International seeTouch® Keypads

Keypad Base Units
HWIS-NB-NONE
HWIS-NBIR-NONE
15 V=== 100 mA

IR Receiver
(HWIS-NBIR-NONE only)
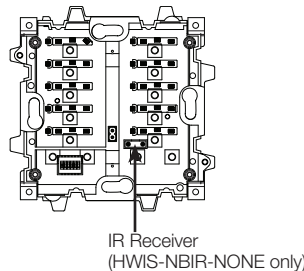
Important Notes
Please read before installing.

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

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

Cleaning: To clean, wipe with a clean damp cloth. Do not use any chemical cleaning solutions.

Faceplates: Must be used with Lutron faceplates. Do not paint controls or faceplates.

Wallboxes: Lutron recommends using a 35 mm (1⅜ in) deep wallbox, minimum.

Keypad Wiring:
LED Count: Each International seeTouch Keypad counts as 20 LEDs. An external power supply may be required depending on the total LED draw of all keypad devices on the processor.

Wire type: One pair 1.0 mm² (18 AWG) for power. One pair 0.5 mm² to 1.0 mm² (22 AWG to 18 AWG) twisted/shielded for data. Lutron® wire, model #GRX-CBL-346S-500, may be used.

Configuration: Daisy-chain, star, or t-tap.

Maximum wire length per run: Each home run on a link may be up to 305 m (1 000 ft).

Maximum wire length - total: The total length of wire on a single link (all home runs combined) may be up to 1 220 m (4 000 ft).

Maximum Number of Keypads Per:

Each home run	10 keypads
Keypad Link	32 keypads

Technical Assistance
If you have questions concerning the installation or operation of this product, call **Lutron's Headquarters.** Please provide exact model number when calling.

LUTRON®

Installation

1 **Disconnect power to the keypads.**
Turn OFF all circuit breakers connected to the *HomeWorks* processor or keypad link auxiliary power supply.

⚠ **WARNING: To avoid the risk of electric shock, locate and lock MCB (supply breaker) in the OFF position or remove fuse. Failure to turn off power can result in serious personal injury and/or property damage.**

2 **Remove faceplate and button kit.**
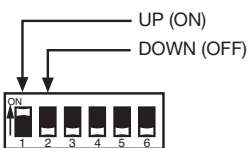Remove currently installed faceplate and button kit (if applicable) by gently prying from the top.
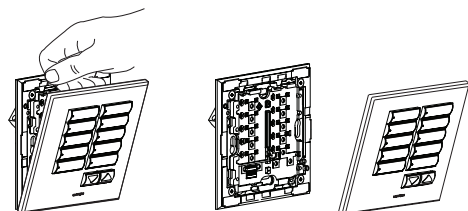
3 **Address keypads.**
Assign a unique address to each keypad using the DIP switch settings. Record the address for future programming purposes.

DIP switches 1-5 for setting address (DIP switch 6 does not affect keypad address).
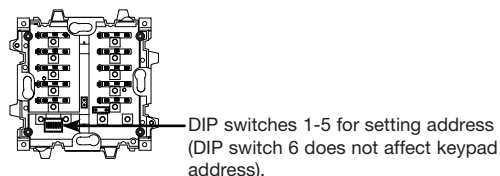
Set DIP switches 1-5 to give the keypad a unique *HomeWorks* system address from 1 to 32.

Address #	Switch Settings	Address #	Switch Settings	Address #	Switch Settings	Address #	Switch Settings
1		9		17		25	
2		10		18		26	
3		11		19		27	
4		12		20		28	
5		13		21		29	
6		14		22		30	
7		15		23		31	
8		16		24		32	

Example: Setting Switch #1 ON.

UP (ON)
DOWN (OFF)

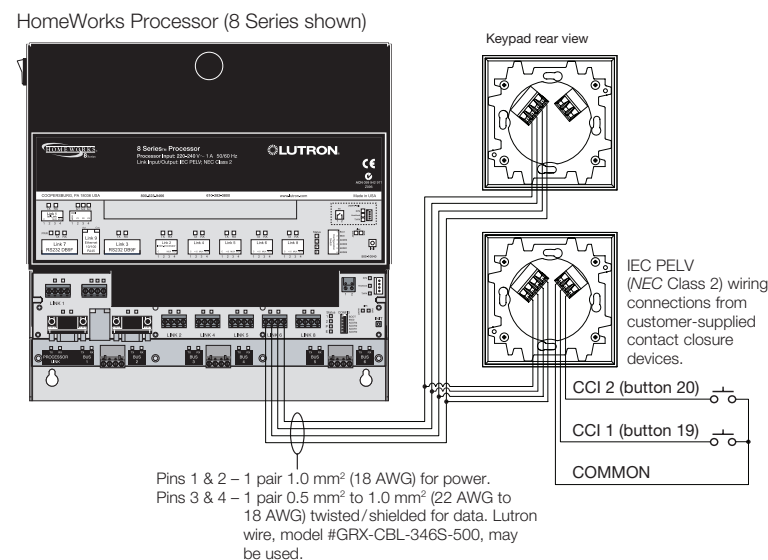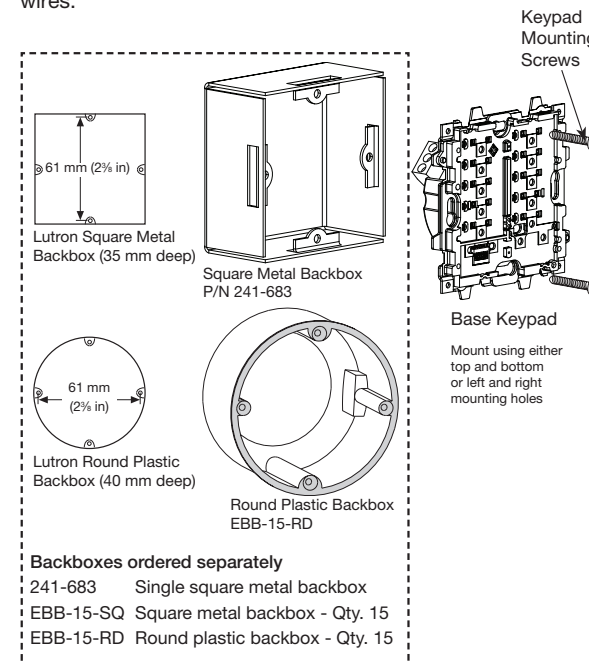**4** **Keypad Wiring.**

Strip insulation to 10 mm (3/8 in).

Unplug keypad link terminal block from the keypad.

Connect wiring to terminal block as shown below. Each terminal will accept one or two 1.0 mm² (18 AWG) wires.

Plug the keypad link terminal block back onto the keypad circuit board. Be sure to orient the terminal block correctly.

Connect external input closures (if applicable). All International *seeTouch* keypads accept two low-voltage dry contact closures (see below).

When using the input closures: Verify compatibility of external devices. The input closures are intended for use with devices that provide 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 V === and an off-state leakage of less than 50 μA. Dry contact or solid-state outputs must be capable of switching 15 V === at 10 mA. The outputs must stay in the closed or open states for a minimum of 40 msec. If there is any question as to whether the contact closure device is compatible with these specifications, contact the manufacturer of that device.
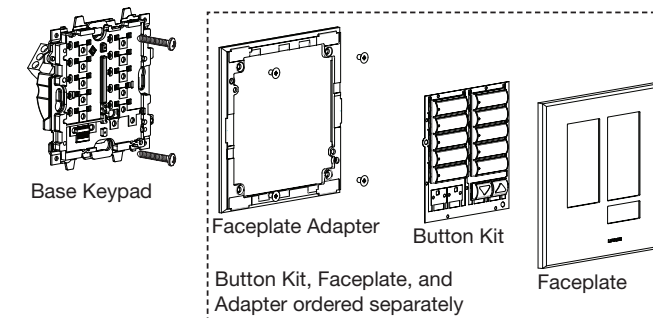
HomeWorks Processor (8 Series shown)

Keypad rear view

IEC PELV (*NEC* Class 2) wiring connections from customer-supplied contact closure devices.

CCI 2 (button 20)
CCI 1 (button 19)
COMMON

Pins 1 & 2 – 1 pair 1.0 mm² (18 AWG) for power.
Pins 3 & 4 – 1 pair 0.5 mm² to 1.0 mm² (22 AWG to 18 AWG) twisted/shielded for data. Lutron wire, model #GRX-CBL-346S-500, may be used.

5 **Mount and align Keypad.**

Push all wires back into the wallbox and fasten the control to the wallbox using the screws provided. Do not overtighten. Do not pinch the wires.

Keypad Mounting Screws

61 mm (2⅜ in)
Lutron Square Metal Backbox (35 mm deep)

Square Metal Backbox P/N 241-683

61 mm (2⅜ in)
Lutron Round Plastic Backbox (40 mm deep)

Round Plastic Backbox EBB-15-RD

Base Keypad

Mount using either top and bottom or left and right mounting holes

Backboxes ordered separately

241-683	Single square metal backbox
EBB-15-SQ	Square metal backbox - Qty. 15
EBB-15-RD	Round plastic backbox - Qty. 15

6 **Attach Button Kit and Faceplate.**

If available, attach faceplate adapter using screws provided with the Faceplate/Button Kit. See instructions included with Faceplate/Button Kit.

Base Keypad
Faceplate Adapter
Button Kit
Faceplate

Button Kit, Faceplate, and Adapter ordered separately

7 **Turn power ON at MCB (circuit breaker) or replace fuse.**

Symptom	Cause and Action
LEDs don't light up when buttons are pushed.	Power is not present at keypad. • Make sure *HomeWorks* processor is powered. • Check for 15 V=== between pins 1 & 2 on the keypad connector. • Remove connector from back of keypad, check connections and replace.
LEDs cycle from top to bottom sequentially.	Keypad is properly powered but is not communicating with the processor. • 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 the processor. • Verify that link is configured for keypads in the *HomeWorks* software. • Check the *HomeWorks* software to make sure the keypad is programmed and addressed correctly.
LEDs light when pressed, but the system response isn't correct.	• Check keypad for proper address. • Check *HomeWorks* software system programming.