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## **QS** Keyswitch

#### **Features**

- Provides key-only access to QS lighting controls.
- Recalls preset light levels for any two scenes including Off.
- Allows fine-tuning (raise/lower level) of a zone or group of zones.
- Starts/Stops scene sequencing.
- Enables/Disables timeclock.
- Enables/Disables occupancy sensors.
- Enables/Disables daylight sensors.
- Allows associated Zones to be turned On/Off.
- Enables/Disables panic mode.
- Starts/Stops afterhours mode.
- Opens/Closes a shade or group of shades.
- Works with GRAFIK Eye
   QS and Quantum
   Systems.







Insert Style (standard decorator opening)

Note: For applications involving Energi Savr Node™ and Homeworks® QS systems, contact Lutron.

#### Finish, Engraving, and Key Options:

See following pages for options; also available with custom engraving to meet specific project needs. Replacement keys available (part number REP-KS-KEY). Contact Lutron for details.

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## How to Build a Model Number

#### **Example:**

# QSWS2-KSN3MOC-WH:

QSWS2-KS I = Insert **N** = Non-Insert Non-insert, 3-position, momentary, key removable from center only, white

Color Code:

**WH** = White

**BE** = Beige

IV = Ivory

GR = Grav

**BR** = Brown **BL** = Black AL = Almond

**LA** = Light almond

### Available Key Settings:

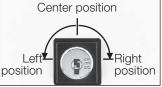
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**3MOC**: **3**-position **Mo**mentary

Center position key removal

± 45° travel



3MAC\*: 3-position

**Maintained** 

Center position key removal

± 90° travel

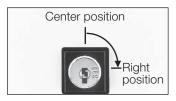
Center position ▼Right position

2MAC\*: 2-position

**Maintained** 

Center position key removal

± 90° travel



2MAA\*: 2-position

**Ma**intained

Any position key removal

± 90° travel

\*3MAC, 2MAC, and 2MAA keyswitches are available as custom products (CPN5432).

Contact Lutron for details.

#### **LUTRON** SPECIFICATION SUBMITTAL

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# **Specifications**

#### Power

Low-voltage Class 2 (PELV).

Operating voltage: 24 V=== 30 mA.

Uses one (1) Power Draw Unit (PDU) on the QS Link

#### **Key Design Features**

- Tested to withstand 16 kV electrostatic discharge without damage or memory loss.
- Faceplate snaps on with no visible means of attachment.
- Insert version can be ganged with other controls using any standard decorator multigang faceplate.
   For non-insert version ganging, contact Lutron for custom faceplate options.

#### **System Communications and Capacity**

- Low-voltage Class 2 (PELV) wiring connects wallstations to processor panel.
- Counts as one (1) device toward the QS system maximum of 100.

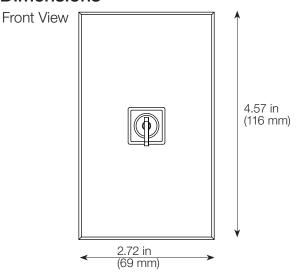
#### **Terminals**

12 AWG to 22 AWG wire (0.5 mm<sup>2</sup> to 4.0 mm<sup>2</sup>) Each accepts up to two 18 AWG (1.0 mm<sup>2</sup>) typical.

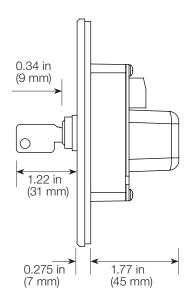
#### **Environment**

32-104 °F (0-40 °C). Relative humidity less than 90% non-condensing. For indoor use only.

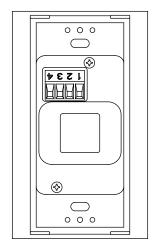
#### **Dimensions**



Side View



Back View



#### **LUTRON** SPECIFICATION SUBMITTAL

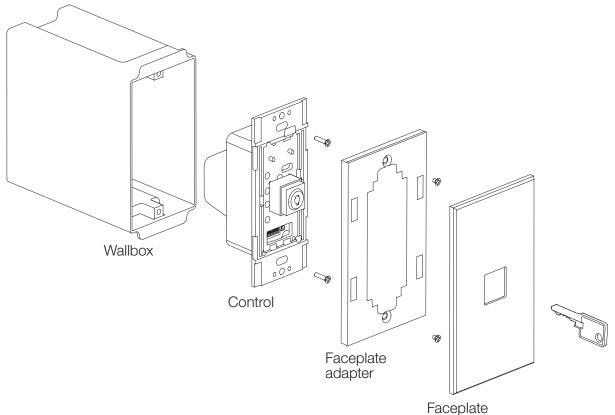
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# Mounting

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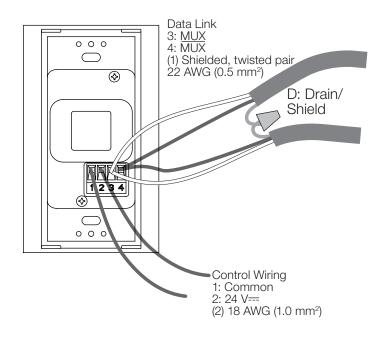


## Installation

#### Class 2 (PELV) Wiring

- Use Class 2 (PELV) wiring to connect wallstations to the QS link. Connections may be daisy-chain, star or T-tap configurations.
- Connect Drain/Shield as shown. Do not connect to Ground (Earth) or wallstation. Connect the bare drain wires and cut off the outside shield.

QS Link Wiring Length	Wire Gauge Available from Lutron in one cable		
Logo than	Power (terminals 1 and 2): 1 pair 18 AWG (1.0 mm²)	GRX-CBL-346S GRX-PCBL346S	
Less than 500 ft (153 m)	Data (terminals 3 and 4): 1 pair 22 AWG (0.5 mm <sup>2</sup> ), twisted and shielded		
500 # (450 ···) t-	Power (terminals 1 and 2): 1 pair 12 AWG (4.0 mm²)	GRX-CBL-46L GRX-PCBL-46L	
500 ft (153 m) to 2000 ft (610 m)	Data (terminals 3 and 4): 1 pair 22 AWG (0.5 mm <sup>2</sup> ), twisted and shielded		



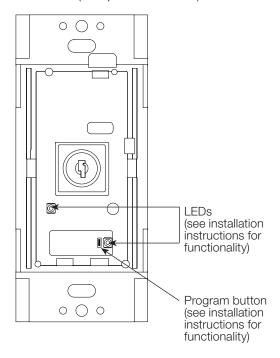
#### **LUTRON** SPECIFICATION SUBMITTAL

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Job Name:	Model Numbers:	
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# Operation

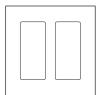
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Front View (faceplate removed)



# Ganging

- Order Insert (I) style controls.
- To order Wallplates for multi-ganging, specify "R3" openings in a NovaT☆® multi-gang FB (fins broken) Series model number.



Example:

Wallplate for 2 QS Keyswitches, Model # NT-R3-R3-FB-(color)

## **LUTRON** SPECIFICATION SUBMITTAL

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# **Keyswitch Functionality**

Some keyswitch models are more appropriate than others for the available functions. Please refer to the table and notes below and the specific function diagrams on the following page to set up your keyswitch.

Keyswitch	Keyswitch Model			
Function	змос	3MAC	2MAC	2MAA
Scene Select*	Χ	X	X	Χ
Zone Preset	Х	X	Х	Χ
Fine Tune Zones	Χ	Not recommended	Not recommended	Not recommended
Sequence Start/ Stop	Χ	Not recommended	Not recommended	X
Timeclock Enable/ Disable	Х	Not recommended	Not recommended	X
Afterhours Start/ Stop	Х	Not recommended	Not recommended	X
Panic Enable/ Disable	Х	Not recommended	Х	X
Daylight Sensor Enable/Disable	Х	Not recommended	Not recommended	X
Occupancy Sensor Enable/Disable	Х	Not recommended	Not recommended	X
Shade Raise/Lower	Χ	Not recommended	Not recommended	Not recommended

<sup>\*</sup>Note: Scene functionality is limited to toggling between two scenes. Choose from any of the 16 available scenes and Off or any two consecutive scenes (e.g., Scenes 5 and 6). In either case, the scene with the higher number (never the Off scene) is activated by turning the key to the right position, and the scene with the lower number (or the Off scene, if applicable) is activated by turning the key to the left position (for a 3-position keyswitch) or center position (for a 2-position keyswitch).

Note: For applications involving Energi Savr Node and Homeworks QS systems, contact Lutron.

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Job Name:	Model Numbers:
Job Number:	



#### **QSWS2 Keyswitch Functions**

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The following functions are available for a QS Keyswitch.

**Scene Select:** Goes to a preset scene. See the Note on the previous page.

> Center position No action Left position Select scene

Right position Select scene

**3MOC** 

Center position No action

Left position Select scene



Right position Select scene

3MAC

Center position Select scene



Right position Select scene

2MAC

Center position Select scene



Right position Select scene

2MAA

**Zone Preset:** Zones go to the preset On level with a fade time of 3 seconds (if all assigned zones are currently off). The 3-second fade time cannot be adjusted.

> Center position No action

Left position Zone Off



Right position Zone(s) On (preset)

**3MOC** 

Center position No action

Left position Zone Off



Right position Zone(s) On (preset)

3MAC

Center position Zone Off



Right position Zone(s) On (preset)

2MAC

Center position Zone Off



Right position Zone(s) On (preset)

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Job Name: Model Numbers:

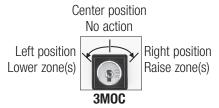
Job Number:



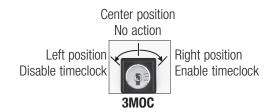
#### QSWS2 Keyswitch Functions (continued)

**<b>\$\text{LUTRON}** 

Fine Tune Zones: Raises and lowers the assigned zone(s).



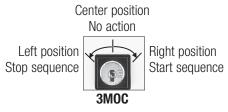
Timeclock Enable/Disable: Enables and disables the astronomic timeclock.



Center position Disable timeclock



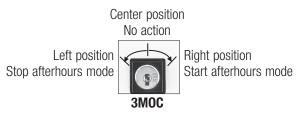
Sequence Start/Stop: Starts and stops sequencing of Scenes 1 through 4, or Scenes 5 through 16.



Center position Stop sequence



Right position Start sequence Afterhours Start/Stop: Starts and stops afterhours mode (automatically turns off lights when no buttons are pushed for a specified time).



Center position Stop afterhours mode



Right position Start afterhours mode

**LUTRON** SPECIFICATION SUBMITTAL

Job Name: Model Numbers: Job Number:

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# QSWS2 Keyswitch Functions (continued)

**<b>\$\text{LUTRON}** 

**Panic Enable/Disable:** Starts panic mode (sends all assigned zones immediately to scene 16, and locks out all button presses on all connected devices).

Center position No action

Left position Stop panic mode Right position
Start panic mode

Center position Stop panic mode

**3M0C** 



Right position Start panic mode

Center position Stop panic mode



Right position Start panic mode

2MAA

Sensor Enable/Disable: Enables and disables

either occupancy or daylight sensors.

Center position No action

Left position Disable sensors



Right position Enable sensors

**3M0C** 

Center position Disable sensors



Right position Enable sensors

2MAA

**Shade Raise/Lower:** Raises and Lowers assigned shade(s).

Center position No action

Left position Lower shade(s)



Right position Raise shade(s)

**LUTRON** SPECIFICATION SUBMITTAL

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Job Number:

Job Name:

Model Numbers: