

## QS Sensor Module

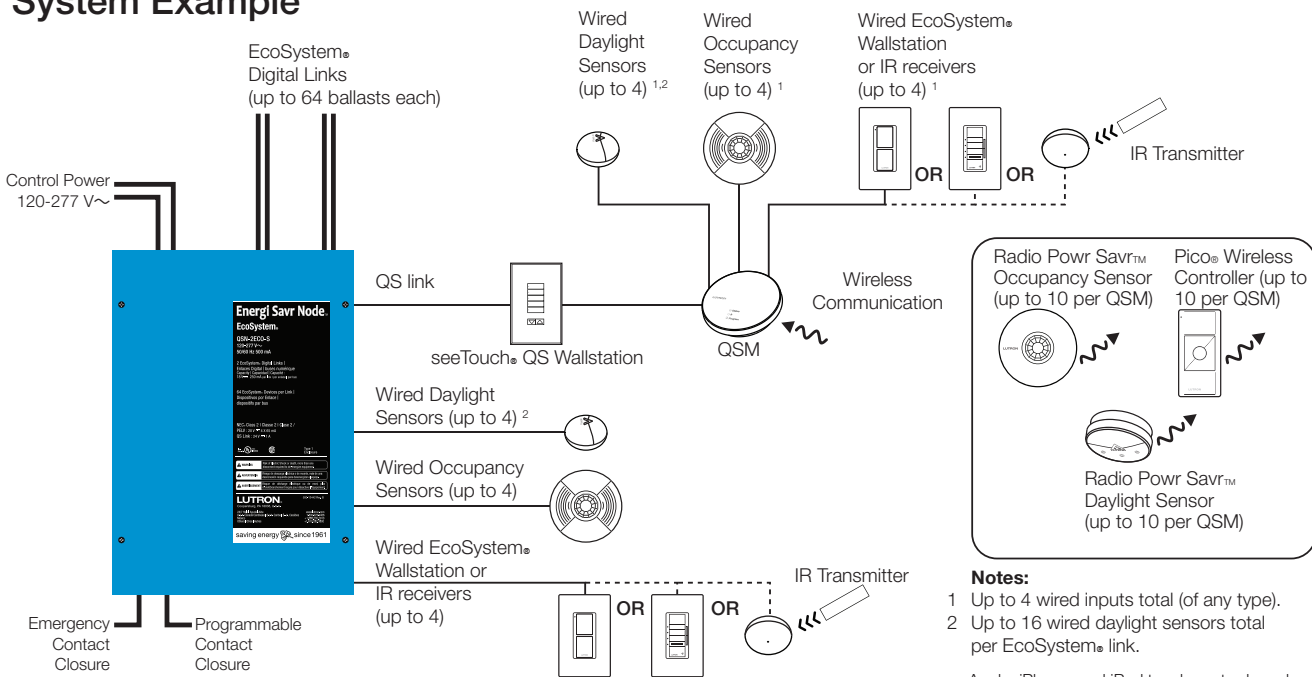
The QS Sensor Module (QSM) is a ceiling-mounted device that integrates Lutron® wireless and wired sensors and controls through the QS communication link to Energi Savr Node™ (ESN) units, GRAFIK Eye® QS control units, Quantum® systems and Sivoia® QS shades / draperies.



### Features

- Uses Clear Connect® RF Technology for communication with Radio Powr Savr™ occupancy sensors, Radio Powr Savr™ daylight sensors, and Pico® wireless controllers.
- QSM connects to four Lutron® wired sensors or controls—occupancy sensors, daylight sensors, EcoSystem® infrared (IR) receivers, or EcoSystem® wallstations. Does not apply to wireless only models.
- Powered by the QS link—no line voltage connections are required.
- Contact Lutron for compatibility details with the Quantum® system.
- Compatible with the entire ESN product family:
  - Allows Lutron® wired occupancy sensors, daylight sensors, EcoSystem® wall stations, EcoSystem® IR receivers, Pico® wireless controllers, Radio Powr Savr™ wireless occupancy sensors and daylight sensors to control ESN units.
- Compatible with GRAFIK Eye® QS control units.
  - GRAFIK Eye® QS control unit models starting with QSGR.
  - Allows Lutron® wired or Radio Powr Savr™ wireless occupancy sensors and daylight sensors linked to a QSM to control the GRAFIK Eye® QS control unit.
  - Contact Lutron for compatibility with Pico® wireless controllers, EcoSystem® wallstations, and EcoSystem® infrared (IR) receivers.
- Compatible with Sivoia® QS shades / draperies.
  - Allows Pico® wireless controllers to control Sivoia® QS shades / draperies (QSM models with wireless inputs only).

### System Example



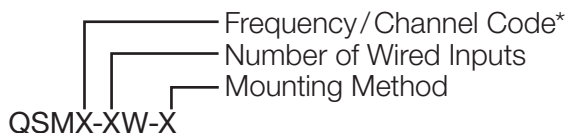
**Notes:**

- 1 Up to 4 wired inputs total (of any type).
- 2 Up to 16 wired daylight sensors total per EcoSystem® link.

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Job Name:	Model Numbers:
Job Number:	

## Models



### Frequency/Channel Code\*

2—431.5 - 436.6 MHz	U.S.A., Canada and Mexico
3—868.1 - 869.8 MHz	European Union and United Arab Emirates
4—868.1 - 868.5 MHz	Singapore and China
5—865.5 - 866.5 MHz	India
7—433.0 - 434.7 MHz	Hong Kong
X—No RF	

\*Contact Lutron for frequency/channel code compatibility with your particular geographic region if it is not indicated above.

### Number of Wired Inputs

- 4—4
- X—None

### Mounting Method

- C—Ceiling Mount
- J—Junction Box Ceiling Mount

## Availability/Compatibility

Refer to the chart below to determine QSM model availability and compatibility with different sensor models.

Models Available	Lutron® Radio Powr Savr™		Lutron® Pico® Wireless Controllers
	Occupancy/Vacancy Sensors	Daylight Sensors	
QSM2-4W-C QSM2-XW-C QSM2-4W-J QSM2-XW-J	LRF2-OCRB-P, LRF2-OHLB-P, LRF2-OKLB-P, LRF2-OWLB-P, LRF2-VHLB-P, LRF2-VKLB-P, LRF2-VWLB-P, LRF2-OCR2B-WH, LRF2-VCR2B-WH	LRF2-DCRB	MRF2-3BRL, MRF2-3B, MRF2-2BRL, MRF2-2B, QSR4P-3R, PJ-2B-Gxx-xxx, PJ-2BRL-Gxx-xxx PJ-3B-Gxx-xxx PJ-3BRL-Gx-xxx
QSM3-4W-C QSM3-XW-C	LRF3-OCRB-P	LRF3-DCRB	QSRKP-2, QSRKP-2R, QSRKP-3R
QSM4-4W-C QSM4-XW-C	LRF4-OCRB-P	LRF4-DCRB	QSRMP-2, QSRMP-2R, QSRMP-3R
QSM5-XW-C	LRF5-OCRB-P	LRF5-DCRB	QSRNP-2, QSRNP-2R, QSRNP-3, QSRNP-3R
QSM7-4W-C QSM7-XW-C	LRF7-OCR2B-P	LRF7-DCRB	QSRQP-2, QSRQP-2R QSRQP-3, QSRQP-3R
QSMX-4W-C	N/A	N/A	N/A

<b>Job Name:</b>	<b>Model Numbers:</b>
<b>Job Number:</b>	

## Specifications

### QS Sensor Module (QSM)

#### Power

- 24 V<sub>DC</sub>
- Current draw:  
max 400 mA (models with wired input)  
max 100 mA (models without wired input)
- Power Draw Units: (PDU)  
Refer to the QS Link Power Draw Units specification submittal (Lutron® P/N 369405) for information concerning PDUs on the QS Link. Use only Lutron® approved power sources.
- 10-year power failure memory: restores settings and programming after power interruption.

#### Regulatory

- Lutron® Quality Systems registered to ISO 9001.2008.

#### QSM2 –

- cUL US Listed (USA and Canada).
- FCC Compliant. Complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules (USA).
- IC Certified. (Canada).
- SCT Certified (Mexico).

#### QSM3 –

- CE Marked (European Union).
- TRA Type Approved (United Arab Emirates).

#### QSM5 –

- WPC Type Approved (India).

#### QSM7 –

- FCC Compliant. Complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules (USA).

#### Environment

- Ambient Temperature Operating Range: 32 °F to 104 °F (0 °C to 40 °C).
- Relative humidity: less than 90% non-condensing.
- For indoor use only.

#### Terminals

- Input wiring: 22 AWG to 12 AWG (0.5 mm<sup>2</sup> to 4.0 mm<sup>2</sup>)
- QS link wiring: 22 AWG to 12 AWG (0.5 mm<sup>2</sup> to 4.0 mm<sup>2</sup>)

#### Mounting

- QSM units should be mounted in the middle of non-metal ceiling tile or drywall, visible from inside the space.
- Installation near metal other than a Junction Box may reduce RF range.

#### Wireless Communication

##### (models with wireless inputs only)

- RF Range: 60 ft (18 m) line of sight, or 30 ft (9 m) through typical construction materials.
- To ensure optimal wireless range, install the QSM in the ceiling in a visible position from inside the space.
- Lutron® Radio Powr Savr™ Occupancy sensor (up to 10)
- Lutron® Radio Powr Savr™ daylight sensor (up to 10)
- Lutron® Pico® wireless controllers (up to 10)

#### Wired Inputs

- There are 4 universal wired inputs. Each input can accept one of the following:
  - Lutron® EcoSystem® wallstations
  - Lutron® occupancy sensors (LOS- series)
  - Lutron® daylight sensors (EC-DIR- series)
  - Lutron® EcoSystem® infrared (IR) receivers (EC-IR, EC-DIR- series)
  - Lutron® Wired Pico® Controls
- Maximum wiring distance = 150 ft (46 m)

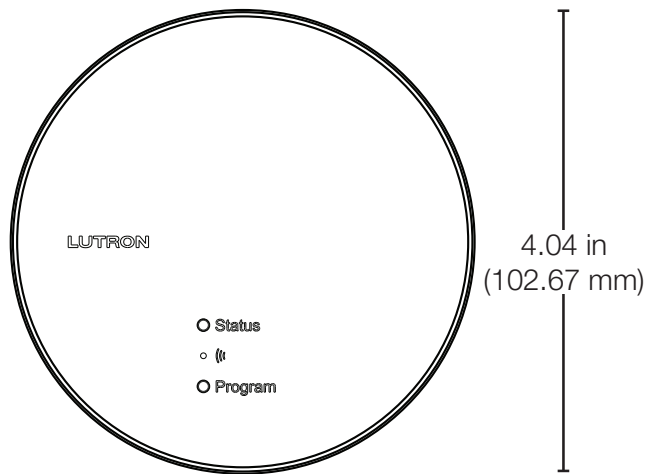
#### QS Link Limits

- The QS link can have up to 100 devices.
- Each QSM counts as 1 device towards the 100 device limit.
- Each QSM draws 3 Power Draw Units (PDUs) on the QS link.
- Wired sensors add to the PDU draw of a QSM. Refer to the QS Link Power Draw Units specification submittal (Lutron® P/N 369405) for information concerning PDUs.
- QS link maximum wire run length is 2000 ft (610 m).

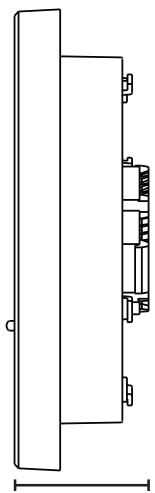
Job Name:	Model Numbers:
Job Number:	

### Mechanical Dimensions (All Models)

Front View

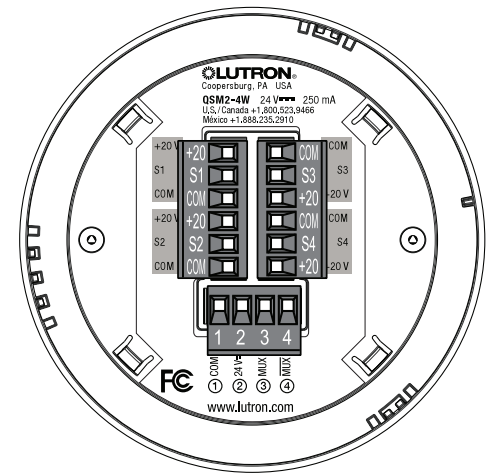


Side View

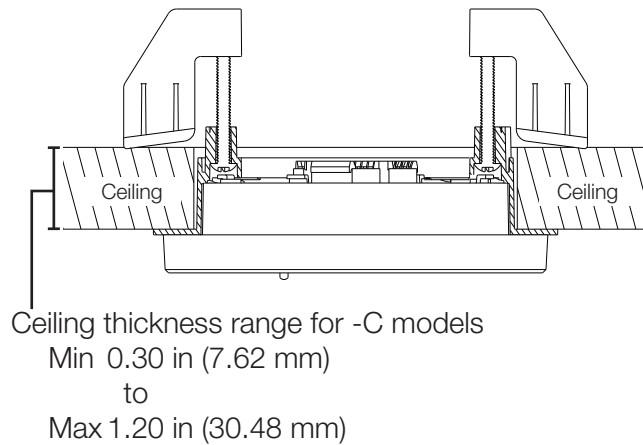


Back View

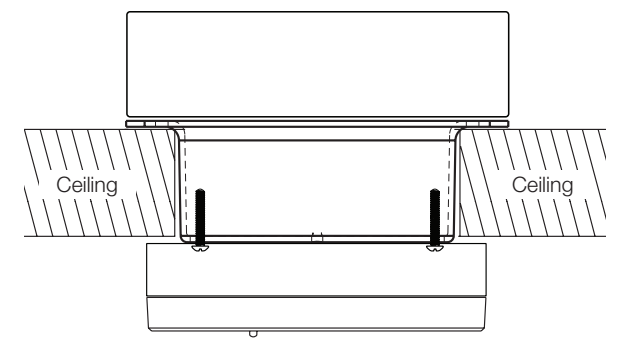
(QSM2-4W-C shown)



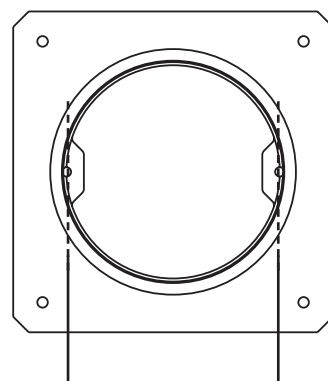
Mounted (-C Models)



Mounted (-J Models)



Use appropriate Mud Ring for ceiling tile thickness

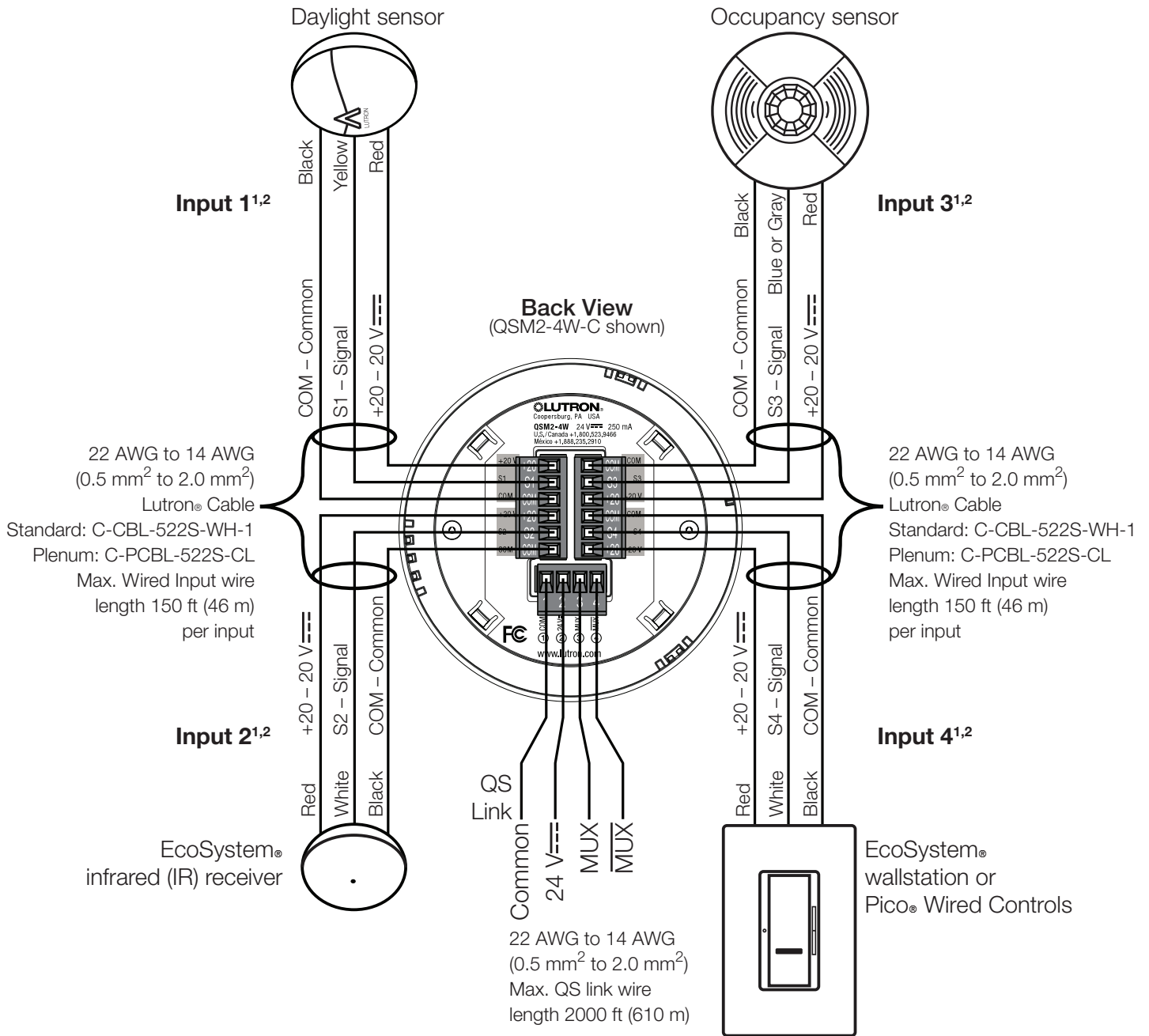


Use Mud Ring with hole spacing shown below. (Mud Ring not included with any QSM models)

2.75 in (70 mm)

Job Name:	Model Numbers:
Job Number:	

Wiring: QS Link and Wired Inputs<sup>1</sup>



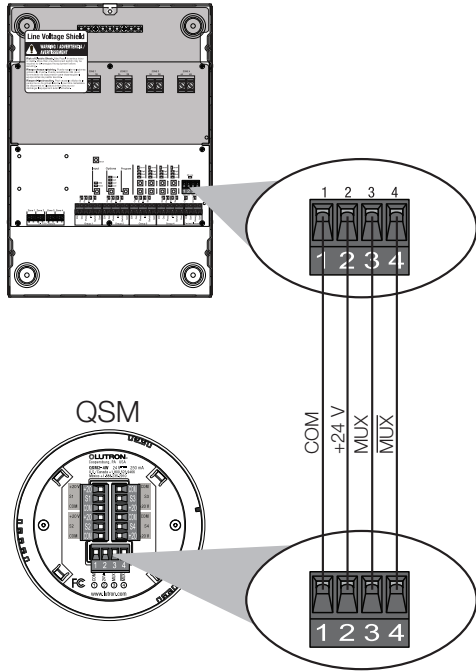
1 Only on QSM models with wired inputs.  
2 **Note:** For reference only. Each input is universal and can accept any of the inputs shown above.

Job Name:	Model Numbers:
Job Number:	

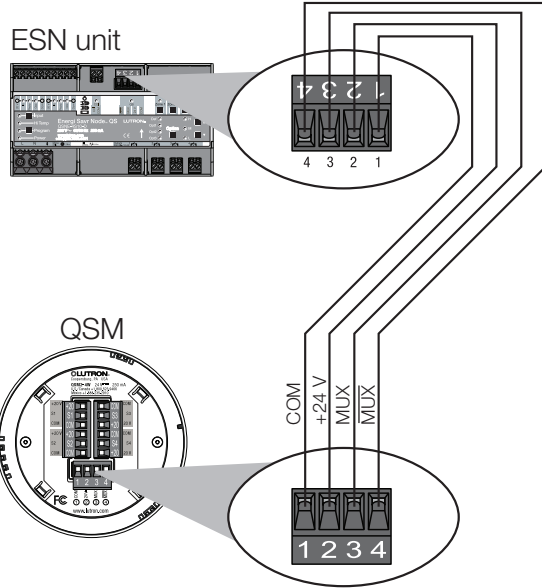
### Wiring: Device Power

#### Single QSM powered by an ESN unit

ESN unit



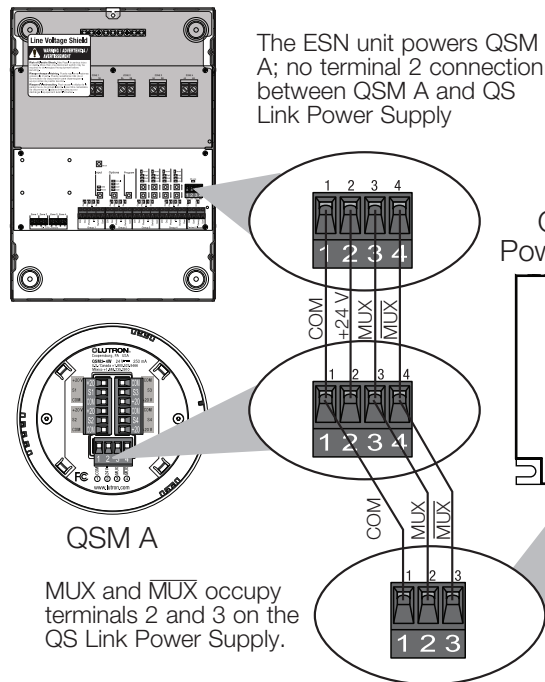
ESN unit



#### Multiple QSMs powered by an ESN unit and a QS Link Power Supply

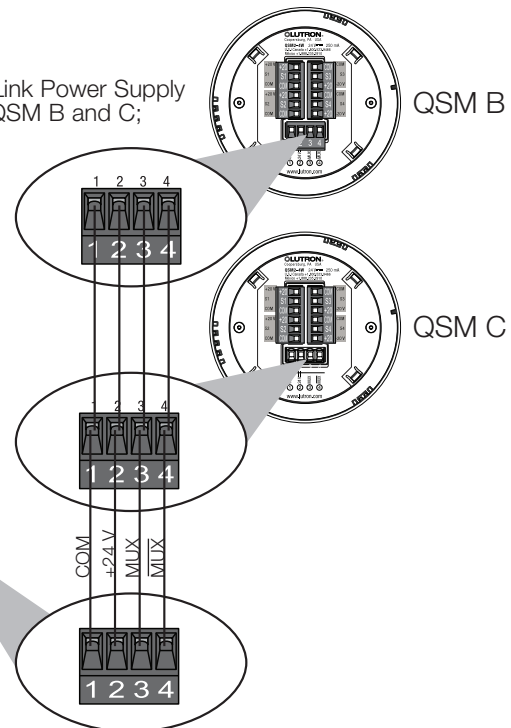
**Note:** A QS Link Power Supply may be necessary if PDUs required by QSMs exceed available PDUs from the device supplying power.

ESN unit



The QS Link Power Supply powers QSM B and C;

QS Link Power Supply



MUX and MUX occupy terminals 2 and 3 on the QS Link Power Supply.

Job Name:	Model Numbers:
Job Number:	