HZ-KPCN
Horizon™ Keypads

Crestron® Horizon™ HZ-KPCN-series precision keypads provide optimal control of Crestron devices such as lighting, shading, and A/V equipment from a single location. Each keypad offers up to five tactile button or rocker switch positions, multicolor LED backlighting, laser-engraved buttons and customizable faceplates designed to meet your needs. Simply connect the keypad directly to your Cresnet® control network to begin.
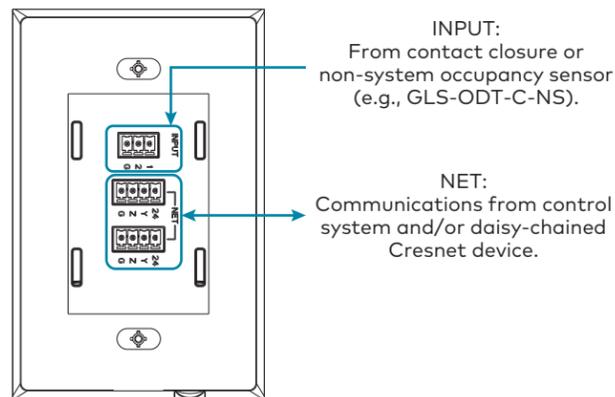
≫ Check the Box

Item	Qty
HZ-KPCN*	1
Connector, 3-Pin (P/N 2003575)	1
Connector, 4-Pin (P/N 2003576)	2
Trim Plate*	2
Trim Plate, Textured*	2
Button Cap, Single Button*	5
Screw, 6-32 x 3/4 in., Truss Head, Combo (P/N 2009211)	2
Screw, 4-40 x 1/4 in., Flat Head, Philips (P/N 2050242)	2
Metal, Plate, Mounting (P/N 2052028)	1

* Available in a variety of colors and textures. Please refer to the Crestron website for a complete list of options.

≫ Wire the Keypad

To wire the keypad, connect the NET and INPUT ports as needed.

INPUT:
From contact closure or non-system occupancy sensor (e.g., GLS-ODT-C-NS).

NET:
Communications from control system and/or daisy-chained Cresnet device.

≫ Install the Keypad

CAUTION: Do not mix high- and low-voltage devices in the same electrical box without an approved barrier.

NOTE: Before operating the HZ-KPCN, ensure the device is using the latest firmware. Check for the latest HZ-KPCN firmware at www.crestron.com/firmware. Load the firmware onto the device using Crestron Toolbox™ software.

The Horizon keypad is designed for installation into a standard, single-gang electrical box. For larger applications, combine up to four keypads in a multi-gang electrical box.

To install the keypad:

1. Turn the system power OFF.
2. Place the metal mounting bracket over the back of the HZ-KPCN. The two parts of the metal bracket clip together which allows the wiring to remain in place.
3. Fold the wires into the electrical box. Avoid pinched wires.
4. Secure the HZ-KPCN to the electrical box using the integrated mounting screws on the device. Ensure that the "Top" label is properly oriented.

   CAUTION: Do not overtighten the screws when attaching the keypad to the electrical box, damage to the unit and undesired functionality may occur.
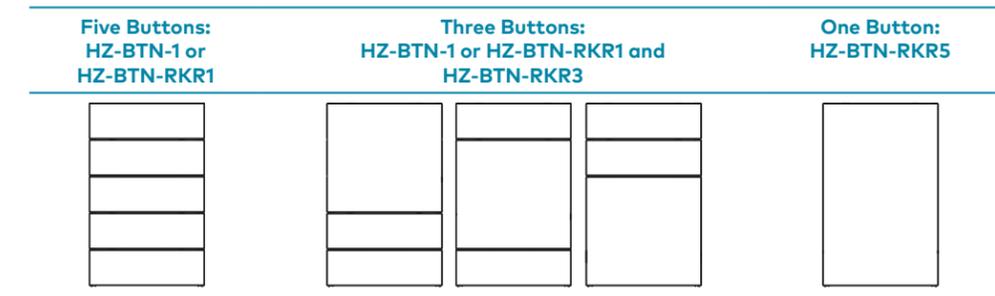
5. Attach the magnetic top and bottom trim pieces to the faceplate.
6. Ensure that all buttons actuate without sticking.
7. Turn the system power ON.

Wall
Electrical Box (not supplied)
Faceplate
Metal Mounting Bracket (top and bottom)
HZ-KPCN
Trim (x2)
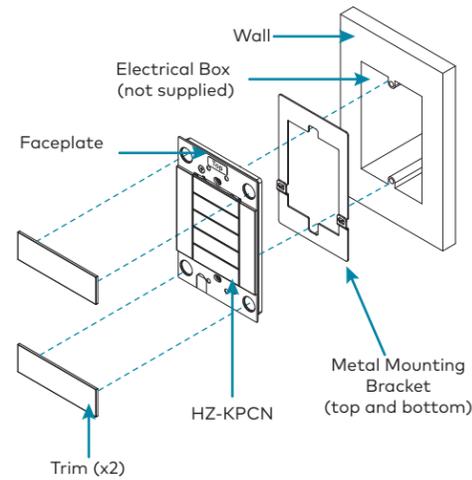
≫ Button Cap Configurations

The keypad button layout is configurable to suit a wide range of uses. The keypad is configured using a variety of button caps, which may include a single pushbutton or horizontal rocker switch cap. Larger vertical rocker switch caps are also available. All button caps are intended to be laser-engraved to identify each button's function.

The HZ-KPCN offers the following button-cap configurations:

| Five Buttons: HZ-BTN-1 or HZ-BTN-RKR1	Three Buttons: HZ-BTN-1 or HZ-BTN-RKR1 and HZ-BTN-RKR3		One Button: HZ-BTN-RKR5

- HZ-BTN-1: One-row button cap, center press (supplied - qty. 5)
- HZ-BTN-RKR1: One-row rocker button cap, left/right press (not supplied)
- HZ-BTN-RKR3: Three-row rocker button cap, top/bottom press (not supplied)
- HZ-BTN-RKR5: Five-row rocker button cap, top/bottom press (not supplied)

To replace button caps:

1. Remove the top trim piece.
2. Remove the old button cap using the flat end of the spudger (supplied with engraved buttons):
   a. Insert the spudger between the top of the button cap and the keypad near the left edge of the button. Rotate the spudger tool counterclockwise to remove the left side of the button cap.
   b. Insert the spudger between the top of the button cap and the keypad near the right edge of the button. Rotate the spudger tool clockwise to remove the right side of the button cap.

   NOTE: For the 3 and 5 position button caps, repeat step 2 but insert the spudger between the bottom of the button cap and the keypad.

Spudger tool

Scan or click the QR code to view a video tutorial of the button cap replacement process.
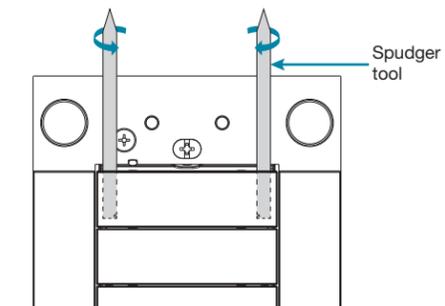
3. Align the posts on the back of the new button cap with the slot in the keypad and press firmly onto the keypad. Ensure that the button cap actuates without sticking.
4. Replace the top trim piece.

Ambient Light Sensor Calibration

Behind each button is an LED backlight, which illuminates the engraving. The ambient light sensor adjusts the keypad's backlight brightness according to the light level in the room. Once the custom, laser-engraved buttons are installed, the ambient light sensor must be calibrated.

NOTE: The LED backlight is enabled after light sensor calibration.

Calibrate the light sensor:

1. Ensure the faceplate and bottom trim piece are installed correctly. Remove the top trim piece.
2. Press and hold the setup button using the pointed end of the supplied spudger tool until all keypad backlights flash magenta (about 2 seconds).
3. Avoid blocking the light sensor on the bottom of the HZ-KPCN. The light sensor should remain unobstructed and free of direct light. After about 5 seconds, the calibration process is complete. The keypad returns to normal operation.
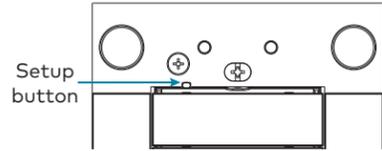
Setup button

Backlight Customization

To change the color of the LED backlights:

1. Press the setup button once using the pointed end of the spudger tool. The LED backlights will light brightly for 15 seconds.
2. Press the setup button repeatedly to cycle through the backlight color options.

   NOTE: Custom color themes may be defined in the control system program.

Technical Specifications

Visit the product web page for complete technical specifications.

Specification	Details
Power Requirements	
Cresnet Power Usage	2 W (83 mA @ 24 VDC)
Power Consumption	2 W maximum
INPUT Port	(2) digital/analog input ports (referenced to GND);
	Digital Input: Rated for 0-24 Volts DC, input impedance 200k Ohms, logic threshold 1.24 Volts DC;
	Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 200k Ohms;
	Programmable 3 Volts, 2k Ohms pull-up resistor per input
Environmental	
Temperature	32º to 104 ºF (0º to 40 ºC)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	6.8 Btu/h maximum

Dimensions

Setup button

Light sensor

1-3/4 in. (44 mm)

3-9/32 in. (83 mm)

4-1/8 in. (105 mm)

1-13/16 in. (46 mm)

3/8 in. (10 mm)

2-23/32 in. (69 mm)

5/8 in. (16 mm)

3-1/16 in. (78 mm)

4-23/32 in. (120 mm)

15/16 in. (24 mm)
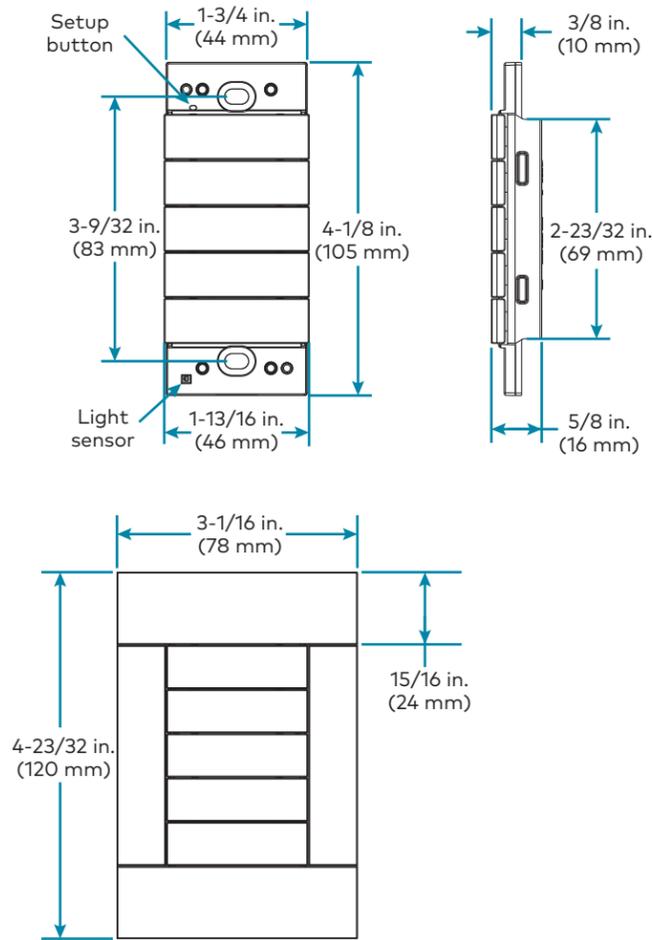
Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron Customer service representative.

Symptom	Issue	Action
No action is performed when a button on the keypad is pressed.	The unit is not receiving 24 VDC Power.	Check wiring for 24 VDC power.
	There is an error in the control system program.	Verify that the control system program is correct.
The LEDs do not light.	The LEDs are not enabled.	Perform Light Sensor Calibration to enable the LEDs.
The keypad button(s) do not actuate when pressed.	The keypad mounting screws are overtightened.	Slightly loosen the mounting screws.
	The button may not be snapped into the keypad.	Ensure that the button cap is properly oriented and installed.
The backlight LEDs are too bright when the room is dark.	The keypad may be staying in Day mode. While in Day mode the LEDs are typically full brightness or off.	Check the DayNightThreshold setting in the control system program. If set to Default, rerun the calibration process from the keypad.
		Change the DayNightThreshold Calibration setting to Med-Bright or Bright in the control system program to ensure Night mode is entered when the room is dark.
	The LED brightness settings for Night mode may be incorrect.	Adjust the Keypad Brightness settings in the control system program.
The backlight LEDs are too dim or not visible.	The keypad may be staying in Night mode as the room transitions from Dark to Dim. While in Night mode the LEDs are typically at very low brightness.	Change the DayNightThreshold Calibration setting to Med-Dark or Dark in the control system program to ensure Day mode is entered when the room brightens.
		Calibration may have been run when the lower trim piece was not installed. Replace lower trim and rerun calibration.

For Additional Information

Scan or click the QR code for detailed product information.

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