

SZ-IO Contact Closure Interface



Description

The *Stanza* system is an easy-to-install and easy-to-use lighting control system designed especially for hotel guest rooms and similar applications. The system consists of wallbox dimmers, wallbox switches, line-voltage wallbox keypads, low-voltage interfaces, and lamp socket dimmer/switches. All of these devices communicate via radio frequency (RF) within each individual guest room.

The *Stanza* contact closure interface allows *Stanza* systems to connect with equipment that has contact-closure inputs and outputs, including:

- Occupant and vacancy sensors.
- Motorized window treatments.
- AV equipment.
- Thermostats.
- Card switches.
- Alarm systems.

The functionality of the *Stanza* contact closure interface is determined by programming from the *Stanza* design graphical user interface (GUI) PC software.

Features

- Provides five inputs and five dry contact closure outputs.
- Provides both normally open (NO) and normally closed (NC) momentary or maintained contacts.
- Using the inputs, contact closures in other equipment can interface with the *Stanza* system to:
 - Select scenes.
 - Turn lights on or off based on room occupancy.
 - Generate contact closure outputs.
- Using the outputs, contact closure inputs or button presses on keypads can:
 - Trigger outputs to control other equipment.
 - Provide status feedback to other equipment.
- Provides 15 - 24 V_{AC}, 100 mA maximum output for powering external devices, such as card switches and occupant sensors.
- Up to 3 contact closure interfaces may be used in a basic *Stanza* system (limit can be increased with SZ-CI-PRG present).

Job Name:	Model Numbers:
Job Number:	

Specifications

Standards:

- FCC approved. Complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules

Input Power:

- Low-voltage PELV (Class 2: USA).
Operating voltage: 15 - 24 V \equiv , 200 mA.
- AC adapter included (requires 120 V \sim outlet; provides 15 V \equiv output).

Output Power:

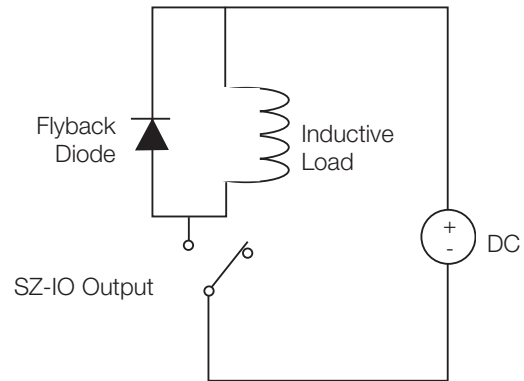
- The SZ-IO can support an external device drawing up to 100 mA. Note that the power is supplied directly from the external low-voltage PELV (Class 2: USA).

Five Input Terminals:


- Accept maintained inputs and momentary inputs with 40 msec minimum pulse times.
- Off-state leakage current must be less than 100 μ A.
- Open circuit voltage: 24 V \equiv maximum.
- Inputs must be dry contact closure, solid state, open collector, or active-low (NPN)/active high (PNP) output.
 - Open collector NPN or active-low on-state voltage must be less than 2 V \equiv and sink 3.0 mA.
 - Open collector PNP or active-high on-state voltage must be greater than 12 V \equiv and source 3.0 mA.
- 250 ft (76 m) maximum from external device to interface

Five Output Terminals:

- Provide maintained or momentary (programmable 0.25- to 10-second) outputs.
- The SZ-IO is not rated to control unclamped, inductive loads. Inductive loads include, but are not limited to, relays, solenoids, and motors. To control these types of equipment, a flyback diode must be used (DC voltages only). See diagram below.



- Relays are non-latching and de-energize if power is lost.
- 250 feet (76 m) maximum from interface to external device.
- Output current is rated as follows:

Supply Voltage	Resistive Load 
0 - 24 V \equiv	1.0 A
0 - 24 V \sim	0.5 A

Job Name:	Model Numbers:
Job Number:	

Specifications

Key Design Features:

- Five Status LEDs can be set to light when associated output or input is active (on) or closed. Additional status LEDs show proper device and system operation.
- Power failure memory: if power is interrupted, when the power is restored, device will retain all settings that were in place prior to the interruption.
- Diagnostic mode allows the outputs to be overridden temporarily.

System Communications and Capacity:

- Contact closure interface communicates with other *Stanza* system components through radio frequency (RF) at 434 MHz.
- Multiple RF channels and thousands of system addresses prevent interference between systems.
- Each contact closure interface counts as 1 device toward the basic system maximum of 31 RF devices (maximum devices can be increased to 100 if an SZ-CI-PRG is present in the system).
- A maximum of three *Stanza* contact closures may be used per system (limit increases with SZ-CI-PRG present).

Environment:

- 32-104 °F (0-40 °C).
- Relative humidity less than 90% non-condensing.
- Indoor use only.
- Cannot be mounted in a metal enclosure (interferes with RF reception).

Warranty:

- 1-year limited warranty
- 2-year full parts and labor warranty, with 8-year pro-rated parts replacement on commissioned systems

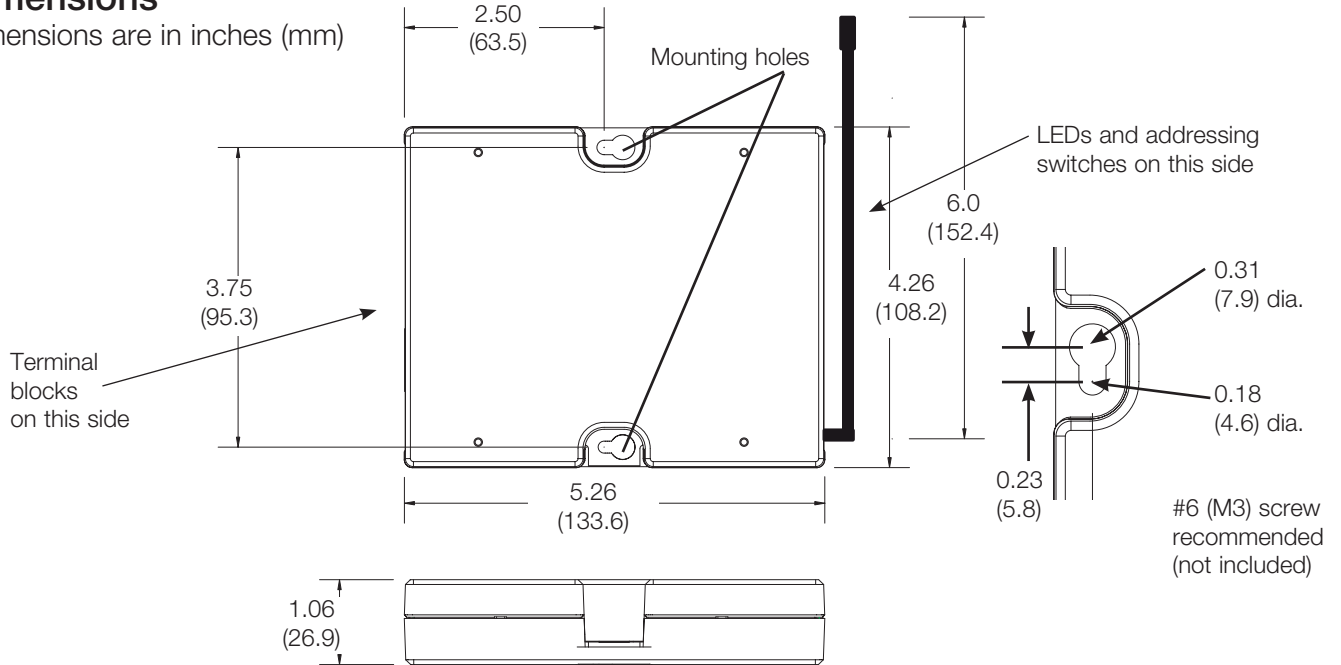
Color/Finish:

- Black only

Job Name:	Model Numbers:
Job Number:	

Dimensions

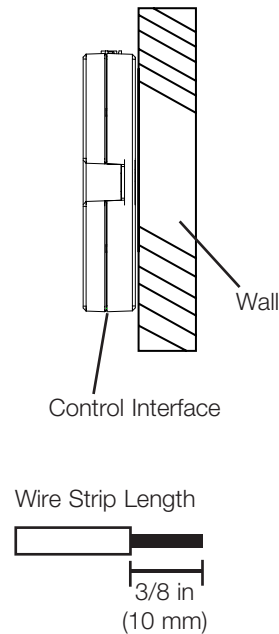
Dimensions are in inches (mm)



Mounting

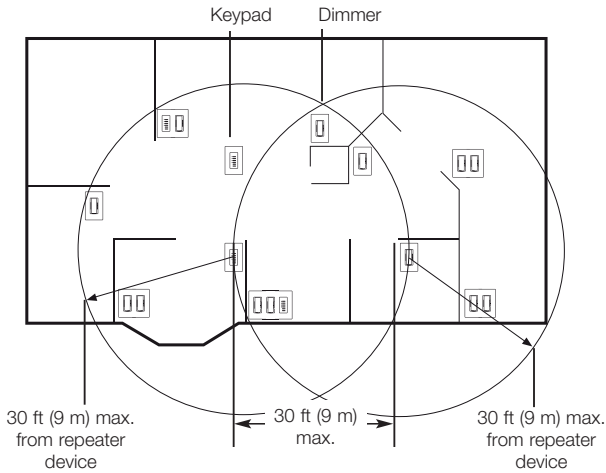
1. Mount the control interface directly on a wall, as shown in the Mounting Diagram, using screws (not included).
2. When mounting, provide sufficient space for the antenna and connecting cables.
3. Mount in an accessible location for convenient access to addressing button, LEDs, terminal blocks, and DIP switches.
4. The unit cannot be mounted in a full metal enclosure. If mounting in a metal enclosure is necessary, antenna must fully protrude out of a knockout or other hole. The antenna is not removable or remotely mountable.
5. Connect wiring as shown in the Wiring Diagram. Use wire sizes as specified in the Wiring Diagram.
6. The SZ-IO should be mounted no less than 3 ft (1 m) from motorized window treatments for proper RF performance.
7. The SZ-IO must remain accessible after commissioning.
8. The SZ-IO must be connected to Earth/Ground or Chassis Ground for ESD protection (see Wiring Diagram).

Mounting Diagram



Job Name:	Model Numbers:
Job Number:	

System Overview

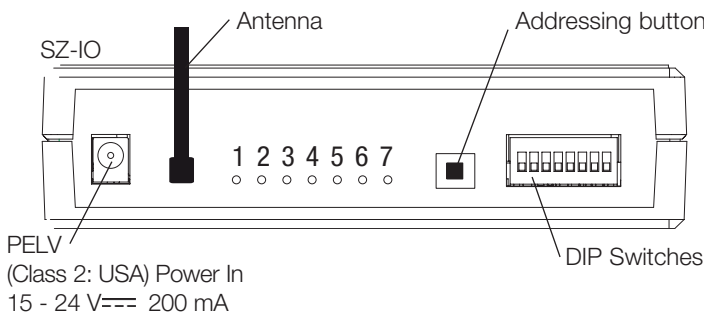


System Communication Notes

- *Stanza* RF devices must be located within 30 ft (9 m) of a *Stanza* RF device configured as a repeater. Multiple devices configured as repeaters may be necessary to provide adequate coverage.
- Any *Stanza* RF device can be configured as a repeater.
- A total of 5 devices maximum can be configured as repeaters.
- Devices configured as repeaters must be within 30 ft (9 m) of another device configured as a repeater.
- *Stanza* lighting controls cannot be controlled wirelessly, and *Stanza* keypads and contact closure interfaces will not function, until they are addressed and programmed.

Feature	Basic System (no SZ-CI-PRG present)	Advanced System (with SZ-CI-PRG present)
Maximum devices	31	100
RS232 and/or Ethernet Interface Capability	No	Yes
PC Required for Device Replacement	No	Yes

Interface Overview

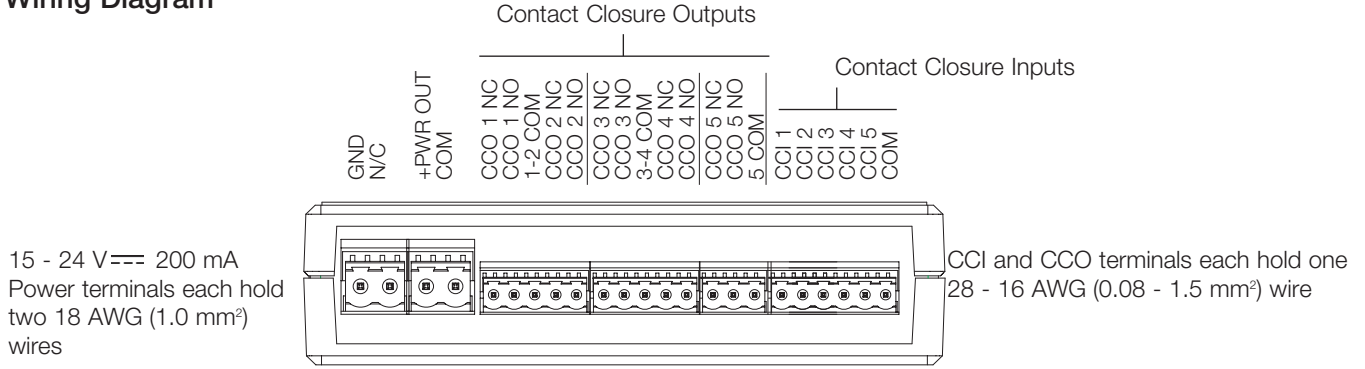


- LED 1: CCI/O 1 status
- LED 2: CCI/O 2 status
- LED 3: CCI/O 3 status
- LED 4: CCI/O 4 status
- LED 5: CCI/O 5 status
- LED 6: Addressing mode
- LED 7: RF link activity

Note: Device should be powered using the supplied transformer or shade power supply (Lutron part number SZ-PS-P1-1-50). See Wiring Diagram. Contact Lutron Technical Support prior to powering device using any other transformer or power supply.

Job Name:	Model Numbers:
Job Number:	

Wiring Diagram



15 - 24 V $\overline{\text{---}}$ 200 mA
 Power terminals each hold two 18 AWG (1.0 mm²) wires

Note: For ESD protection, the included ground wire should be connected to Earth/Ground before device is powered.

Operation

The SZ-IO receives its operating settings during system startup. A device database containing settings is transferred to the SZ-IO after it has been addressed. This database includes settings for:

- CCO behavior (maintained vs. momentary)
- Momentary pulse time
- CCI programming action
- System presets

LED Feedback

The SZ-IO provides 7 LEDs for user feedback:

Status LEDs

LEDs 1 through 5 provide feedback for the CCOs and CCIs. The display mode (CCO vs. CCI status) depends on the position of DIP switch 7: The LED lights when the CCO is active or when the CCI is closed.

- Switch up (on): CCI status displayed
- Switch down (off): CCO status displayed

Addressing Mode LED

LED 6 will blink during addressing. A slow blink (on for 3 seconds every 4 seconds) indicates an unaddressed device. A fast blink (once per second) indicates an addressed device. When not in addressing mode, this LED is off.

RF Link Activity LED

LED 7 will blink when the SZ-IO receives or transmits an RF packet.

Diagnostic Mode and DIP Switch Settings

Diagnostic mode allows the user to override the contact closure outputs (CCOs) of the device.

DIP Switch Settings

Switch #	Mode	LED Display Shows
6 7	Normal	Outputs
6 7	Normal	Inputs
6 7	Diagnostic	Outputs
6 7	Diagnostic	Inputs

- Switch up (On)
- Switch down (Off)

Note: In diagnostic mode, DIPs 1-5 set the override state of the outputs.

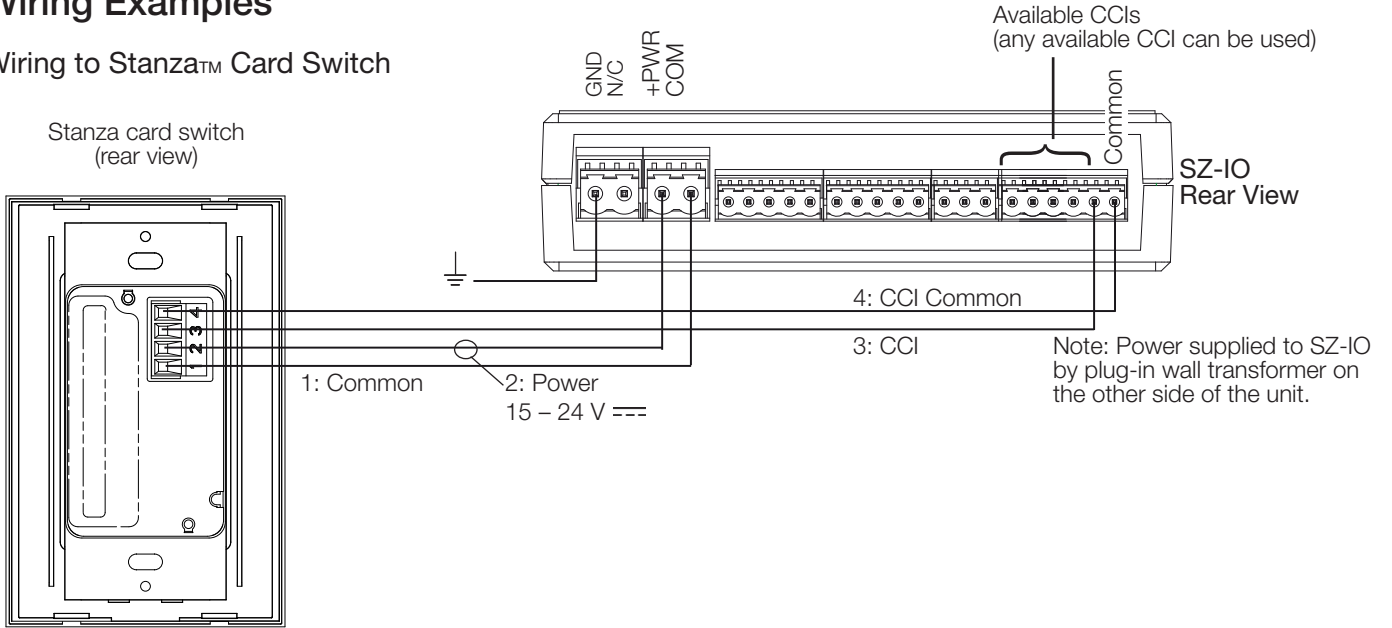
Diagnostic Mode Operation

1. **Enter diagnostic mode.** Move DIP switch 6 to the on (up) position. LEDs 6 and 7 will flash together (once per second) while the unit is in diagnostic mode.
2. **Select CCOs to override.** Use DIP switches 1 through 5 to select which CCOs to close when the addressing (ADDR) button is pressed. (The DIP switch number corresponds to the CCO it controls.)
3. **Activate the CCOs.** Press the addressing button to activate the CCOs you set using the DIP switches in the previous step. The CCOs will remain active as long as the button is pressed.
4. **Exit diagnostic mode.** Move DIP switch 6 to the off (down) position. LEDs 6 and 7 will stop flashing together.
 Note: Diagnostic mode will exit automatically after 5 minutes of inactivity. Pressing the addressing button will reset the inactivity time and the unit will remain in diagnostic mode.

Job Name:	Model Numbers:
Job Number:	

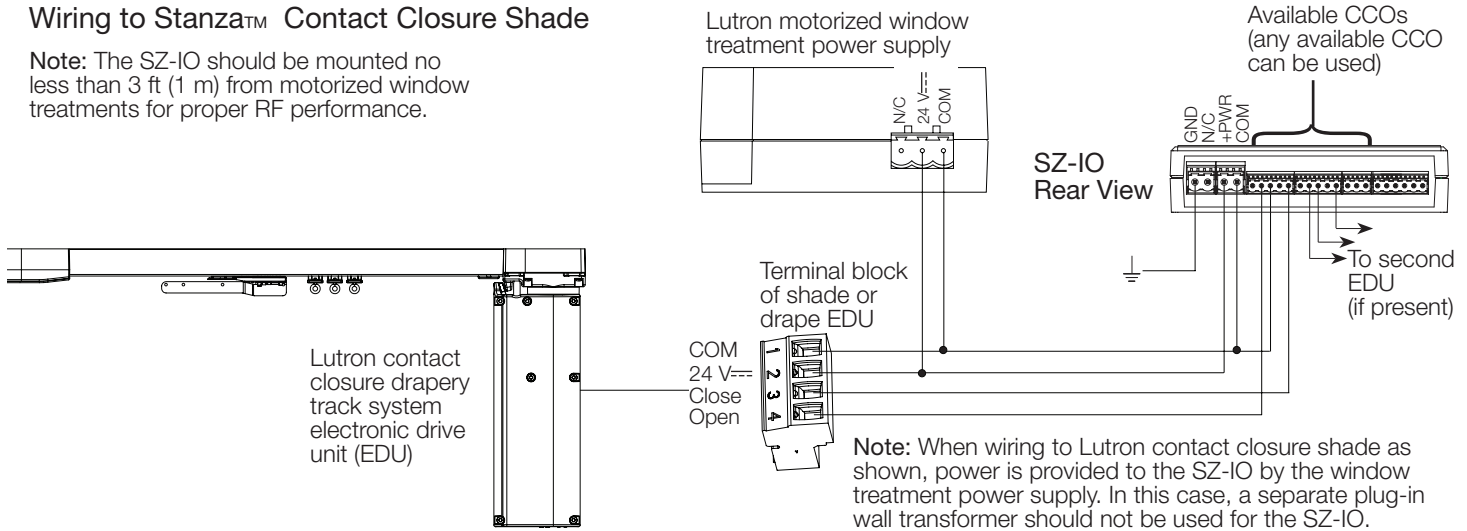
Wiring Examples

Wiring to Stanza™ Card Switch

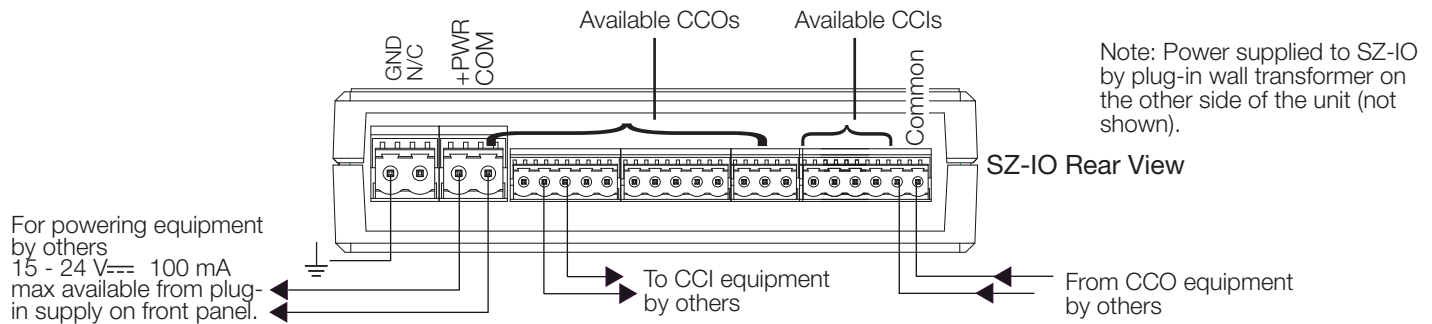


Wiring to Stanza™ Contact Closure Shade

Note: The SZ-IO should be mounted no less than 3 ft (1 m) from motorized window treatments for proper RF performance.



Wiring to/from Equipment by Others



Job Name:	Model Numbers:
Job Number:	