

# Echoflex Installation Guide

## Elaho Keyswitch Station

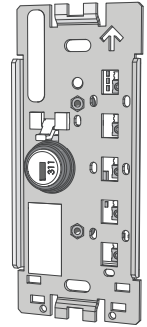
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### Overview

Elaho Keyswitch Station enables security for stations within a space by preventing unwanted control-activation from all stations within the space while the keyed lockout is enabled.

The Keyswitch Station is designed for use with any EchoConnect-enabled system including Elaho Zone Controllers.

For use with Echoflex dimming and relay products.



### Prepare for Installation

Keyswitch Stations ship with station electronics, faceplate, termination kit, (2) keys, and installation hardware.

The station installs into an industry standard single-gang back box (RACO 690 or equivalent - provided by others) or an optional surface mount back box (part number 7081A2004-1) sold separately and available from Echoflex.

### Environmental

For indoor installation only - 0-50° C, 5-95 % non-condensing humidity.

### Installation

Installation should follow all local codes and standard electrical practices. The back box should be installed level and square for best results. Ensure that the back box is clean and free of obstructions.



**Note:** *NEC Class 2 product to be wired in accordance to NEC Article 725 and local jurisdiction requirements.*

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**Note:** When using Category 5 (or equivalent) cable on the EchoConnect communication bus, please note the following:

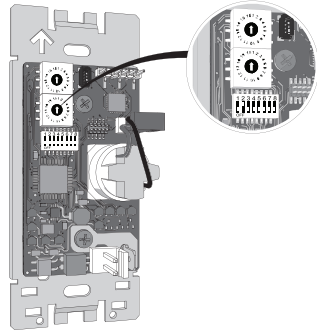
- Cat5 wiring must be terminated using EchoConnect Cat5 Termination Kit and must be installed using a bus topology. Refer to the installation guide that is provided with the Cat5 Termination Kit (8186A1207) for information to terminate Cat5 wiring.
  - Not all topologies are supported using Cat5; careful planning is required to ensure the proper termination kits are available and the wire is pulled appropriately.
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### Set Space and Address

The Keyswitch Station participates in an Elaho system using the configured Space and Address which are selectable using the rotary switches on the back of the station.

Each station must be set to a unique station address for the assigned space. By default, these switches are set to Space 1, Address 1. Station commands are shared by all devices within an assigned space.

1. Set the Space rotary switch to the desired number (1 through 16) for the space you want the station to provide lockout.
2. Set the Address rotary switch to the desired address (1 through 16) for the station identification in the assigned Space.



**CAUTION:** Each station must have its station address set to a unique number (1 through 16) for the space it controls. If two or more stations use the same address for the same space, the system will not function properly.

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### DIP Switches

DIP switches are located on the rear panel of the station. The default position for all DIP switches is Off which provides space lockout. To enable the Keyswitch Station for custom configuration using ElahoAccess, set DIP switch 2 On. Reference the mobile app integrated help system for information to configure custom actions available to the Keyswitch Station.

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### Connect the Wiring

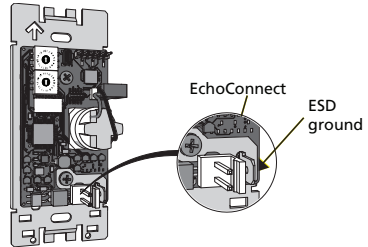
1. Pull all required wiring (data +, data -) and an additional 14 AWG (2.5 mm<sup>2</sup>) ESD ground wire into the back box.



**Note:** A ground connection is required between every station and back box, even when installed with grounded metal conduit.

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2. Connect station ESD ground wire pigtail.
  - a. Strip 7/16" (11 mm) of insulation from the ends of the station ground wire pigtail, provided in the termination kit, and the incoming ground wire.
  - b. Use one WAGO 221 Series LEVER-NUTS<sup>®</sup> provided in the termination kit to connect the station ESD ground pigtail and the incoming ground. For stations using grounded metal conduit, connect the ground pigtail to the metal back box ground location.
  - c. Install the ESD ground wire pigtail FASTON connector to the mating receptacle on the station electronics.
3. Terminate EchoConnect wires. EchoConnect is topology free, you may install the wires in any combination of bus, star, loop, or home-run.
  - a. Strip 7/16" (11 mm) from the ends of each power pigtail wire provided in the termination kit and the installed control wires.
  - b. Use the WAGO connectors provided to connect the power pigtail wires and the installed Belden 8471 control wires. One WAGO should be used for the white wire pair (data +) and one for the black wire pair (data -). Open the terminal levers on the WAGO connector and insert the installed Belden 8471 wire and the lead from the power pigtail into the terminals then close the levers.
  - c. Install the two pin connector from the power pigtail to the mating receptacle on the station electronics.

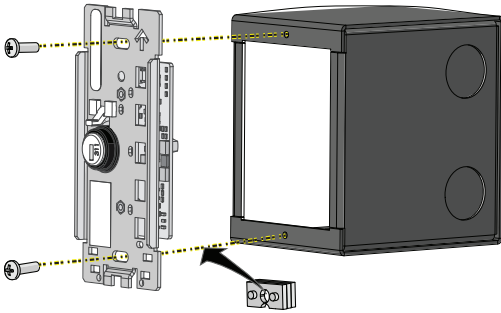


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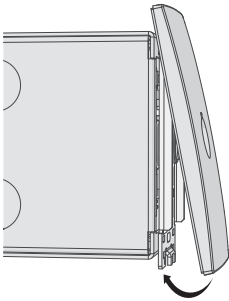
### Installing the Station in the Back Box



1. Insert the station electronics and wiring into the back box. The arrow on the mounting plate must point up.
2. Use receptacle spacers as needed to provide a flush mounted station. These spacers are not required for a surface mount installation.
  - a. Fold the spacer in a zig-zag fashion and press them together to achieve the required thickness to fill the gap between the station, wall surface, and the back box.
  - b. Cut off and discard the excess.
  - c. Place the stack between the station electronics and the flush mounted back box.
3. Secure the station with two screws. If using spacers, insert the screws through the spacers as well.

### Installing the Faceplate

The faceplate is secured to the station with two magnets that are located on the bottom edge of the faceplate.



1. Align the top of the faceplate approximately 20 degrees to the station.
2. Hook the top of the faceplate on the tabs located on the top of the station electronics assembly. To ensure the faceplate is hooked properly on the top hook, wiggle it slightly side to side while the bottom is angled about 20 degrees from the wall.
3. Swing the bottom of the faceplate down until the magnets engage.
4. If the faceplate does not fully attach, wiggle the bottom of the plate until the magnets are seated properly to the station and the faceplate is secure.

## Service

If you have any difficulties installing your system or with system start up please contact Echoflex Technical Services at the office nearest you. Echoflex contact information is located at the bottom of [page 1](#).