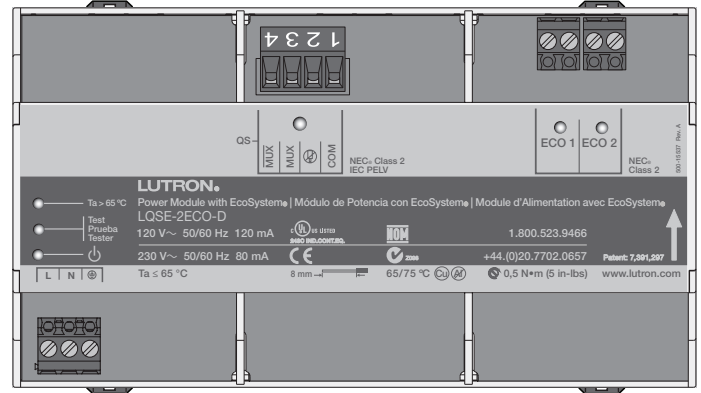


Power Module with EcoSystem®

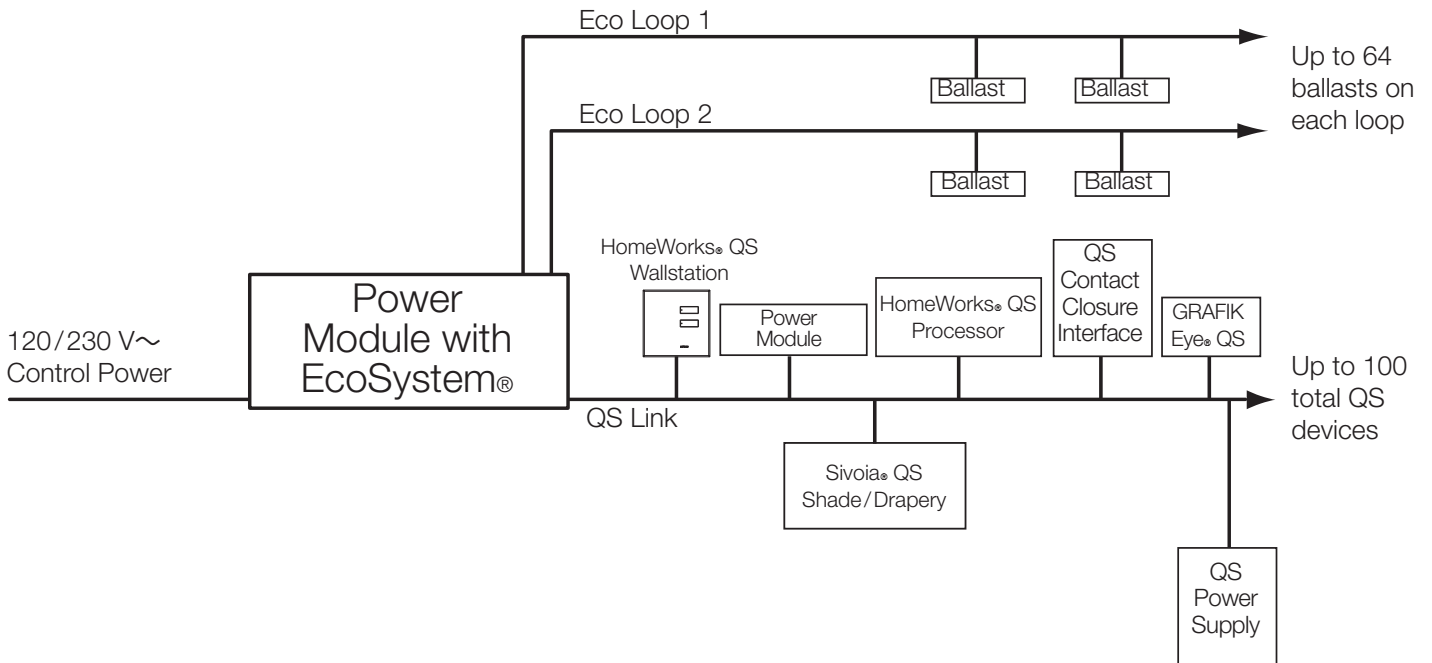
The Power Module with EcoSystem® unit is a DIN-rail mounted EcoSystem® Loop controller for EcoSystem® ballasts, drivers and devices. It provides EcoSystem® Loop power and control for two independent EcoSystem® Loops with up to 64 ballasts or drivers each.



Features

- Provides EcoSystem® Loop power for two loops of EcoSystem® ballasts or drivers (up to 250 mA per loop).
- Power failure memory retains control unit programming in the event of a power loss.
- Includes QS Link for connection to a HomeWorks® QS system.
- Power Module with EcoSystem® unit can be used in a HomeWorks® QS system to control and manage light in an entire home or building.

System Example




Job Name:	Model Numbers:
Job Number:	

Specifications

Power

- 120 V~ 50/60 Hz 120 mA
- 230 V~ 50/60 Hz 80 mA
- Lightning strike protection meets ANSI/IEEE standard 62.31-1980. Can withstand voltage surges of up to 6000 V~ and current surges of up to 3000 A.
- Stand by power: 7 W
- BTUs/hour when fully loaded: 24
- EcoSystem® Loop Output: 16 V=== 250 mA maximum per loop.

Standards

- UL
- CE
- Lutron Quality Systems registered to ISO 9001.2008.
- C-Tick 
- cUL
- NOM

Environment

- Surrounding Air Temperature Range: 0 °C to 65 °C (32 °F to 149 °F).
- Relative humidity: less than 90% non-condensing.
- Calibration point maximum: 75 °C (167 °F)
- For indoor use only.

Terminals

- Mains wiring: 1.0 mm² to 4.0 mm² (18 AWG to 12 AWG)
- EcoSystem® Loop Wiring: 1,0 mm² to 4,0 mm² (18 AWG to 12 AWG)
- QS Wiring: 1,0 mm² (18 AWG)
- Minimum wire temperature rating = 65 °C (149 °F), Cu only

Mounting

- Intended to mount within an IP20 (minimum) rated consumer panel or breaker panel with integrated DIN rail and dead cover
- Width = 9 DIN modules (161.7 mm or 6 3/8 in).

Programming and Compatibility Requirements

- The LQSE-2ECO-D can only be used with the HomeWorks® QS system.
- Setup and programming of the Power Module with EcoSystem® is done through the HomeWorks® QS programming software.

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LUTRON® SPECIFICATION SUBMITTAL

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Job Name:	Model Numbers:
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EcoSystem®

- Control up to 64 EcoSystem®-compatible devices (ballast or LED drivers) per EcoSystem® Digital Loop (up to 128 devices per Power Module with EcoSystem® unit).
- Digitally define areas and zones.
- Automatic replacement of a single failed ballast or driver.
- Simple method of replacing multiple failed ballasts or drivers.
- EcoSystem® Digital Loop can be wired as Mains voltage or IEC PELV/NEC® Class 2 for maximum wiring flexibility.
- EcoSystem® Loop wires are polarity insensitive and topology-free.

EcoSystem® Digital Loop Limits

- Up to 64 EcoSystem®-compatible fluorescent ballasts and/or LED drivers per EcoSystem® digital loop.
- EcoSystem®-compatible fluorescent ballasts and LED drivers on the EcoSystem® digital loop do not count as QS devices.

QS Link Limits

- A QS link in a HomeWorks® QS system can have up to 512 zones (outputs) and 100 devices. A ballast or driver counts as 1 zone unless specifically grouped into zones from the HomeWorks® QS software.
- Each Power Module with EcoSystem® unit counts as one device toward the 100 device limit.
- A maximum of 8 fully loaded EcoSystem® digital loops may be connected to a single QS link.

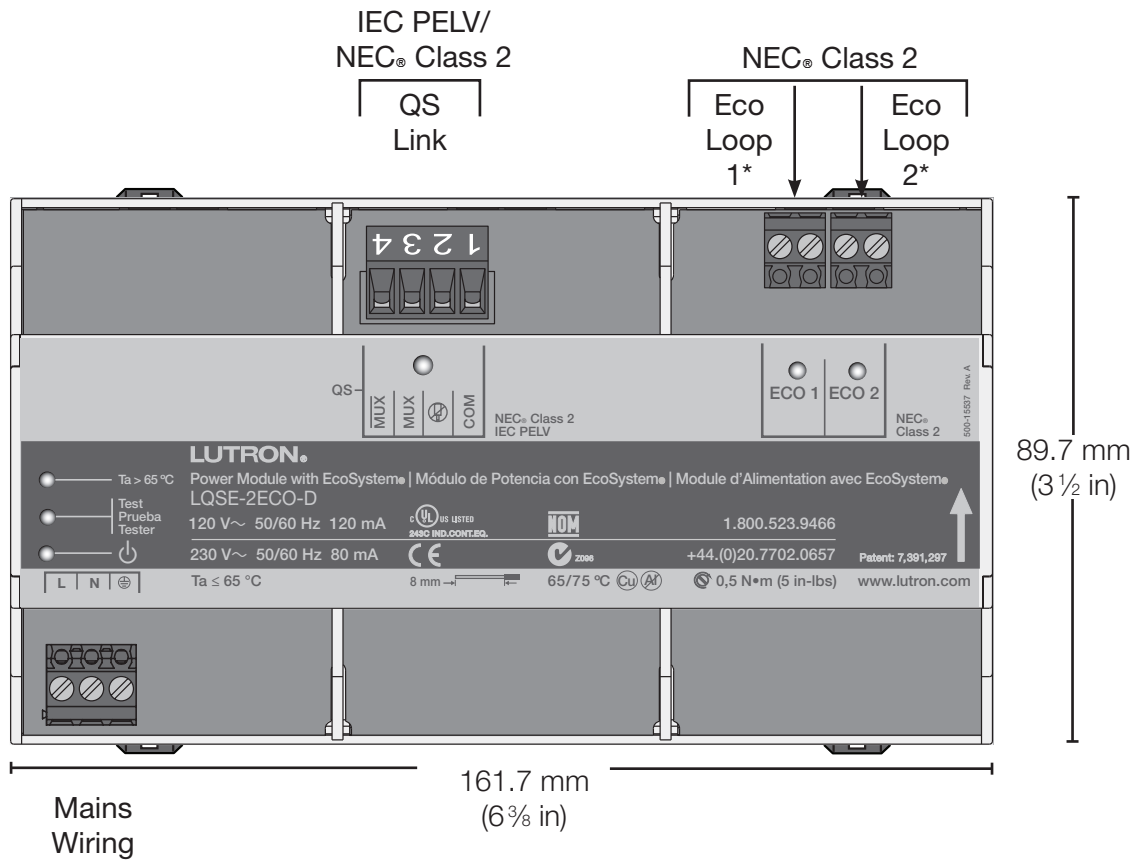
HomeWorks® QS Wallstations

- HomeWorks® QS wallstations can be configured to control Power Module with EcoSystem® units with the HomeWorks® QS programming utility.
- LED indicator displays the status of programmed lights.

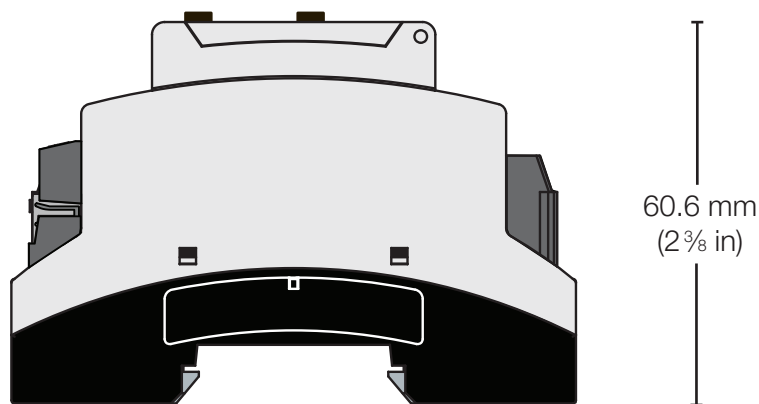
Troubleshooting and Maintenance Features

- Maintains redundant memory of ballast programming for ease of single or multiple ballast replacement.
- To verify EcoSystem® lights connected to EcoSystem® Loop 1 and Loop 2:
 - **Enter Test Mode:** Press and hold **Test** button on the Power Module with EcoSystem® until the Test LED starts flashing.
 - **Test:** Each press of either the **ECO 1** or **ECO 2** button will cycle the lights between high-end, low-end, flash, and off for that loop.
 - **Exit Test Mode:** Press and hold **Test** button until Test LED stops flashing.

Overview of Wiring Terminals and Mechanical Dimensions



*Wire according to local codes.



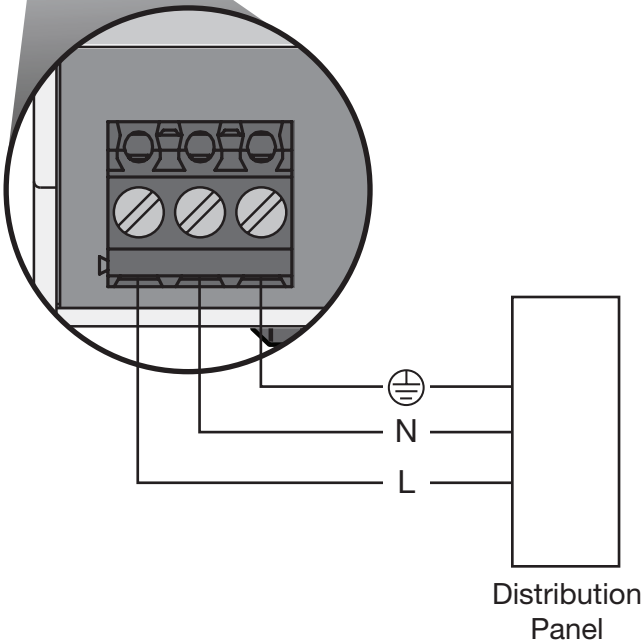
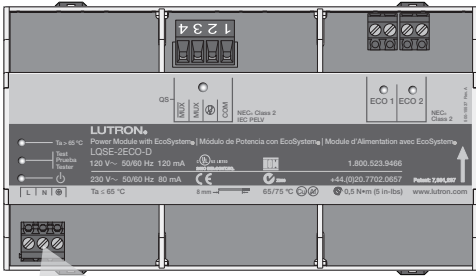
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Job Name:	Model Numbers:
Job Number:	

Wiring: Mains Voltage



- ⊕ – Earth/Ground
- N – Neutral
- L – Mains/Line

Wiring from Distribution to Power Module Unit

- Turn off all circuit breakers or isolators feeding the Power Module unit at the distribution panel.
- Run line, neutral, and earth/ground ⊕ wires from a feed to the Power Module with EcoSystem®.
- Use 1.0 mm² to 4.0 mm² (18 AWG to 12 AWG) conductors (depending on breaker rating) to feed the mains wiring. The device draws less than 80 mA (230 V~) or 120 mA (120 V~).

Emergency Lighting Applications

- Use normal (non-essential) power only to power the Power Module with EcoSystem®.
- EcoSystem® ballasts and drivers are programmed to enter emergency mode when the EcoSystem® Loop loses power.
- When normal power drops out, the Power Module with EcoSystem® will not power the EcoSystem® Loops. When this occurs, ballasts powered from emergency feeds go to their emergency mode, full light output by default.

Mains Wiring and IEC PELV/NEC® Class 2 Separation

- The Power Module with EcoSystem® is designed to separate mains wiring from IEC PELV/NEC® Class 2 circuits.
- Follow appropriate local and national codes to avoid violating required separation guidelines.

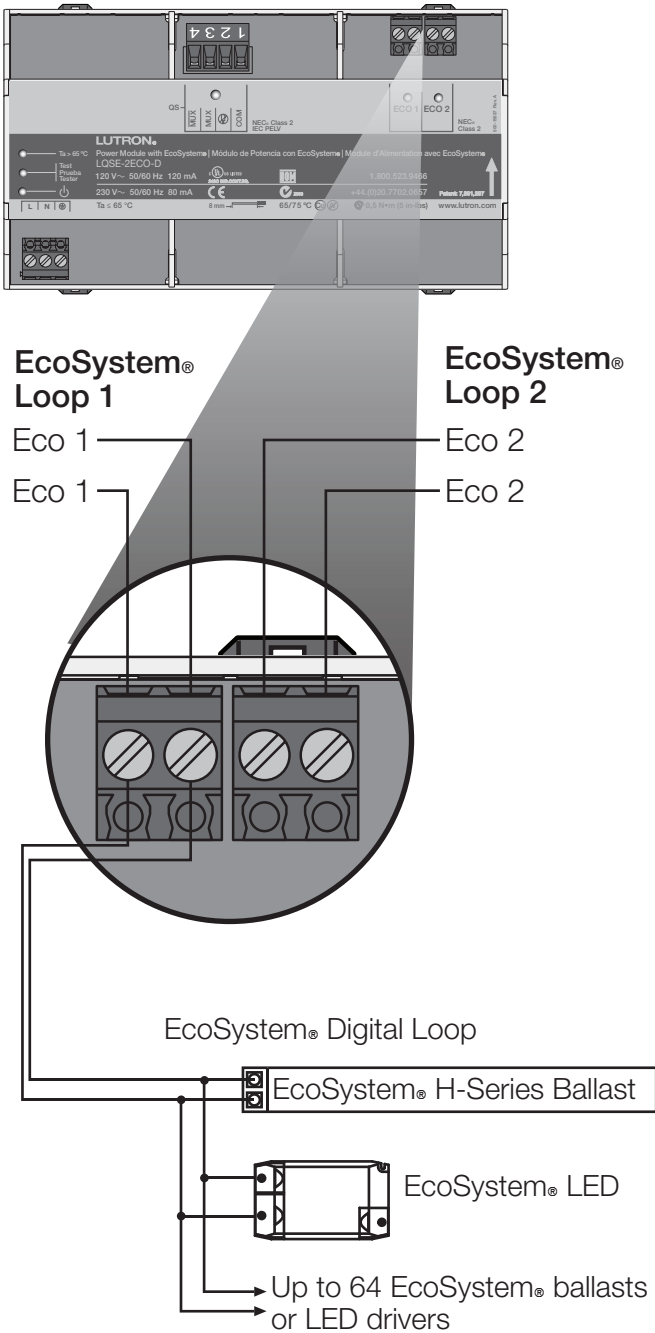
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Job Name:	Model Numbers:
Job Number:	

Wiring: EcoSystem Loop®



Power Module with EcoSystem® will supply power for two independent EcoSystem® Loops, which support a maximum of 64 ballasts per loop.

Eco Wiring

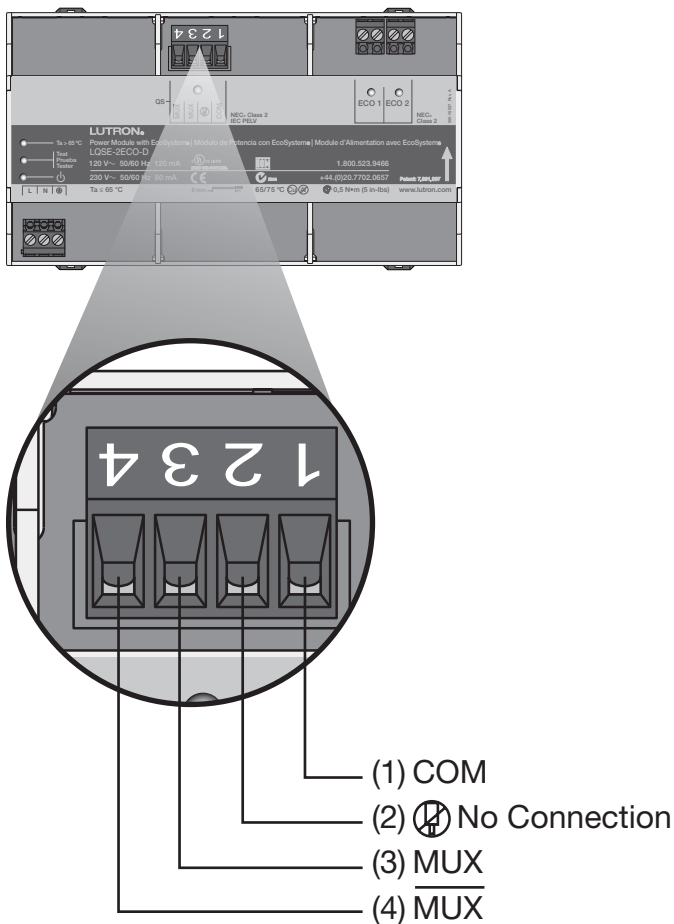
- EcoSystem® Digital Loop can be wired as Mains voltage or IEC PELV/NEC® Class 2 for maximum wiring flexibility.
- The Loop is polarity insensitive and can be wired in any topology.
- Consult all national and local electrical codes for separation requirements.

Wire Gauge	Maximum EcoSystem®-compliant Loop Wire Length
4.0 mm ² (12 AWG)	671 m (2200 ft)
2.5 mm ² (14 AWG)	427 m (1400 ft)
1.5 mm ² (16 AWG)	275 m (900 ft)
1.0 mm ² (18 AWG)	175 m (570 ft)

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Job Name:	Model Numbers:
Job Number:	

Wiring: QS Link



IEC PELV/NEC® Class 2 QS Link Wiring

- Link communicates using IEC PELV/NEC® Class 2 wiring.
- Follow all applicable national and local codes for proper circuit separation and protection.
- Wiring may be daisy chained or t-tapped.
- Total length of QS link must not exceed 610 m (2000 ft).
- Do NOT connect terminal 2.
- Wire Gauge
 - Power (terminals 1 and 2): 1 pair 1.0 mm² (18 AWG)
 - Data (terminals 3 and 4): 1 pair 0.5 mm² to 1.0 mm² (22 AWG to 18 AWG) twisted and shielded
 - Can use Lutron® cable GRX-CBL-346S-500

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Job Name:	Model Numbers:
Job Number:	