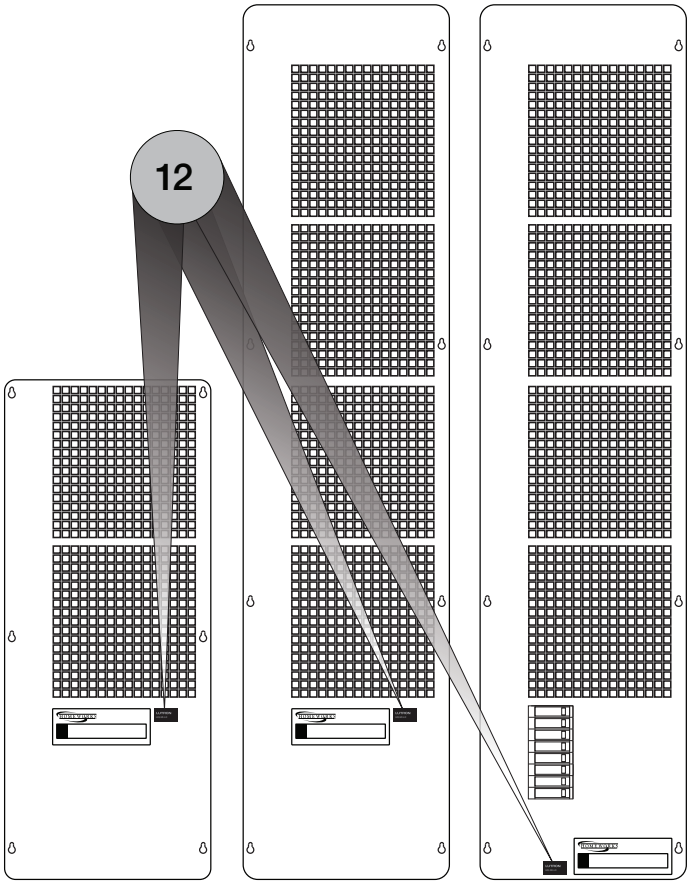


Click here to complete the replacement of a module interface on the next page...

Module Interface (MI) *(continued)*

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

12 Apply the Lutron HQ-MI-LX label (provided) to the legacy panel cover near the existing labeling.



8-Series Processors with Internal Module Interface Link

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

1 HomeWorks QSX processors and QS link power supplies will be required when upgrading an 8-series processor with module interface link.

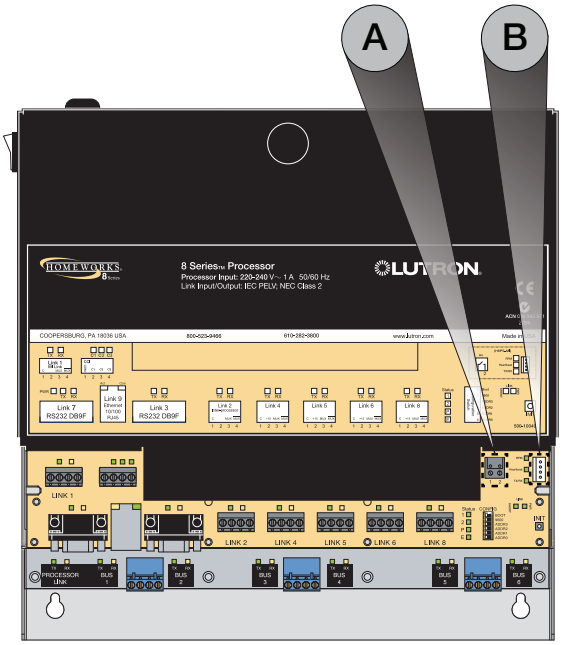
Refer to Lutron Application Note #840 (P/N 048840) at www.lutron.com for a comparison of the old installation to the new installation.

Proceed with the following instructions after completing the conversion.

The following wiring will be reused by the panel link translator after the existing processor has been removed.

A The manual override terminal block.

B The RPM control link harness.



2 Add the mounting screws/studs.

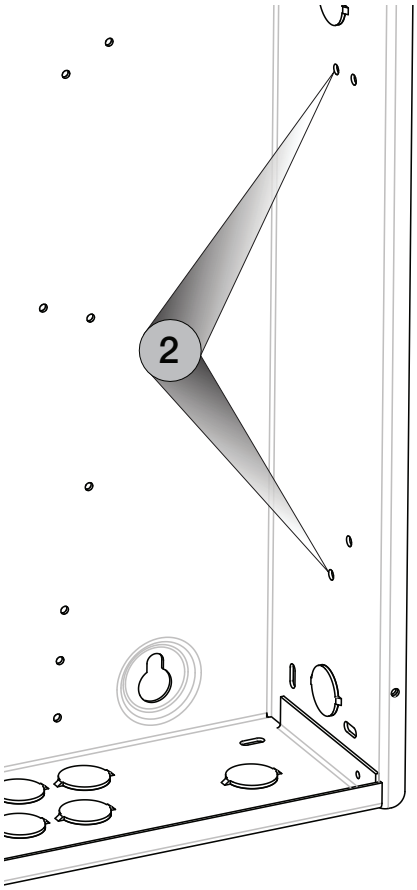
A For surface mounted panels:

Insert the two number 8 screws (provided) into the panel link translator mounting holes from the exterior of the panel. Then secure each screw with a washer and nut (provided).

Add a star washer and nut (provided) to each screw/stud, but do not fully tighten.

B For recess mounted panels:

Drive the number 12 self-tapping screws (provided) into the panel link translator mounting holes, but do not fully tighten.



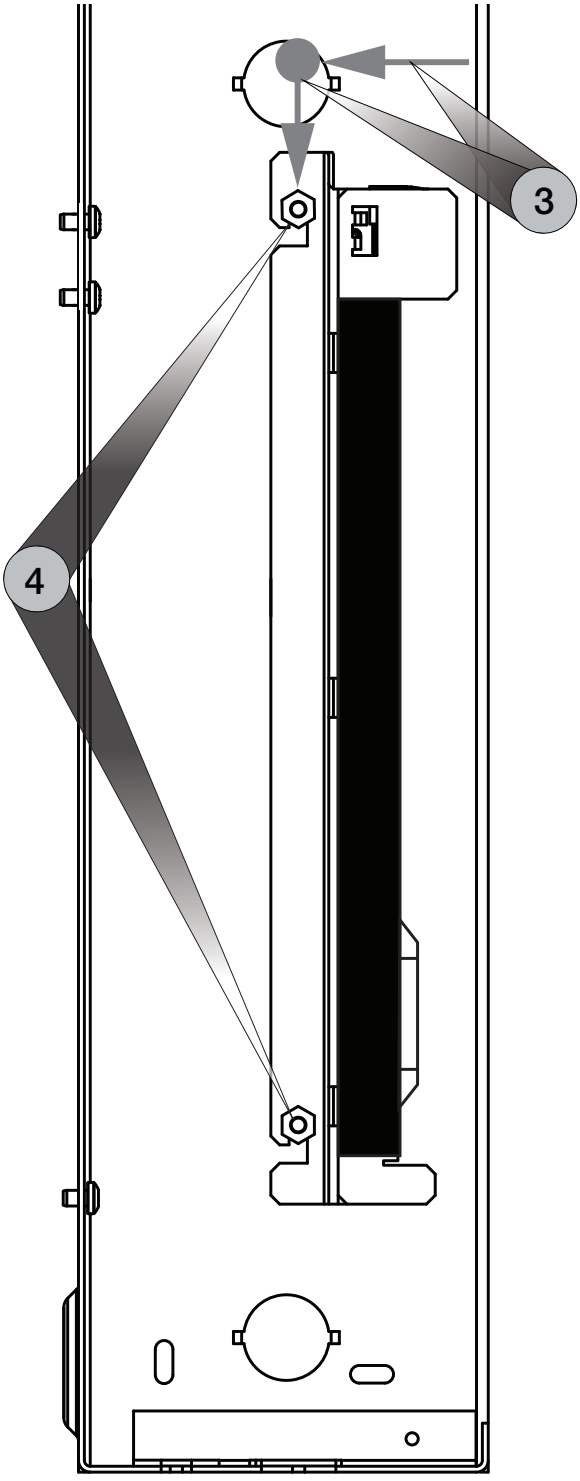
Click here to continue the replacement of an 8-series processor with internal module interface link on the next page...

8-Series Processors with Internal Module Interface Link *(continued)*

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

3 Mount the panel link translator by placing it over the screw/stud and then sliding it downward.

4 Firmly tighten the number 12 self-tapping screws or nuts from step 2.

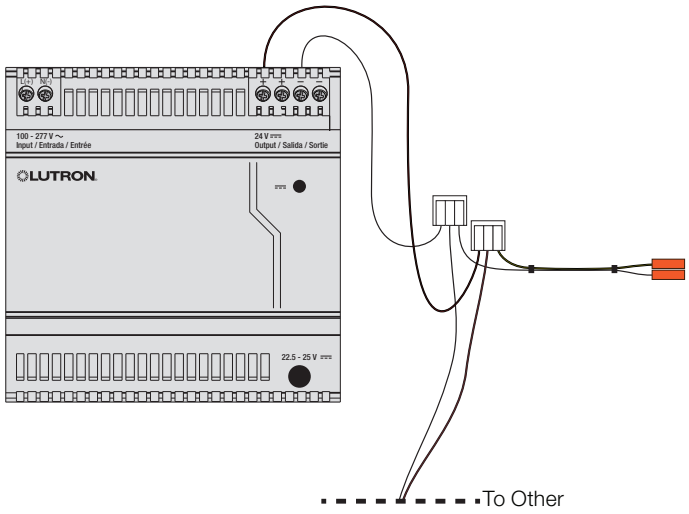


Click here to continue the replacement of an 8-series processor with internal module interface link on the next page...

8-Series Processors with Internal Module Interface Link *(continued)*

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

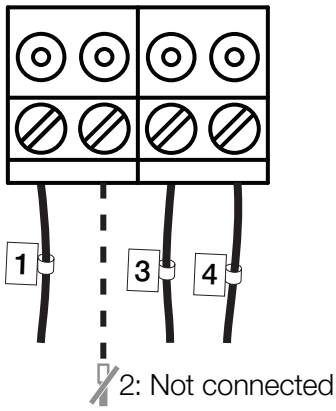
5 Connect the wire harness (provided) to the QS power supply output with the lever connectors (provided).



6 Connect the QS link terminal block (provided) to a QS link from a wired HomeWorks QSX processor that was added to the panel when replacing the 8-series processor with internal module interface link.

Connect “1” to COM, “3” to MUX, and “4” to MUX.

The “2” terminal on the terminal block of the panel link translator should not be connected.



Click here to complete the replacement of an 8-series processor with internal module interface link on the next page...

8-Series Processors with Internal Module Interface Link *(continued)*

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

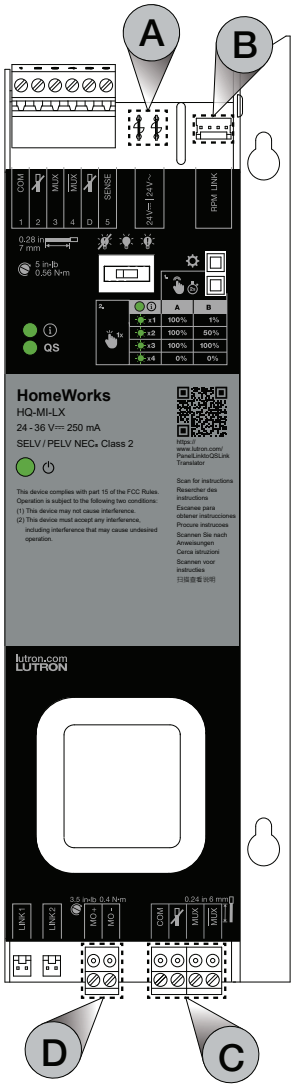
7 Connect the panel link translator.

A Plug the wire harness from step 5 into the panel link translator.

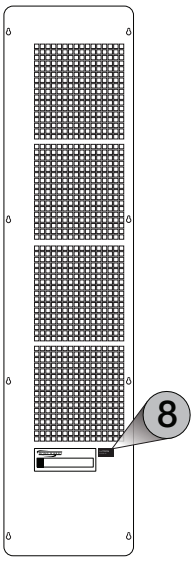
B Plug the RPM control link harness from the 8-series processor into the RPM control link header on the panel link translator.

C Plug the QS link from step 6 into the QS link header on the panel link translator.

D Plug the manual override terminal block from the 8-series processor into the manual override header on the panel link translator.



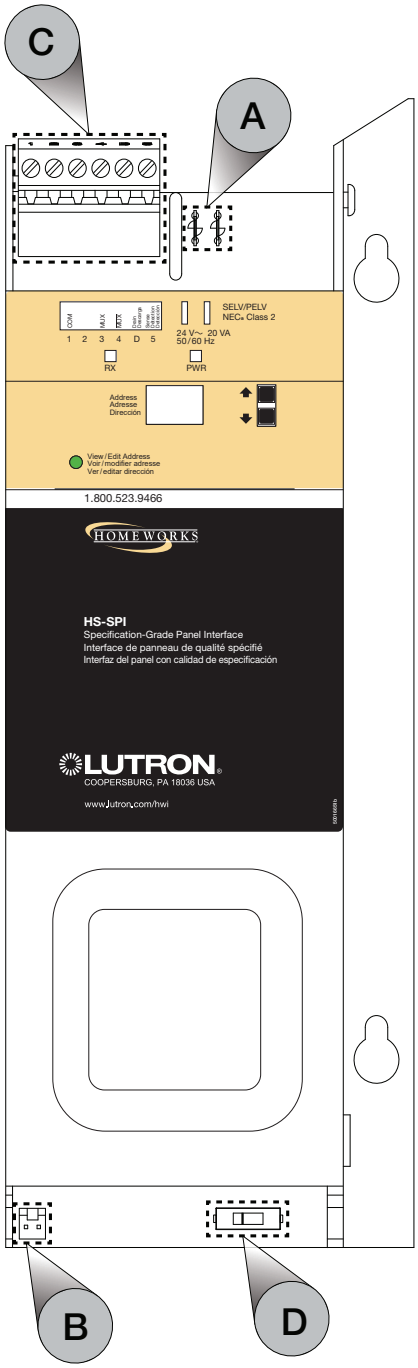
8 Apply the Lutron HQ-MI-LX label (provided) to the legacy panel cover near the existing labeling.



Specification Grade Panel Interface (SPI)

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

1	Remove the wiring from the existing SPI.
A	Disconnect the Class 2/PELV 24 V⁓ wiring.
B	Remove the LINK1 control link harness from the bottom left of the SPI.
C	Unplug the 6-pin communication terminal block from the existing SPI.
D	Record the switch (S1) position. This will be used in step 7D.



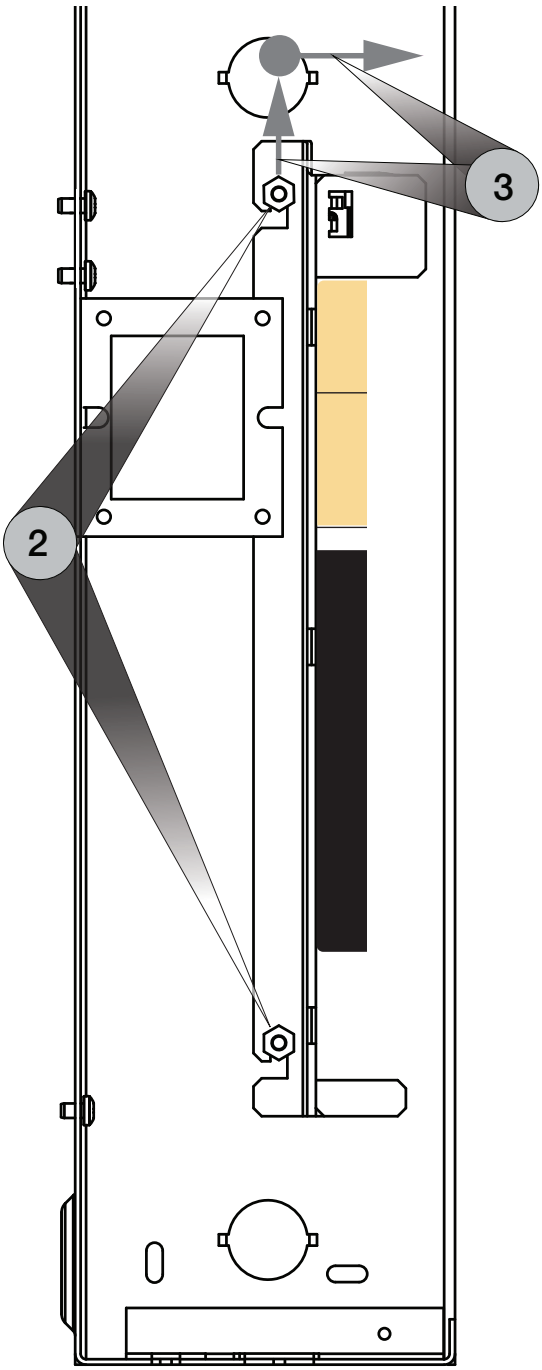
Click here to continue the replacement of a specification grade panel interface (SPI) on the next page...

Specification Grade Panel Interface (SPI) *(continued)*

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

2 Without removing them from the screw/stud, loosen the two 11/32 in (9 mm) nuts behind the SPI.

3 Remove the SPI by sliding it upwards and then pulling it away from the front of the panel.

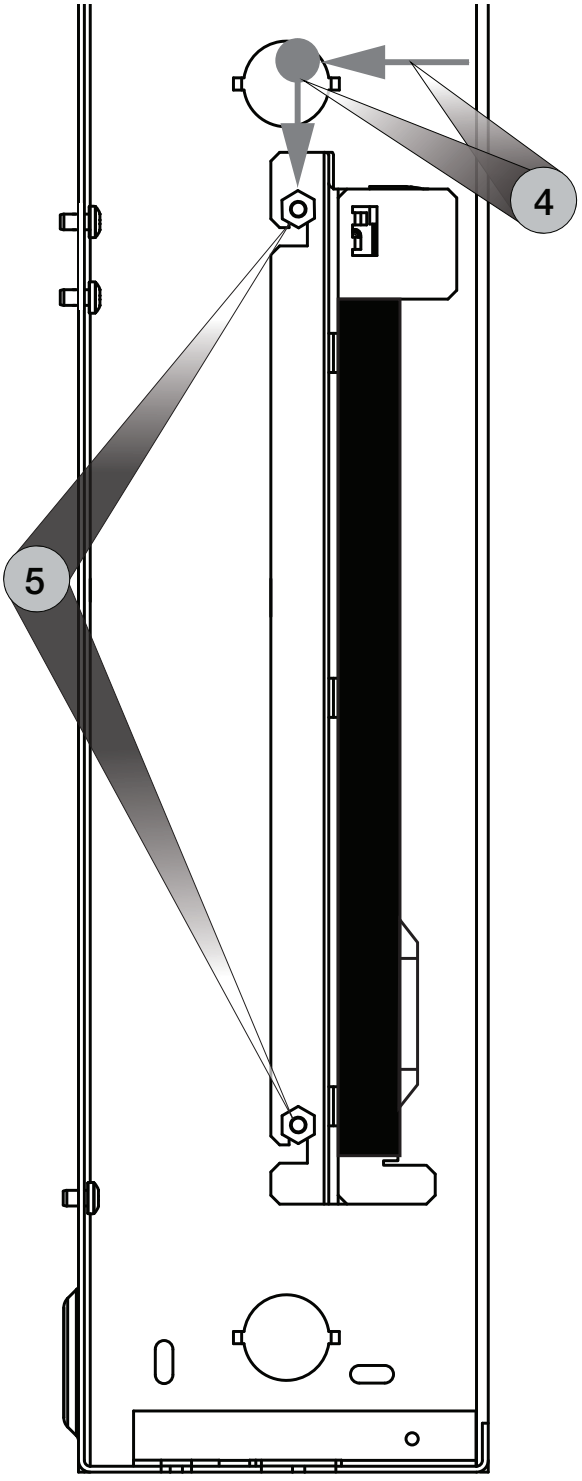


Click here to continue the replacement of a specification grade panel interface (SPI) on the next page...

Specification Grade Panel Interface (SPI) *(continued)*

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

4	Mount the panel link translator by placing it over the screw/stud and then sliding it downward.
5	Firmly tighten both 11/32 in (9 mm) nuts and star washers.



Click here to continue the replacement of a specification grade panel interface (SPI) on the next page...

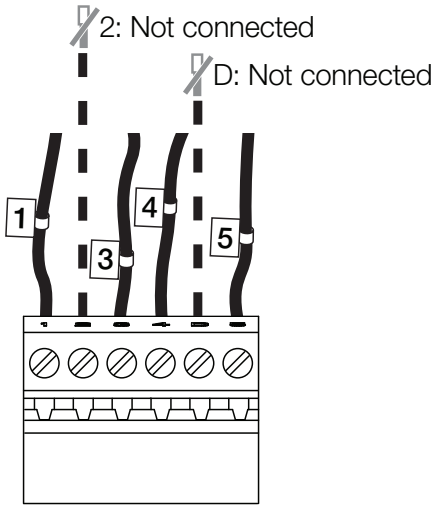
Specification Grade Panel Interface (SPI) *(continued)*

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

6 Remove and cap the “2” and “D” wires from the 6-pin communication terminal block from step 1C.

The “2” and “D” terminals on the 6-pin communication terminal block of the panel link translator should not be connected.

NOTE: If a link terminator (LT-1) is present between pins 3 and 4, remove and discard it.



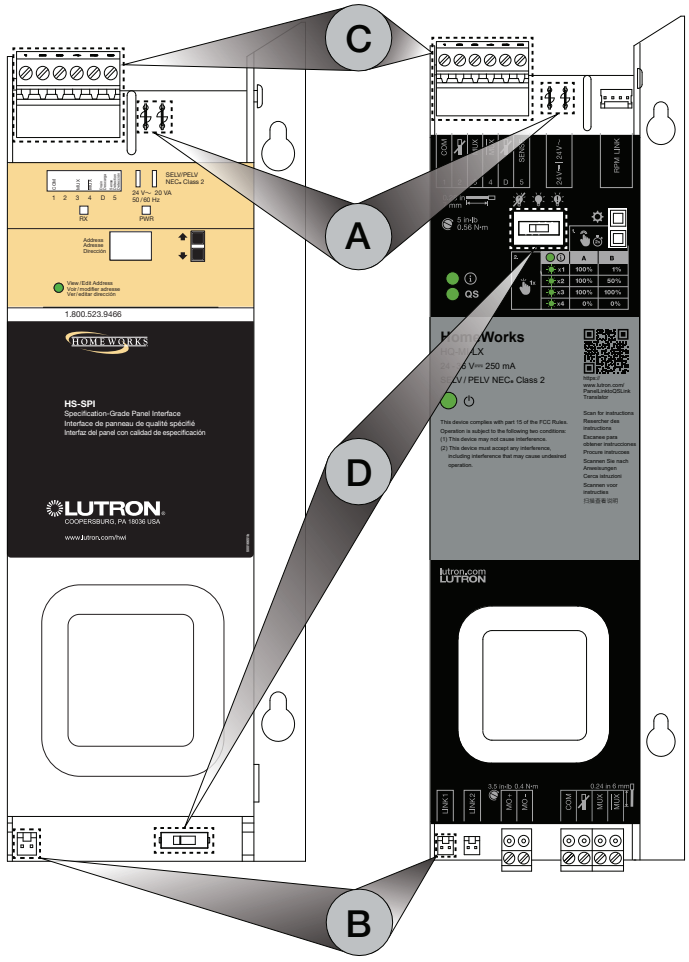
7 Connect the panel link translator to the existing wiring.

A Plug the Class 2/PELV 24 V⎓ wiring into the panel link translator.

B Plug the LINK1 control link harness from the SPI into the LINK1 header on the panel link translator.

C Plug the 6-pin communication terminal block from step 6 into the panel link translator.

D Move the emergency switch to match the switch position that was recorded in step 1D.

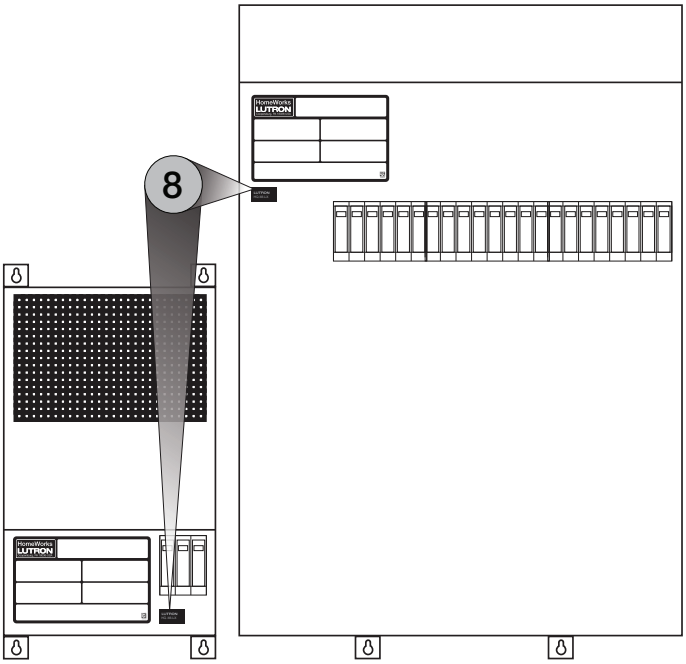


Click here to complete the replacement of a specification grade panel interface (SPI) on the next page...

Specification Grade Panel Interface (SPI) *(continued)*

WARNING: SHOCK HAZARD. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

8 Apply the Lutron HQ-MI-LX label (provided) to the legacy panel cover near the existing label.



Local Operations

Setup and programming of the panel link translator is done through the HomeWorks programming software. The local buttons are intended for system activation and local panel control.

Control Link Baud Rates

Show Baud Rates

- Press the ☼ button.
  - Hi 1: The **QS** LED will blink slowly (2 seconds on, then 2 seconds off)
  - Hi 2: The **QS** and ⓘ LED indicators will blink slowly (2 seconds on, then 2 seconds off)

Change Baud Rates

- Press and hold the ☼ button for 2 seconds to enter baud rate selection mode. ⓘ and **QS** LEDs will start blinking in an alternating pattern when the device has entered baud rate selection mode.
  - Press the ☼ button to toggle the baud rate.
- Press and hold the ☼ button for 2 seconds to exit baud rate selection mode.

NOTE: The device will exit baud rate selection mode if there is no local button interaction for 30 seconds. The locally set baud rate will be overriden if it does not match baud rate that is specified in the HomeWorks programming software. Refer to Lutron Application Note #840 (P/N 048840) at www.lutron.com for instructions on how to change the baud rate in the HomeWorks programming software.

Override the Panel Switch Leg Outputs[1]

- Press and hold the 2s button for 2 seconds to enter local load control mode. ⓘ and **QS** LEDs will start blinking in an alternating pattern when the device has entered local load control mode.
  - Press the 2s button to cycle through the preset load levels. The number of ⓘ LED blinks specifies the location in the load control cycle: 1, 2, 3, or 4.

    A. The preset cycle for non-configured switch legs or switchable switch legs is (1) 100%, (2) 100%, (3) 100%, and (4) 0%.

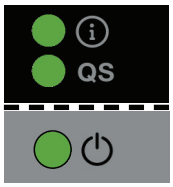
    B. The preset cycle for configured dimming switch legs is (1) 1%, (2) 50%, (3) 100%, and (4) 0%.
- Press and hold the 2s button to exit local load control mode.

NOTE: The device will exit local load control mode if there is no local button interaction for 30 seconds.

Load Control Cycle	ⓘ Blinks	Light Level	
		A	B
1	1	100%	1%
2	2	100%	50%
3	3	100%	100%
4	4	0%	0%

[1] Motor loads should not be overridden by the local buttons.

Troubleshooting

Symptom	Additional Details	Action
Local buttons do not control the load(s). 	⏻ LED: Off	Verify that there is voltage at the power terminal of the device.
	Device can enter local load control mode.	• Verify the control link wiring. • Verify the control link baud rate(s). **NOTE:** The locally set baud rate will be overridden by the baud rate configured in the system programming software. • Verify that the load(s) can be locally controlled. Motor loads should not be controlled locally. • Verify the dimming/switching module(s) functionality. • Verify load(s) functionality.
	ⓘ LED: Flashes 5 times every second (100 ms on and 100 ms off)	• Verify that the SENSE switch position is correct. **NOTE:** The SENSE switch will typically need to be in the same position as the SENSE switch on the previous controller. • Verify the SENSE terminal wiring.
	ⓘ LED: Flashes 2 times every second (250 ms on and 250 ms off)	• Verify the manual override wiring. • Contact Lutron Tech Support.
	ⓘ LED and QS LED: Flashes 3 times every second (150 ms on and 150 ms off)	Device needs to be replaced. Contact Lutron Tech Support.
	ⓘ LED and QS LED: Flashes 5 times every second (100 ms on and 100 ms off)	Device needs to be replaced. Contact Lutron Tech Support.
Local load control can only turn the load(s) on and off.	None	• Verify that the load(s) can be dimmed by local load control. Only dimmable loads that have been configured in the system programming software can be dimmed by local load control. • Verify the dimming/switching module(s) functionality. • Verify load(s) functionality.
Unable to activate the device.	None	Verify QS Link wiring.
The system cannot control the load(s).	QS LED: On	• Verify that the load(s) is correctly configured in the system programming software and that they have been transferred to the device. • Verify that the baud rate is correctly configured in the system programming software. • Verify that the dimming/switching module address(es) in the system software matches the address(es) on the module(s). • Verify that the load(s) can be locally controlled by the device.
	QS LED: Off	• Verify the QS link wiring. • Verify that the load(s) can be locally controlled by the device.
The system can only turn the load(s) on and off.	None	Confirm that all GP card(s)/module(s) are correctly configured in the system programming software and that they have been transferred to the device.

Contact Us

Warranty

For warranty information, please visit https://assets.lutron.com/a/documents/043492.pdf

FCC/IC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation.

Modifications not expressly approved by Lutron Electronics Co., Inc. could void the user's authority to operate this equipment.

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 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 interference 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 the dealer or an experienced radio/TV technician for help

This Class B digital apparatus complies with Canadian ICES-003.

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