Horizon™ In-Wall Forward-Phase Dimmer with infiNET EX® Wireless Communication, 120 VAC

The Crestron® HZ-DIMUEX Horizon™ in-wall universal phase dimmer features the following:

- Auto load detection switches dimmer between reverse phase and forward phase depending on the load connected
- infiNET EX® Wireless Communication to Crestron Gateway (CEN-GWEXER)
- Field replaceable, engravable button caps available in various sizes (not supplied)
- REM input for multiway control for up to four HZ-KPEX or HZ-AUX devices

The HZ-DIMUEX controls LED, incandescent, electronic low voltage, and magnetic low voltage loads. The device offers the following load ratings:

- Input Rating: 120 VAC (Requires Neutral Wire Connection)
- Output Rating: 600 W/VA Max. (No minimum load)

In the Box

1   HZ-DIMUEX, Horizon™ In-Wall Universal Phase Dimmer with infiNET EX® Wireless Communication, 120 VAC

Additional Items

2   Screw, 6-32 x 1 in., Truss Head, Combo (2054883)
1   Spacer, Multi-Gang Alignment (2049924)
1   Nut, Wire, Blue (2045230)

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Important Notes

WARNINGS:

- To avoid fire, shock, or death, turn off power at circuit breaker or fuse and test that power is off before wiring!
- New installations should be checked for short circuits prior to installing an HZ-DIMUEX dimmer. With power off, close the circuit and restore power. If the lights do not work or a breaker trips, check and correct the wiring or fixture (if necessary). Install the dimmer only when the short is no longer present. The warranty is void if the dimmer is installed and operated with a shorted load.

CAUTION: TO REDUCE THE RISK OF OVERHEATING AND POSSIBLE DAMAGE TO OTHER EQUIPMENT, DO NOT INSTALL TO CONTROL A RECEPTACLE, A MOTOR-OPERATED APPLIANCE, A FLUORESCENT LIGHTING FIXTURE, OR A TRANSFORMER-SUPPLIED APPLIANCE.

ATTENTION: GRADATEURS COMMANDANT UN BALLAST-AFIN DE RÉDUIRE LE RISQUE DE SURCHAUFFE ET LA POSSIBILITÉ D'ENDOMMAGEMENT À D'AUTRES MATÉRIELS, NE PAS INSTALLER POUR COMMANDER UNE PRISE, UN APPAREIL D'ÉCLAIRAGE FLUORESCENT, UN APPAREIL OPÉRÉ DE MOTEUR OU UN APPAREIL ALIMENTÉ PAR UN TRANSFORMATEUR.

NOTES: Observe the following points.

- Codes: This product should be installed and used in accordance with appropriate electrical codes and regulations.
- Installation: This product should be installed by a qualified electrician.
- Wiring: Use copper wire only. For supply connections, use wires rated for at least 75° C (167° F).
- Lamp Type: For control of permanently installed LED, incandescent, electronic low voltage, or magnetic low voltage transformer lamp fixtures only.

- Temperature: For use where temperatures are between 32° to 86° F (0° to 30° C).
- Electrical Boxes: Devices mount in standard electrical boxes. For easy installation, use 3-1/2 in. (89 mm) deep electrical boxes. Several devices can be installed in one electrical box (multigang). This requires derating of the dimming device. For a smooth appearance, one-piece multigang faceplates (not supplied) must be installed. When installing into a multigang box, do not fully tighten the devices to the box until the faceplate has been aligned.
- Switches: Mechanical 3- or 4-way switches do not work with HZ-DIMUEX dimmers.
- Spacing: If mounting one device above another, leave at least 4-1/2 in. (115 mm) vertical space between them.
- Low Voltage Applications: Operation of a low voltage circuit with all lamps inoperative or removed may result in current flow in excess of normal levels. To avoid transformer overheating and premature transformer failure, Crestron recommends the following:
  - Do not operate low voltage circuits without operative lamps in place.
  - Replace burned-out lamps as quickly as possible.
  - Use transformers that incorporate thermal protection or fuse transformer primary windings to prevent transformer failure due to overcurrent.

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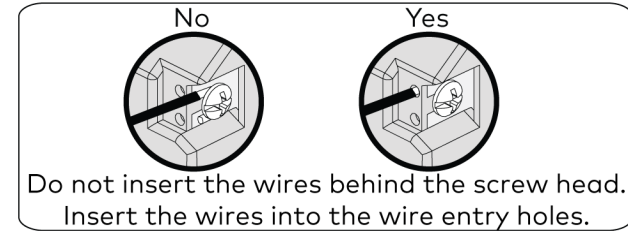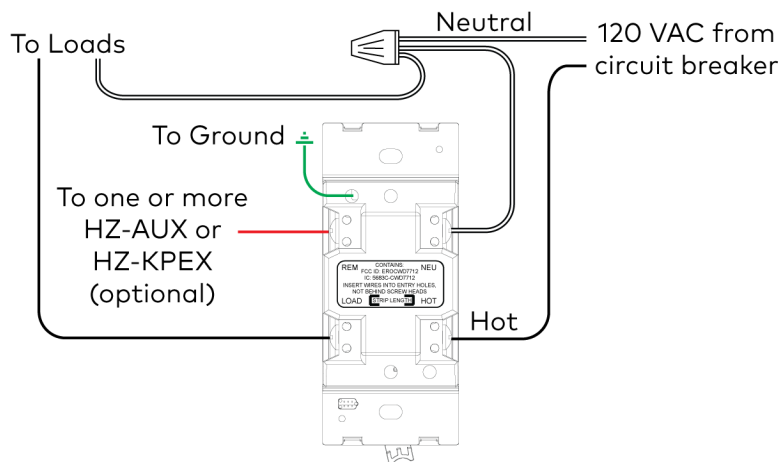
⚙ Installation

Install the HZ-DIMUEX:

1. Turn power off at the circuit breaker.

   > **WARNING:** If the HZ-DIMUEX is used with an HZ-AUX or HZ-KPEX, power may need to be turned off at multiple breakers.

2. Wire the device as shown in the following diagrams. In multigang installations, daisy-chain Hot and Neutral wires with other Horizon devices to eliminate excess wiring.

   > **NOTE:** To wire one or more HZ-AUX or HZ-KPEX, refer to the HZ-AUX Quick Start (Doc. 8485) or the HZ-KPEX Quick Start (Doc. 8284) at crestron.com/manuals.

No | Yes

Do not insert the wires behind the screw head.
Insert the wires into the wire entry holes.

3. Fold the wires into the electrical box. Avoid pinched wires.

4. Secure the HZ-DIMUEX to the electrical box using the integrated mounting screws on the device. To allow for adjustments, do not fully tighten the screws at this time. Ensure that any text on the device is in the proper orientation and facing up.

   > **CAUTION:** Do not overtighten the screws when attaching the keypad to the electrical box. Damage to the unit and undesired functionality may occur.
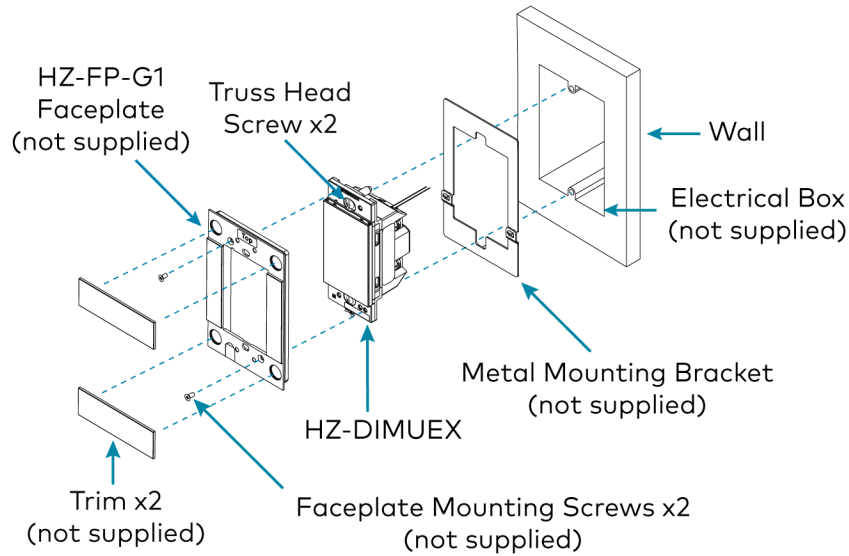
5. Place the metal mounting bracket (not supplied) over the back of the HZ-DIMUEX. The two parts of the metal mounting bracket clip together which allows the wiring to remain in place.

   > **NOTE:** When installing the HZ-FP-G faceplate over an old work electrical box, do not use the metal mounting bracket.
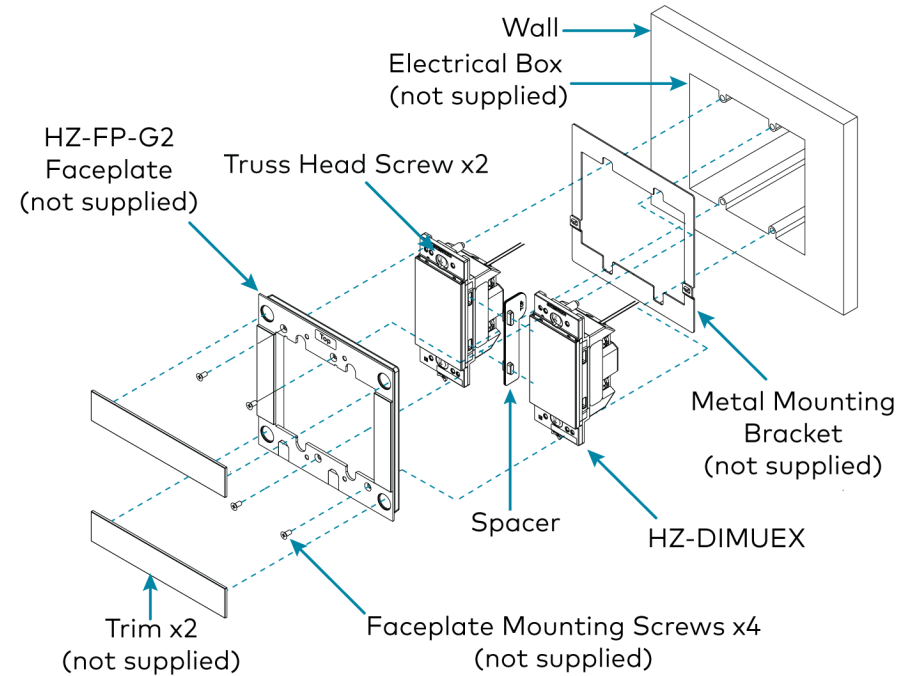
6. Attach the HZ-FP-G series Horizon faceplate using the faceplate mounting screws. Ensure that the "Top" label is properly oriented.

7. Ensure that the HZ-DIMUEX is properly aligned within the HZ-FP-G and then fully tighten the integrated mounting screws to secure the device to the electrical box.

8. Attached the magnetic top and bottom trim pieces to the HZ-FP-G.

9. Ensure that all buttons actuate without sticking.

10. Restore power at the circuit breaker.

HZ-DIMUEX

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HZ-DIMUEX Single Gang Installation

HZ-FP-G1 Faceplate (not supplied)

Truss Head Screw x2

Wall

Electrical Box (not supplied)

Metal Mounting Bracket (not supplied)

HZ-DIMUEX

Trim x2 (not supplied)

Faceplate Mounting Screws x2 (not supplied)

HZ-DIMUEX Multigang Installation

Wall

Electrical Box (not supplied)

HZ-FP-G2 Faceplate (not supplied)

Truss Head Screw x2

Metal Mounting Bracket (not supplied)

Spacer

HZ-DIMUEX

Trim x2 (not supplied)

Faceplate Mounting Screws x4 (not supplied)

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Multigang Installations

In multigang installations, several devices are grouped horizontally in one electrical box. For a smooth appearance, use a 2-, 3-, or 4-gang HZ-FP-G series Horizon faceplate (not supplied).

The load capacity for each device in the electrical box must be derated. Refer to the following diagrams for derating information. The VA ratings are for input power to the transformer. If you do not know the input power requirement of the transformer, use the bulb's wattage rating to determine the proper rating.

HZ-DIMUEX Derating Information

600 VA				500 VA	500 VA

500 VA	300 VA	500 VA

500 VA	300 VA	300 VA	500 VA
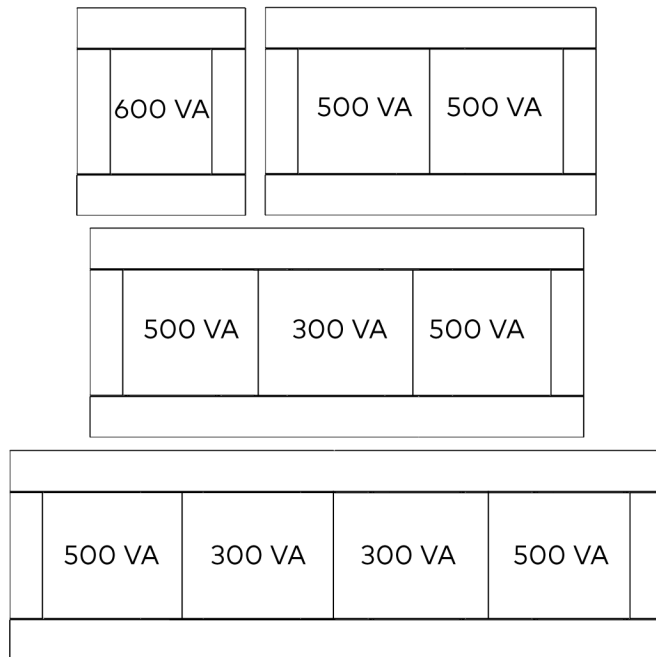
Changing the Dim Mode

By default, the device is set to Auto Phase Dimming mode, which allows the device to automatically toggle between forward and reverse phase dimming based on the connected load. The device can be set to Auto Phase Dimming mode or Forward Phase Dimming mode manually.

To switch between Auto Phase Dimming mode and Forward Phase Dimming mode:

1. Slide the air-gap switch to the right, as described in Disconnect the Power.

2. To set the dimming mode:
   - **Auto Phase Dimming Mode:** Press and hold the top button cap while the power is off.
   - **Forward Phase Dimming Mode:** Press and hold the bottom button cap while the power is off.

     NOTE: If a side-to-side rocker is in the top or bottom position, either side of the rocker can be pressed and held.

3. While holding the appropriate button, slide the air-gap switch to the left to restore power to the device.

4. After all visible LEDs have flashed green once, release the button.

   NOTE: If the dimming mode has already been set via programming, the LEDs will flash red five times and the new mode will not be set. To modify the parameter, change the setting in control system programming to "Local Settings" and retry the operation.

5. After the released button's LED flashes green, the device will boot-up in the selected dimming mode.

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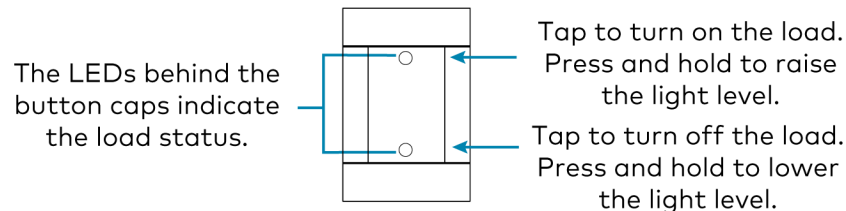
Operation

NOTES:

- Before using the HZ-DIMUEX, ensure the device is using the latest firmware. Check for the latest firmware for the HZ-DIMUEX at www.crestron.com/firmware. Firmware is loaded onto the device using either Crestron Toolbox™ software or Crestron Home™ software.

- Phase dimming mode can be set in control system programming.

Basic Operation

The operations in this guide assume the HZ-DIMUEX is operating with Local mode enabled (with or without a control system). The device can also operate in Remote mode, in which the control system program dictates button behavior and load control. The HZ-DIMUEX is shipped with a rocker button preinstalled, which functions as described below.

The LEDs behind the button caps indicate the load status.

Tap to turn on the load. Press and hold to raise the light level.

Tap to turn off the load. Press and hold to lower the light level.

Disconnect the Power

Power to the device buttons, LEDs, and the connected load(s) can be disconnected by using the air-gap switch, which is located at the bottom of the device. Slide the air-gap switch to the right to disconnect the power to the device buttons, LEDs, and to the connected load(s), and slide the switch to the left to restore power.

NOTE:

- When the air-gap switch is in the right position, power is still supplied to the HOT terminal of the device.

- The switch must be in the left position for the device to operate.

Slide the air-gap switch to the right to shut off power to the unit and the load.
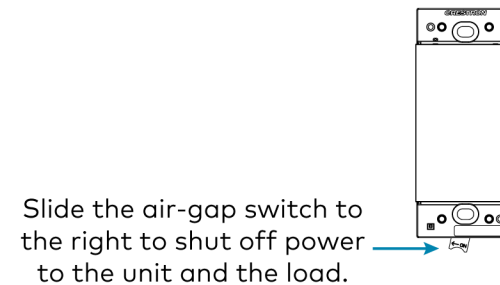
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Default Button Functionality

The figure below illustrates the press and hold actuation sequences for each local button option as selected in programming. There is only one local button available per device.

Button behavior can be altered by the control system program. If the local button is disabled in the control system program and communication to the control system is lost, the device will default to the shown behavior. When enabled, the local button can still act as a remote trigger. However, LED feedback for the local button will be dictated only by the local load.

Default Local Button

	Single Press	Double Press	Hold
A	On	Fast On	Raise
B	Off	Fast Off	Lower
C	Toggle	N/A	Raise/Lower

NOTES:

- The default "On" powers the load to 100% in 1 second. The default "Fast On" powers the load to 100% in 1/4 second. Load behavior for "On" and "Fast On" operations can be modified when programming the device.
- The single push button or side-to-to-side rocker can be designated as the local button in any of the five available positions.

LED Behavior

The LEDs on the HZ-DIMUEX display the state of the connected loads and are located under each button cap.

Each LED can be in one of the following states:

- On: The load is powered.
- Off: The load is not powered.
- Flashing: The load is ramping up or down.

NOTE: LED functionality for both local and remote behavior can be modified when programming the device.

Multiway Operation

For more information on multiway operation, refer to the HZ-AUX Quick Start (Doc. 8485) or the HZ-KPEX Quick Start (Doc. 8284) at crestron.com/manuals.

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Wireless Communications

The device connects to the Crestron network via the infiNET EX communications protocol. Use the following procedures to join or leave an infiNET EX network and to verify communications between the device and the control system.

> **NOTE:** The HZ-DIMUEX is not compatible with the MC3 internal gateway when using channels 25 or 26.

Joining an infiNET EX Network

Before a device can be used in a lighting system, it must first join an infiNET EX network by being acquired by an infiNET EX gateway.

> **NOTE:** A device can be acquired by only one gateway.

1. Put the infiNET EX gateway into Acquire mode from the unit itself or from Crestron Toolbox software, as described in the gateway's manual at www.crestron.com/manuals.

    > **NOTE:** In an environment where multiple gateways are installed, only one gateway should be in Acquire mode at any time.

2. Place the device into Acquire mode.

    a. Tap the top button three times, and then press and hold it down (tap-tap-tap-press+hold) until all of the LEDs flash red once (this can take up to 10 seconds if the device has been previously acquired to a gateway).

    > **NOTE:** If a side-to-side rocker is in the top position, either side of the rocker can be pressed and held.

    b. Release the button to start the acquire process. The top button's LED flashes red slowly to show that the device is actively scanning the infiNET EX network.

    - The top button's LED lights red for 5 seconds to show that the device has been successfully acquired to the infiNET EX network.

    - The top button's LED flashes red quickly to indicate that the device was not successfully acquired by the infiNET EX network. Tap the setup button to acknowledge failure to acquire the infiNET EX network. Before attempting the acquire process again, ensure one of the following:

        ○ The gateway is in Acquire mode and within range.

        ○ A non-battery powered infiNET EX device is in Acquire mode on the same gateway.

3. Once all devices have been acquired, take the gateway out of Acquire mode. Refer to the gateway's manual for details.

Leaving an infiNET EX Network

To leave an infiNET EX network, put the device into Acquire mode. Ensure that no gateway is in Acquire mode when removing a device from an infiNET EX network.

To place a device into Acquire mode, refer to step 2 in Joining an infiNET EX Network.

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Verifying Communications Status

To check the communications status of the device, tap the top button three times and then press and hold it down (tap-tap-tap-press+hold) for up to 2 seconds. The button must be released before the LEDs flash to indicate the communications status. Refer to the following table for details.

NOTES:

- If a side-to-side rocker is in the top position, either side of the rocker can be pressed and held.
- If there is a communication error and a remote button is pressed, all of the LEDs will flash red in one of the patterns described in the table below.

| LED	Communications Status
Turns on for 5 seconds	The device is communicating with the control system.
Flashes three times	The device is communicating with the gateway, but the gateway is not communicating with the control system.
Flashes twice	The device was previously joined to the network but is not communicating with the gateway.
Flashes once	The device is not joined to the network.

((•)) Ambient Light Sensor Calibration

An LED backlight behind each button illuminates engravings. The ambient light sensor adjusts the backlight brightness according to the light level in the room. The ambient light sensor can be affected by room conditions and should be calibrated manually (locally or through programming), or the appropriate setting can be changed in control system programming.

To locally calibrate the light sensor:

1. Ensure that all room lights are fully on.
2. Ensure the faceplate and bottom trim piece are installed correctly. Remove the top trim piece.
3. Press and hold the setup button with a small pointed object for about 2 seconds until all keypad backlights flash magenta. This can also be triggered in programming.
4. Avoid blocking the light sensor on the bottom of the HZ-DIMUEX. 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
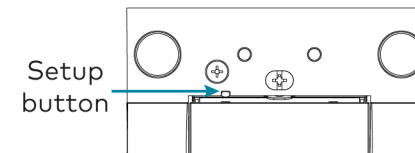
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Backlight Customization

Backlight color customization can be accomplished locally or through programming.

> NOTE: Custom and preset color themes may be defined in the control system program. Custom programming will override local settings.

To locally change the color of the LED backlights:

1. Press the setup button with a small pointed object once. The LED backlights will light brightly for 15 seconds.
2. Press the setup button repeatedly to cycle through the backlight color options.

Troubleshooting

The module displays error codes using the dimmer output LEDs. The LED flashes a pattern to indicate the error on that output. For example, a 2-1 error flashes the LED two times, pauses for 1 second, flashes once, pauses for 2 seconds, and then repeats for 90 seconds (except where otherwise noted). Refer to the following table for possible corrections.

Error Code	Fault Name	Fault Description
2-1	Over Current	A short circuit has been detected. Verify that there are no shorts in the wiring and that the total load output matches the proper ganged ratings.
2-2	Shorted FET	A flowing current is detected when an FET should be off. The load will power to 100%. This error code is permanent until the device is power cycled. Disconnect the load and contact Crestron Technical Support.
2-3	Over Temperature	The dimmer has overheated and shut down due to an excessive load. Verify that the total load matches the proper ganged rating. The dimmer resumes normal operation after cooling.
2-4	Over Voltage	High voltage spikes have been detected and output has been shut down. If a magnetic load is connected, verify that the dimming phase has been set to Forward Phase mode.
2-5	Overload	A load is detected beyond the allowable load rating. This error code will cause the device to shut down. Verify that the total load output matches the proper ganged rating.
3-1	Zero Cross Fault	The dimmer is unable to lock onto the AC line. If the unit is powered by a generator, verify that the generator output is 50/60 Hz and stable.
3-3	Device Error	The device is experiencing a hardware issue. Please contact Crestron Technical Support.

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For general troubleshooting, please refer to the following table:

Trouble	Probable Cause(s)	Corrective Action
The device does not function.	The device is not receiving power.	Verify that the power connections are correct and that the circuit breaker is closed.
	The load is not operational (e.g. lamps are burned out).	Verify that the load is operational and that the air-gap switch is closed.
	The button(s) being used are not set to control the local load.	Check the program to verify that at least one button is programmed to control the local load.
	The air-gap is switched to the right.	Ensure that the air-gap is switched to the left.
	The device has overheated.	Verify that the device is loaded properly for ganged configuration.
	The neutral wire is not connected to the device.	Connect a dedicated neutral wire to the device.
The dimmer does not dim to a low level or flickers when dimmed.	The lamps connected may be better suited to an alternate dimming mode.	Switch the dimmer to an alternate dimming mode. Contact Crestron Technical Support.

Visit the Product Page

Scan the QR code to visit the product page.

www.crestron.com/model/6509592

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Additional Information

Original Instructions
The U.S. English version of this document is the original instructions.
All other languages are a translation of the original instructions.

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The product warranty can be found at www.crestron.com/warranty.

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