

QS Sensor Module

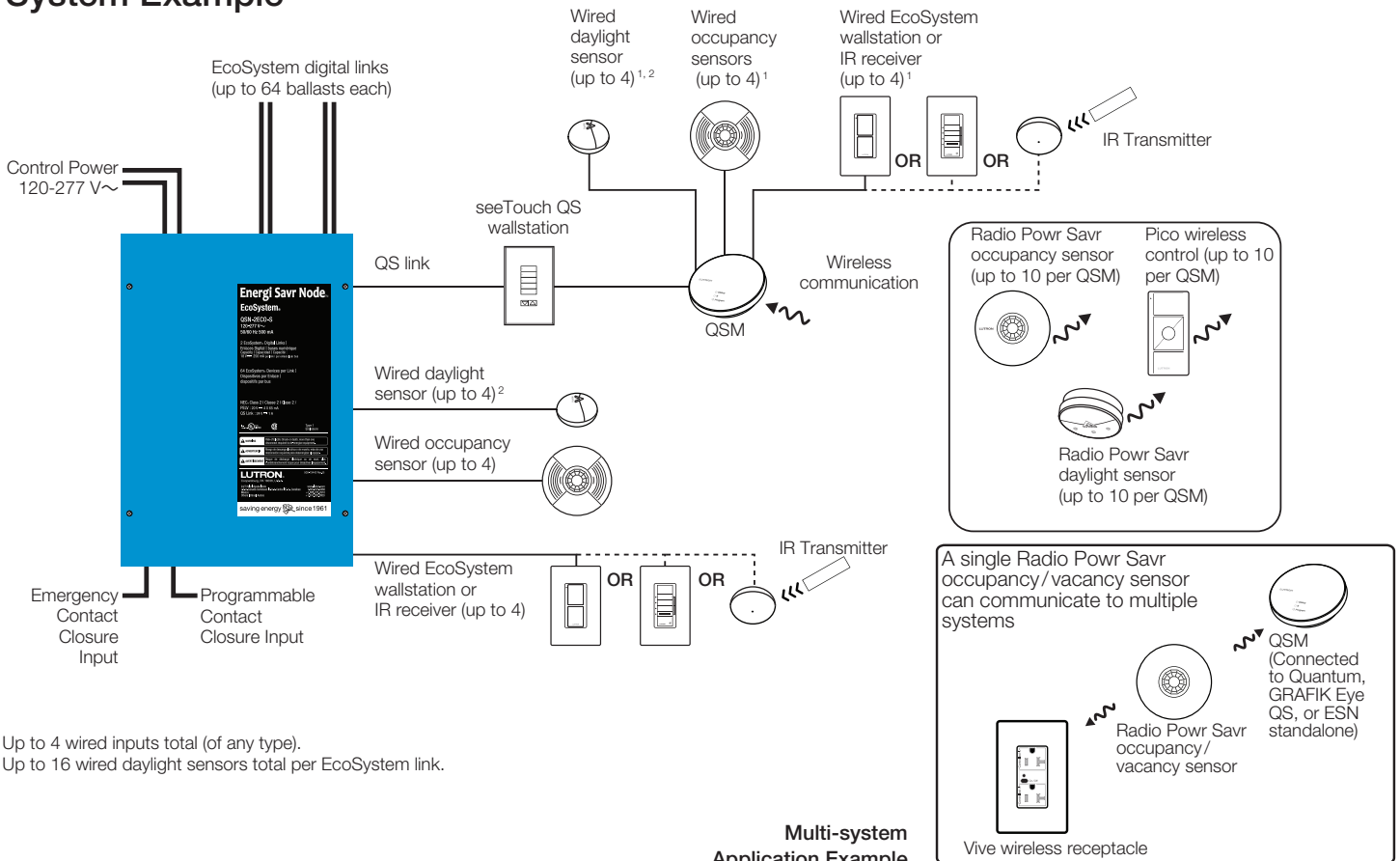
The QS Sensor Module (QSM) is a ceiling-mounted device that integrates Lutron wireless and wired sensors and controls through the QS communication link to Energi Savr Node (ESN) units, GRAFIK Eye QS control units, Quantum systems, myRoom control modules, and Sivoia QS shades/draperies.



Features

- Uses Clear Connect RF technology for communication with Radio Powr Savr sensors and Pico wireless controls.
- QSM connects to four Lutron wired sensors or controls—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 sensors, EcoSystem wallstations, EcoSystem IR receivers, Pico wireless controls, and Radio Powr Savr sensors to control ESN units.
- Compatible with myRoom power modules.
 - Allows Lutron wired and wireless occupancy/vacancy sensors to control power modules.
 - Allows Pico wireless controls to control power modules.
- Compatible with GRAFIK Eye QS control units.
 - GRAFIK Eye QS control unit models starting with QSGR.
 - Allows Lutron wired or Radio Powr Savr wireless sensors linked to a QSM to control the GRAFIK Eye QS control unit.
 - Contact Lutron for compatibility with Pico wireless controls, EcoSystem wallstations, and EcoSystem infrared (IR) receivers.
- Compatible with Sivoia QS shades/draperies.
 - Allows Pico wireless controls to control Sivoia QS shades/draperies (QSM models with wireless inputs only).

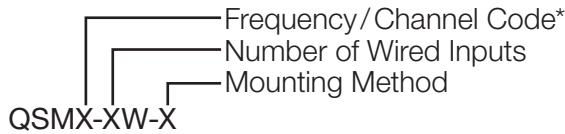
System Example



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

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.

QSM Models	Radio Powr Savr Sensors		Pico Wireless Controls
	Occupancy /Vacancy***	Daylight**	
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, PJ2-2B-Gxx-xxx, PJ2-2BRL-Gxx-xxx, PJ2-3B-Gxx-xxx, PJ2-3BRL-Gx-xxx, PJ2-4B-Gxx-xxxx
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

** Daylight sensors cannot be used as part of myRoom solutions.

***Low light occupancy mode is incompatible with QSM models.

Job Name:	Model Numbers:
Job Number:	

Specifications

QS Sensor Module (QSM)

Power

- 24 – 36 V_{DC}
- Maximum current draw:
 - 400 mA (models with wired input)
 - 100 mA (models without wired input)
- Power Draw Units (PDU): Refer to the QS Link Power Draw Units specification submittal (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.
- RoHS compliant
- Wireless receiver (Rx) device. Product has no wireless transmit functionality.

QSM₂ –

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

QSM₃ –

- CE Marked (European Union)

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 (U.S.A.).

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 mm² to 4.0 mm²)
- QS link wiring: 22 AWG to 12 AWG (0.5 mm² to 4.0 mm²)

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.
- Radio Powr Savr occupancy/vacancy sensor (up to 10)
- Radio Powr Savr daylight sensor (up to 10)
- Pico wireless control (up to 10)

Wired Inputs

- There are 4 universal wired inputs. Each input can accept one of the following:
 - EcoSystem wallstation (CC- series)
 - Occupancy sensor (LOS- series)
 - Daylight sensor (EC-DIR- series)
 - EcoSystem IR receiver (EC-IR or EC-DIR- series)
 - Wired Pico control (PX- series)
- Use of both the infrared receiver and daylight sensor on the EC-DIR- series sensors is considered two wired inputs on a QSM
- Maximum wiring distance = 150 ft (46 m)
- Only wired (LOS- series) and wireless occupancy/vacancy sensors may be used in myRoom; no Ecosystem wallstations, daylight sensors, Ecosystem IR receivers or wired Pico controls

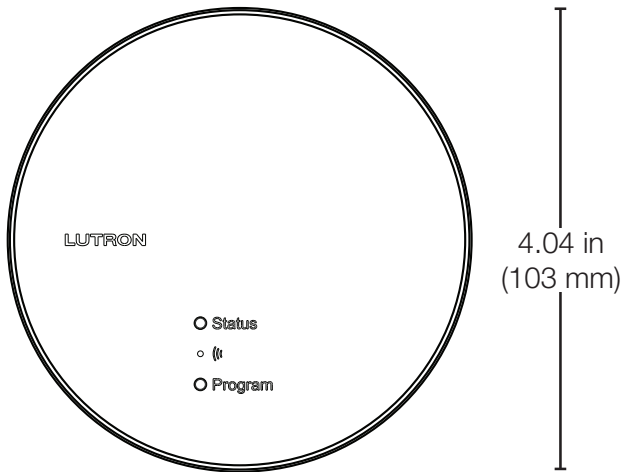
QS Link Limits

- 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 (P/N 369405) for information concerning PDUs.
- QS link maximum wire run length is 2000 ft (610 m).
- See the commercial system rules spec (P/N 369821) for system specific limitations.

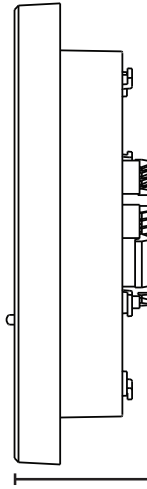
Job Name:	Model Numbers:
Job Number:	

Mechanical Dimensions (All Models)

Front View

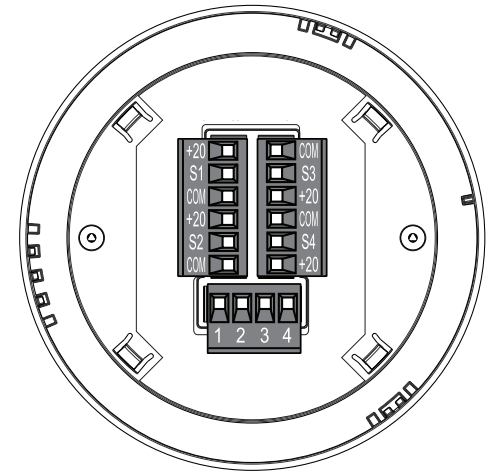


Side View

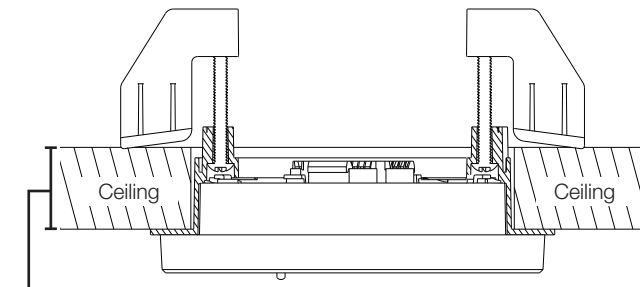


Back View

(QSM2-4W-C shown)

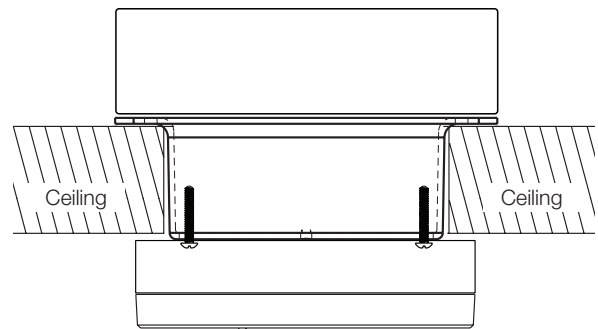


Mounted (-C Models)

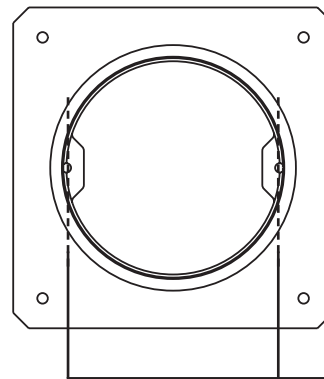


Ceiling thickness range for -C models
 Minimum 0.30 in (8 mm)
 to
 Maximum 1.20 in (30 mm)

Mounted (-J Models)



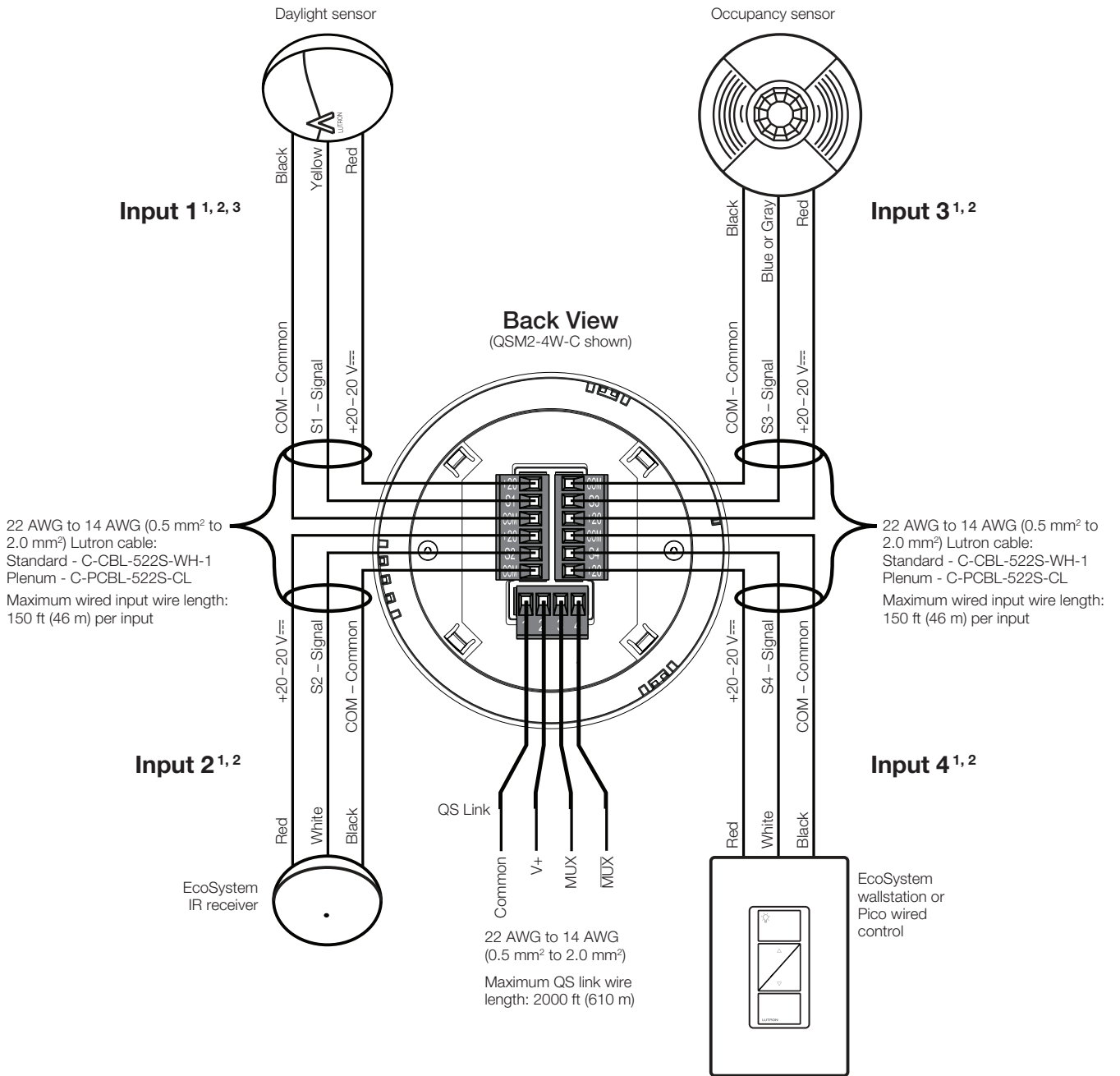
Use appropriate mud ring for ceiling tile thickness.
 Do not allow the tile to carry the weight of the junction box.



Use mud ring with hole spacing shown below.
 Mud ring not included with any QSM models.

Job Name:	Model Numbers:
Job Number:	

Wiring: QS Link and Wired Inputs¹



¹Only on QSM models with wired inputs.

²For reference only. Each input is universal and can accept any of the inputs shown above.

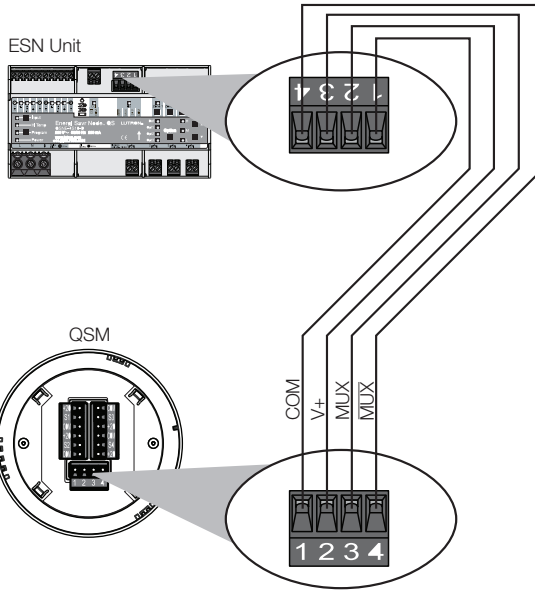
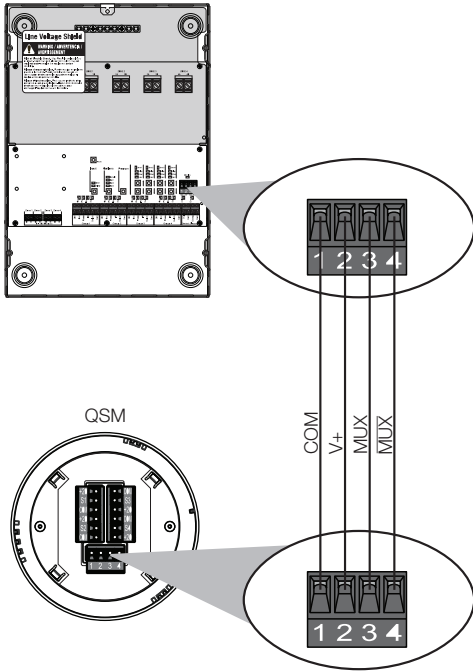
³Only daylight sensor signal connected to QSM shown above. Use of IR signal counts as an additional input on the QSM.

Job Name:	Model Numbers:
Job Number:	

Wiring: Device Power

Single QSM Powered by an ESN Unit

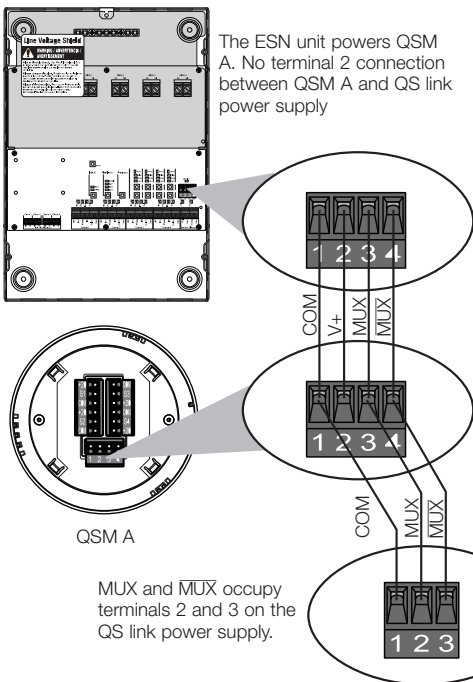
ESN Unit



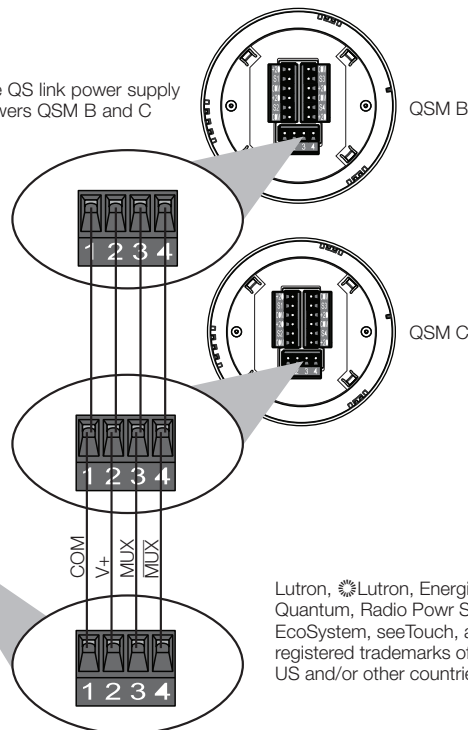
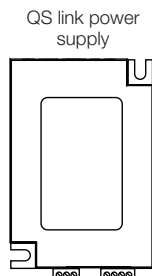
Multiple QSMs Powered by an ESN Unit and a QS Link Power Supply

A QS link power supply may be necessary if PDUs required by QSMs exceed available PDUs from the device supplying power.

ESN Unit



The ESN unit powers QSM A. No terminal 2 connection between QSM A and QS link power supply



The QS link power supply powers QSM B and C

MUX and MUX occupy terminals 2 and 3 on the QS link power supply.

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Job Number:	