

Introduction

Features and Functions

The CLW-DIM (-DIM) is a stand-alone wall box dimmer that can also act as a Cresnet® device that reports to a Crestron® control processor. The CLW-DIM has four preset lighting levels that can be adjusted (refer to note below). The CLW-DIM also includes two isolated, non-polarized Cresnet wires (plus a ground wire) for connecting to the Cresnet network over a twisted pair wire with shield.

NOTE: The four preset levels are noted as Button 1-High, Button 1-Low, Button Preset 2, and Button Preset 3. Preset “Button 1-High” is usually used for turning lights on to full brightness while preset “Button 1-Low” is usually used for turning the lights off. Although “1-High” and “1-Low” are usually used for “On” and “Off” respectively, the light level for each preset can be customized by the user. Refer to “Operating Buttons and Switches” on page 5 for more information on customizing light levels.

The CLW-DIM features a three-position mode selection switch. Refer to “Operating Buttons and Switches” on page 5 for more information. In the absence of Cresnet communications, the dimmer can still be used to control lighting.

The CLW-DIMS (-DIMS) is similar to the -DIM with the added capability of working with a slave unit (CLW-SLVD) in a multi-switch / single circuit application.

The CLW-SLVD (-SLVD) is a slave unit that when used in conjunction with the -DIMS acts as an additional dimmer control point in a multi-dimmer / single circuit application. It does not connect to a Cresnet system and cannot be used without a -DIMS. The -SLVD does not have a mode selection switch and is not programmable. It emulates the operation of the -DIMS to which it is connected.

These dimmers are available in a variety of colors and textures. The table below shows the availability.

Available Colors/Textures

COLOR/ TEXTURE	MODEL NUMBER SUFFIX	MATCHING LUTRON FACEPLATE
White	W	Not Applicable
Smooth White	W-S	CW-1-WH
Almond	A	CW-1-LA
Smooth Almond	A-S	CW-1-LA
Black	B	Not Applicable
Smooth Black	B-S	CW-1-BL

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Specifications

Following are specifications for the -DIM, -DIMS, and -SLVD.

CLW-DIM, CLW-DIMS, & CLS-SLVD Specifications

SPECIFICATION	DETAILS
Power Requirements	Line Power, 120 VAC, 60 Hz
Default Net ID	-DIM: 6D -DIMS: 6E
Switch Type	Dimmer
Load Type	Incandescent, Tungsten-Halogen, Magnetic Low Voltage
2-Series Control System Update File ^{1,2}	Version 3.093 or later
Load Ratings ³	
Incandescent/Tungsten Halogen	-DIM: 1000W -DIMS: 1000W -SLVD: N/A
Magnetic Low Voltage ⁴	-DIM: 1000VA/750W -DIMS: 1000VA/750W -SLVD: N/A
Operating Temperature and Humidity	32°F to 104°F (0°C to 40°C) 10 to 90% Relative Humidity (Non-Condensing)
Dimensions and Weight	-DIM and -DIMS: Height: 4.13 in (10.48 cm) Width: 2.38 in (6.03 cm) Depth: 1.91 in (4.85 cm) Weight: 4.9 oz (0.67 kg) -SLVD: Height: 4.13 in (10.48 cm) Width: 1.75 in (4.45 cm) Depth: 1.91 in (4.85 cm) Weight: 3.6 oz (0.50 kg)

1. The latest software versions can be obtained from the Crestron website. Refer to the NOTE following these footnotes.
2. Crestron 2-Series control systems include the AV2 and PRO2. Consult the latest Crestron Product Catalog for a complete list of 2-Series control systems.
3. Refer to Derating Charts for Multigang Installations on page 3.
4. 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 proper rating.

NOTE: Crestron software and any files on the website are for Authorized Crestron dealers and Crestron Authorized Independent Programmers (CAIP) only. New users may be required to register to obtain access to certain areas of the site (including the FTP site).

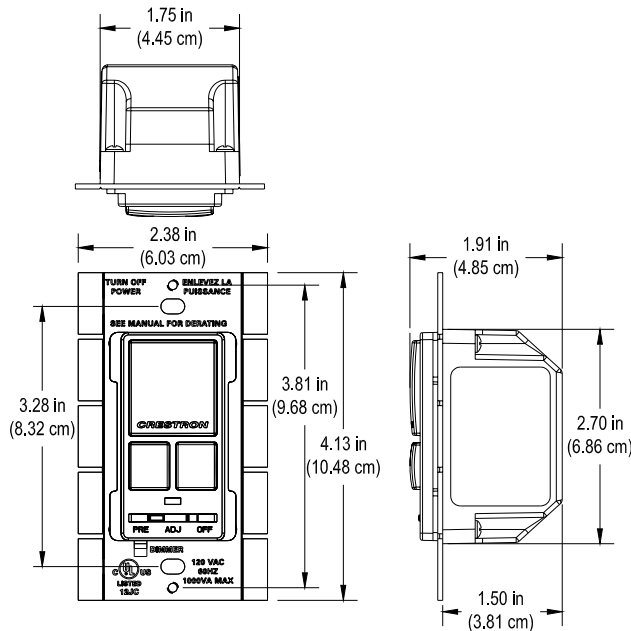
Physical Description

The -DIM and -DIMS contain three buttons (one large, two small), a light emitting diode (LED), and a three-position slider-switch, shown after this paragraph. The -SLVD is similar to the -DIM and -DIMS but does not have the slider-switch. Line voltage connections are made at the rear of the dimmer. Three Class 2 low voltage wires, located on the front of the switch provide a Cresnet connection to a control system. The wires are routed to the bottom of the unit for placement outside of the wall box.

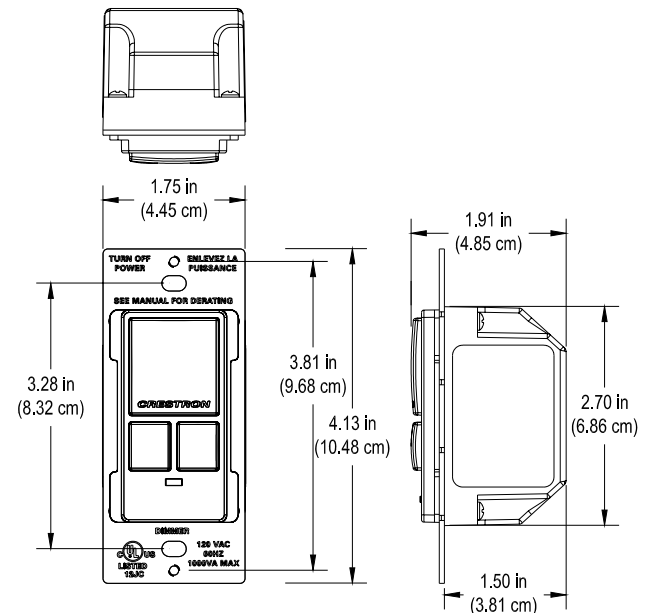
CLW-DIM/DIMS (L) and CLW-SLVD (R) shown in white



Physical view of CLW-DIM/ DIMS (clockwise from top; Top, Side, and Front)



Physical view of CLW-SLVD (clockwise from top; Top, Side, and Front)



The -DIM, -DIMS, and -SLVD mount in a standard wallbox and are covered using a decorative faceplate (not included).

Industry Compliance

This product is Listed to applicable UL Standards and requirements by Underwriters Laboratories Inc.



Important Notes

Read before installation.

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

Alternate wiring methods may be used for the Class 2 wiring connection. The 2002 National Electrical Code (Article 725-55) prohibits Class 2 conductors of the -DIM, -DIMS, and -SLVD to occupy the same outlet box as the power conductors. The exception is Part D of Section 725.55 of the 2002 National Electrical Code, which allows a device's power conductors to be installed near (0.25 inch minimum spacing) associated Class 2 conductors in the same outlet box. Consult the 2002 National Electrical Code Handbook and your local electrical inspector before proceeding.

Do not use the supplied butt-splice connectors if the Class 2 conductors are to be installed in the wallbox with the power conductors. Use

approved connectors (supplied by others) to make Class 2 connections inside the wallbox.

- **CAUTION:** TO REDUCE THE RISK OF OVERHEATING AND POSSIBLE DAMAGE TO OTHER EQUIPMENT, DO NOT INSTALL TO CONTROL A RECEPTACLE OR A MOTOR OPERATED APPLIANCE (i.e. BATH FAN).
- **Wiring:** Use copper wire only. For supply connections, use wires rated for at least 75°C.
- **Lamp Type:** The -DIM, -DIMS, and -SLVD are designed for use with permanently installed incandescent, magnetic low voltage, or tungsten-halogen only.
- **Temperature:** The -DIM, -DIMS, and -SLVD are designed to be used where temperatures are between 32° to 104°F (0° to 40°C).
- **Wallboxes:** Devices mount in standard wallboxes. For easy installation, Crestron recommends using 3 1/2" deep wallboxes. Several devices can be installed in one wall box (multigang). This requires the removal of side sections (refer to diagram on page 3) and the derating of the dimming device. For a smooth appearance, one-piece multigang faceplates (not supplied) can be installed.
- **Other Switch Devices:** Mechanical 3- or 4-way switches will not work with the -DIM, -DIMS, or -SLVD.
- **Spacing:** If mounting one device above another, leave at least 4 1/2" vertical space between them.
- **Low Voltage Applications:** Use with core and coil (magnetic) low voltage transformers only. Do not use any solid-state electronic low voltage transformers.

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:

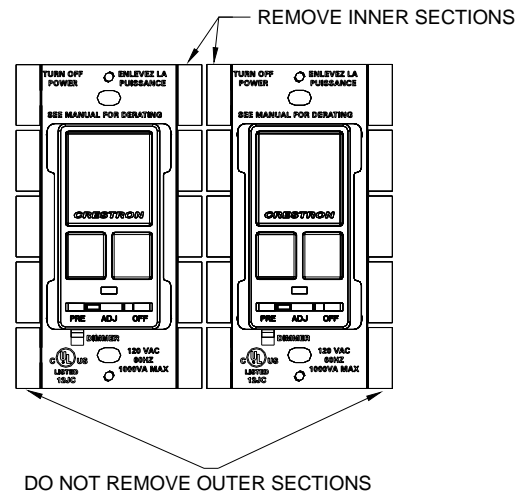
- Do not operate low voltage circuits without operative lamps in place.
- Replace burned-out lamps as quickly as possible.
- Use transformers that incorporate thermal protection or fuse transformer primary windings to prevent transformer failure due to overcurrent.

Multigang Installations

In multigang installations, several controls are grouped horizontally in one wallbox. For a smooth appearance, one-piece multigang faceplates (not supplied) can be installed.

1. When combining controls in a wallbox, remove inner side sections prior to wiring (refer to the following figure).

Inner Sections of Multiganged Switches



The load capacity must also be derated. The following charts provide derating information for various applications.

Derating Information for Incandescent and Tungsten Halogen Applications

Part Number	No Side Removed	One Side Removed	Two Sides Removed
-DIM	1000W	600W	400W
-DIMS	1000W	600W	400W
-SLVD	No Derating Necessary		

Derating Information for Magnetic Low Voltage Applications*

Part Number	No Side Removed	One Side Removed	Two Sides Removed
-DIM	1000VA/750W	600VA/450W	400VA/300W
-DIMS	1000VA/750W	600VA/450W	400VA/300W
-SLVD	No Derating Necessary		

* 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 proper rating.

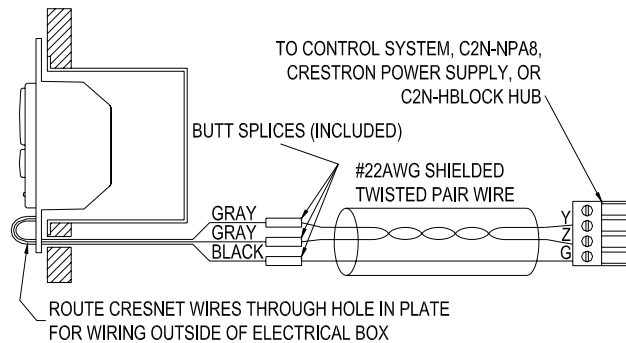
2. To remove a side section, bend the side section back and forth with a pair of pliers until the section breaks off from the mounting plate. Use a file or sandpaper to remove any excess metal.

Prewire for Master Application

Each device has two Class 2 low voltage wires (plus a ground wire) that provide a Cresnet connection over

shielded twisted-pair to a Crestron control system. These wires are routed to the bottom of the device for connection outside of the wallbox. The low voltage wires are pulled from each device location to the Crestron control system, a Crestron power supply, a Crestron C2N-NPA8, or a Crestron connection block device. Use #22 AWG, twisted, shielded, 2-conductor wire. Wiring can be daisy chained, T-tapped, or home run back to the control system. Refer to the following wiring diagram.

Wiring Diagram of CLW device to Cresnet



NOTE: The GRAY (Cresnet) wires are not polarized. These wires can be connected to either the Y or Z line on a Cresnet port.

NOTE: The BLACK wire (Cresnet ground) should not be grounded with the GREEN (Ground) wire on the -DIM/-DIMS/-SLVD.

NOTE: Crestron recommends using Crestron's *Cresnet-DM* cable for connecting the -DIM and -DIMS to the Cresnet network.

Installation

WARNING: Turn off power at the circuit breaker. Installing with power on can result in serious personal injury and damage to the device.

NOTE: The -DIMS must be installed in the same wallbox that contains the connections to the load.

NOTE: The -DIM, -DIMS, and -SLVD require a neutral wire for operation. If no neutral is present, contact a licensed electrician for installation or contact Crestron Customer Service for alternative wiring options.

NOTE: New installations should be checked for short circuits prior to installing the -DIM, -DIMS, or -SLVD. 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 -DIM, -DIMS, or -SLVD only when the short is no longer present. **The warranty is void if the -DIM, -DIMS, or -SLVD is installed and operated with a shorted load.**

1. Turn power off at the circuit breaker.
2. If installing multiple dimmers (-DIM or -DIMS), note the serial number on each device and make sure they are being installed in the proper location.
3. Pull Class 2 low voltage wires through a hole in the drywall located outside of the electrical box, to the Crestron control system, a Crestron power supply, a Crestron C2N-NPA8, or a Crestron connection block device. Leave wires outside of the wallbox for connection to the -DIM or -DIMS.

NOTE: Alternate wiring methods may be used for the Class 2 wiring connection. Refer to section 725-55, Part D of the 2002 National Electric Code.

4. Wire the device for the appropriate application. Choose either "CLW-DIM / CLW-DIMS Wiring" or "CLW-DIMS with CLW-SLVD Wiring", shown on this page and the following page.

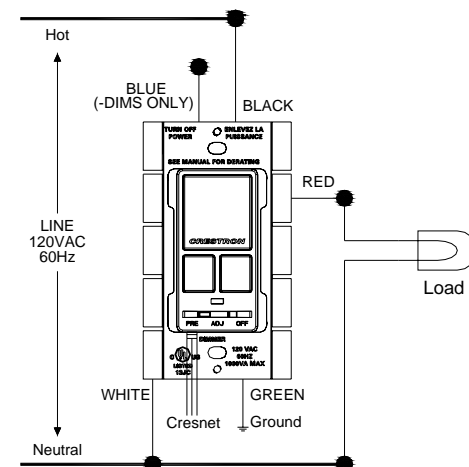
NOTE: Alternative wiring methods can be obtained from Crestron Online Help Answer ID 1926, or contact Crestron True Blue Support at www.crestron.com/support.

CLW-DIM / CLW-DIMS Wiring

NOTE: The -DIM and -DIMS require a neutral wire for operation. If no neutral is present, contact a licensed electrician for installation or contact Crestron customer service for alternative wiring options.

The following wiring diagram illustrates installation of the -DIM or -DIMS.

Wiring Diagram for CLW-DIM or CLW-DIMS (without CLW-SLVD)



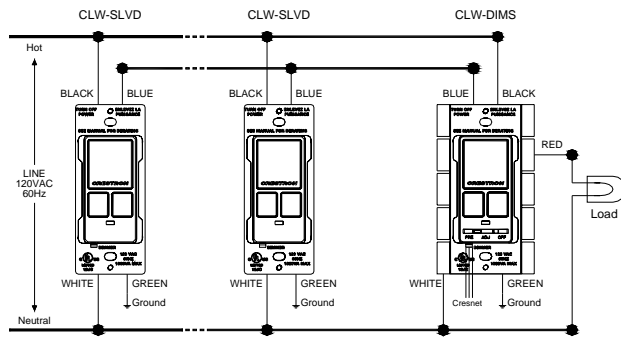
NOTE: The RED (Load) and BLACK (Hot) wires are #14 AWG. The BLUE (Slave) and WHITE (Neutral) wires are #18 AWG. The GREEN (Ground) wire is #16 AWG. The GRAY (Cresnet) wires are #22 AWG. The BLACK wire (Cresnet ground) paired with the GRAY (Cresnet) wires is #22 AWG.

CLW-DIMS with CLW-SLVD Wiring

NOTE: The -DIMS must be installed in the same wallbox that contains the connections to the load.

The following wiring diagram illustrates installation of the -DIMS with a -SLVD.

Wiring Diagram of CLW-DIMS with multiple CLW-SLVDs



NOTE: Do not connect the BLUE (Slave) wire to the Black (Hot) or RED (Load) wires.

NOTE: The RED (Load) and BLACK (Hot) wires are #14 AWG. The BLUE (Slave) and WHITE (Neutral) wires are #18 AWG. The GREEN (Ground) wire is #16 AWG. The GRAY (Cresnet) wires are #22 AWG. The BLACK wire (Cresnet ground) paired with the GRAY (Cresnet) wires is #22 AWG.

NOTE: If a -DIMS is installed without a -SLVD, the BLUE lead (Slave) should be capped.

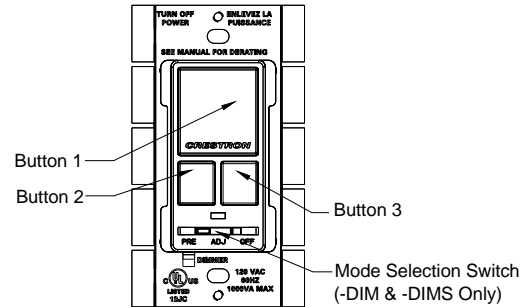
1. Splice the gray wires of the -DIM or -DIMS to the Class 2 low voltage wires connected to the Crestron control system, a Crestron power supply, a Crestron C2N-NPA8, or a Crestron connection block device. Push the wires and the splices into a hole in the drywall to provide the necessary separation.
2. Push all Class 1 power wires back into the wallbox and fasten the device to the wallbox with the provided screws.
3. Attach decorative faceplate.
4. Restore power.

Operating Buttons and Switches

The -DIM, -DIMS, and -SLVD feature three pushbuttons (one large, and two-small). The -DIM and -DIMS also have a three-position mode selection switch. The function of each button is determined by the position of the mode selection switch. Refer to the following diagram.

NOTE: The -SLVD does not have a mode selection switch. It will act in the same mode as the -DIMS.

Buttons of CLW-DIM, -DIMS, and -SLVD



OFF

When the mode selection switch is in the “OFF” position, the buttons will not have any function and the load is disconnected from the power source. This **must** be used when changing light bulbs to ensure that the load is fully disconnected from power.

ADJ

When the mode selection switch is in the “ADJ” position, the large button is used to switch between the “Button 1-High” and “Button 1-Low” presets (typically “On” and “Off”). The lighting level can be manually adjusted using the two small buttons to raise (right button) and lower (left button) the lighting level.

If the lighting level is to be stored as a preset, move the mode selection switch to the PRE position. Press and hold the desired preset button until the LED flashes.

PRE

NOTE: Before storing a preset, the lighting must be adjusted to the desired level while in the ADJ mode.

When the switch is in the PRE position, it is in the preset mode and can be used to recall and/or store preset lighting levels. The large button is used to recall and/or store the “Button 1-High” and “Button 1-Low” presets. The lower left button (button 2) is used to recall and/or store preset level two. The lower right button (button 3) is used to recall and/or store preset level three. Pressing and releasing a button will fade to the preset lighting level over a three second period. Tapping a button while the light is fading will cause the light level to “jump” to the preset without fading. Pressing and holding a button until the LED flashes will store the current lighting level.

To store preset values for “Button 1-High” and “Button 1-Low”; While in the PRE mode, recall the lighting level to be changed. (For example, if default preset values are to be changed, turn the light to maximum brightness or turn off the lights by tapping the large button). Switch to the ADJ mode and adjust the lighting to the desired level. Move the mode selection switch to PRE. Press and hold the large button until the LED flashes to store the new preset value.

NOTE: If a new preset value for “Button 1-High” is lower than the stored value for “Button 1-Low”, the previously stored value for “Button 1-Low” becomes “Button 1-High”. Similarly, if a new preset value for “Button 1-low” is higher than the value stored for “Button 1-High”, the previously stored value for “Button 1-High” becomes “Button 1-Low”.

NOTE: The default preset light values for each button are:

- Button 1-High: 100%
- Button 1-Low: 0%
- Button Preset 2: 30%
- Button Preset 3: 70%

NOTE: The device may be warm to the touch during operation. This is normal.

Problem Solving

Troubleshooting

The table after this paragraph provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

Dimmer Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Dimmer does not function.	Dimmer is not receiving line power.	Verify that the dimmer is properly connected to power line and that the circuit breaker is closed.
	Load is not connected.	Verify that load is operational and that the mode selection switch is in the PRE position.

If the dimmer does not function after performing the above corrective actions, restore the dimmer’s default settings by moving the mode selection switch to the “PRE” position. While holding the Button 1, move the mode selection switch to the “ADJ” position and back to the “PRE” position. Release the pushbutton. The LED will flash once to confirm that the default values have been restored.

Further Inquiries

If you cannot locate specific information or have questions after reviewing this guide, please take advantage of Crestron’s award winning customer service team by calling the Crestron corporate headquarters at 1-888-CRESTRON [1-888-273-7876].

You can also log onto the online help section of the Crestron website (<http://www.crestron.com/onlinehelp>) to ask questions about Crestron products. First-time users will need to establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features, and extends the capabilities of the device, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron website periodically for manual update availability and its relevance. Updates are identified as an “Addendum” in the Download column.

Return and Warranty Policies

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange or service without prior authorization from CRESTRON. To obtain warranty service for CRESTRON products, contact an authorized CRESTRON dealer. Only authorized CRESTRON dealers may contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number and return address.
2. Products may be returned for credit, exchange, or service with a CRESTRON Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to CRESTRON, 6 Volvo Drive, Rockleigh, N.J, or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. CRESTRON reserves the right in its sole and absolute discretion to charge a 15% restocking fee, plus shipping costs, on any products returned with an RMA.
3. Return freight charges following repair of items under warranty shall be paid by CRESTRON, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

CRESTRON Limited Warranty

CRESTRON ELECTRONICS, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from CRESTRON, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touchscreen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from CRESTRON or an authorized CRESTRON dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

CRESTRON shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended, or if it has been subjected to misuse, accidental damage, modification, or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced, or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall CRESTRON be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. CRESTRON is not liable for any claim made by a third party or made by the purchaser for a third party.

CRESTRON shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, CRESTRON makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supercedes all previous warranties.

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