## 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．

Note：For applications involving Energi Savr Nodeтм 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．


Non－Insert Style


Insert Style （standard decorator opening）

| Job Name： |
| :--- |
| Job Number：$\quad \square$ |

Model Numbers：

How to Build a Model Number


Available Key Settings:


3MOC: 3-position
Momentary
Center position key removal $\pm 45^{\circ}$ travel

3MAC*: 3-position
Maintained
Center position key removal
$\pm 90^{\circ}$ travel


2MAC*: 2-position
Maintained
Center position key removal $\pm 90^{\circ}$ travel

2MAA*: 2-position Maintained
Any position key removal $\pm 90^{\circ}$ travel
*3MAC, 2MAC, and 2MAA keyswitches are available as custom products (CPN5432).
Contact Lutron for details.

## Example:

QSWS2-KSN3MOC-WH:
Non-insert, 3-position, momentary, key removable from center only, white

Color Code:
$\mathbf{W H}=$ White
BE = Beige
IV = I lvory
GR = Gray
$\mathbf{B R}=$ Brown
BL = Black
AL = Almond
LA = Light almond

| Job Name: |
| :--- | :--- |
| Job Number: $\quad \square$ |

## Specifications

## Power

Low－voltage Class 2 （PELV）．
Operating voltage： $24 \mathrm{~V}=-=30 \mathrm{~mA}$ ．
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（ $0.5 \mathrm{~mm}^{2}$ to $4.0 \mathrm{~mm}^{2}$ ） Each accepts up to two 18 AWG（ $1.0 \mathrm{~mm}^{2}$ ）typical．

## Environment

32－104 ${ }^{\circ} \mathrm{F}\left(0-40^{\circ} \mathrm{C}\right)$ ．Relative humidity less than 90\％non－condensing．
For indoor use only．

## Dimensions

Front View


Side View


Back View


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| Job Name： |
| :--- |
|  |
| Job Number：$\quad \square$ |

Model Numbers：

## Mounting



Faceplate

## 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: |
| :---: | :---: | :---: |
| Less than 500 ft (153 m) | Power (terminals 1 and 2): 1 pair 18 AWG ( $1.0 \mathrm{~mm}^{2}$ ) | GRX-CBL-346S GRX-PCBL346S |
|  | Data (terminals 3 and 4): 1 pair 22 AWG ( $0.5 \mathrm{~mm}^{2}$ ), twisted and shielded |  |
| $\begin{aligned} & 500 \mathrm{ft}(153 \mathrm{~m}) \text { to } \\ & 2000 \mathrm{ft}(610 \mathrm{~m}) \end{aligned}$ | Power (terminals 1 and 2): <br> 1 pair 12 AWG ( $4.0 \mathrm{~mm}^{2}$ ) | $\begin{aligned} & \text { GRX-CBL-46L } \\ & \text { GRX-PCBL-46L } \end{aligned}$ |
|  | Data (terminals 3 and 4): 1 pair 22 AWG ( $0.5 \mathrm{~mm}^{2}$ ), twisted and shielded |  |

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Model Numbers:

## Operation

Front View（faceplate removed）


## Ganging

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


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

| Job Name： |  |
| :--- | :--- |
| $\square$ |  |
| Job Number： | $\square$ |

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

*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.


Model Numbers:

## QSWS2 Keyswitch Functions

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
Select scene


Center position
Select scene


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．



Model Numbers：

## QSWS2 Keyswitch Functions（continued）

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


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


Center position
Stop sequence


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


Center position
Disable timeclock


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



Model Numbers：

QSWS2 Keyswitch Functions （continued）

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
Stop panic mode


Sensor Enable／Disable：Enables and disables either occupancy or daylight sensors．



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


