myRoom Door Button and Chime Recommendations and Implementation Guide

This document explains how to implement corridor signage that includes Do Not Disturb (DND), a door chime control, and an optional Make Up Room (MUR) guest control in a myRoom system.

Note that Lutron has a corridor control available that includes a door button to ring the third-party chime and has a DND and MUR indicator (QSWP-CP-XXX, where "XXX" designates color). Please refer to the Guestroom Pico Corridor Control Specification Submittal (P/N 369706) at www.lutron.com for more information. If this Lutron corridor control is used, only the third-party door chime is required, as well as the Guest Pico Privacy Control (QSWP-DM-XXX, where "XXX" designates color). Please refer to the QS Link Power Draw Units Specification Submittal (P/N 369405) at www.lutron.com for more information.

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myRoom Corridor Signage Sequence of Operation Overview

The system design can implement either of the sequences of operation as given below:

- Do Not Disturb (DND) only:

  o The guest in the room can press the DND button to illuminate the red* DND indicator light located outside the room.

  o The doorbell will not activate the chime in this mode.

  o See the Single Color Illumination Implementation section later in this document for more information.

- Do Not Disturb (DND) and Make Up Room (MUR):

  This mode will also have the MUR functionality in addition to the DND functionality listed in the previous section.

  o The guest in the room will press the MUR button to illuminate the green* MUR indicator light located outside the room.

  o The DND indicator is turned off when MUR is turned on and vice-versa.

Overall Architecture

The myRoom corridor signage solution includes a control inside the room, and corridor signage outside the room. The control inside the room is the QSWP-DM Pico Privacy Control, a QS device such as the Palladiom keypad, or a third-party contact closure. The corridor sign can either be a Pico corridor control (QSWP-CP) or a corridor sign by others. See the architecture diagram on the next page for more detail. Note that the power supply provides 8 Power Draw Units (PDUs). The QSE-IO consumes 3 PDUs. Assume each wired Pico corridor control or relay device consumes one PDU each. Ensure the maximum consumption of PDUs does not exceed the power supply. Please refer to the QS Link Power Draw Units Specification Submittal (P/N 369405) at www.lutron.com for more information.

* The illumination color can be chosen as per the requirement of the customer and availability of the manufacturer.

Overall Architecture *(continued)*

Plugs into receptacle

QSWP-DM-XXX
Pico Privacy Control
Control Dimensions:
3.49 in (H) x 3.49 in (W) x 0.381 in (D)
(89 mm [H] x 89 mm [W] x 10 mm [D])
(Shown Mounted in a Wallplate / Wallplate
Adapter Kit - Sold Separately)

QSPS-Px-1-35V
QS Link Power Supply
CEE 7/7 Plug
Dimensions:
4.00 in (H) x 2.75 in (W) x 1.25 in (D)
(102 mm [H] x 70 mm [W] x 32 mm [D])

Corridor Sign

Corridor Sign (by others)

(CCI)
(CCO)
(CCO)

| Door Bell Button |
| MUR Indicator |
| DND Indicator |

OR

QSE-IO
Contact Closure Interface

INPUT #1

QSWP-CP-XXX
Pico Corridor Control
Control Dimensions:
3.49 in (H) x 3.49 in (W) x 0.381 in (D)
(89 mm [H] x 89 mm [W] x 10 mm [D])
(Shown Mounted in a Wallplate / Wallplate
Adapter Kit - Sold Separately)

(CCO)
Door Chime
(by others - suggested ATW PC-200 12-24 V== door chime)

TOTAL CONTROL LINK LENGTH	WIRE GAUGE	AVAILABLE FROM LUTRON IN ONE CABLE
Less than 500 ft (153 m)	Power (Terminals 1 & 2) 1 pair 18 AWG (1.0 mm²)	GRX-CBL-346S OR GRX-PCBL-346S These cables come in 500 ft (153 m) rolls only.
	Data (Terminals 3 & 4) 1 pair 22 AWG (0.5 mm²), twisted and shielded*	
500 ft (153 m) to 2000 ft (600 m)**	Power (Terminals 1 & 2) 1 pair 12 AWG (4.0 mm²)	GRX-CBL-46L OR GRX-PCBL-46L These cables come in 250 ft (76.2 m) or 500 ft (153 m) rolls only.
	Data (Terminals 3 & 4) 1 pair 22 AWG (0.5 mm²), twisted and shielded*	

* Alternate data-only cable: Use approved data link cable (22 AWG [0.5 mm²] twisted / shielded) from Belden, model #9461.

** Total length of the QS Link must not exceed 2000 ft (600 m).

Third-Party Door Button and Chime Recommendations

- **Recommended chime (provided by others):** The recommended chime is the ATW Security PC-200 24 V⎓ electronic chime. This chime consumes 5 PDU's when powered by a Lutron power supply such as the MQSPS-DH-1-30.

- Recommended door button (provided by others): The table below lists recommended options.

Recommended Doorbell Button	Illumination	Sequence of Operation	Connection Method	PDU Consumption
Bulgin MPI002 / FL / RD*/24	Single color illumination	DND only	Flying leads	1 PDU per button
Bulgin MPI002 / TE / RD*/24	Single color illumination	DND only	Screw terminals	
E-Switch PV4F2B0SSG-3R5 and PVP4WD3 wire harness	Dual color illumination	DND and MUR	Wire harness Order with the wiring harness PVP4WD3	
EEC Switch Model 19 button	Dual color illumination	DND and MUR	Flying leads	

Ensure the maximum consumption of PDUs for doorbell buttons and chimes do not exceed the power supply.
Refer to the QS Link Power Draw Units Specification Submittal (P/N 369405) at www.lutron.com for more information.

*   The illumination color can be chosen as per the requirement of the customer and availability of the manufacturer.

Dual Color Illumination Implementation

The following sections explain dual color (DND and MUR) illumination implementation. For single color illumination (DND only), see the "Single Color Illumination Implementation" section further in this document.

Dual Color Illumination Button with Door Chime – Equipment

This section describes the equipment required for DND and MUR operation of door button and chime.

Lutron products

- QSE-IO

Products provided by others

- Door Button (Choose one)
    o E-Switch PV4F2B0SSG-3R5 and PVP4WD3 wire harness
    o EEC Switch Model 19
    o Lutron Corridor Pico Control (QSWP-CP-XXX)
- Door Chime (ATW PC-200)
- DND dry contact closure output (if not using the Lutron Guest Pico Privacy Control, QSWP-DM-XXX) or QS keypad (for myRoom Plus systems only)
- MUR dry contact closure output (if not using the Lutron Guest Pico Privacy Control, QSWP-DM-XXX) or QS keypad (for myRoom Plus systems only)

Dual Color Illumination Implementation *(continued)*

Dual Color Illumination Button with Door Chime – Equipment *(continued)*

Cable/Wire: Use low-voltage wire (18 AWG [1.0 mm^2])

- For Lutron QS devices, such as the QSE-IO and Guest Pico Privacy Control (if used), use Lutron QS Cable (Example: GRX-PCBL-346S-500).
- For third-party low-voltage devices, use wire that follows the below specifications:
  - o Wire sizes at least 18 AWG (1.0 mm^2)for power/common and 22 AWG (0.5 mm^2) for dry contacts.
  - o The maximum capacitance does not exceed:
    - – Conductor to Conductor: 25 pf/ft max (82 pf/m)
  - o For the door chime, use 3 low-voltage wires
    - – 2 wires for power/common
    - – 1 wire for dry contact signal
  - o For the door button, use 5 low-voltage wires
    - – 3 wires for power/common (DND, MUR, and common)
    - – 2 wires for dry contact signal
  - o For the dry contact closure outputs for DND and MUR, use 4 low-voltage wires
    - – 2 wires for the DND dry contact signal
    - – 2 wires for the MUR dry contact signal

Dual Color Illumination Button with Door Chime - Wiring

This section describes the wiring for DND and MUR operation of door button and chime. Button models with this capability include the E-Switch PV4F2B0SSG-3R5 and EEC Switch Model 19.

This application requires Lutron's contact closure interface (QSE-IO). Wire the controls to the QSE-IO as shown on pages 6 and 7.
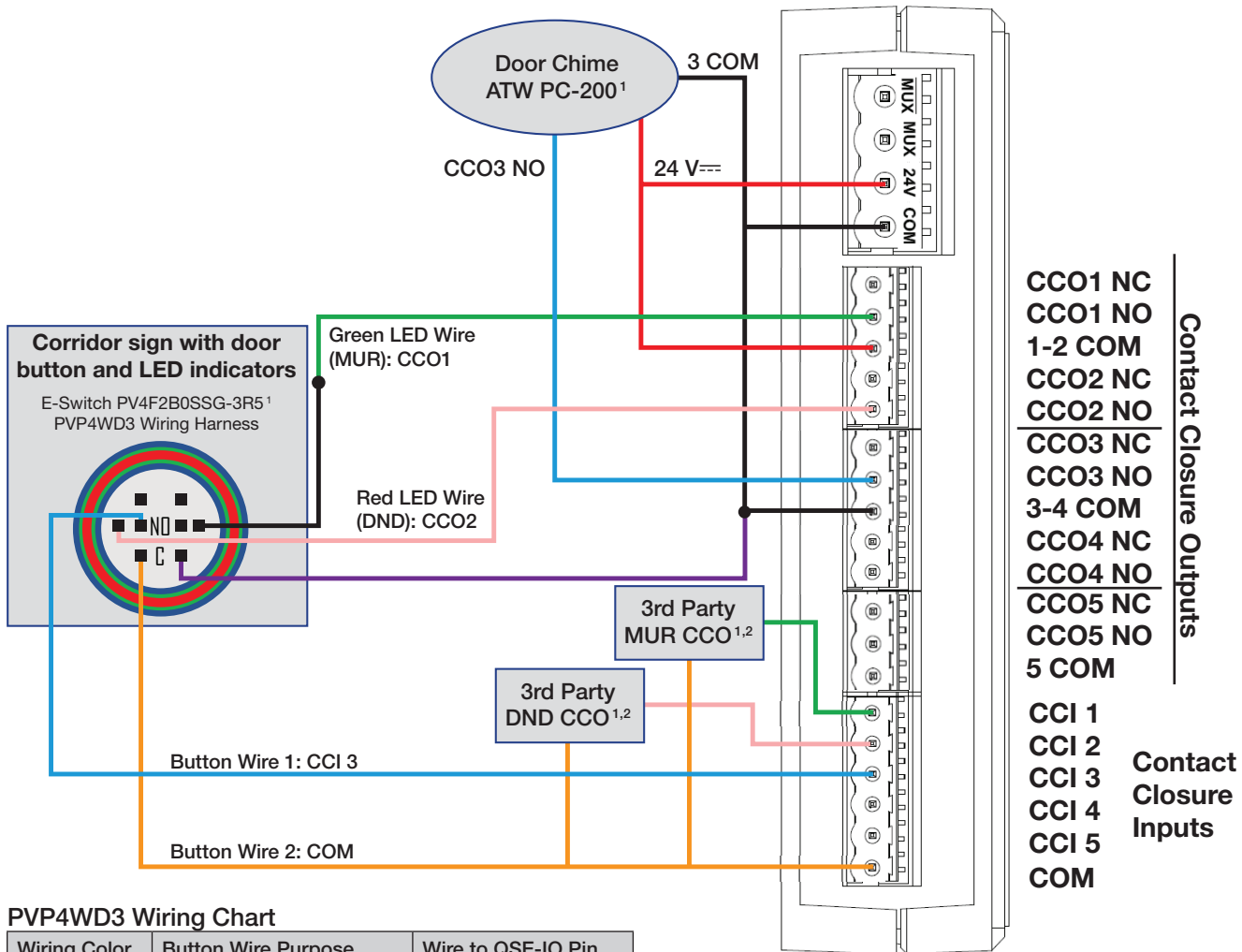
Note: There is a different wiring diagram for the E-Switch button and EEC Switch button. Confirm using the correct diagram for the chosen button.

Dual Color Illumination Implementation *(continued)*

Dual Color Illumination Button with Door Chime - Wiring *(continued)*

Dual Color Illumination - E-Switch PV4F2B0SSG-3R5 Wiring Diagram

Door Chime ATW PC-200[1]

3 COM

CCO3 NO

24 V⎓

Corridor sign with door button and LED indicators

E-Switch PV4F2B0SSG-3R5[1]
PVP4WD3 Wiring Harness

Green LED Wire (MUR): CCO1

Red LED Wire (DND): CCO2

NO

C

3rd Party MUR CCO[1,2]

3rd Party DND CCO[1,2]

Button Wire 1: CCI 3

Button Wire 2: COM

MUX MUX 24V COM

CCO1 NC
CCO1 NO
1-2 COM
CCO2 NC
CCO2 NO
CCO3 NC
CCO3 NO
3-4 COM
CCO4 NC
CCO4 NO
CCO5 NC
CCO5 NO
5 COM

Contact Closure Outputs

CCI 1
CCI 2
CCI 3
CCI 4
CCI 5
COM

Contact Closure Inputs

PVP4WD3 Wiring Chart

| Wiring Color	Button Wire Purpose	Wire to QSE-IO Pin
Yellow	Button contact common	CCI COM
Blue	N.O. Button contact output	CCI 3
Red	Red LED 24 V⎓ (+)	CCO 2 N.O.
Black	Green LED 24 V⎓ (+)	CCO 1 N.O.
Purple	LED VDC COM (-)	COM
White	Blue LED 24 V⎓ (+)	Not Used
Orange	Not Used	Not Used
Green	N.C. contact output	Not Used

[1] To be provided by others.
[2] The CCO is provided by others. Alternatively, the Pico Privacy Control (QSWP-DM-XXX) can be used to activate DND and MUR. A QS keypad may also be used in myRoom Plus systems.

Dual Color Illumination Implementation *(continued)*

Dual Color Illumination Button with Door Chime - Wiring *(continued)*

Dual Color Illumination - EEC Switch Model 19 Wiring Diagram


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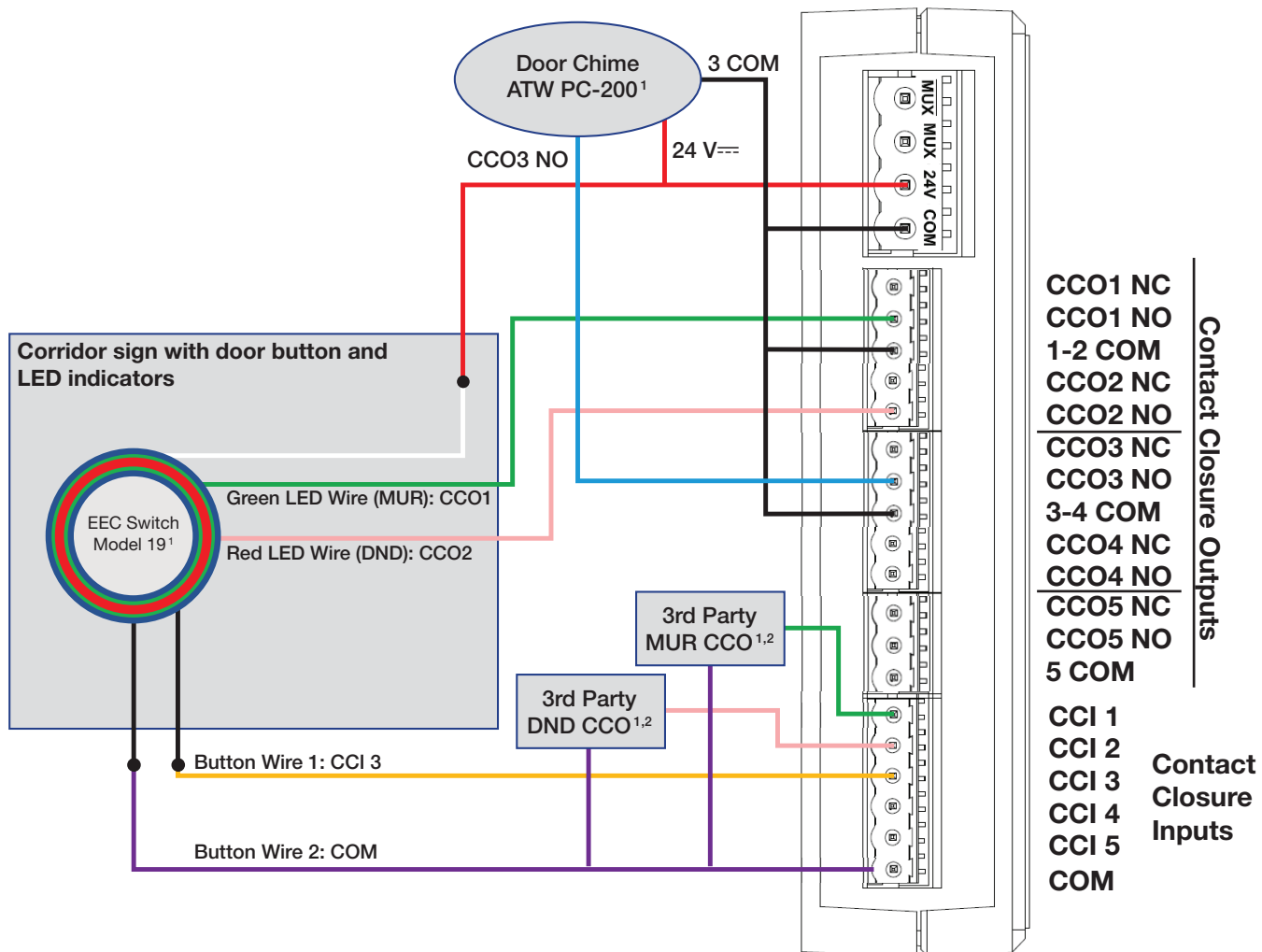
[1] To be provided by others.

[2] The CCO is provided by others. Alternatively, the Pico Privacy Control (QSWP-DM-XXX) can be used to activate DND and MUR. A QS keypad may also be used in myRoom Plus systems.

Dual Color Illumination Implementation *(continued)*

Dual Color Illumination Button with Door Chime – Commissioning and Programming

myRoom Prime Dual Color Illumination Programming Procedure

1. Confirm that another QS device is connected to the QSE-IO on the QS link, such as the QSWP-DM-XXX or QSWP-CP-XXX. Note that the QSE-IO will not function without another QS device connected to it (the QS device does not need to be programmed if it is not used in the system). If the QSE-IO's LEDs are "waterfalling" from right to left, the QSE-IO does not recognize that there is another QS device connected on the QS link.

2. To program the QSE-IO to act in Hotel Mode, set the DIP switches on the side of the QSE-IO to the following:
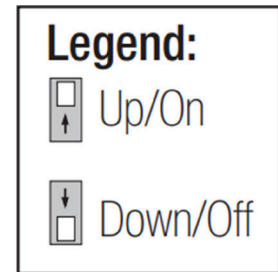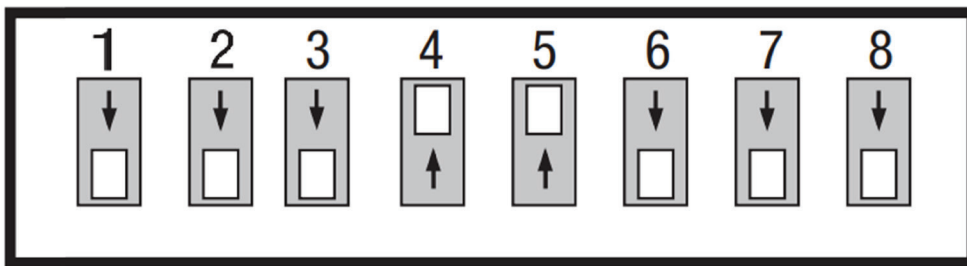
3. If using a Guest Pico Privacy Control (QSWP-DM-XXX) instead of third-party contact closures, follow the instructions below:

   a. Press and hold the MUR and DND buttons simultaneously for 20 seconds (the MUR LED will begin to flash). Release both buttons once the LED starts flashing.

   b. Press and release the programming button on the QSE-IO. The first LED on the QSE-IO will flash.

   c. With the first LED on the QSE-IO flashing, press and hold the QSE-IO programming button for 5 seconds, then release the button. The first LED will rapidly flash again, then remain on.

   d. Press and release the DND button on the Pico. The red LED will start flashing.

   e. Press and release the programming button on the QSE-IO. The first LED on the QSE-IO will flash.

   f. Press and release the programming button again on the QSE-IO. The second LED on the QSE-IO will flash.

   g. With the second LED on the QSE-IO flashing, press and hold the QSE-IO programming button for 5 seconds, then release the button. The second LED will rapidly flash then remain on.

   h. Press and hold the MUR and DND buttons simultaneously for 5 seconds. The QSE-IO's last LED will flash.

Dual Color Illumination Implementation *(continued)*

Dual Color Illumination Button with Door Chime – Commissioning and Programming *(continued)*

myRoom Prime Dual Color Illumination Programming Procedure *(continued)*

4. If using a different Lutron device to activate DND or MUR than the Guest Pico Privacy control mentioned in step 3, see the Hotel Mode section of QSE-IO Control Interface Programming Guide (P/N 040391) at www.lutron.com for more information.

5. If using a Pico corridor control (QSWP-CP-XXX) instead of third-party contact closures, follow the instructions below:

   a. Press and hold the doorbell button for 20 seconds (the MUR LED will begin to flash). Release the button once the LED starts flashing.

      i. Press and release the programming button on the QSE-IO. The first LED on the QSE-IO will flash.

      ii. With the first LED on the QSE-IO flashing, press and hold the QSE-IO programming button for 5 seconds, then release the button. The first LED will rapidly flash, then remain on.

   b. Press and release the doorbell button again on the Pico corridor control. The red and green LEDs will start alternately flashing.

      i. Press and release the programming button on the QSE-IO. The first LED on the QSE-IO will flash.

      ii. Press and release the programming button again on the QSE-IO. The second LED on the QSE-IO will flash.

      iii. Press and release the programming button again on the QSE-IO. The third LED on the QSE-IO will flash.

      iv. With the third LED on the QSE-IO flashing, press and hold the QSE-IO programming button for 5 seconds, then release the button. The third LED will rapidly flash, then remain on.

   c. Press and release the doorbell button again on the Pico. The red LED will start flashing.

      i. Press and release the programming button on the QSE-IO. The first LED on the QSE-IO will flash.

      ii. Press and release the programming button again on the QSE-IO. The second LED on the QSE-IO will flash.

      iii. With the second LED on the QSE-IO flashing, press and hold the QSE-IO programming button for 5 seconds, then release the button. The second LED will rapidly flash, then remain on.

   d. Press and hold the doorbell button for 5 seconds. The QSE-IO's last LED will flash.

6. Test the door button and chime by following the Door Chime and Button Test Procedure section later in this document.

myRoom Plus Dual Color Illumination Programming Procedure

In a myRoom Plus system, the programming is done in the myRoom programming software during commissioning. Contact Lutron or a certified Lutron Hospitality Technology Integrator for programming instructions. The door chime and button can still be tested by setting the DIP switches to the above configuration and following the same test procedures.

Single Color Illumination Implementation

The following sections explain single color (DND only) illumination implementation.

Single Color Illumination Button with Door Chime – Equipment

This section describes the equipment required for DND-only operation of door button and chime.

Lutron products

- myRoom DIN Switching Power Module (one zone output)
  - o Model MQSE-4S1-D. Note that the MQSE-3S1-D or MQSE-2S1-D can be used, provided one zone is reserved for the door functionality and all lighting zones are accounted for. Please refer to the QS Switching Power Module Specification Submittal (P/N 369841) at www.lutron.com for more information
  - o Lutron QS device to activate DND, such as a Palladiom Keypad

Products provided by others

- Door Button (Choose one)
  - o E-Switch PV4F2B0SSG-3R5 and PVP4WD3 wire harness
  - o EEC Switch Model 19
  - o Bulgin MPI002
- Single Pole Double Throw (SPDT) relay, with the relay (output) rated for 24 V⎓, and the coil (input) rated for the line-voltage from the MQSE-4S1-D (100-120 V∼ or 220-240 V∼)
- Door Chime (ATW PC-200)

Cable/Wire: Use low-voltage wire (18 AWG [0.75 mm^2])

- For Lutron QS devices' low-voltage wiring, use Lutron QS Cable (Example: GRX-PCBL-346S-500).
- For Lutron QS devices' line-voltage wiring, follow the mains wiring guidelines found in the QS Switching Power Module Specification Submittal (P/N 369841) at www.lutron.com for more information
- For third-party devices, use wire that follows the specifications below:
  - o **Line-voltage wiring:** Follow the mains wiring guidelines found in the QS Switching Power Module Specification Submittal (P/N 369841) at www.lutron.com for more information
  - o **Low-voltage wiring:** Wire sizes at least 18 AWG (1.0 mm^2) for power/common and 22 AWG (0.5 mm^2) for dry contacts.
    - – Conductor to Conductor capacitance does not exceed 25 pf/ft (82 pf/m)
  - o For the door chime, use 3 low-voltage wires
    - – 2 wires for power/common
    - – 1 wire for dry contact signal
  - o For the door button, use 4 low-voltage wires
    - – 2 wires for power/common (DND and common)
    - – 2 wires for dry contact signal
  - o For the SPDT relay, use 2 line-voltage wires and 2 low-voltage wires
    - – 2 line-voltage wires from the MQSE to the coil
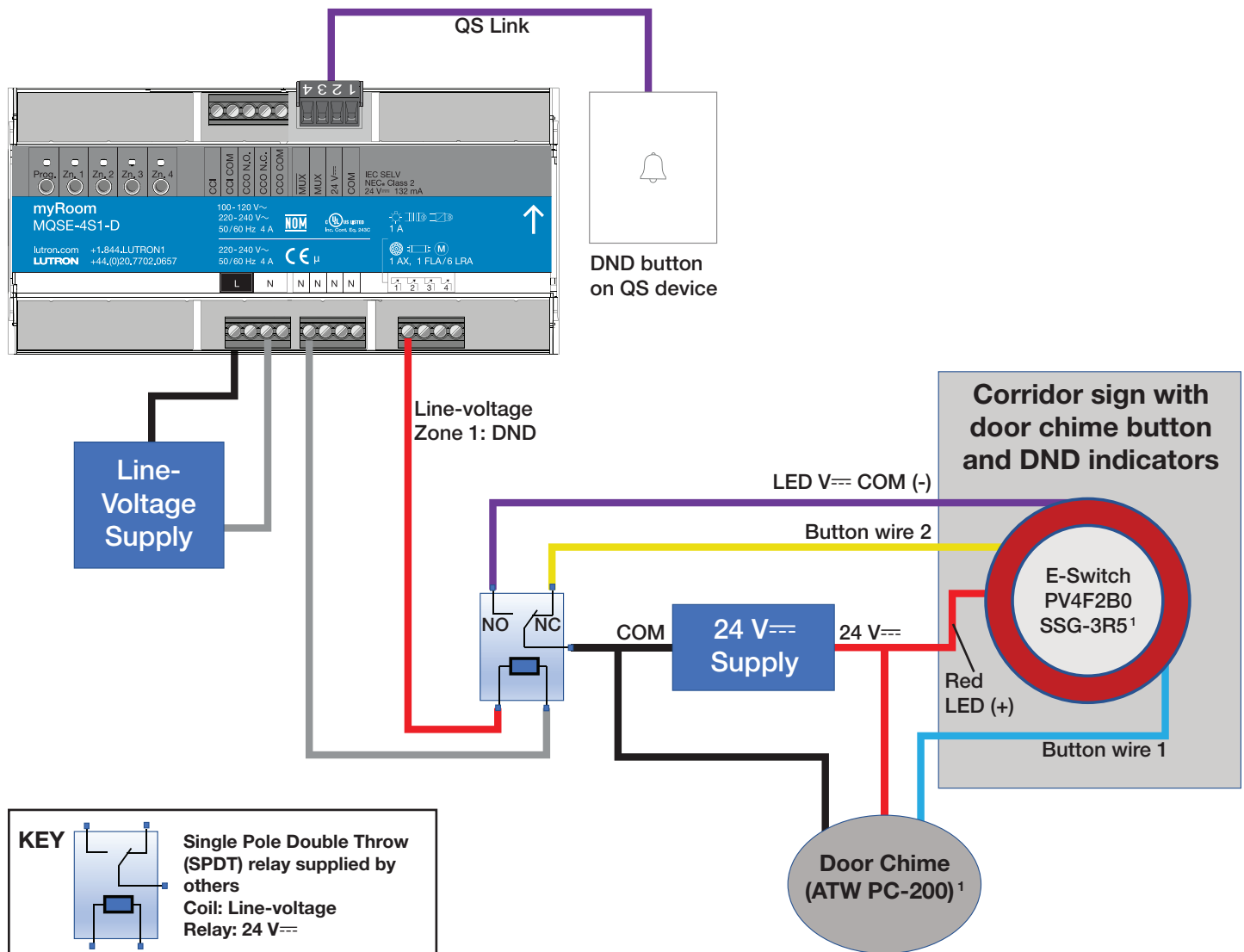   - – 2 low-voltage wires from the relay to the door button

Single Color Illumination Implementation *(continued)*

Single Color Illumination Button with Door Chime – Wiring

This section describes the wiring for DND-only applications for door button and chime.

Note: There is a different wiring for the E-Switch button and EEC Switch button. Confirm using the correct diagram for the chosen button.

Single Color Illumination - E-Switch PV4F2B0SSG-3R5 or Bulgin MPI002 Wiring Diagram

KEY — Single Pole Double Throw (SPDT) relay supplied by others
Coil: Line-voltage
Relay: 24 V⎓

PVP4WD3 Wiring Chart

| Wiring Color	Button Wire Purpose	Wire to:
Yellow	Button contact common	N.C. pin on SPDT relay
Blue	N.O. button contact output	Door chime signal (blue)
Red	Red LED 24 V⎓ (+)	Power supply 24 V⎓ (+)
Purple	LED V⎓ COM (-)	N.O. pin on SPDT relay
All Others	-	Not used

[1] To be provided by others.

Single Color Illumination Implementation *(continued)*

Single Color Illumination Button with Door Chime – Wiring *(continued)*

This section describes the wiring for DND-only applications for door button and chime.

Note: There is a different wiring for the E-Switch button and EEC Switch button. Confirm using the correct diagram for the chosen button.

Single Color Illumination - EEC Switch Model 19 Wiring Diagram
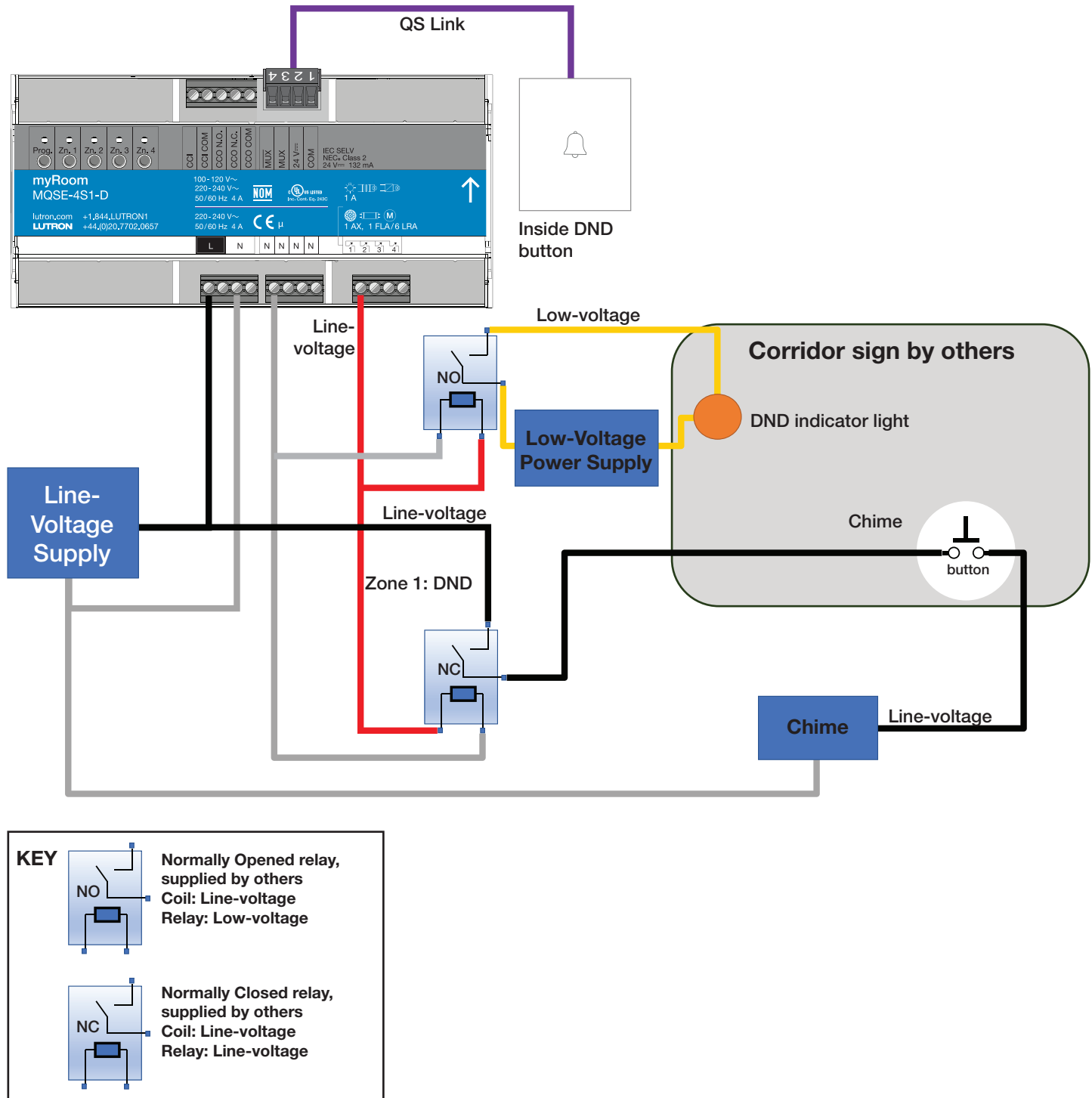

[1] To be provided by others.

Single Color Illumination Implementation *(continued)*

Single Color Illumination Button with Door Chime – Wiring *(continued)*

Line-voltage DND Light, Line-voltage Chime and Button

Single Color Illumination Implementation *(continued)*

Single Color Illumination Button with Door Chime – Wiring *(continued)*

Line-voltage DND Light, Low-voltage Chime and Button
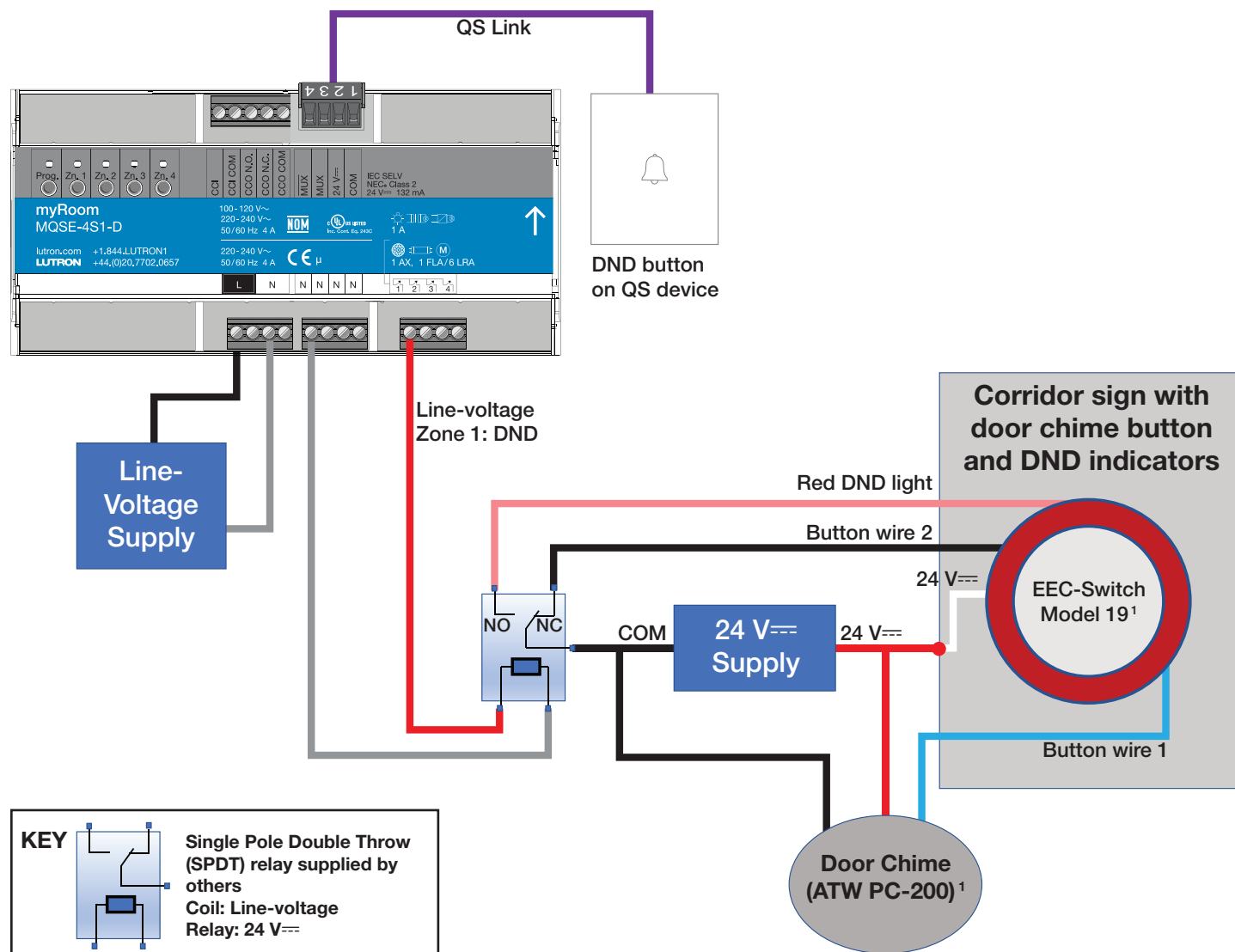
Single Color Illumination Implementation *(continued)*

Single Color Illumination Button with Door Chime – Wiring *(continued)*

Low-voltage DND Light, Line-voltage Chime and Button

KEY

Normally Opened relay,
supplied by others
Coil: Line-voltage
Relay: Low-voltage

Normally Closed relay,
supplied by others
Coil: Line-voltage
Relay: Line-voltage

Single Color Illumination Implementation *(continued)*

Single Color Illumination Button with Door Chime – Commissioning and Programming

For both myRoom Plus and myRoom Prime, the programming is done in the myRoom programming software during commissioning. Contact Lutron or a certified Lutron Hospitality Technology Integrator for programming instructions.

Single Color Illumination Door Chime and Button Test Procedures

1. Confirm that DND is not active.
    a. Confirm the button's DND LED is off.
    b. Confirm the door button activates the chime when pressing the button.
2. Press the DND button on the QS device to activate the DND.
    a. Confirm the button's red LED is on.
    b. Confirm the door button does not activate the chime when pressing the button.

If any of the steps above fail, confirm the wiring with the diagrams and ensure the programming was done correctly.

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