

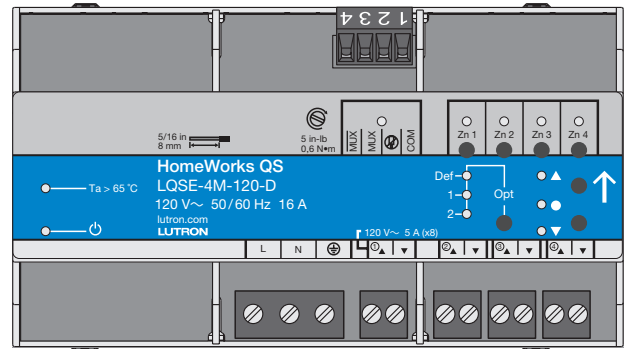
## Motor Control Power Module

The motor control power module is an interface that provides seamless integration of HomeWorks QS systems with AC blinds, shades, louvers, projection screens, or any compatible AC motor. This document describes the following:

- LQSE-4M-120-D: 4-Zone Output Raise/Lower DIN Power Module for controlling 3-wire AC motor loads

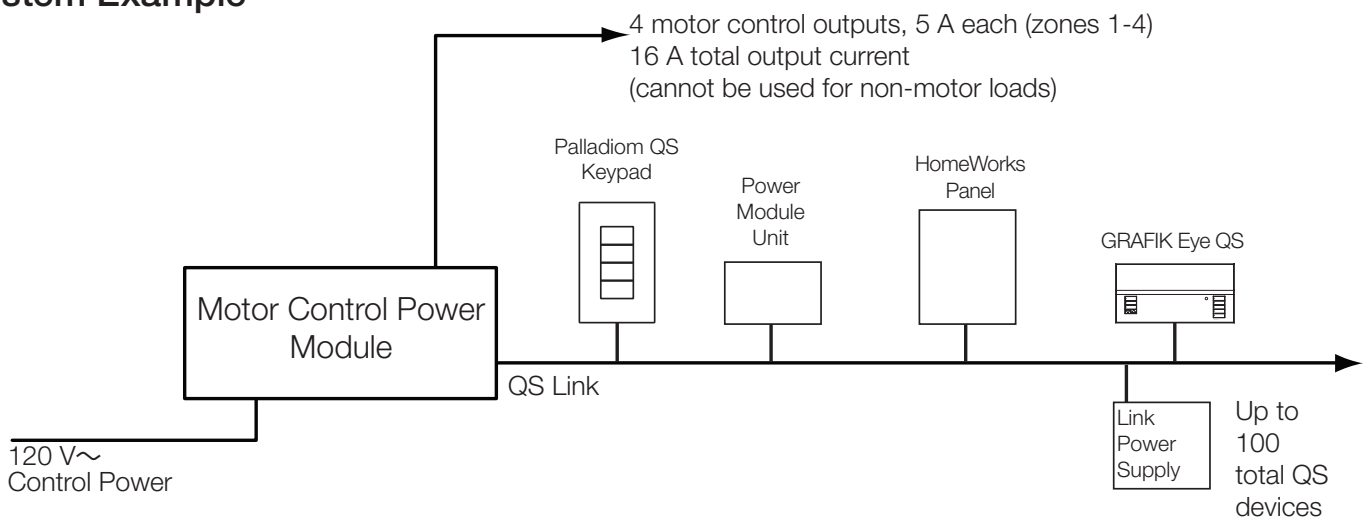
### Features

- Motor Control Power Modules can be used in a HomeWorks QS system
- Includes QS link for seamless integration of lights, motors, and controls
- Controls AC motor loads
- Provides air gap off for zones in the off state
- Raise and lower outputs of each zone are mechanically interlocked to prevent simultaneously activating Raise/Lower outputs
- LEDs on the module provide diagnostic information
- Buttons on the module provide override control
- Terminal block set included with module for panel wiring



LQSE-4M-120-D

## System Example



Job Name:	Model Numbers:
Job Number:	

## Specifications

### Power

- 120 V~ 50/60 Hz
- 16 A maximum total input current
- At standby (no motors being driven), power is less than 1 W
- BTU/hour when fully loaded: 5
- 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
- Contact Lutron for ungrounded delta feed applications

### Output Capacity

- 5 A maximum motor load per zone (not for lighting control)
- 16 A maximum total motor load per unit
- Each zone supports only one motor; do not wire motors in parallel
- Raise and Lower outputs for each zone are mechanically interlocked to prevent simultaneously activating Raise/Lower outputs

### Regulatory Requirements

- Lutron Quality Systems registered to ISO 9001.2015
- cULus Listed
- FCC Compliant
- RoHS Compliant
- NOM Certified

### Environment

- Ambient temperature operating range (outside mounting panel): 32 °F to 104 °F (0 °C to 40 °C)
- Calibration point maximum: 131 °F (55 °C)
- Surrounding air temperature:  $T_a \leq 131$  °F (55 °C)
- Relative humidity: less than 90% non-condensing
- For indoor use only

### Terminals

- Mains Wiring: 14 to 10 AWG (2.5 to 4.0 mm<sup>2</sup>)  
5 in-lbs (0.6 N•m)
- Zone Wiring: 14 to 10 AWG (2.5 to 4.0 mm<sup>2</sup>)  
5 in-lbs (0.6 N•m)
- QS Link Wiring: See **Wiring: QS Link** section on page 5

### Mounting

- Use an IP20 (minimum) rated consumer panel or breaker panel with integrated DIN rail
- Width = 9 DIN units (6.4 in/ 161.7 mm)

### QS Link Limits

- A QS link can have up to 100 zones (outputs) and 100 devices
- Each motor control power module counts as 4 zones (outputs) and 1 device on the QS link

### Normal Mode Operation

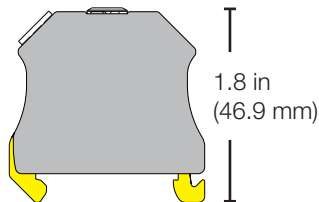
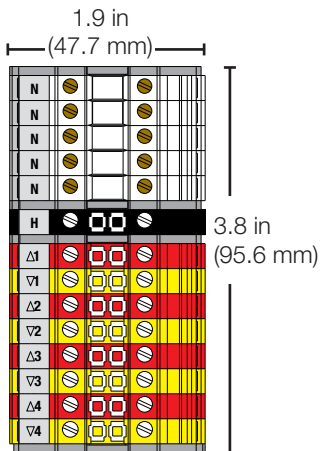
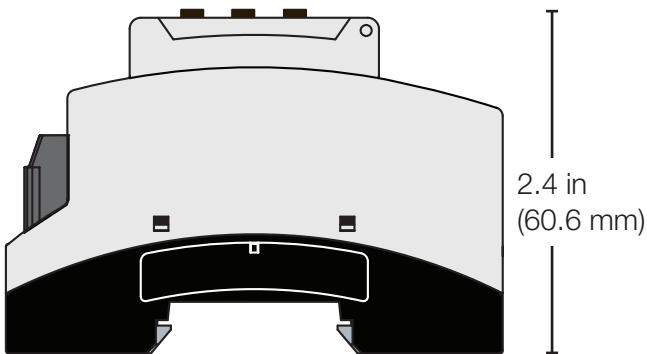
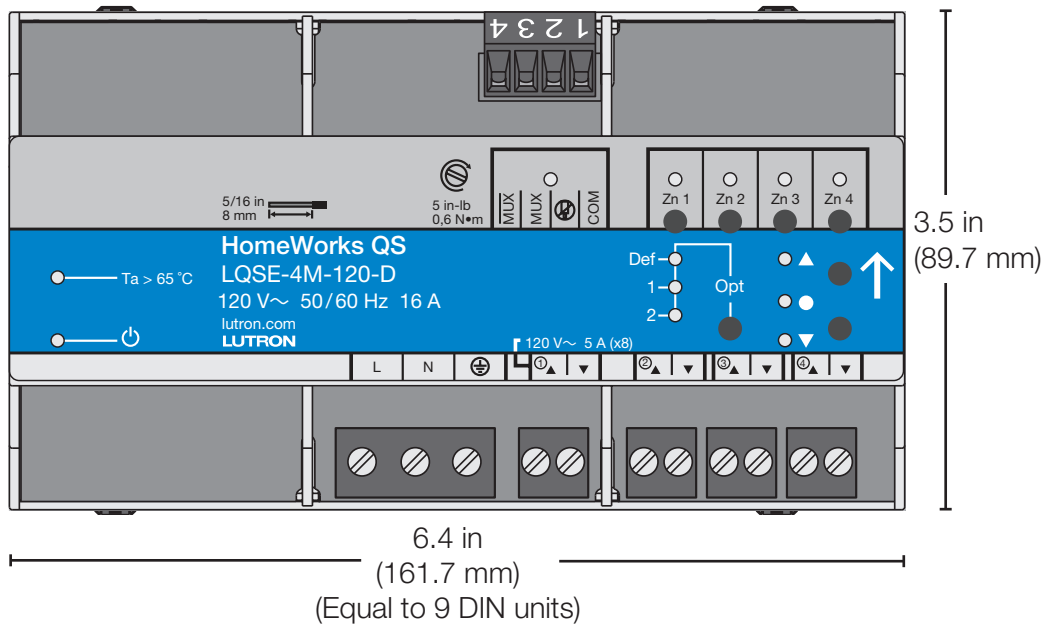
- Zone Select button selects the desired zone; raise/lower buttons control the selected zone
- Supports Open, Close, Stop, and Unaffected presets only; all other presets are ignored
- Only supports load type: motor
- Does not support discrete shade levels
- Does not support motor speed control

### Configurable Parameters

- Minimum On time (also called Jog Time): The minimum time for which the Raise/Lower relay will be turned on  
Configurable from 80 ms to 3520 ms in 80 ms increments  
Default: 80 ms
- Interlock delay: The time both relays are de-energized while switching from Raise to Lower, or from Lower to Raise  
Configurable to 320 ms, 560 ms, or 960 ms  
Default: 560 ms
- Maximum On time (also called Travel Time or Time to Off): after this time, the relay is turned off as a precaution  
Configurable from 10 seconds to 450 seconds in 10 second increments  
Default: 80 seconds

<p>Job Name:</p>  <p>Job Number:</p>	<p>Model Numbers:</p>
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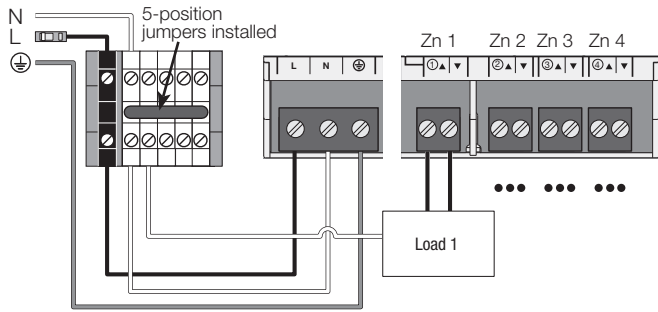
### Mechanical Dimensions



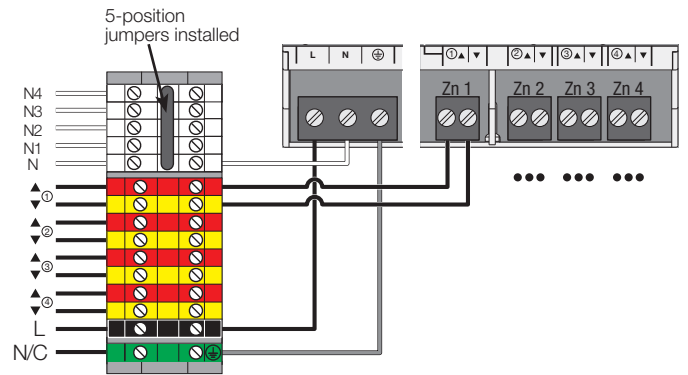
Job Name:	Model Numbers:
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## Mains Voltage and Load Wiring

### Feed-through Panel Wiring



### Lutron Breaker Panel Wiring



### Wiring from Distribution Panel to Motor Control Power Module

- Turn off all circuit breakers or isolators feeding the motor control power module unit at distribution panel.
- Run Line/Hot, Neutral, and Earth wires from a 120 V~ 50/60 Hz feed to the power module.
- Verify all wiring before applying power to the module.

### Mains Wiring and NEC® Class 2 Separation

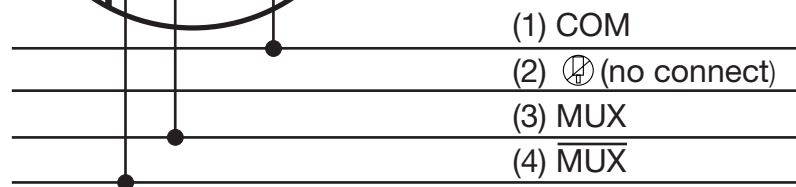
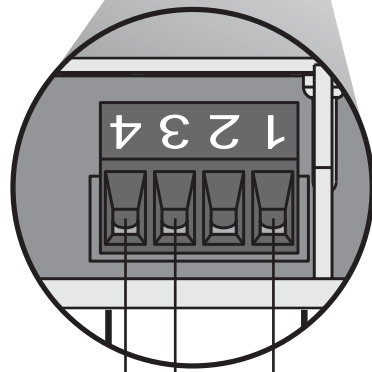
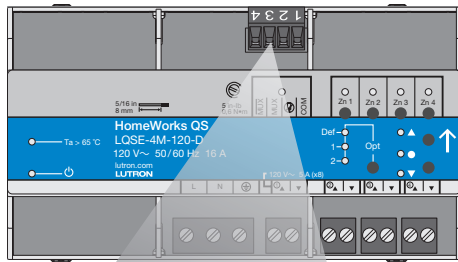
- Follow appropriate local and national codes to ensure proper separation.

### Note

Before proceeding with the line voltage/mains wiring, set the upper/open and lower/close limits for each motor. Refer to the manufacturer's instructions for your specific motor.

Job Name:	Model Numbers:
Job Number:	

### Wiring: QS Link



To additional QS devices

#### NEC® Class 2 QS Link Wiring

- Link communicates using 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.
- Do NOT connect terminal 2.

#### Wire Sizes (check compatibility in your area)

QS Link Wiring Length	Wire Gauge	Lutron Cable Part Number
Less than 500 ft (150 m)	Common (terminal 1) 1 18 AWG (1.0 mm <sup>2</sup> )	GRX-CBL-346S (non-plenum)
	Data (terminals 3 and 4) 1 twisted, shielded pair 22 AWG (0.5 mm <sup>2</sup> )	GRX-PCBL-346S (plenum)
500 ft to 2000 ft (150 m to 610 m)	Common (terminal 1) 1 12 AWG (4.0 mm <sup>2</sup> )	GRX-CBL-46L (non-plenum)
	Data (terminals 3 and 4) 1 twisted, shielded pair 22 AWG (0.5 mm <sup>2</sup> )	GRX-PCBL-46L (plenum)

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