

HomeWorks Digital Power Module

The HomeWorks digital power module is a DIN-rail mounted module for use with HomeWorks digital loads in HomeWorks QSX systems. It provides HomeWorks digital bus power and control for two independent HomeWorks digital buses with up to 64 HomeWorks digital loads on each bus.

Model Number

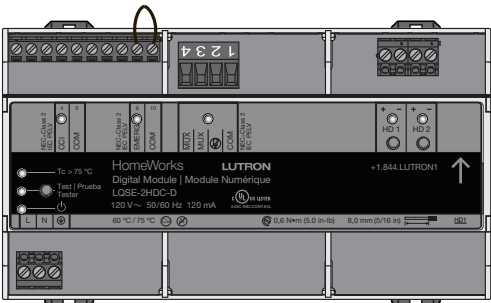
LQSE-2HDC-D

Features

- Provides power for two buses of HomeWorks digital loads
 - 128 mA guaranteed current
 - 250 mA maximum supply current per bus
- Supports up to 64 HomeWorks digital loads on each bus, which can be addressed into 64 Lutron zones
- Two HomeWorks digital buses per HomeWorks digital power module, totaling up to 128 HomeWorks digital loads per module and 128 Lutron zones per HomeWorks digital power module
- Provides perceived linear control of intensity
- Includes QS control link for seamless integration of lights in an HomeWorks QSX system
- Field configurable emergency level, low-end and high-end trims, and fade time
- Power failure memory retains control unit programming in the event of power loss

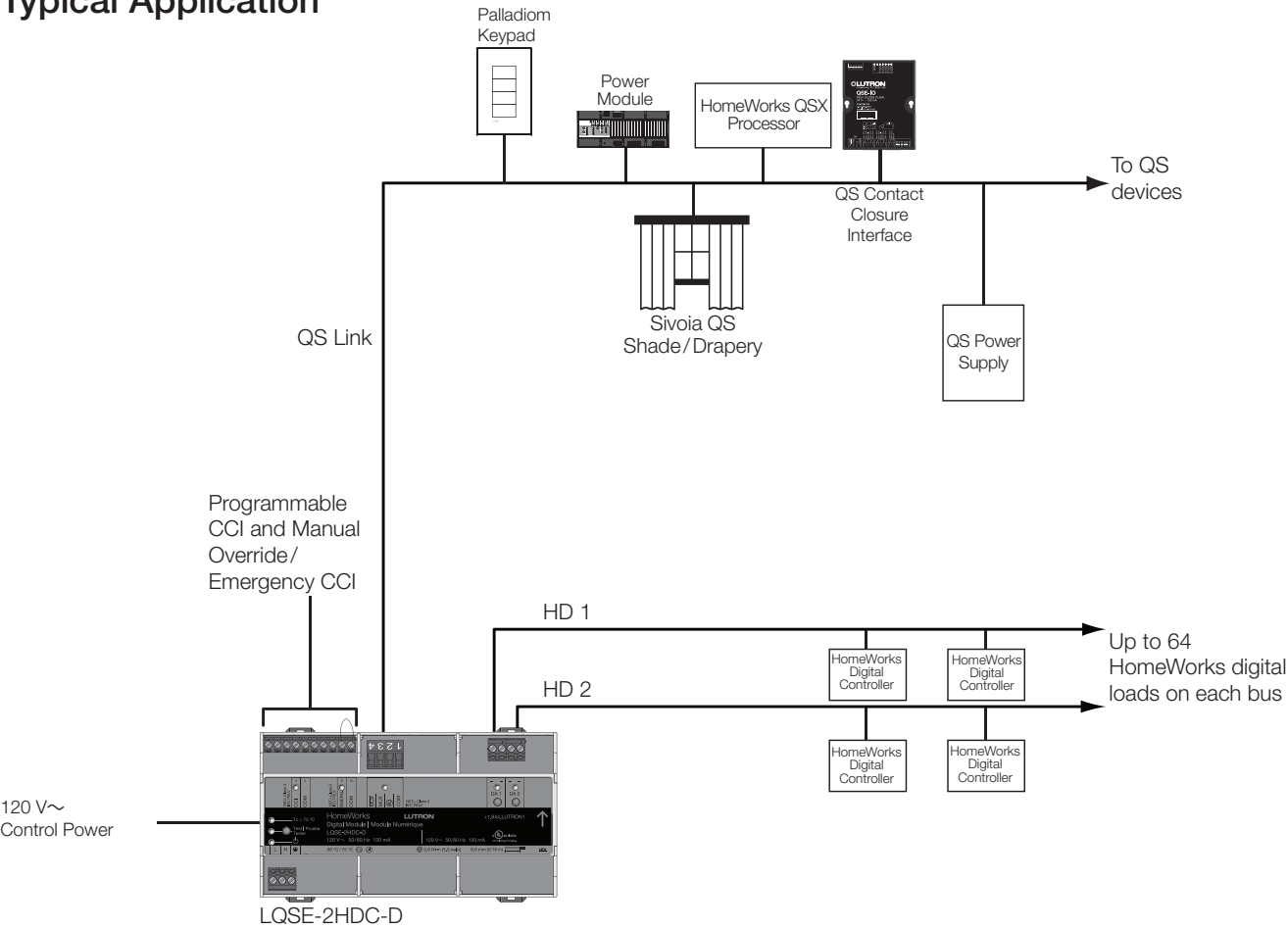
Compatible Systems

- HomeWorks



LQSE-2HDC -D

Typical Application



Specifications

Power

- LQSE-2HDC-D: 120 V~ 50/60 Hz, max 120 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
- HomeWorks digital Bus Output: 16 V== 128 mA guaranteed supply current, 250 mA maximum supply current per bus

Standards

- cULus Listed
- Lutron Quality Systems registered to ISO 9001:2015
- ICES-3(B)/NMB-3(B)
- FCC Part 15

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

- Mains wiring: 18 AWG to 12 AWG (1.0 mm² to 4.0 mm²)
- HomeWorks digital Bus Wiring: 20 AWG to 12 AWG (0.5 mm² to 4.0 mm²)
- QS Link Wiring: 20 AWG to 12 AWG (0.5 mm² to 2.5 mm²)
- CCI and CCI Emergency Wiring: 20 AWG to 16 AWG (0.5 mm² to 1.5 mm²)

Mounting

- Mount module inside Lutron PD-xx panels only
- Width = 9 DIN modules (161.7 mm)

Programming and Compatibility Requirements

- The LQSE-2HDC-D can only be used with a HomeWorks QSX system
- Setup and programming of the HomeWorks digital power module is done through the HomeWorks QSX programming software

HomeWorks Digital Buses

- Up to 64 HomeWorks digital loads on each bus can be addressed into 64 zones
- Short circuit protection with automatic re-start

Troubleshooting and Maintenance Features

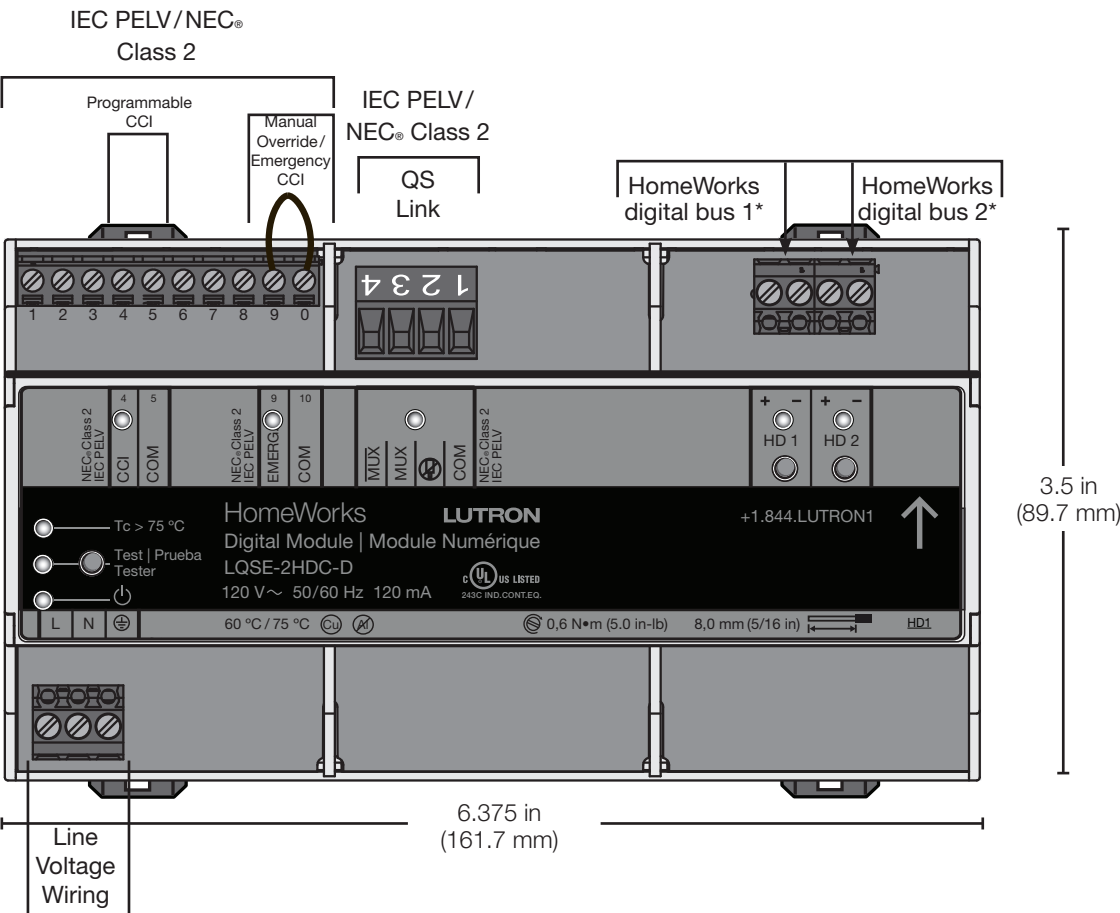
- Maintains redundant memory of control gear programming for ease of single- and multi-control gear replacement
- After installation, “TEST” button verifies HomeWorks digital wiring on all fixtures

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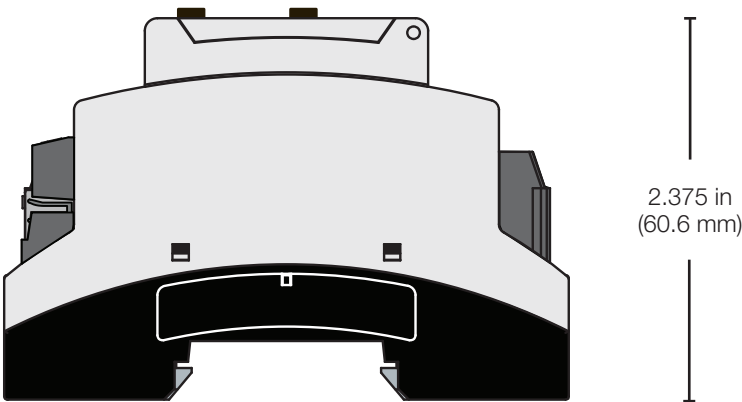
Model Numbers:

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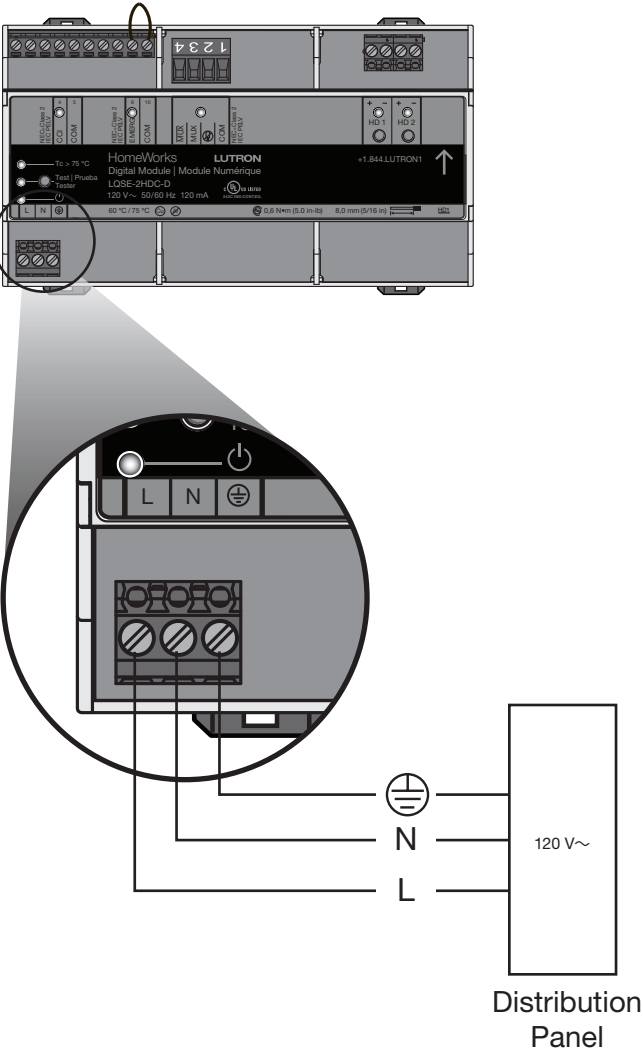
Overview of Wiring Terminals and Mechanical Dimensions



* Wire the HomeWorks digital power module according to local codes



Wiring: Mains Voltage



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

Wiring from Distribution to Bus Supply

- Turn off breaker at distribution panel.
- Run line, neutral, and ⊕ wires from a line/hot feed to the HomeWorks digital power module.

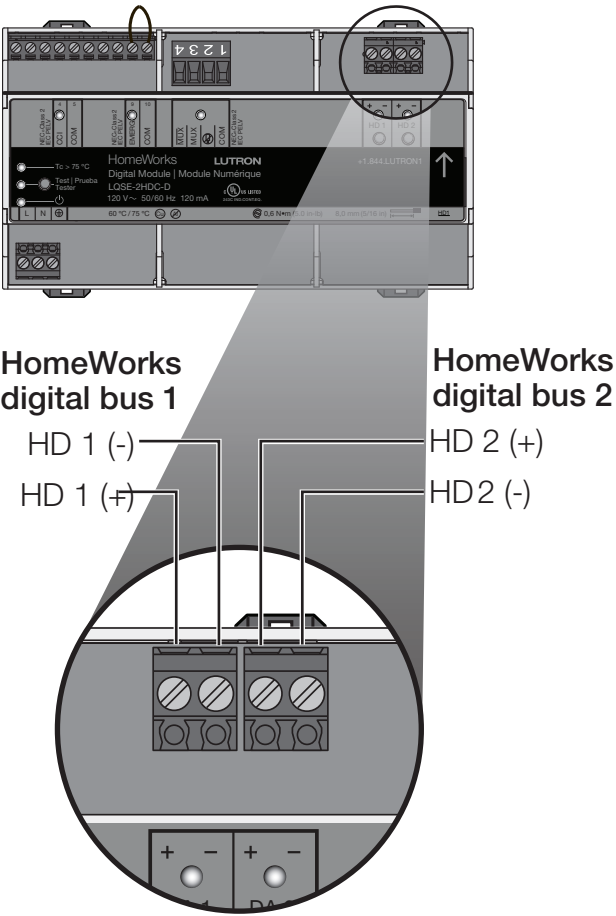
Emergency Lighting Applications

- Use normal (non-essential) power only.
- When normal power drops out, the HomeWorks digital power module will not power the HomeWorks digital buses. When this occurs, control gear powered from emergency feeds go to their emergency level (full light output by default).

Mains Wiring and Low Voltage Separation

- The HomeWorks digital power module is designed to separate mains wiring from PELV circuits.
- Follow appropriate local and national codes to avoid violating required separation guidelines.

Wiring: HomeWorks Digital Bus



The HomeWorks digital power module will supply power to each HomeWorks digital bus independently. Each bus supports a maximum of 64 HomeWorks digital loads per bus.

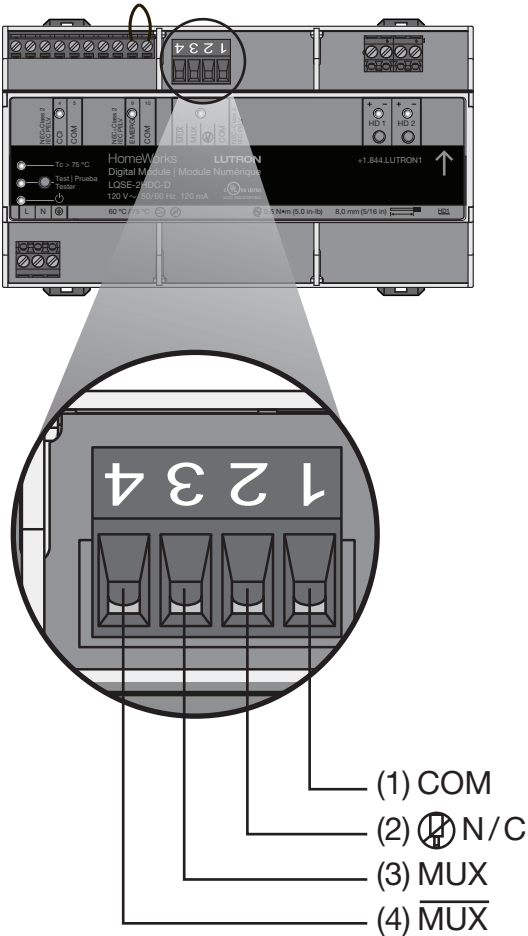
HomeWorks Digital Wiring

- The HomeWorks digital link may be wired Class 1 or Class 2 (See Lutron Application Note #142 (P/N 048142) at www.lutron.com for more details).
- When wired as Class 1, HomeWorks digital wiring is treated as mains voltage, and thus may be run within the same sheathing.
- Ensure that there is no greater than a 2 V drop between the HomeWorks digital power module and the end of the HomeWorks digital bus.
- Consult all national and local electrical codes for separation requirements.

Wire Gauge	Maximum HomeWorks Digital Bus Wire Length *
16 AWG (1.5 mm ²)	984 ft (300 m)
20 AWG (0.75 mm ²)	492 ft (150 m)
22 AWG (0.50 mm ²)	328 ft (100 m)

* Indicates the total length of HomeWorks digital wires

Wiring: QS Link



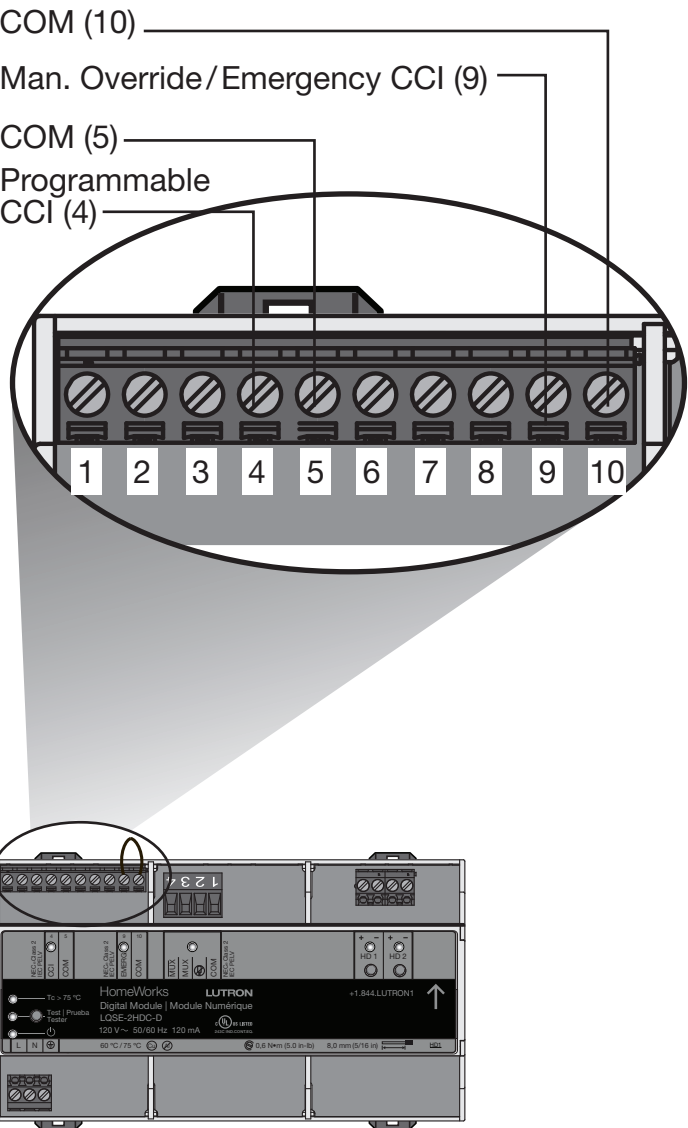
QS Link Wiring (IEC PELV/NEC® Class 2)

- 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 2000 ft (610 m).

QS Link Wiring Length	Wire Gauge	Available from Lutron in one cable: *
Less than 502 ft (153 m)	Power (terminals 1 and 2): 1 pair 18 AWG (1.0 mm²)	GRX-CBL-346S (non-plenum)
	Data (terminals 3 and 4): 1 pair 22 AWG (0.5 mm²), twisted and screened	GRX-PCBL-346S (plenum)
502 ft to 2000 ft (153 m to 610 m)	Power (terminals 1 and 2): 1 pair 12 AWG (4.0 mm²)	GRX-CBL-46L (non-plenum)
	Data (terminals 3 and 4): 1 pair 22 AWG (0.5 mm²), twisted and screened	GRX-PCBL-46L (plenum)

- * Varies by region, refer to the cable spec.
- Use one, twisted-screened pair of 20 AWG (0.5 mm²) for data link (MUX, MUX).

Wiring: Contact Closure Inputs



Manual Override/Emergency CCI Wiring (IEC PELV/NEC® Class 2)

- The attached device must provide a closed dry contact closure or solid-state output.
- Input is miswire-protected up to 36 V_{DC}.
- The HomeWorks digital power module with HomeWorks digital is shipped with a jumper pre-installed in the Emergency Contact Closure Input.
- Manual Override mode is activated by opening the Emergency Contact Closure. Pre-installed jumper must be removed to utilize this function.
- See the **Emergency Lighting Systems Application Note** (P/N 048106) at www.lutron.com for more details.

Programmable Wiring (IEC PELV/NEC® Class 2)

- The attached device must provide a dry contact closure, solid-state output, open collector or active-low (NPN)/active-high (PNP) output.
 - Open collector NPN or active-low on-state voltage must be less than 1 V_{DC} and sink 3.0 mA.
 - Output collector PNP or active-high on-state voltage must be greater than 12 V_{DC} and source 3.0 mA.
 - The outputs must stay in the closed or open states for at least 40 msec in order to be recognized by the HomeWorks digital power module.
- If there is any question as to whether the third-party device generating these outputs is compatible with these specifications, contact the manufacturer.
- Input is miswire-protected up to 36 V_{DC}.

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Job Name:

Job Number:

Model Numbers: