

Installation Instructions

Please Read Before Installing

Architectural-style Wired seeTouch™ Keypads

ST-1B-I/NI, -2B-I/NI, -3B-I/NI, -3BRL-I/NI, -4B-I/NI, -4FS-I/NI, -4S-I/NI, -4SIR-I/NI, -5B-I/NI, -5FS-I/NI, -5BRL-I/NI, -6B-I/NI, -6BRL-I/NI, -7B-I/NI
15 V $\overline{\text{---}}$, 77 mA Class 2/PELV

Overview

The ST-1B, -2B, -3B, -3BRL, -4B, -4FS, -4S, -4SIR, -5B, -5FS, -5BRL, -6B, -6BRL, and -7B keypads are for use with *HomeWorks* systems. The keypad buttons are programmed with a personal computer using the *HomeWorks* Utility.

Up to 32 keypads, each with a unique address, may be connected to each keypad link on the *HomeWorks* processor. A maximum of 300 LEDs may be connected per processor. Each *seeTouch* keypad counts as 15 LEDs. To add capacity beyond 300 LEDs, refer to the section about the HWI-PS in the *HomeWorks* Technical Reference Guide (P/N 366-963).

Important Notes

Codes: Install in accordance with all local and national electrical codes.



Note: Use only Lutron wallplates with these devices. The mechanical design of the keypad is **NOT** compatible with non-Lutron wallplates. Non-Lutron wallplates will **NOT** sit flush against the wall.

Environment: Ambient operating temperature: 0-40°C, 32-104°F, 0-90% humidity, non-condensing. Indoor use only.

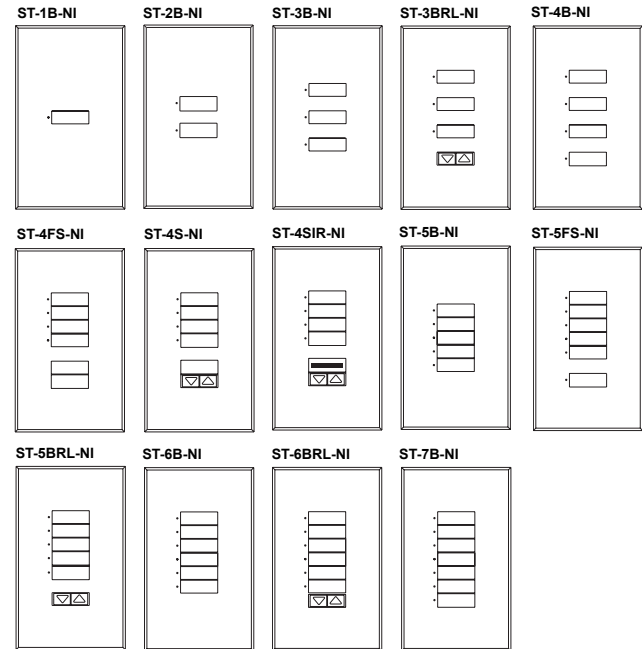
Wallplates: Lutron Nova T☆ wallplates are included. Do not paint controls or wallplates.

Cleaning: To clean, wipe with a clean damp cloth. **DO NOT** use any chemical cleaning solutions.

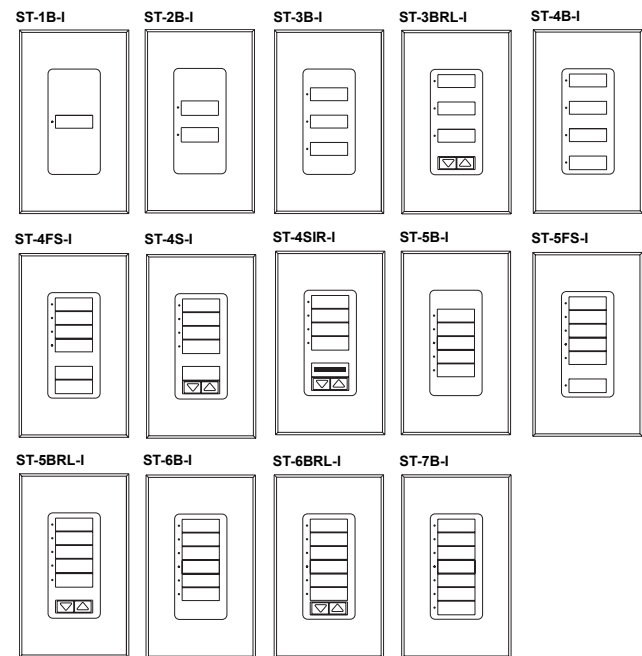
Wallboxes: Lutron recommends using 3-1/2 in. (89 mm) deep wallboxes for easier installation.

Keypad Wiring: Keypad wiring may be in a daisy-chain, star or t-tap configuration. Each home run on a link may be up to 1,000 ft. (305 m) and may contain up to 10 keypad devices. The total length of wire on that link (all home runs) may be up to 4,000 ft. (1220 m). Up to 32 keypad devices may be placed on each processor link configured as a keypad link in the *HomeWorks* Utility. An external power supply may be required depending on the total current draw of all keypad devices on the processor.

No Insert



Insert



Installation

1. Disconnect power to the keypads by turning OFF all circuit breakers connected to the HomeWorks® Processor or keypad link auxiliary power supply (HWI-PS).



Wiring with power ON may result in personal injury.

2. Remove the faceplate and button assembly. For insert models (decorator-style opening) and multigang applications, the adapter must be removed before the button assembly can be removed. For no insert models (architectural-style opening), the adapter need not be removed. See Faceplate and Button Assembly Removal.
3. Address keypads. Assign a unique address to each keypad using the DIP switch settings. See Keypad Addressing (page 3) for DIP switch location and settings. Be sure to record the address for future programming purposes. Replace button assembly.
4. Strip insulation or trim keypad link wires to 3/8" (10mm).
5. Unplug keypad link terminal block from the keypad circuit board.
6. Connect wiring to terminal block as shown in Wiring Diagram (page 3). Each terminal will accept one or two #18 AWG (1.0mm²) wires.
7. Plug the keypad link terminal block back onto the keypad circuit board. Be sure to orient the terminal block correctly.
8. Connect external input closures (if applicable). All seeTouch™ keypads accept two low-voltage dry contact closures (see Wiring Diagram - page 3).

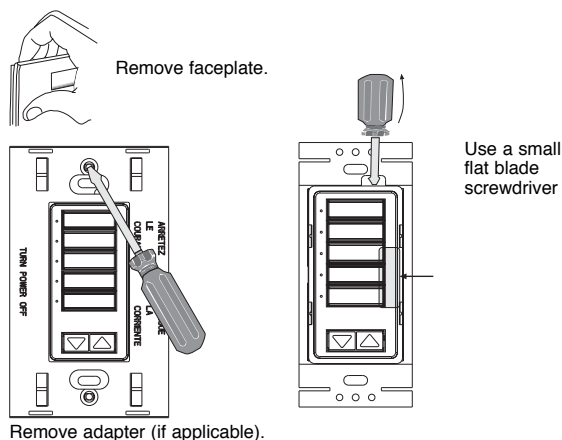
When using the input closures:

Verify compatibility of external devices. The input closures are intended for use with devices that provide outputs in the form of dry contact closure outputs. The input closures may be used with ground-referenced, solid-state outputs if the outputs

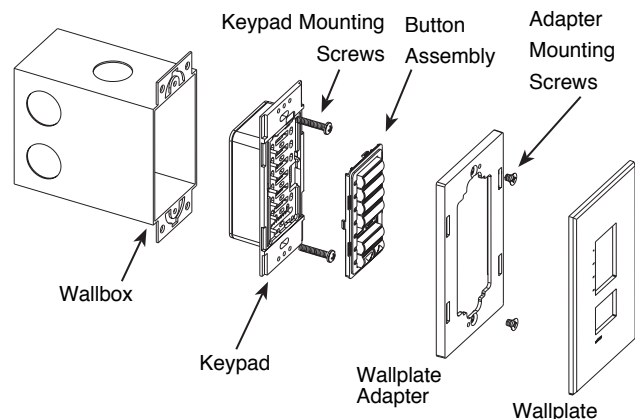
have an on-state saturation voltage of less than 2 VDC and an off-state leakage of less than 50 μ A. Dry contact or solid-state outputs must be capable of switching 15 VDC at 10 mA. The outputs must stay in the closed or open states for at least 40 msec in order to be recognized by the keypad. If there is any question as to whether the contact closure device is compatible with these specifications, contact the manufacturer of that device.

9. Push all wires back into the wallbox and loosely fasten the control to the wallbox using the screws provided. Do not pinch the wires. See Mounting Diagram.
10. Attach Lutron® Nova T☆® wallplate adapter and wallplate.
 - a. Loosely install keypad mounting screws.
 - b. Tighten wallplate adapter mounting screws snug.
 - c. Tighten keypad mounting screws until wallplate adapter is flush to wall (do not over-tighten).
 - d. Snap wallplate onto wallplate adapter, and verify button kit is not submerged.
 - e. If button kit is submerged, loosen mounting screws appropriately.
11. Restore power.

Faceplate and Button Assembly Removal



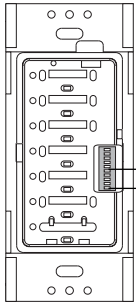
Mounting Diagram



Keypad Addressing

Keypad Front View

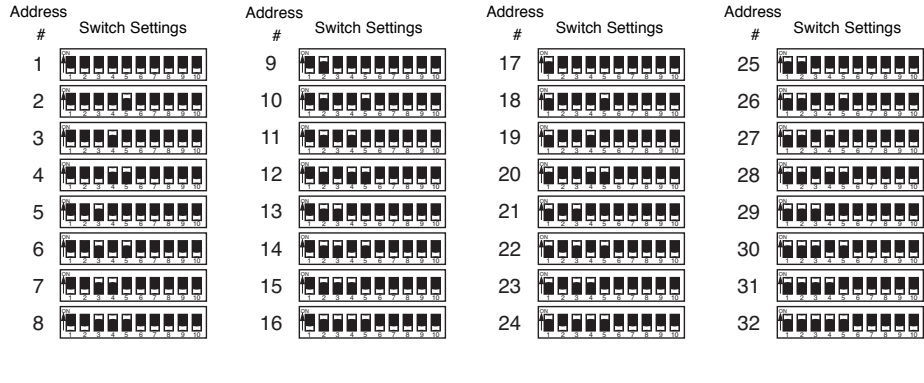
(wallplate, wallplate adapter, and button kit removed)



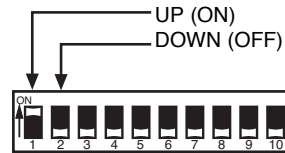
DIP switches
1-5 for setting
address, DIP
switches
6-10 do not
affect keypad
address.

DIP Switches

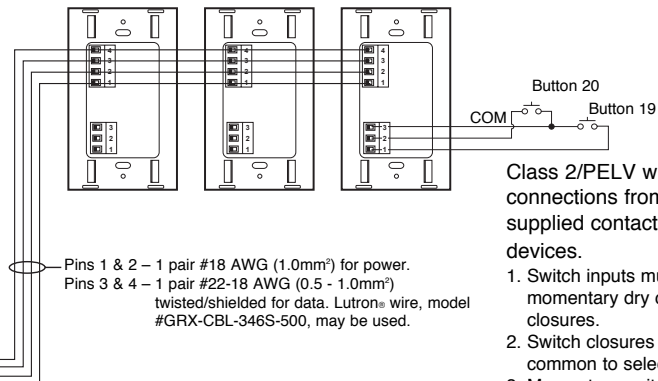
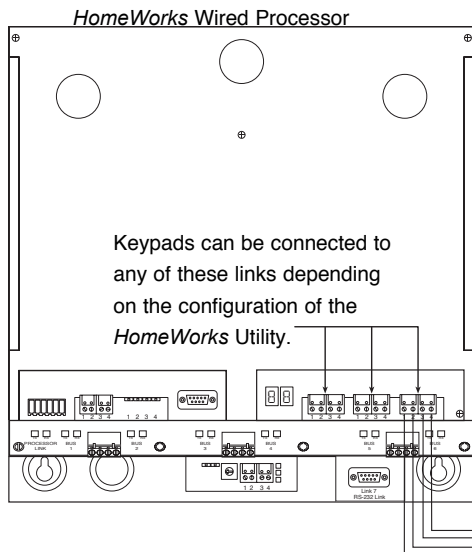
Set DIP switches 1-5 to give the keypad a unique HomeWorks® system address from 1 to 32.



Example: Setting Switch #1 ON.



Wiring Diagram



Class 2/PELV wiring connections from customer supplied contact closure devices.

1. Switch inputs must be momentary dry contact closures.
2. Switch closures must be from common to selected input.
3. Momentary switch inputs require a minimum closure time of 40 msec.

Troubleshooting Guide

Keypad is working properly when LEDs light up and loads respond as buttons are pressed.

Symptom	Cause and Action
LEDs don't light up when buttons are pushed.	<p>Power is not present at keypad.</p> <ul style="list-style-type: none"> • Make sure HomeWorks® processor is powered. • Check for 15 VDC between pins 1 & 2 on the keypad connector. • Remove connector from back of keypad, check connections and replace. • Check the <i>HomeWorks</i> Utility to make sure the keypad is programmed and addressed correctly.
LEDs cycle from top to bottom sequentially.	<p>Keypad is properly powered but is not communicating with the processor.</p> <ul style="list-style-type: none"> • Verify that the processor is powered. • Check that keypad wires 3 & 4 are properly connected. • Check that keypad link is plugged into correct connector at processor. • Verify that link is configured for HWI keypads in the <i>HomeWorks</i> Utility.
LEDs light when pressed, but the system response isn't correct.	<ul style="list-style-type: none"> • Check keypad for proper address. • Check system programming.

Technical and Sales Assistance

If you need assistance, call the toll-free **Lutron Technical Support Center**. Please provide exact model number when calling.
 (800) 523-9466 (U.S.A., Canada and the Caribbean)
 Other countries call:
 Tel: (610) 282-3800
 Fax: (610) 282-3090
 Visit our Web site at www.lutron.com

LIMITED WARRANTY

Lutron will, at its option, repair or replace any unit that is defective in materials or manufacture within two years after purchase. For warranty service, return unit to place of purchase or mail to Lutron at 7200 Suter Rd., Coopersburg, PA 18036-1299, postage prepaid. Telephone the Lutron Technical Support Center toll free at 800-523-9466. After the two year period, a pro-rated warranty applies to this product until eight years after the purchase. For more information regarding this warranty contact your Lutron representative. **THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES, AND THE IMPLIED WARRANTY OF MERCHANTABILITY IS LIMITED TO TWO YEARS FROM PURCHASE. THIS WARRANTY DOES NOT COVER THE COST OF INSTALLATION, REMOVAL OR REINSTALLATION, OR DAMAGE RESULTING FROM MISUSE, ABUSE, OR IMPROPER OR INCORRECT REPAIR, OR DAMAGE FROM IMPROPER WIRING OR INSTALLATION. THIS WARRANTY DOES NOT COVER INCIDENTAL OR CONSEQUENTIAL DAMAGES. LUTRON'S LIABILITY ON ANY CLAIM FOR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE MANUFACTURE, SALE, INSTALLATION, DELIVERY, OR USE OF THE UNIT SHALL NEVER EXCEED THE PURCHASE PRICE OF THE UNIT.**

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