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Product Manual

DIN-DLI

DALI® Interface, DIN Rail Mount

Crestron Electronics, Inc.

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

Regulatory Model: M202236001

Contents

DIN-DLI

DALI® Interface, DIN Rail Mount

The DIN-DLI is a DALI-2™ certified DALI® interface for Crestron control systems that provides control of one DALI loop. Housed in a 3M DIN-rail enclosure, the compact DIN-DLI is capable of controlling DT0, DT1, DT2, DT3, DT4, DT5, DT6, DT7, and DT8 Tc^2 DALI devices. Crestron control system connection is provided through a Cresnet® wired or Ethernet with PoE connection. DALI devices can be commissioned through an intuitive web user interface. The DIN-DLI also offers unique features that improve the flexibility and performance of DALI® systems to help with your DALI installation.

This section provides the following information:

Features

Key features include:

- Interfaces with one independent DALI® loop
- DALI-2™ certified
- Supports DT0, DT1, DT2, DT3, DT4, DT5, DT6, DT7, and DT8 Tc[2] DALI Devices
- Controls up to 64 DALI devices
- Ethernet or Cresnet® wired communication
- Power using Cresnet network or PoE for single-wire installation
- Provides DALI loop power[1] for communication
- Commissioned through Web UI for easy setup
- Override input
- Link-local direct connection to a PC for commissioning when powered via Cresnet
- 3M wide DIN rail mounting
- Works with the Crestron Home® OS

One DALI Loop

The single DALI loop on the DIN-DLI enables control of up to 64 individual DALI devices. With DALI's device level control, lighting loads powered from the same feed can be controlled individually. DALI allows layout changes without new circuit wiring, providing flexibility by allowing zone reconfiguration after a system is installed.

Integrated DALI Power Supply

The design of the DIN-DLI eliminates the need for external power supplies required by other DALI controllers on the market. Power[1] is delivered via PoE or Cresnet, creating a true single-wire installation. Both Cresnet and PoE are capable of powering the communications of all 64 DALI ballast controllers.

Override Input

Override input is provided to allow an external contact closure to momentarily override the control system program and set each channel output to its override preset level. Factory default override values on DALI devices can be adjusted through the DIN-DLI web user interface.

DIN Rail Installation

The 3M 2.08 in. (52.83 mm) wide DIN-DLI snaps onto a standard DIN rail for installation in a wall mount enclosure. When installed in an enclosure utilizing 45 mm cutouts, the front panel stays accessible while the connections are concealed.

Module to Module Connectors

Module to Module connectors quickly connect Cresnet and Override between modules without the need for additional wiring or tools.

Cresnet® Communications and PoE

The DIN-DLI communicates with Crestron control systems via the Cresnet control network or Power-over-Ethernet (PoE). A pair of Cresnet ports and module to module connectors allow for easy daisy-chaining of several DIN Rail Series automation control modules. An RJ45 connector enables both data and power to be transmitted to the unit using a single CAT5 or higher cable.

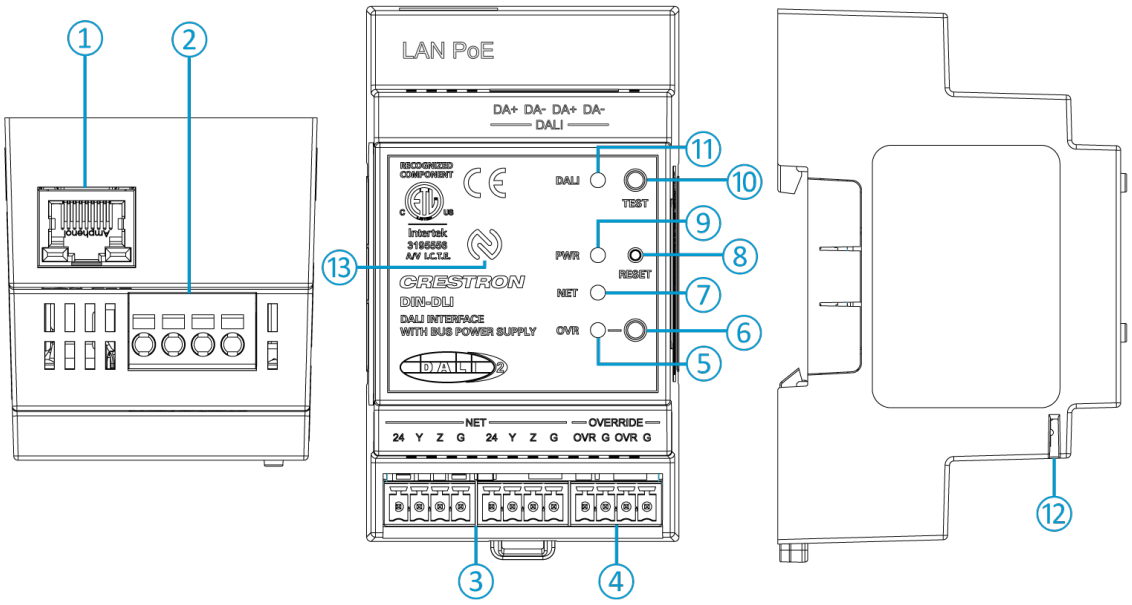
> **NOTE:** The DIN-DLI is not compatible with Crestron 2-Series control systems or earlier.

Notes:

1. External DALI power supplies cannot be used on the DALI loop with the DIN-DLI.
2. DT8 Tc features will be available in firmware version 2.0000.00000 or newer.

Physical Description

The following illustrations show the connectors, controls, and indicators on the front, top, and bottom of the DIN-DLI. For additional details, refer to Specifications on page 9 and Operation on page 49.



① **LAN PoE:** Connects to the Ethernet network to provide power to the device and communications between the control system and DIN-DLI. When powered via Cresnet, connect directly to a PC for link-local access to the web configuration. Green and yellow LEDs indicate Ethernet port status.

② **DALI:** Connects to the DALI network to provide communications between the DALI devices and DIN-DLI.

③ **NET:** Connects to the Cresnet wired network to provide power to the device and communications between the control system and DIN-DLI. Provides pass-thru to additional devices.

④ **Override:** Connects to a contact closure to provide override control. Provides pass-thru to additional devices.

⑤ **OVR:** The LED lights to indicate the override status.

⑥ **OVR:** Pushbutton enables override mode.

⑦ **NET (LED):** The LED lights to indicate communications on the **NET** port.

⑧ **RESET:** Pushbutton resets internal processor. Holding down for 10 seconds triggers a factory restore.

⑨ **PWR:** The LED lights to indicate the power status.

⑩ **TEST:** Pushbutton provides local control of lights and initiates a single DALI device replacement.

⑪ **DALI (LED):** The LED lights to indicate communications on the **DALI** port. Rapid blinking indicates a short on the DALI loop.

⑫ **Module to Module Connector:** Insert module to module jumper to connect Cresnet and Override between DIN modules that support this connection.

⑬ **NFC:** Tap with an NFC-enabled device to view the product manual.

Specifications

Product specifications for the DIN-DLI.

Product Specifications

Power

Cresnet Power Usage	6W (250mA @ 24V)
PoE Power Usage	IEEE 802.3af (802.3at Type 1) Class 2 PoE Powered Device (6.5W)

Load Ratings

DALI Loop	1
DALI Devices	64
Load Types	DALI devices DT0, DT1, DT2, DT3, DT4, DT5, DT6, DT7, and DT8 Tc[2]

DALI Loop Power Supply

DALI Loop	Maximum: 0.25A
Power Supply[1]	Continuous: 0.17A

Communications

Cresnet	Cresnet secondary mode
Ethernet	100BASE-TX; IEEE 802.3af (802.3at Type 1) Class 2 PoE Powered Device (6.5W); MbedTLS encryption; Authentication prompted on first connection; Link-local direct connection to a PC for commissioning when powered via Cresnet
DALI	One DALI loop; DALI-2™ Certified; Provides power[1] and communication for the DALI loop; Up 64 DALI drivers in up to 16 DALI groups; DT0, DT1, DT2, DT3, DT4, DT5, DT6, DT7 and DT8 Tc[2] support

Connectors

Module to Module	(2) Module to module connectors; Provides Cresnet and Override to connected modules
NET	(2) 4-pin 3.5 mm detachable terminal blocks, paralleled; Cresnet® secondary port

OVERRIDE	(2) 2-pin 3.5 mm detachable terminal blocks, paralleled; Sensing input for external low-voltage contact closure; Activates override mode when a closure is present; Minimum contact closure rating: 10mA (per module) at 24V
LAN PoE	(1) 8-pin RJ-45, female; 100BASE-TX Ethernet port; Green and yellow LEDs indicate Ethernet port status; Cresnet network power disables PoE power; Link-local direct connection to a PC for commissioning when powered via Cresnet
DA+ / DA-	(2) 2-pin 3.5 mm spring terminals, paralleled; Control a single DALI loop; A DALI loop controls up to 64 drivers; 3kVAC isolation from Cresnet (NET) and Ethernet (LAN PoE) ports; Wire Gauge: 12-24 AWG solid wire or 14-24 AWG stranded wire

Controls and Indicators

OVR	(1) Red LED and (1) push button; For enabling override mode
PWR	(1) Green LED; Indicates power to device
NET	(1) Yellow LED; Indicates communication with the control processor
RESET	(1) Recessed miniature push button; Resets internal processor on momentary push; Hold for ten seconds to perform a factory restore
DALI	(1) Yellow LED; LED lights to indicate DALI power, communication, and error
TEST	(1) Push button; Provides local control of the lights on momentary push; Hold to initiate a single device replacement

Environmental

Local In-cabinet Air Temperature	32° to 131 °F (0° to 55°C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	13.6 BTU/hr

Construction

Enclosure	Light gray polycarbonate housing with polycarbonate label overlay
Mounting	35 mm DIN EN 60715 rail mount, DIN 43880 form factor for enclosures with 45 mm front panel cutout, occupies 3 DIN module spaces (54 mm)

Dimensions

Height	3.68 in. (93.70 mm)
Width	2.08 in. (52.83 mm)

Depth	2.32 in. (59 mm)

Weight

0.24 lb (113.3 g)

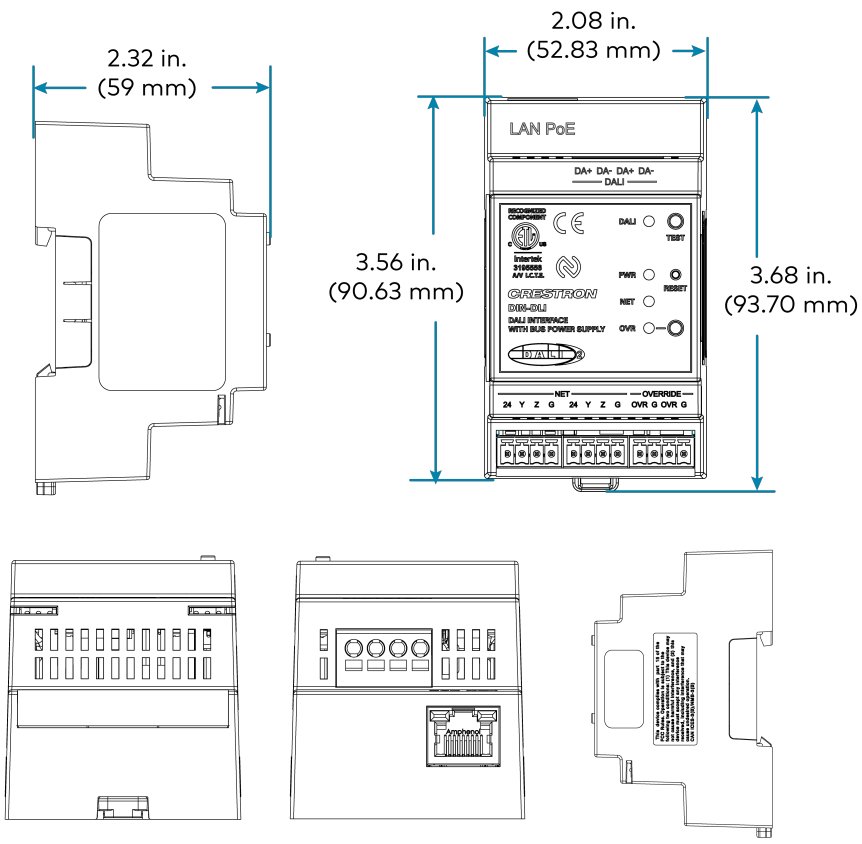
Compliance

Regulatory Model: M202236001
Intertek® Recognized for US & Canada, CE, FCC Class B, IC, WEEE

Notes:

1. External DALI power supplies cannot be used on the DALI loop with the DIN-DLI.
2. DT8 Tc features will be available in firmware version 2.0000.00000 or newer.

Dimension Drawings



Installation

This section provides the following information:

In the Box

Qty.	Description
1	DIN-DLI, DALI® Interface, DIN Rail Mount
	Additional Items
3	Connector, 4-pin (2020555)
1	Module to Module Jumper (2061661)

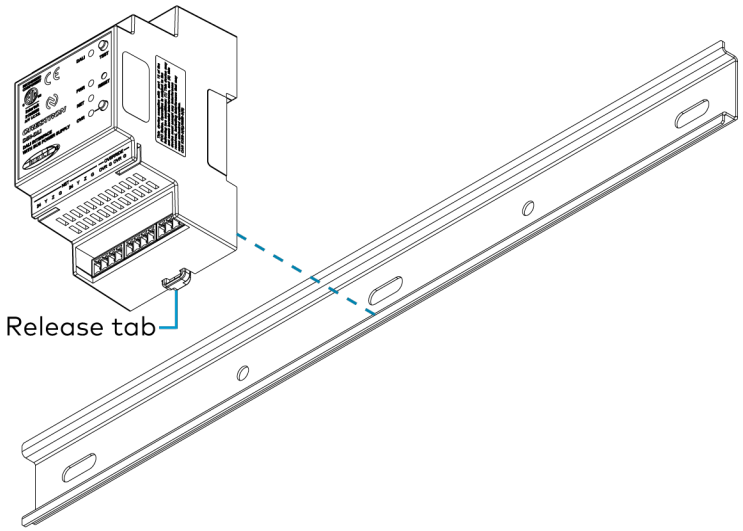
Mounting

Follow the steps below to mount the DIN-DLI.

Mount to a DIN Rail

To mount the DIN-DLI to a DIN rail:

1. Hang the DIN-DLI on the top of the DIN rail.
2. Use a small, flat-head screwdriver to pull the DIN rail release tab down.
3. Press the bottom toward the DIN rail and push the tab up to lock it into place.



Remove from a DIN Rail

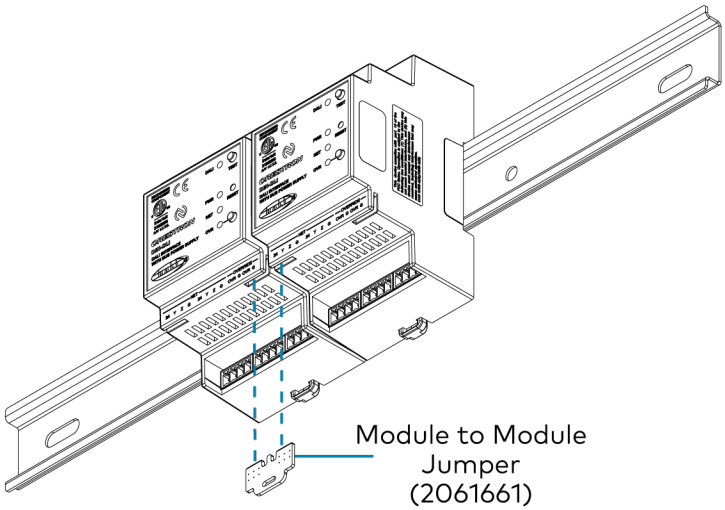
To remove the DIN-DLI DIN Rail:

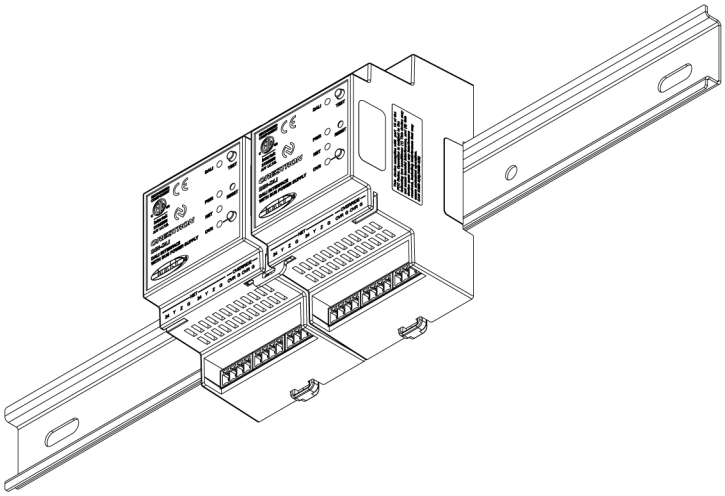
1. Turn off power to the device.
2. Remove all connections from the DIN-DLI.
3. Use a small, flat-head screwdriver to pull the DIN rail release tab down.
4. Tilt the bottom of the DIN-DLI away from the bottom of the DIN rail and then remove the device.

Connecting Multiple DIN-DLI Devices

To connect multiple DIN-DLI devices together:

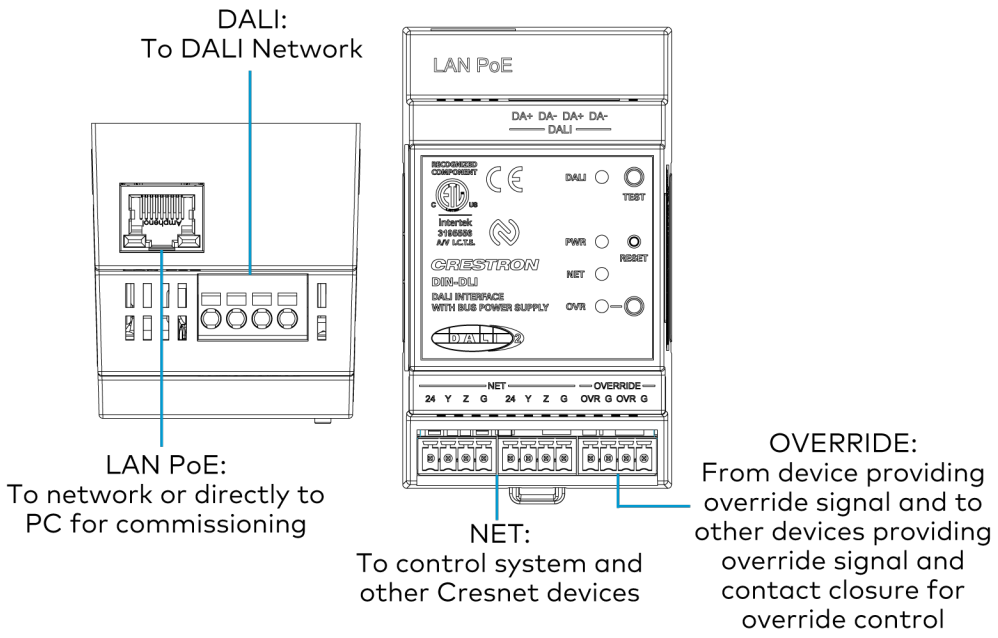
1. Position the DIN-DLI devices next to each other on the DIN rail.
2. Insert the module to module jumper into each device as shown below.





Wiring

Make the necessary connections as shown below. Apply power after all connections have been made.



NOTES:

- The **NET** and **OVERRIDE** connections use screw terminal blocks. A small flat-head screwdriver is necessary to loosen and tighten the terminals when connecting wires.
- The **DALI** connections use spring terminals. Solid wire can be pushed directly into each connection without releasing the springs. To insert stranded wire or to remove either stranded or solid wire, use a small flat-head screwdriver to release each spring terminal.

Configuration

The DIN-DLI web interface lets users view status information and configure local and connected DALI device settings.

This section provides the following information:

Access the Configuration Interface

To connect to the DIN-DLI using the web configuration interface:

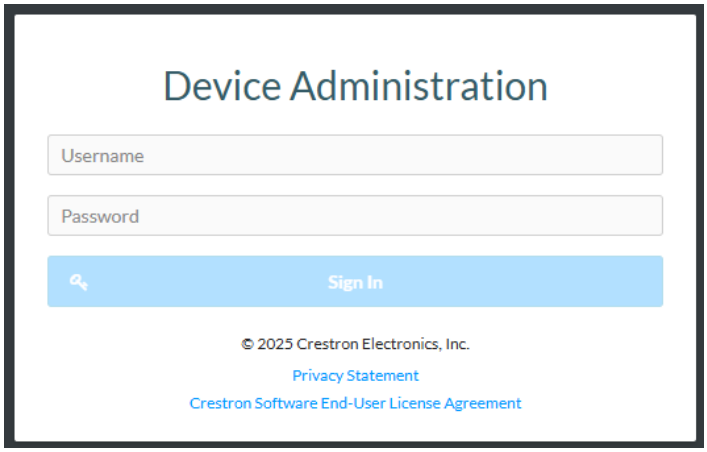
1. Enter the IP address of the DIN-DLI into a web browser.

   NOTES:

   - To obtain the IP address, use the Device Discovery Tool utility in Crestron Toolbox™ software or an IP scanner application.
   - The DIN-DLI supports link-local direct connection to a PC for commissioning when powered via Cresnet.

2. If accessing the device for the first time, a prompt to create an administrator account will be displayed along with a **DEVICE FIRST BOOT** message. To create the first admin account:
    a. Enter a username in the **Username** field.
    b. Enter a password in the **Password** field.
    c. Re-enter the same password in the **Confirm Password** field.

    d. Select **Create User**. A new **Device Administration** page appears with an option to **Sign In** instead of **Create User**.



3. Enter the username in the **Username** field.
4. Enter the password in the **Password** field.
5. Select **Sign In**.

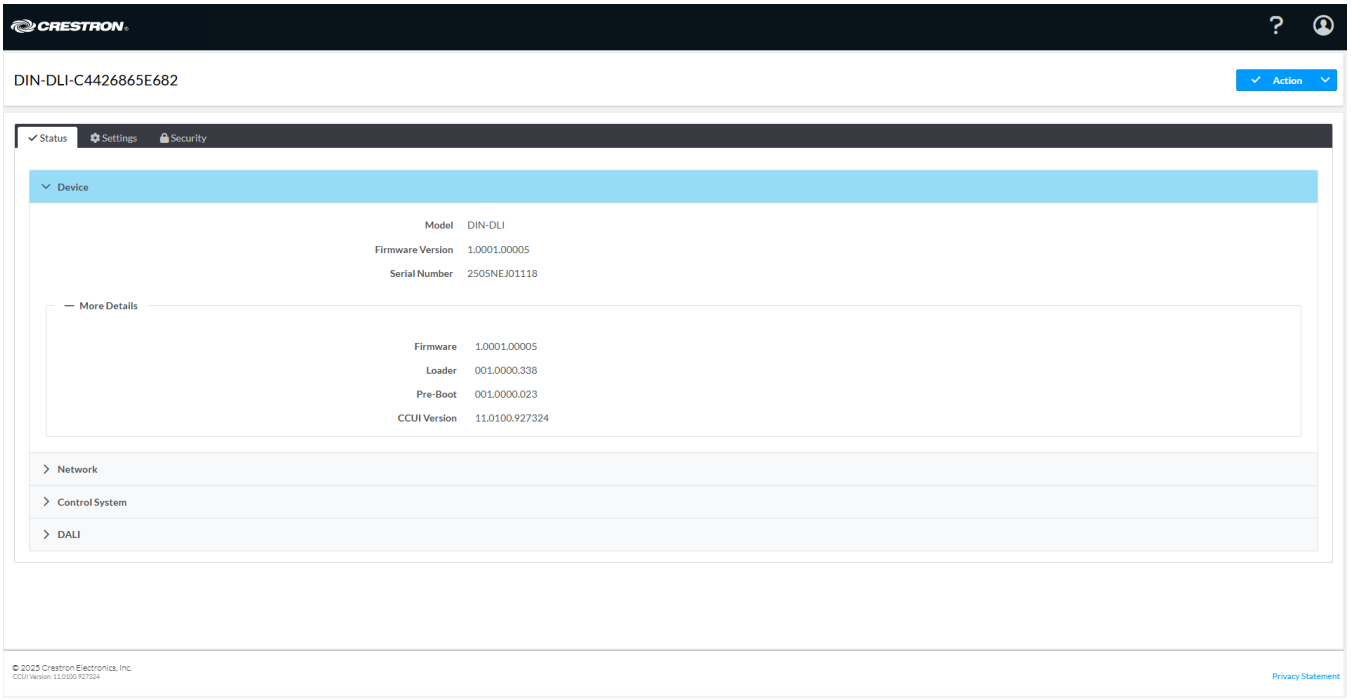
NOTES:

- If the DIN-DLI has been added to a Crestron Home system, the **Username** will be **CHDevice** and the **Password** will be the **Common Device Password** that was configured in Crestron Home.
- Refreshing the web browser at any time will return you to the **Device Administration** page.

Web Configuration

The DIN-DLI may be monitored and configured using its web configuration interface. The interface can be accessed via the device IP address as described in Access the Configuration Interface on page 18.

By default, the **Status** tab is shown with the **Device** accordion open.



The web configuration interface provides the following tabs for navigating the interface:

- **Status**: Used to monitor device status. Refer to Status on page 23.
- **Settings**: Used to configure device settings. Refer to Settings on page 28.
- **Security**: Used to configure security settings. Refer to Security on page 45.

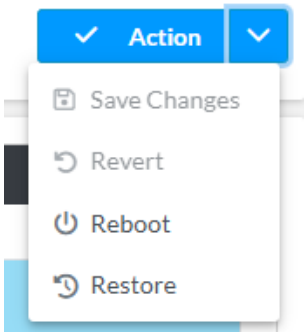
The following controls are also provided on the top right of the web configuration interface:

- Use the **Action** drop-down menu to perform various configuration actions. For more information, refer to Action Menu on page 21.
- Select the profile button to view the active device user and to sign out of the web configuration utility.
- Select the **?** to access this product manual.

Each section of the web configuration interface is described in the sections that follow.

Action Menu

The Action drop-down menu is displayed at the top right side of the web interface and provides quick access to these common device functions:



Save Changes

Select **Save Changes** to save any changes made to the configuration settings.

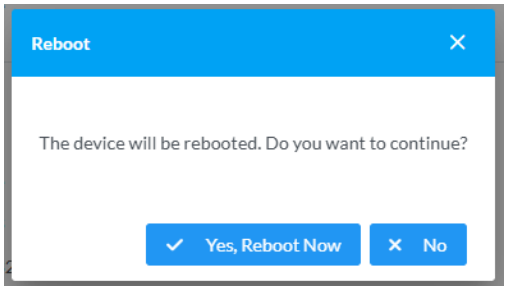
Revert

Select **Revert** to revert the device back to the last saved configuration.

Reboot

Certain changes to the settings may require a reboot to take effect. To reboot the device:

1. Select Reboot in the Action menu. The **Reboot** confirmation message box appears.



2. Select **Yes, Reboot Now** to reboot the device. The **Reboot** status message box appears. Wait for the device reboot to complete before attempting to reconnect to the web interface. Alternatively, select **No** to cancel the reboot operation.

Restore

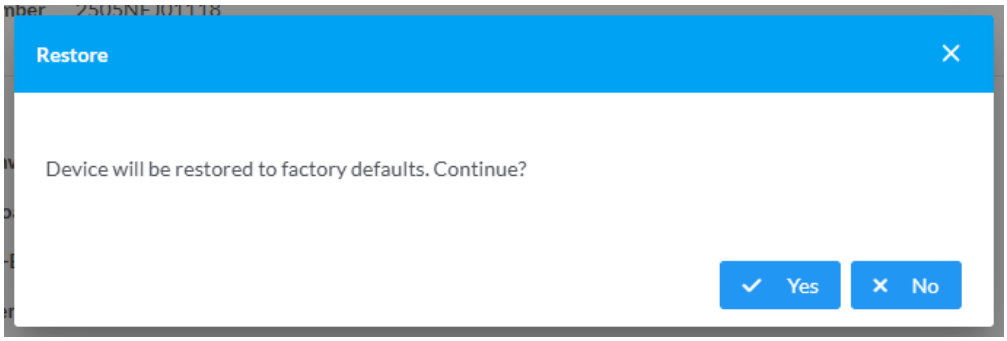
The DIN-DLI can be restored to factory default settings from the **Action** menu.

> **NOTE:** The **Restore** procedure will wipe all settings from the device, including network settings. If a static IP address is set, restoring the device to factory default settings will clear this address and

DHCP will be enabled instead. The restore will not affect settings on the DALI devices, but adding them back to the DIN-DLI will require rediscovery. For instructions, refer to Discovery on page 33.

To restore the device to factory defaults:

1. Select **Restore** in the Action menu. The **Restore** confirmation message box appears.



2. Select **Yes** to restore the device to factory default settings. Select **No** to cancel the restore operation. When **Yes** is selected, the **Restore** status message box appears. Wait for the device restore to complete before attempting to reconnect to the web interface.

   NOTE: Once the device is restored, it may have a new IP address. If reconnecting to the original address does not work, use the **Device Discovery Tool** in Crestron Toolbox software or an IP scanner application to find the device's new IP address.

If the web interface is not accessible, the device can also be restored to factory default settings via a hardware-based procedure. For details, refer to Factory Reset on page 49.

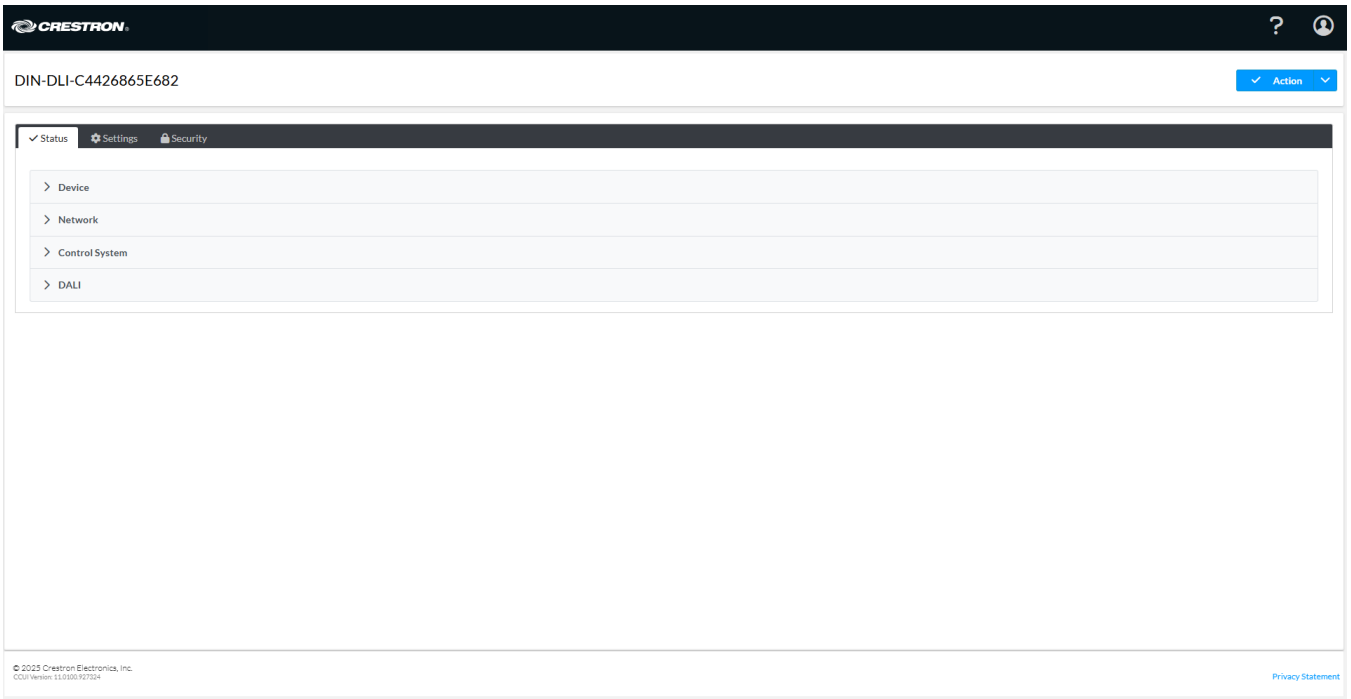
Status

The **Status** page is the first page displayed when opening the DIN-DLI interface. It displays general information about the device (such as **Model** , **Firmware Version**, and **Serial Number**), current network settings (such as **Host Name** and **IP Address**), and the current status of the DALI loop.

The **Status** page can be accessed at any time by selecting the **Status** tab of the interface.

Information displayed on the **Status** page is organized into different sections:

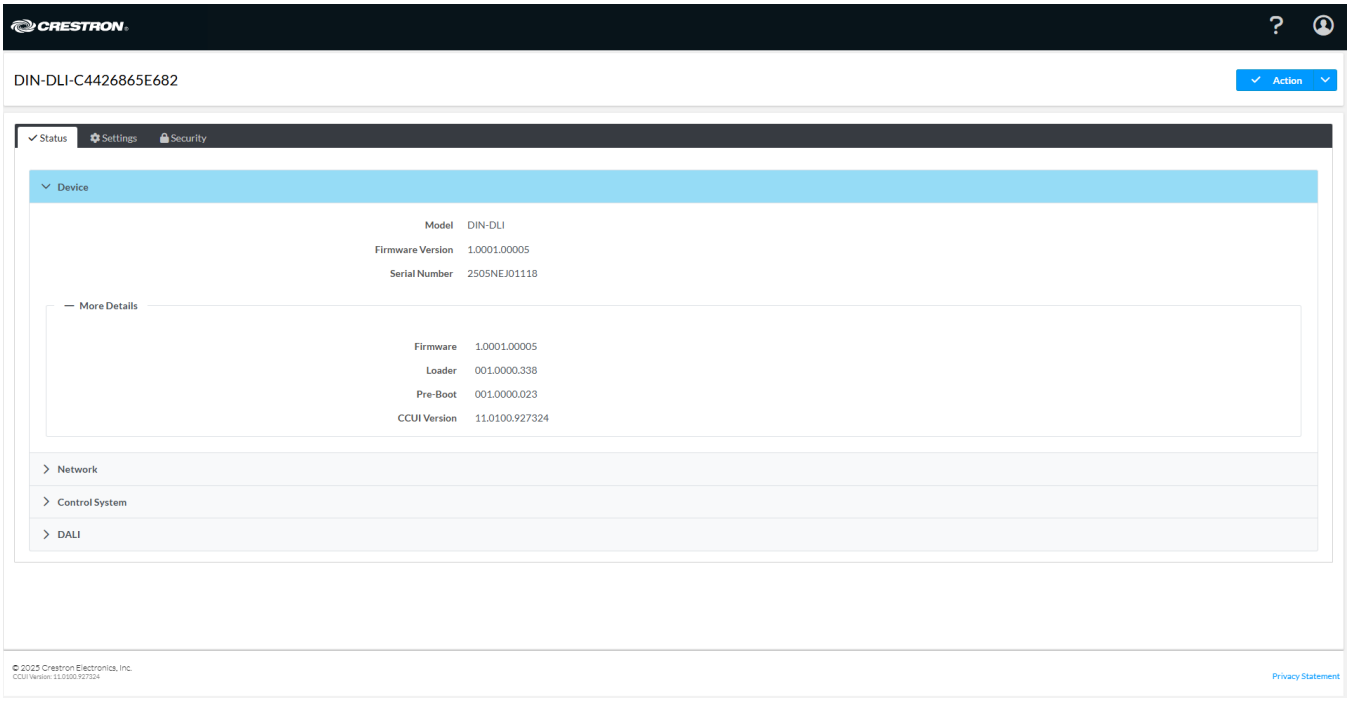
- Device on page 24
- Network on page 25
- Control System on page 25
- DALI on page 26



Device

The **Device** accordion displays the **Model**, **Firmware Version**, and **Serial Number** of the DIN-DLI.

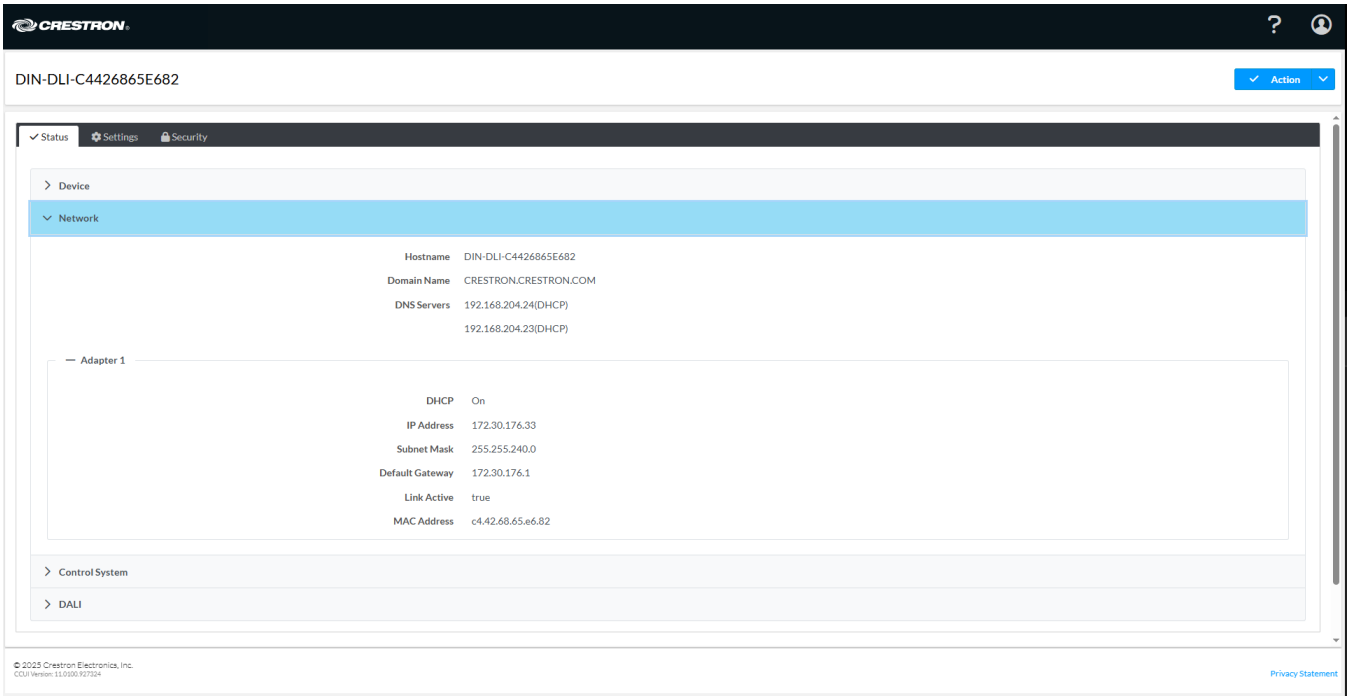
Select **+ More Details** to review additional information about the firmware version installed on the device.



Network

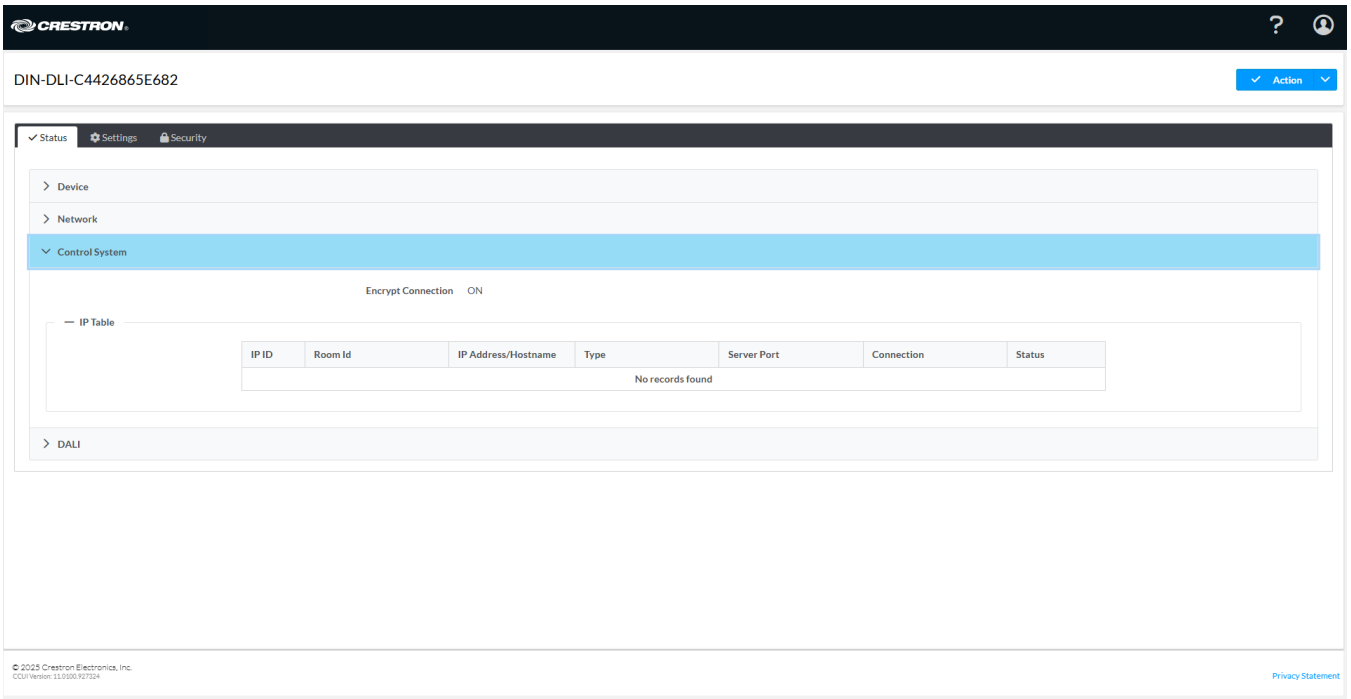
The **Network** accordion displays network-related information about the device, including the **Hostname**, **Domain Name**, and **DNS Servers**.

Select **+ Adapter 1** to display additional network information.



Control System

The **Control System** accordion displays information regarding the connection between the DIN-DLI and a control system.

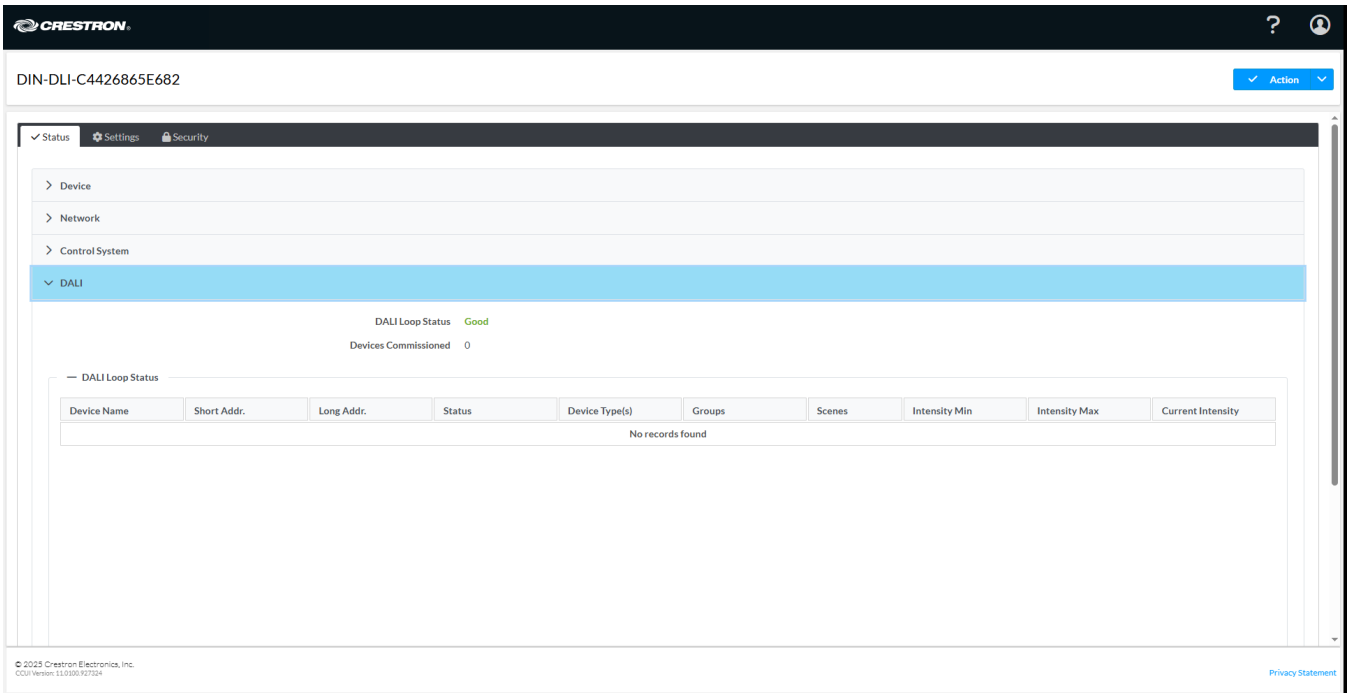


The displayed fields are:

- **Encrypt Connection:** Displays **ON** if the connection is encrypted or **OFF** if it is not.
- **IP ID:** Displays the IP ID used for the connection between the DIN-DLI and the control system.
- **Room ID:** Displays the room ID used for the connection between the DIN-DLI and the control system.
- **IP Address/Hostname:** Displays the IP address or host name of the control system.
- **Type:** Always displays Peer (this is the only relationship the DIN-DLI can have to a control system).
- **Server Port:** Displays the port number for the connection between the DIN-DLI and the control system.
- **Connection:** Always displays **Gway** (this is the only connection type supported between a DIN-DLI and a control system).
- **Status:** Displays either **ONLINE** or **OFFLINE**, depending on if the DIN-DLI is able to communicate with the control system.

DALI

The DALI accordion displays information about the connected DALI loop.



The displayed fields are:

- **DALI Loop Status:** Displays the current status of the DALI loop.
  - **Good:** No faults or conflicts on the DALI loop.
  - **Issues:** Issues, such as a missing DALI device, detected with devices on the DALI loop.
  - **Short Detected:** DALI loop short detected.
- **Devices Commissioned:** Displays the number of DALI devices commissioned.

In the table below, information about each device is displayed:

- **Device Name:** Displays the name assigned to the device.
- **Short Addr:** Displays the short address of the device.
- **Long Addr:** Displays the long address of the device.
- **Status:** Displays the current status
  - **OK:** No issues with this device.
  - **MISSING:** The device is not responding to polling.
  - **CONFLICT:** There is at least one other device on the DALI loop with the same short address.

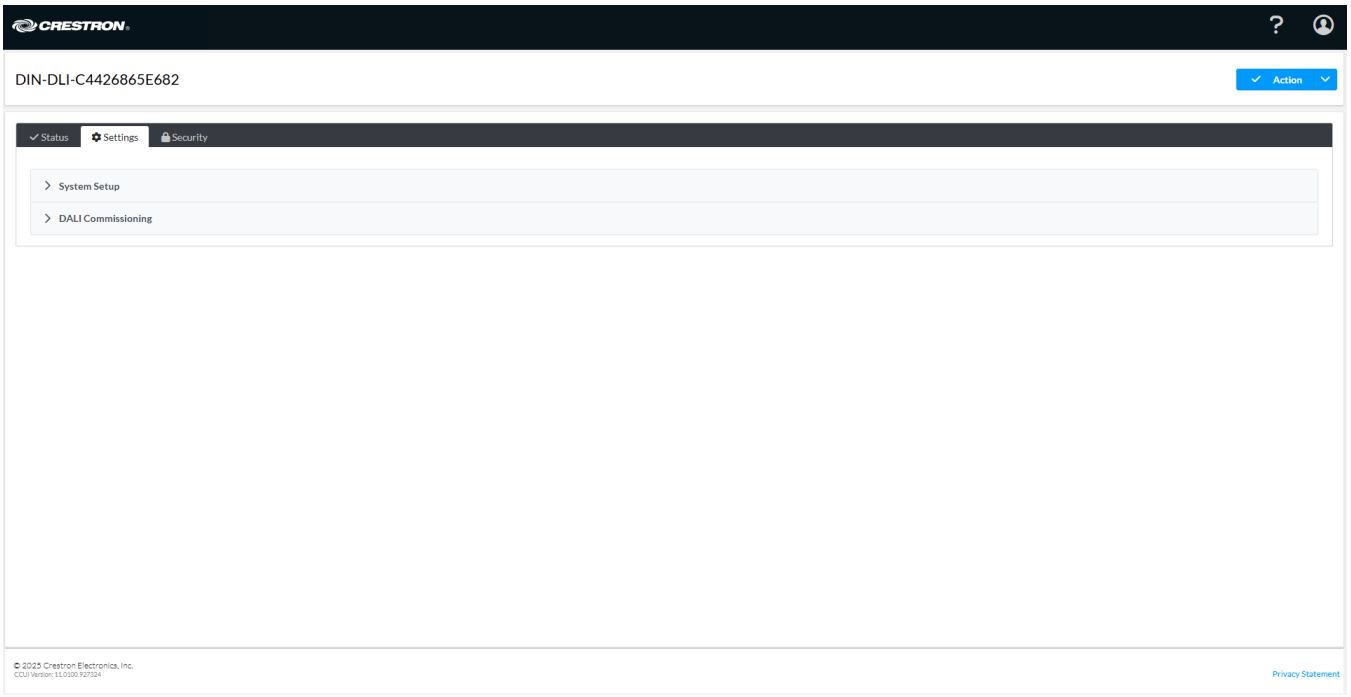
- **Device Type(s):** Displays the DALI device type(s). The available device types are listed below.
    - DT0 Fluorescent
    - DT1A Emergency
    - DT1B Emergency
    - DT1C Emergency
    - DT1D Emergency
    - DT2 HID
    - DT3 LV Halogen
    - DT4 Incandescent
    - DT5 0-10V
    - DT6 LED
    - DT7 Switch
    - DT8: Tc
    - DT8: Tc, XY
    - DT8: Tc, RGBWAF
    - DT8: Tc, XY, RGBWAF
    - DT8: XY
    - DT8: XY, RGBWAF
    - DT8: RGBWAF
- **Groups:** Displays which groups contain the device.
- **Scenes:** Displays which scenes contain the device.
- **Intensity Min:** Displays the minimum intensity for the driver.
- **Intensity Max:** Displays the maximum intensity for the driver.
- **Current Intensity:** Displays the current intensity for the driver.

Settings

The **Settings** page enables configuration of the DIN-DLI's settings. The **Settings** page can be accessed at any time by selecting the **Settings** tab of the interface.

Settings available on the **Settings** page are organized into different sections:

- System Setup on page 29
- DALI Commissioning on page 32



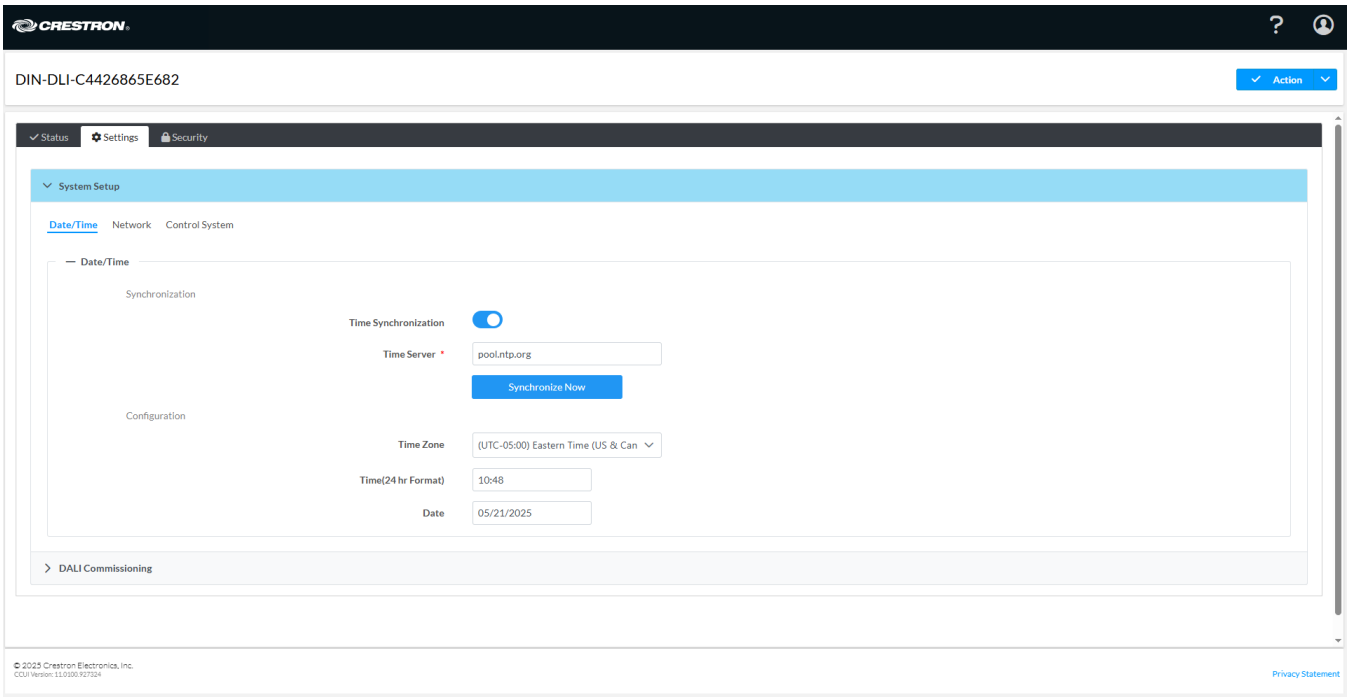
System Setup

The **System Setup** accordion contains settings for configuration of the following system functions:

- Date/Time on page 29
- Network on page 30
- Control System on page 31

Date/Time

Use the **Date/Time** tab to configure the date and time settings of the DIN-DLI.



Synchronization

Use the time synchronization feature to have the DIN-DLI synchronize to a dedicated time server. To configure time synchronization:

1. Set the **Time Synchronization** toggle to the right to enable or left to disable time synchronization. By default, time synchronization is enabled.
2. In the NTP **Time Server** field, enter the URL of a NTP (Network Time Protocol) or SNTP (Simple Network Time Protocol) server.
3. Select **Synchronize Now** to perform time synchronization between the device's internal clock and the time server.

Configuration

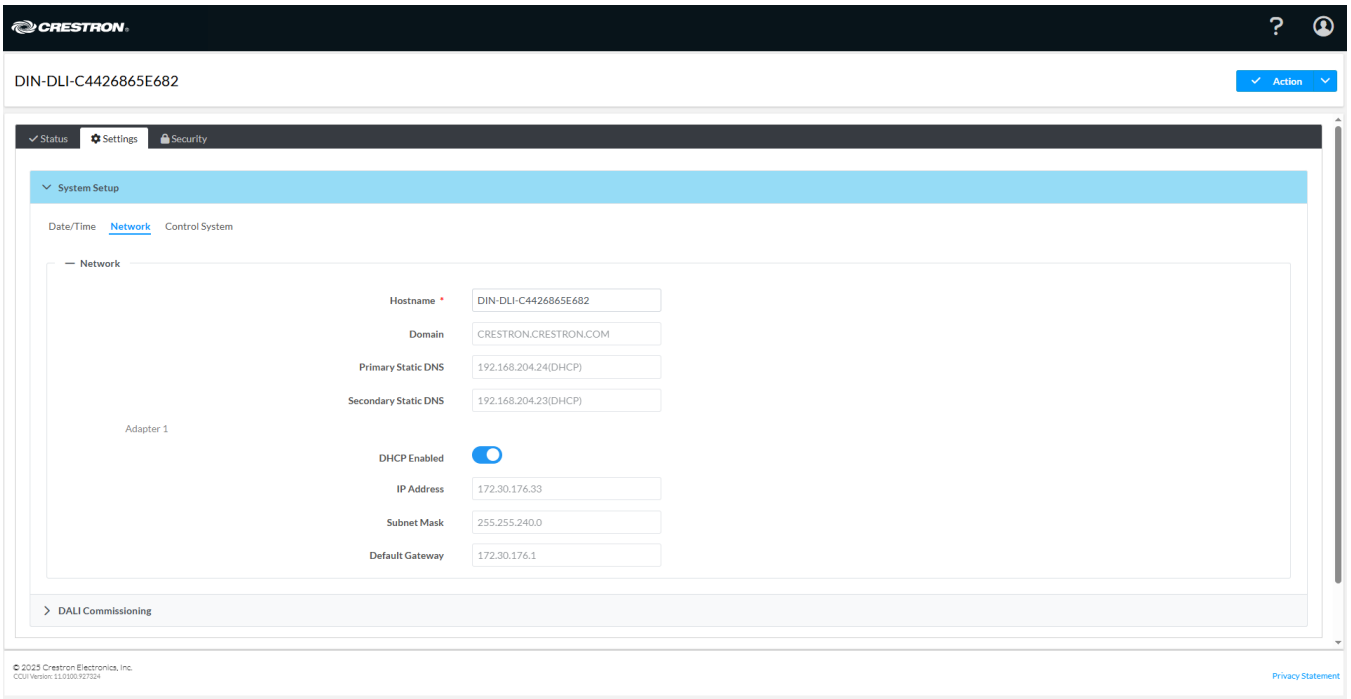
1. Open the **Time Zone** drop-down menu to select the applicable time zone.
2. In the **Date** field, enter the current date.
3. In the **Time (24hr Format)** field, enter the current time in 24-hour format.

Select **Save Changes** to save the settings.

Select **Revert** from the **Action** drop-down menu to revert to the previous settings without saving.

Network

The Network accordion contains network-related settings for the DIN-DLI, including the **Hostname**, **Domain**, **Primary Static DNS**, and **Secondary Static DNS**.



Enter a custom hostname in the **Hostname** field. By default, the hostname of the device consists of the model name followed by its MAC address. For example, DIN-DLI-C4426865E682.

Adapter 1

The **Adapter 1** subheading contains settings for **DHCP**, **IP Address**, **Subnet Mask**, and **Default Gateway** of the Ethernet adapter.

Set the **DHCP** toggle to the right to enable DHCP or left to disable DHCP. This determines whether the IP address of the LAN port is to be assigned by a DHCP (Dynamic Host Configuration Protocol) server.

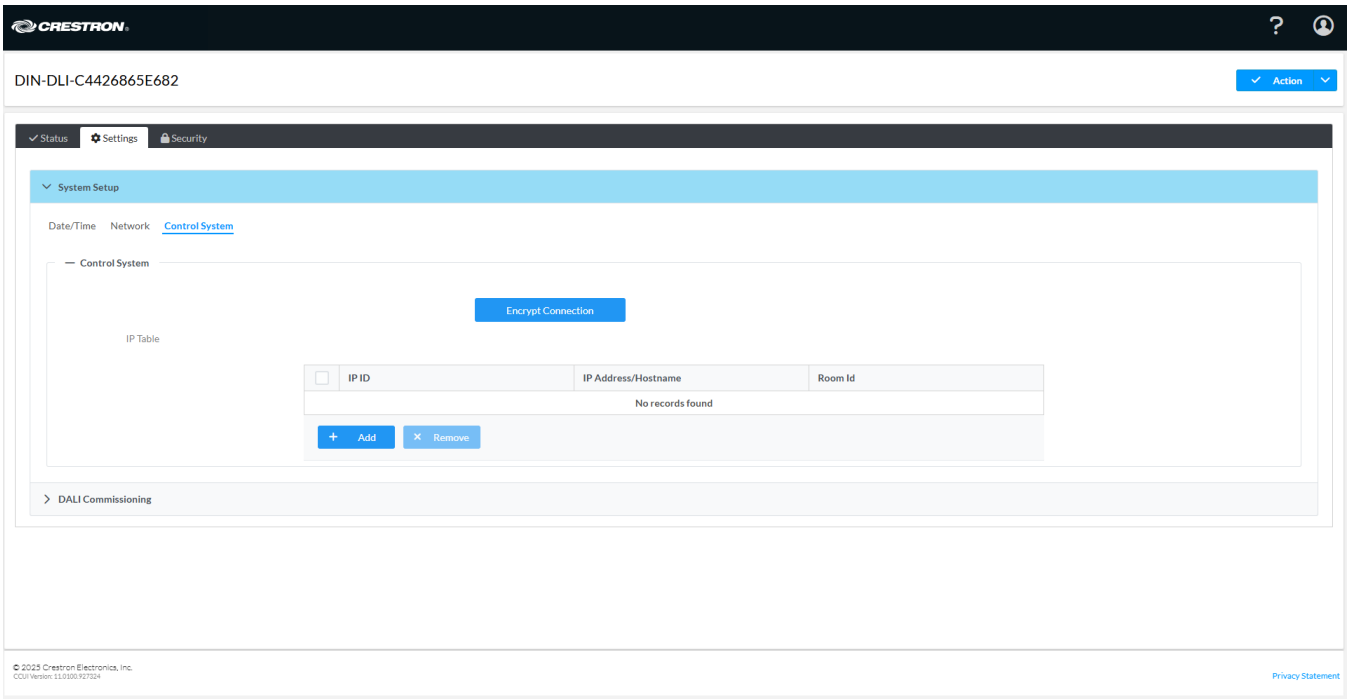
> **NOTE:** DHCP is required for link-local communication.

- **Enabled:** When DHCP is enabled (default setting), the IP address of the LAN port is automatically assigned by a DHCP server on the local area network (LAN).
- **Disabled:** When DHCP is disabled, manually enter information in the following fields:
  - **Domain:** Enter a fully qualified domain name.
  - **Primary Static DNS:** Enter a primary DNS IP address.
  - **Secondary Static DNS:** Enter a secondary DNS IP address.
  - **IP Address:** Enter a unique IP address for the LAN port.
  - **Subnet Mask**: Enter the subnet mask that is set on the network connected to the LAN port.
  - **Default Gateway:** Enter the IP address that is to be used as the LAN network's gateway.

To save any new network entries, select **Save Changes**.

Control System

The **Control System** tab provides settings for configuring a control system connection.



1. Select **Encrypt Connection** to navigate to the **Security** tab to configure encryption settings. Refer to Security on page 45 for details.
2. Select **+ Add** to add an IP table entry to the **IP Table**.
   a. Enter the Room ID in the **Room ID** field.
   b. Enter the IP ID of the DIN-DLI in the **IP ID** field.
   c. Enter the IP address or hostname of the control system in the **IP Address/Hostname** field.

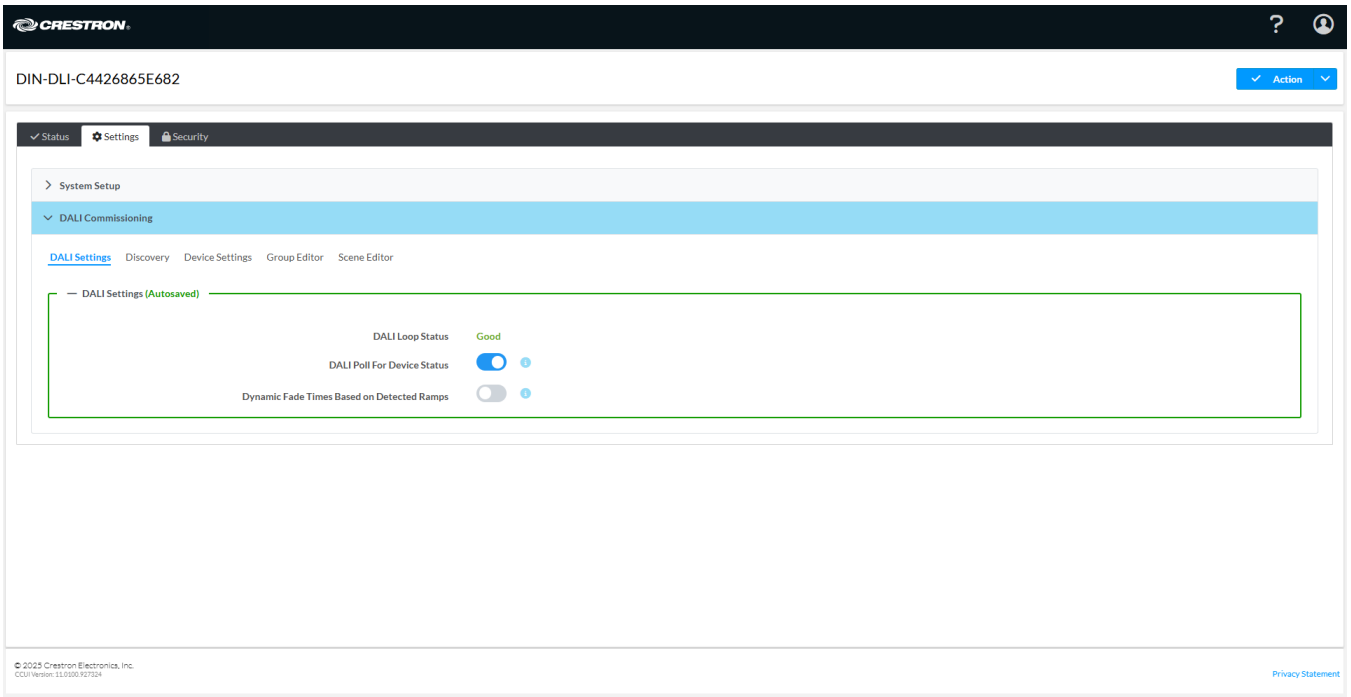
Select **Save Changes** to save the new entries. The **Control System Save** message box appears, indicating that the control system settings were saved successfully. Select **Revert** to revert to the previous settings without saving.

DALI Commissioning

The **DALI Commissioning** accordion contains settings and features for commissioning the DALI loop

DALI Settings

The **DALI Settings** tab contains the following settings that affect the entire DALI loop:



DALI Loop Status: This indicates the current status of the DALI loop.

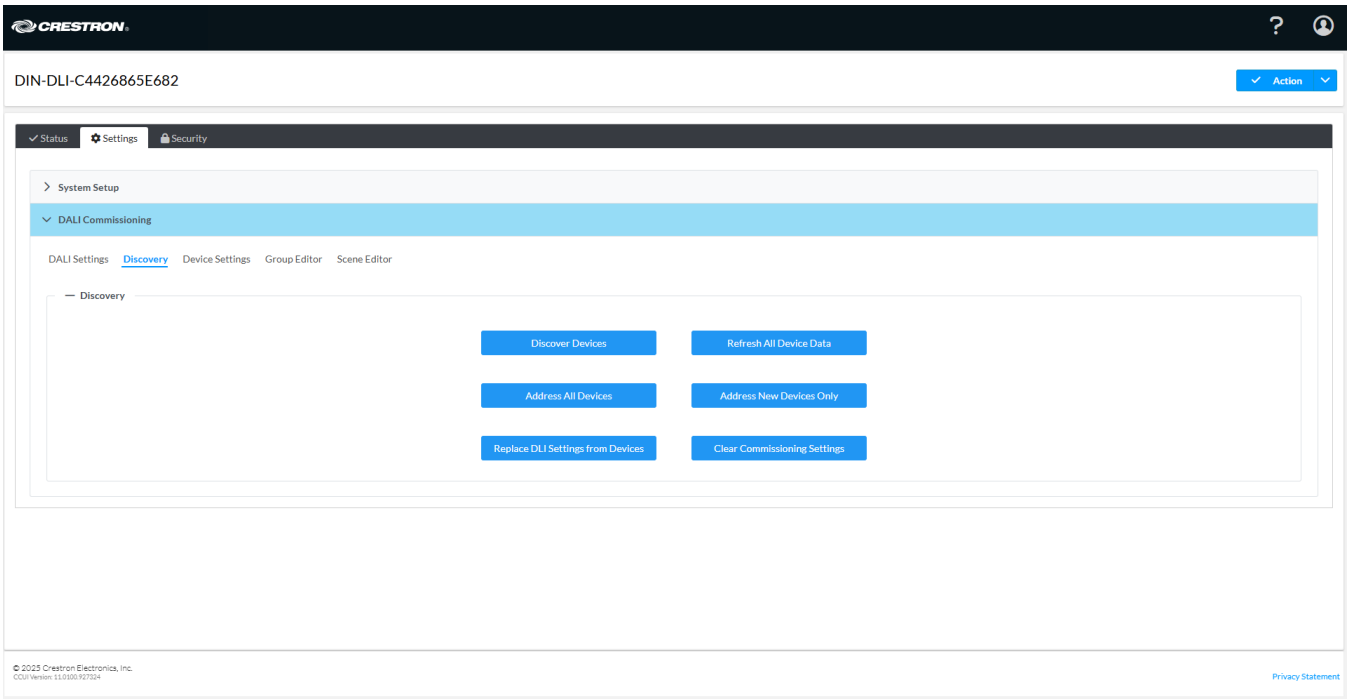
- **Good:** No faults or conflicts on the DALI loop.
- **Issues:** Issues, such as a missing DALI device, detected with devices on the DALI loop.
- **Short Detected:** DALI loop short detected.

DALI Poll for Device Status: This feature polls DALI devices at regular intervals to make sure they are still online. Turn the toggle to the right to enable or left to disable this feature. Crestron recommends keeping this enabled unless you are debugging DALI communications or have DALI fixtures with issues being polled.

Dynamic Fade Times Based on Detected Ramps: This feature looks at the ramp time and target for incoming analog signals and dynamically reprograms DALI device Fade Times with the closest matching ramp time prior to sending the target. Set the toggle to the right to enable or left to disable this feature. Enable this feature if you want to use more than one fade time with DALI fixtures. When enabled, the DIN-DLI will overwrite programmed fade times on connected DALI devices.

Discovery

The **Discovery** tab contains all of the functions related to addressing of DALI devices.



- **Discover Devices:** Select this to discover and perform commissioning actions based on the status of detected DALI devices. New devices can be added at their current address or a new address, and missing devices can be replaced. Refer to Discover Devices on page 34 for more detailed information.
- **Refresh All Device Data:** Select this to force a reread of information from all discovered DALI devices.
- **Address All Devices:** Select this to readdress all connected DALI devices and add them to the list of discovered devices. This randomizes current long addresses and replaces current short addresses.
- **Address New Devices Only:** Select this to address DALI devices that have not yet been discovered. This action should be performed on new DALI systems where the DALI devices not been pre-addressed by other means.
- **Replace DLI Settings from Devices:** Select this to replace the DIN-DLI discovered device settings with the settings of every connected and validly addressed DALI device. This can be used for preaddressed systems or when replacing a DIN-DLI.

  > **NOTE:** This does not change the addresses of already discovered DALI devices. This should be done for systems already commissioned by the DIN-DLI where one or more additional DALI devices need to be added without affecting the addressing of already commissioned devices.

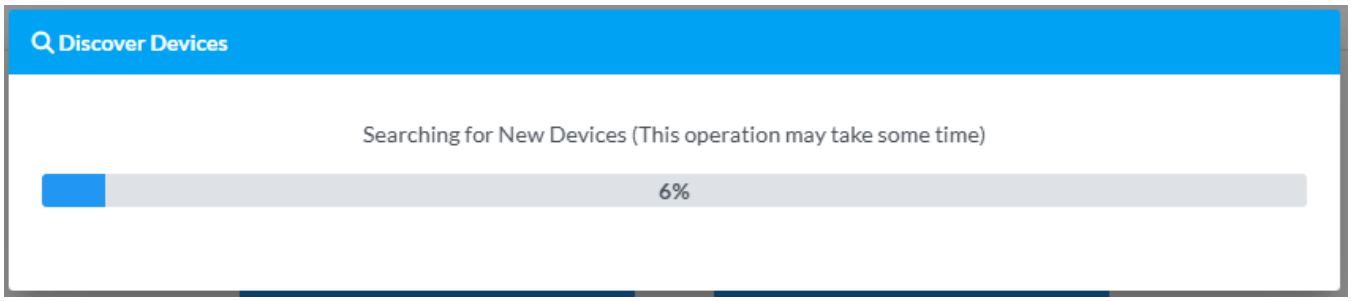
- **Clear Commissioning Settings:** Select this to clear all data related to discovered devices.

Discover Devices

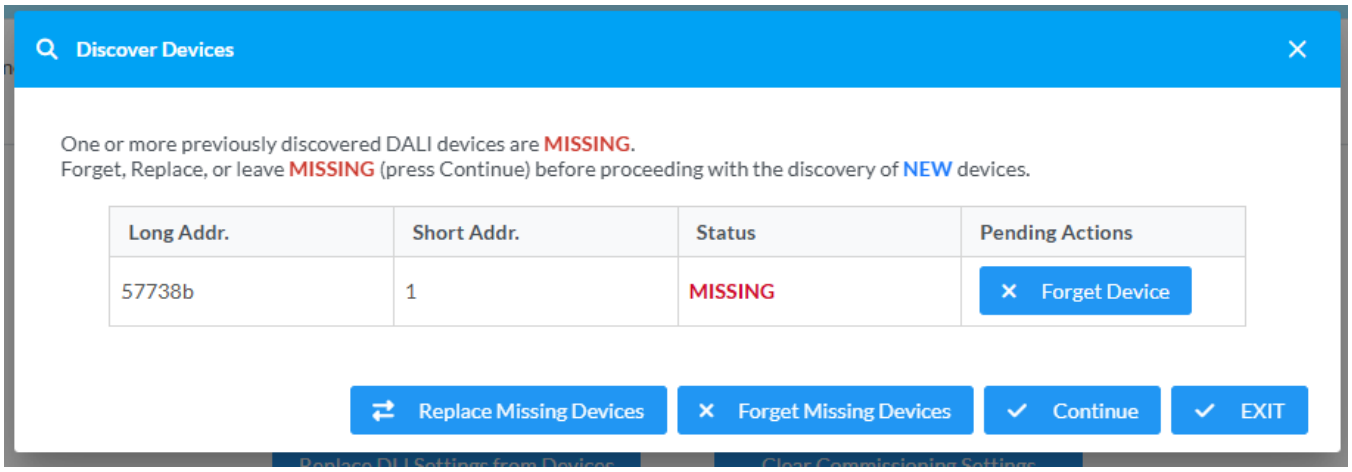
The **Discover Devices** function provides a catch-all method to detect changes on the DALI loop, such as adding new devices or replacing or forgetting missing devices.

TIP: Start with either **Address All Devices** or **Address New Devices Only** for new configurations. The **Discover Devices** function is better suited for detecting and dealing with changes on the DALI loop.

When **Discover Devices** is selected, a discovery process is performed and a status bar appears.



Once the discovery process completes, if any devices already added to the DIN-DLI were missing from the DALI loop, a **Discover Devices** table with just those missing devices will appear with options to either **Replace Missing Devices**, **Forget Missing Devices** (individually or all at once), **Continue**, or **EXIT**.

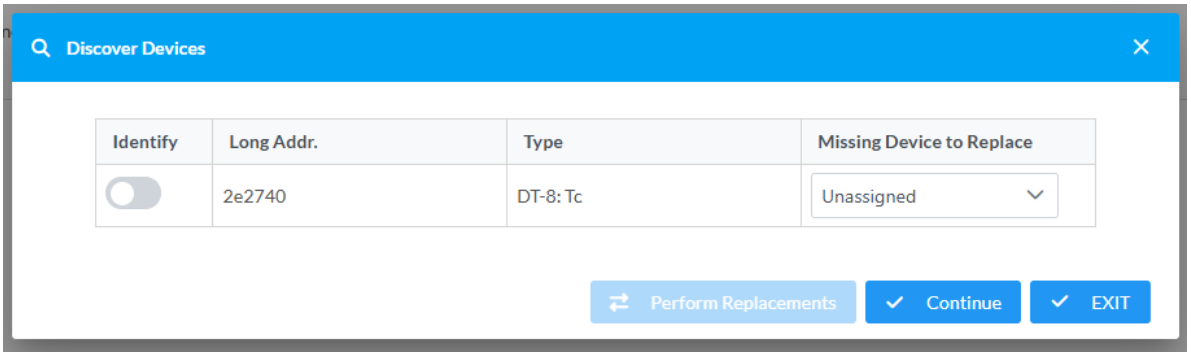


NOTE: Replace Missing Devices can only be selected if at least one new device was detected on the DALI loop with the same device type as any of the **MISSING** devices.

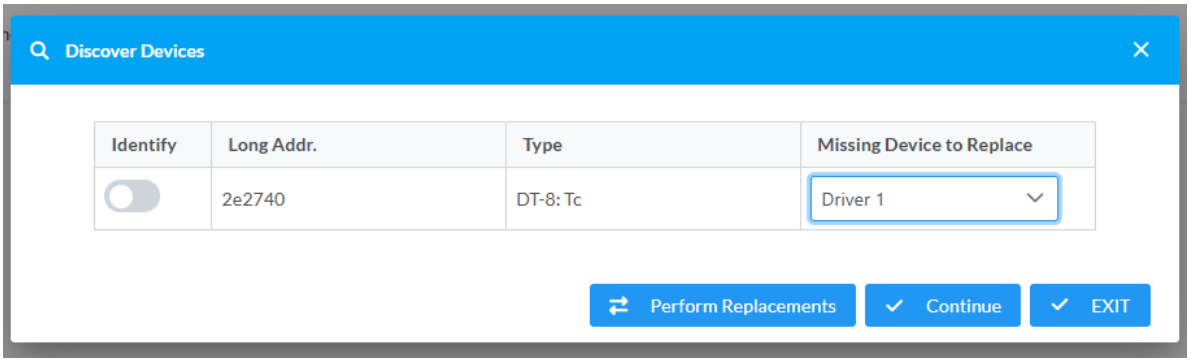
Perform one or more of the following actions to manage any **MISSING** devices, or select **Continue** to skip this step:

- To forget a missing device, select **Forget Device** in its entry of the **Pending Actions** column.
- To forget all missing devices at once, select **Forget Missing Devices** at the bottom of the table.

- To replace any number of missing devices:
    1. Select **Replace Missing Devices** at the bottom of the table. A table appears with any **NEW** devices that can replace any **MISSING** devices.



    2. For each **NEW** device, select either **Unassigned** or the name of a **MISSING** device from its **Missing Device To Replace** drop-down.

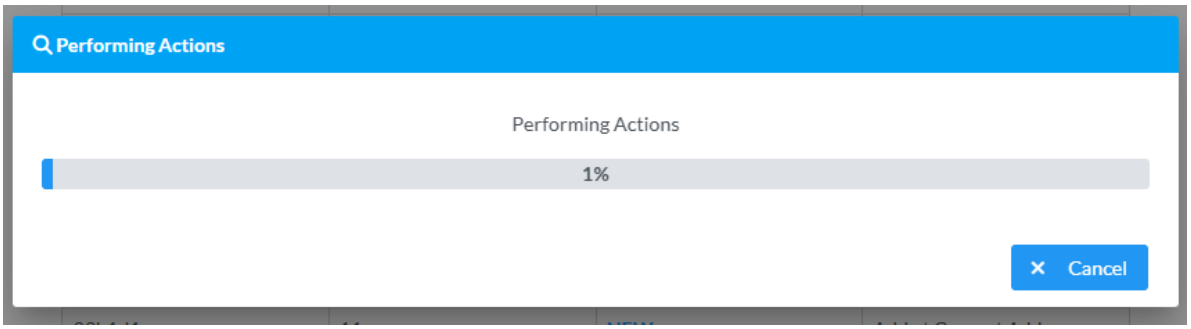


> **TIP:** Set the **Identify** toggle to the right position in the replacement device's table row to turn it on and ensure it is the correct device. Set the **Identify** toggle to the left to turn that device off.

> **NOTES:**
>
> - Devices in this table can only replace a **MISSING** device of the same **Type**.
> - Not all devices in this table have to be used as replacements. Leaving a device as **Unassigned** will keep it available in the main **Discover Devices** table to add as a new device to the DIN-DLI.

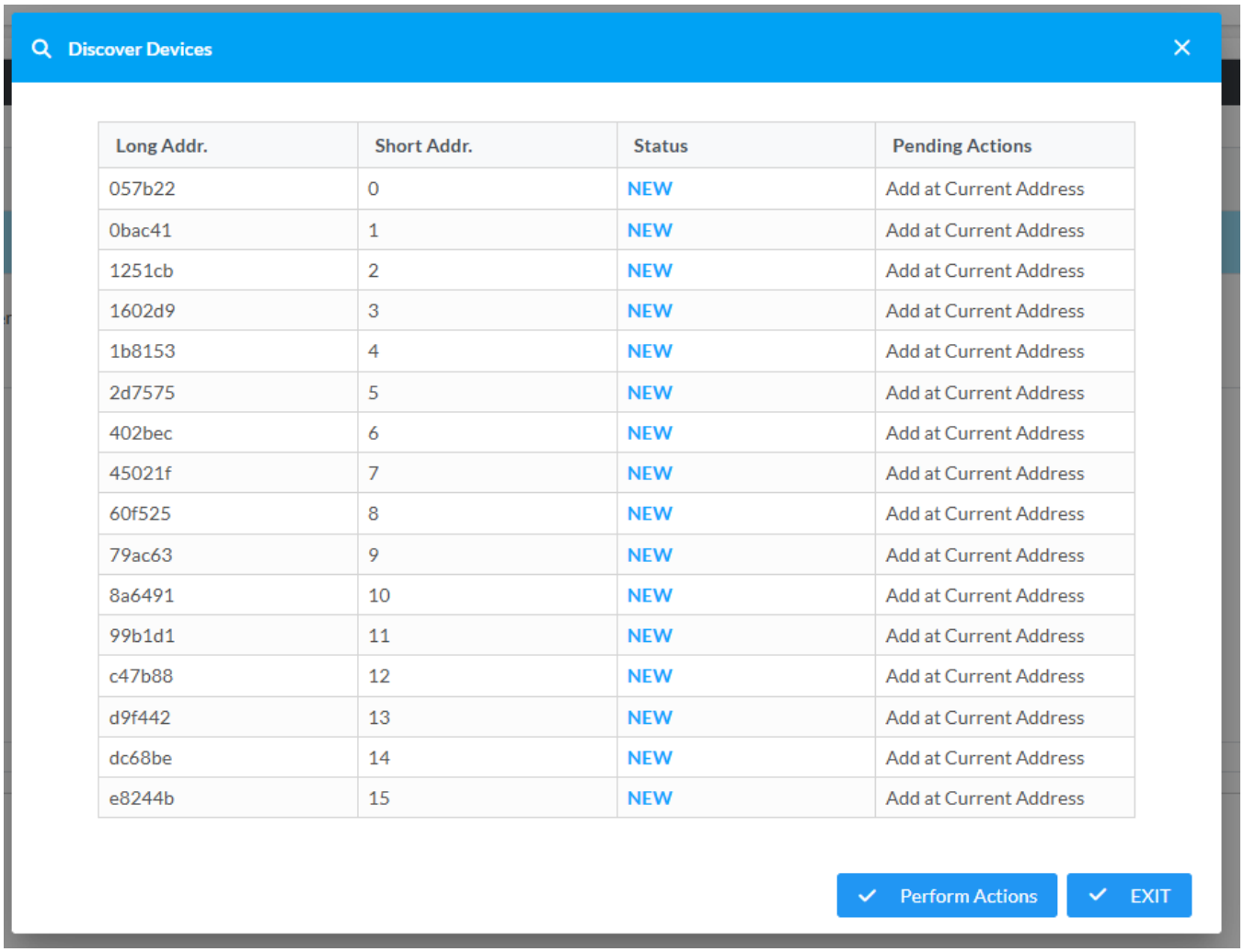
3. Select **Perform Replacements** to replace the missing devices, select **Continue** to skip this step (and leave all **MISSING** devices as **MISSING**), or select **EXIT** to cancel the **Discover Devices** operation and return to the **DALI Commissioning** accordion.

   If **Perform Replacements** was selected, a **Performing Actions** status bar is displayed until the replacement is complete. Select **Cancel** at any point before the replacement completes to cancel it.



   Once the replacement is complete, the **Discover Devices** table will reappear without the replaced **MISSING** devices or the **NEW** devices that were used as replacements.

If no missing devices were detected, or once the missing devices were replaced, forgotten, or skipped, the **Discover Devices** table lists all remaining detected changes on the DALI loop.



For each discovered device, one of the following status conditions will be displayed in its **Status** column along with an associated **Pending Action**:

- **NEW:** The device has not been added to the DIN-DLI and its address is not already being used by another device. A **NEW** device can have one of the following **Pending Actions**:
    - **Add at Current Address:** The device has a valid DALI short address that does not conflict with any other devices on the DALI loop. When **Perform Actions** is selected, it will be added to the DIN-DLI with its current address.
    - **Add at New Address:** The device does not yet have a valid DALI short address. When **Perform Actions** is selected, it will be added to the DIN-DLI and assigned the next available valid address.

- **MISSING:** The device was added to the DIN-DLI, but is no longer reporting when queried.
    - A **MISSING** device will have a **Pending Action** of **Leave Missing**. When **Perform Actions** is selected, the device will still be considered missing by the DIN-DLI and will continue to report as **MISSING** in future device discovery procedures.

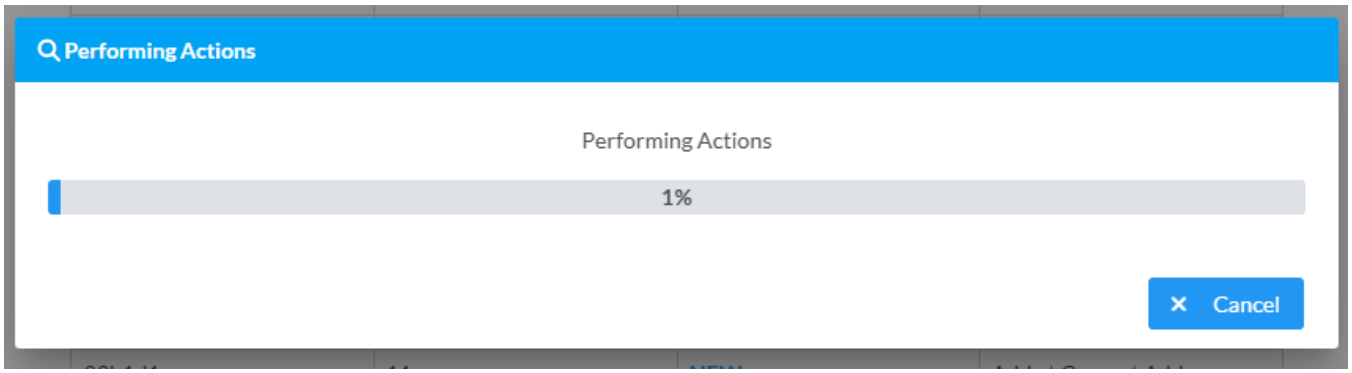
      > **NOTE:** Devices will only appear as **MISSING** here if they were not forgotten or replaced in the previous table. To return to the previous table to either forget or replace a **MISSING** device, select **EXIT** and restart the device discovery process.

- **CONFLICT:** The device was already added to the DIN-DLI, but has the same DALI short address as a new device that has been discovered.
    - A **CONFLICT** device will have a **Pending Action** of **Leave at Current Address**. Each device with a **CONFLICT** status is associated with at least one other corresponding device in the table with a **CONFLICT NEW** status. When **Perform Actions** is selected, the device with the **CONFLICT** status will be kept at its current DALI short address while the **CONFLICT NEW** device(s) at the same address will be assigned the next available valid address(es).
- **CONFLICT NEW:** The device has not been added to the DIN-DLI, but it has a DALI short address that is being used by another device that was already added.
    - A **CONFLICT NEW** device will have a **Pending Action** of **Resolve Conflict**. When **Perform Actions** is selected, the device will be assigned the next available valid address.

> **TIP:** A single missing device can also be replaced using the **TEST** button on the front panel. Refer to Operation on page 49 for details on the automatic device replacement sequence.

Select **Perform Actions** at the bottom of the table to perform all of the indicated **Pending Actions**.

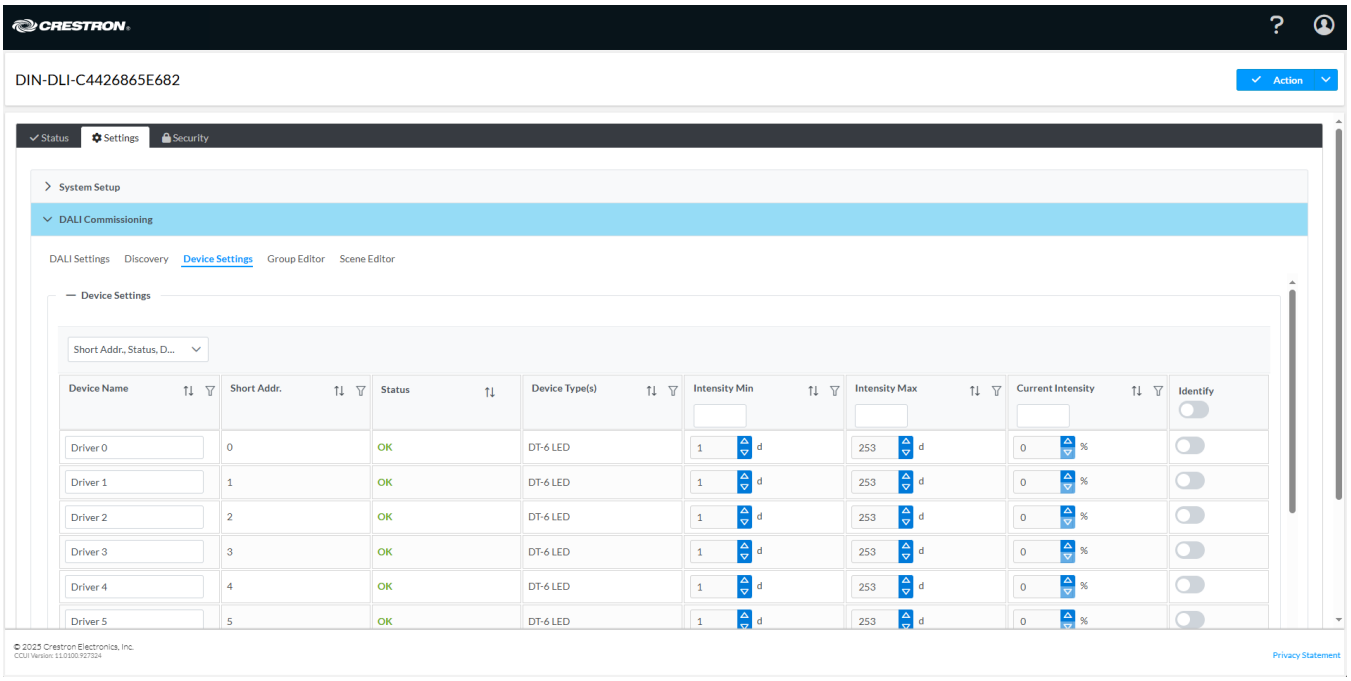
The **Performing Actions** status bar is displayed until the actions are complete. Select **Cancel** at any point before the actions complete to cancel them.



Once all actions have completed, the interface will return to the **DALI Commissioning** accordion.

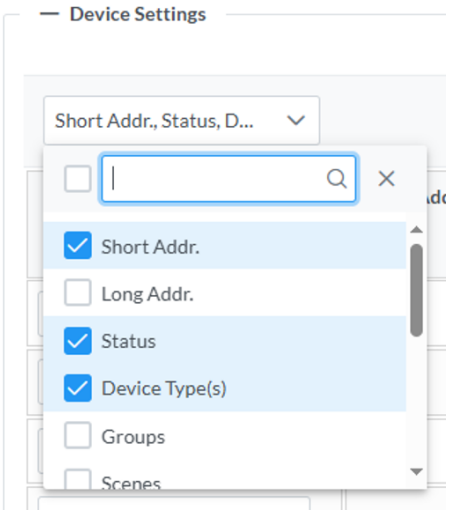
Device Settings

The **Device Settings** tab enables the configuration of commissioned DALI devices via the **Device Settings** table.



Each row in the **Device Settings** table represents a discovered DALI device that has been added to the DIN-DLI. Each column is tied to a DALI device setting or DALI device information readout.

Use the drop-down at the top-left of the table to select which columns appear in the table.



The following columns are available:

- **Device Name:** Displays the name assigned to the device. Select the current name to change it. Device names are limited to 24 characters.
- **Short Addr:** Displays the short address assigned to the device.
- **Long Addr:** Displays the long address the device assigned itself.

- **Status:** Displays the current status of the device.
  - **OK:** No issues with this device.
  - **MISSING:** The device is not responding to polling.
  - **CONFLICT:** There is at least one other device on the DALI loop with the same short address.
- **Device Type(s):** Displays the DALI device type(s).
  - DT0 Fluorescent
  - DT1A Emergency
  - DT1B Emergency
  - DT1C Emergency
  - DT1D Emergency
  - DT2 HID
  - DT3 LV Halogen
  - DT4 Incandescent
  - DT5 0-10V
  - DT6 LED
  - DT7 Switch
  - DT8: Tc
  - DT8: Tc, XY
  - DT8: Tc, RGBWAF
  - DT8: Tc, XY, RGBWAF
  - DT8: XY
  - DT8: XY, RGBWAF
  - DT8: RGBWAF
- **Groups:** Displays which groups contain the device.
- **Scenes:** Displays which scenes contain the device.
- **Intensity Min:** Controls the minimum intensity that the DALI device will dim down to before turning off. The current value is displayed in the text box. Enter a value from 0-254 (0-100%) or use the up and down arrows to set the minimum intensity for the driver.
- **Intensity Max:** Controls the maximum intensity that the DALI device will dim up to. The current value is displayed in the text box. Enter a value from 0-254 (0-100%) or use the up and down arrows to set the maximum intensity for the driver.
- **Current Intensity:** Controls the current intensity of the DALI device. The current value is displayed in the text box. Enter a value from 0-254 (0-100%) or use the up and down arrows to set the current intensity for the driver.
- **Fade Rate:** Controls the rate at which a driver adjusts the intensity during raise and lower commands. The current rate is displayed. Select the drop-down arrow to choose a new rate.

- **Fade Time:** Controls how long the driver takes to change from its current intensity value to a new intensity. The current value is displayed. Select the drop-down arrow to choose a new time. If **Dynamic Fade Times Based on Detected Ramps** is enabled, the **Fade Time** will be overwritten during operation.
- **Power on Level:** Controls the intensity that the DALI device will set itself to when powered on before DALI communications begin. The current value is displayed in the text box. Enter a value from 0-255 (0-100%) or use the up and down arrows to set the power on intensity for the driver.
- **Emergency Level:** Controls the intensity that the DALI device will set itself to when DALI loop power is removed. Enter a value from 0-255 (0-100%) or use the up and down arrows to set the emergency intensity for the driver.
- **Identify:** Set the toggle to the right to cause the driver to flash. Set the toggle to the left to behave normally. **Identify** will timeout after 20 minutes if not disabled.

Use the **Device Settings** table to complete the commissioning of the DALI loop:

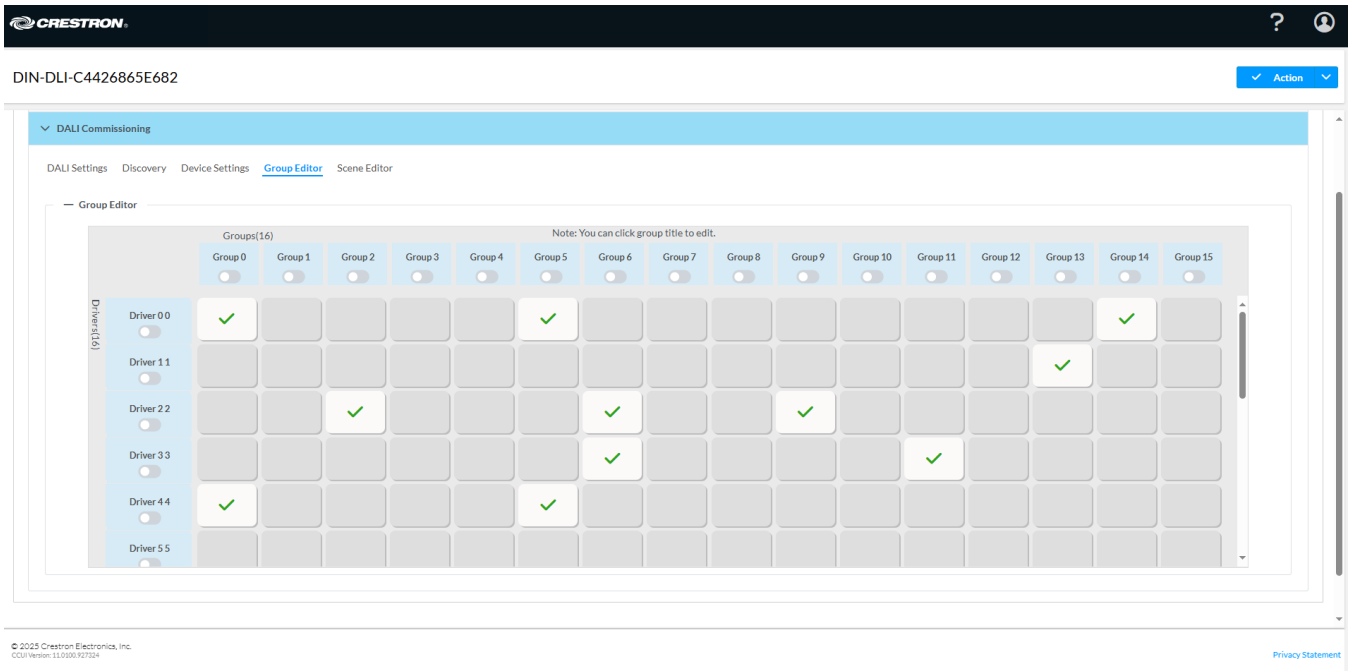
- Sort the table entries in any column by selecting the ↑↓ icon to the right of the column header.
- Use the **Identify** toggle in each row to find the physical location of each DALI device before providing it with a **Device Name**.
- Filter table entries in any column by selecting the ▽ icon to the right of a column header. Filters can be applied in more than one column at once.
- Batch-edit settings for all devices within the current filter(s) by entering or selecting a value in the text box in a given column header.

> **TIP:** Name DALI devices to simplify filtering in the **Device Settings** table. For example, use "DWNLGHT A" for downlights of a specific type, "KTCHN" for kitchen, and "1FLR" for first floor. Two downlights of that type in the first-floor kitchen could be named "1FLR KTCHN DWNLGHT A 1" and "1FLR KTCHN DWNLGHT A 2" to enable filtering by any of those terms.

Group Editor

The **Group Editor** tab enables the organization of individual DALI devices into groups.

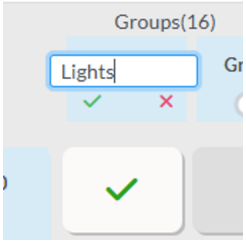
> **TIP:** Proper grouping of DALI devices is crucial to effective operation of a DALI system.



- To add drivers to a group, select the corresponding box in the matrix. A green check appears, showing that the DALI device indicated by that row is in the Group indicated by that column. In the example above, **Driver 0 0** is in **Group 0**, **Group 5**, and **Group 14**.

  > **NOTE:** The driver's short address number is always appended to the driver name in the **Drivers** column in this matrix. For example, **Driver 0 0** above is the driver named **Driver 0** with the short address **0**. If this driver was renamed **Kitchen Downlights**, its entry in this column would read **Kitchen Downlights 0**.

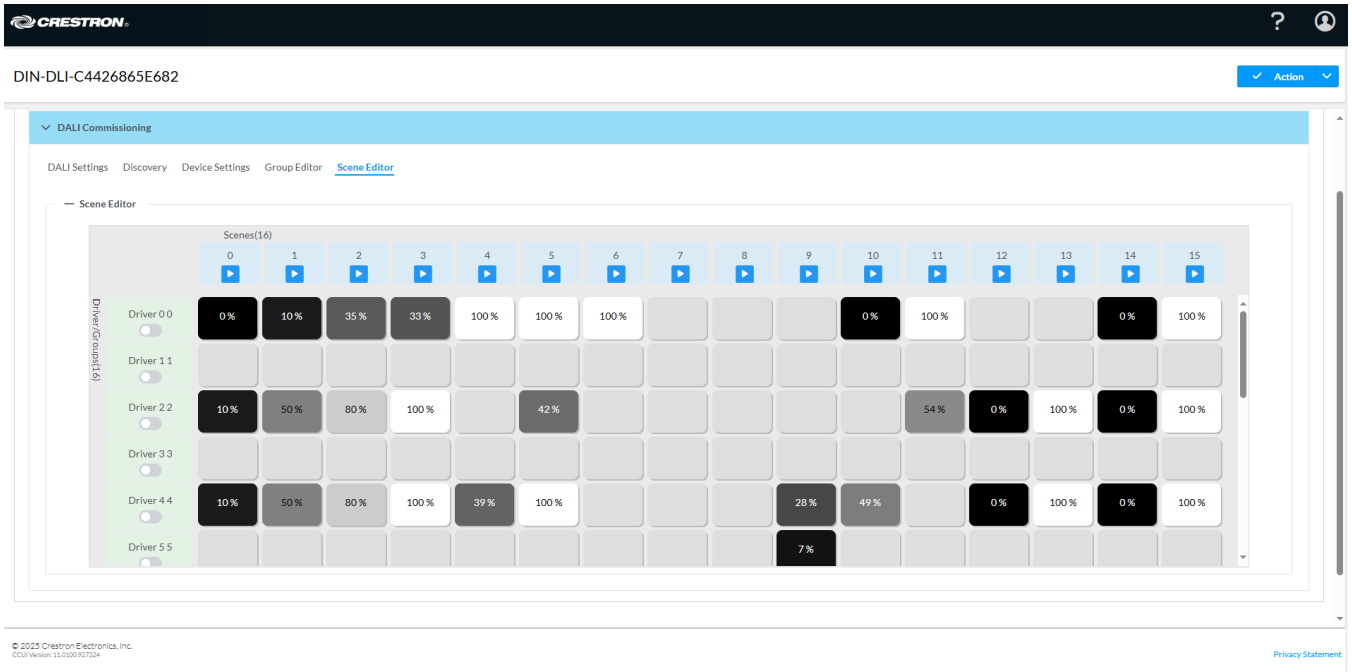
- To remove a driver from a group, select the green check.
- The toggle under each driver and group is used for identification. When a toggle is set to the right, that driver or group will flash. When the toggle is set to the left, they behave as normal. Identify will timeout after 20 minutes if not disabled.
- To change the names of a groups, select the name. Enter the desired name and select the small green check to save or the red X to cancel. Group names are limited to 24 characters.



Scene Editor

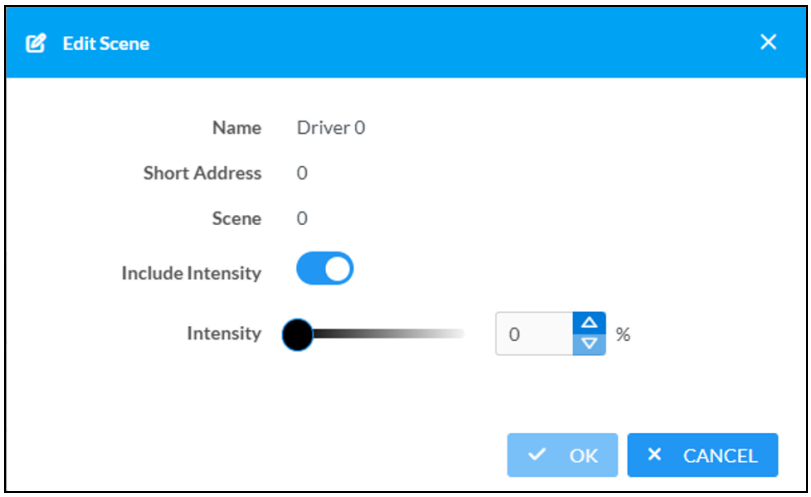
The **Scene Editor** tab enables the configuration of lighting scenes. The intensity value for each driver in each scene is displayed in the matrix.

NOTE: DALI scenes are not used by Crestron Home.



DALI devices with an intensity value shown in the matrix are included in that column's scene. If there is no intensity value shown, the DALI device is not in that scene.

- To add drivers to a scene, select the corresponding box in the matrix. The **Edit Scene** box appears.



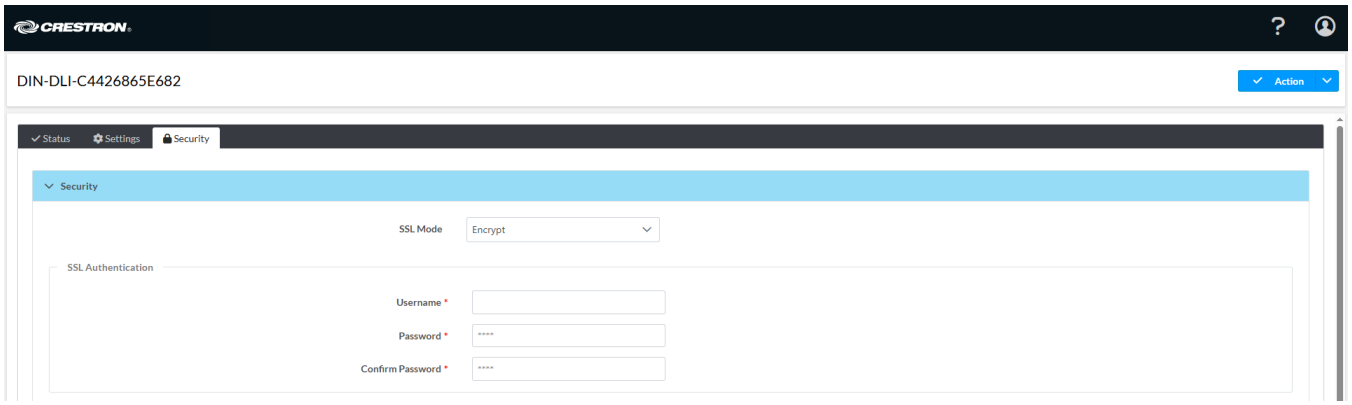
  - **Name:** Displays the name assigned to the driver.
  - **Short Address:** Displays the short address assigned to the device upon discovery.
  - **Scene:** Displays the scene number being edited.
  - **Include Intensity:** Set the toggle to the right to include the DALI device in the scene at the selected **Intensity**. Set the toggle to the left to leave the DALI device's intensity unaffected by the scene.
  - **Intensity:** If the **Include Intensity** toggle is set to the right, set the **Intensity** percentage with the slider or the up and down arrows. The DALI device will adjust to this intensity in real time to facilitate the creation of the scene.

  Select **OK** to save the scene or **Cancel** to cancel.

- The play button under each scene recalls that scene, and sets all included drivers to their assigned scene values.
- The toggle under each driver is used to identify that driver. When a toggle is set to the right, that driver will flash. When the toggle is set to the left, it behaves as normal. Identify will timeout after 20 minutes if not disabled.

Security

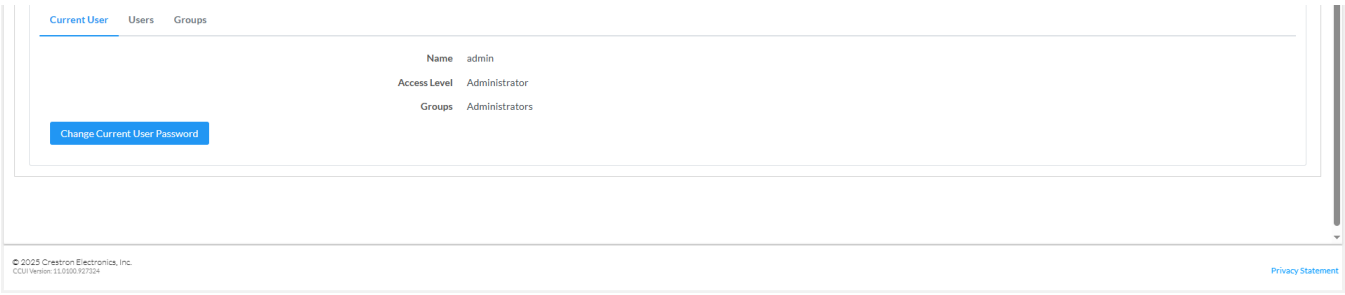
Select the **Security** tab to configure security for users and groups and to allow different levels of access to the DIN-DLI functions. By default, security is disabled.



Select **Encrypt and Validate**, **Encrypt**, or **OFF** from the **SSL Mode** drop-down menu to specify whether to use encryption. By default, SSL Mode is set to **OFF**. If using encryption, enter the credentials in the **SSL Authentication** fields.

Current User

Select the **Current User** tab to view read-only information or to change the password for the current user.



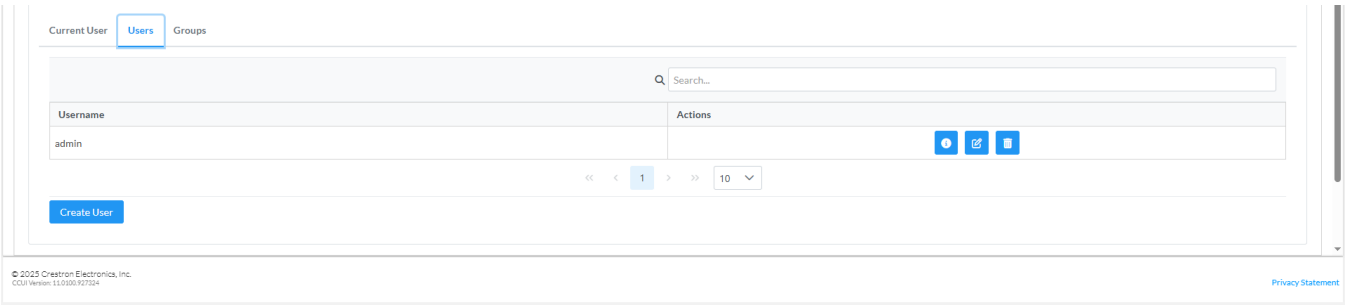
To change the password for the current user account:

1. Select **Change Current User Password**.
2. In the **Change Password** dialog, enter the current password in the **Current Password** field, the new password in the **Password** field, and then re-enter the same new password in the **Confirm Password** field.

Select **OK** to save or select **Cancel** to cancel the changes.

Users

Select the **Users** tab to view and edit user settings. The **Users** tab can be used to add or remove users and preview information about them.



Use the **Search Users** field to enter search term(s) and display users that match the search criteria.

If users listed in the **Users** table span across multiple pages, navigate through the list by selecting a page number or by using the left or right arrows at the bottom of the **Users** pane to move forward or backward through the pages.

Each page can be set to display 5, 10, or 20 users by using the drop-down to the right of the navigation arrows.

Select the information icon in the Actions column to view detailed user information.

Select the edit icon to edit a user's details.

Select the delete icon to delete a user.

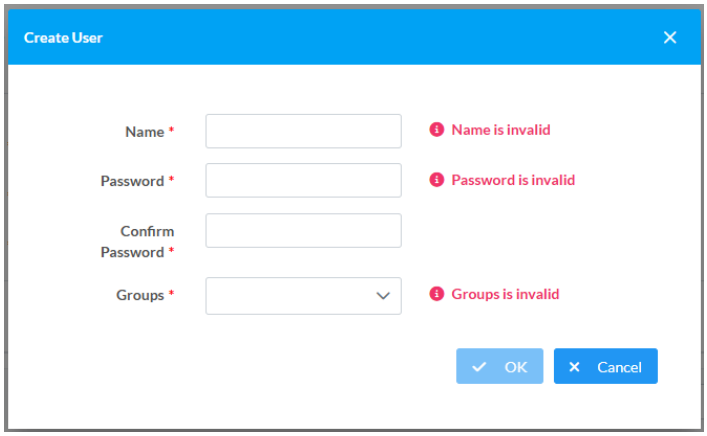
To create a new user, select **Create User**.

Create User

To create a new local user:

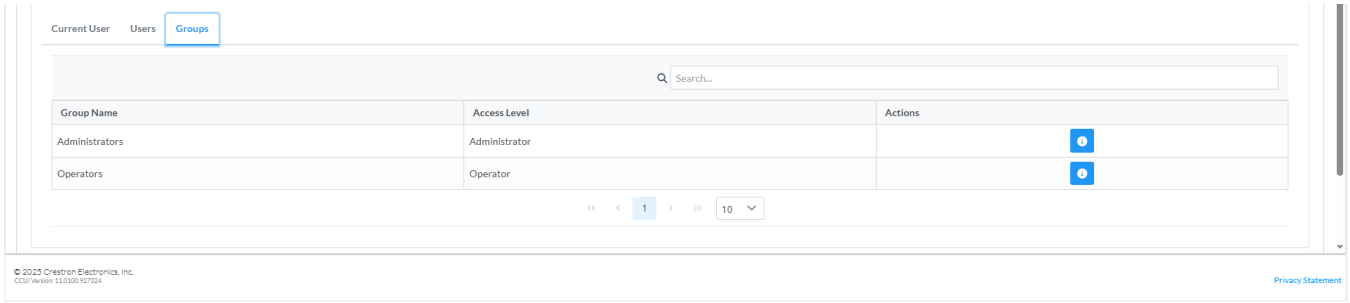
1. Select **Create User** in the Users tab.
2. In the Create User dialog, enter the following:
    a. Enter a user name in the **Name** field. A valid user name can consist of alphanumeric characters (letters a-z, A-Z, numbers 0-9) and the underscore "_" character.
    b. Enter a password in the **Password** field; re-enter the same password in the **Confirm Password** field.
    c. Assign the access level by selecting one or more groups from the **Groups** drop-down list.

Select **OK** to save or select **Cancel** to cancel the changes.



Groups

Select the **Groups** tab to view and edit group settings. The **Groups** tab can be used to preview information about a group.



Groups are displayed in a table and the following information is provided for each group:

- **Group Name:** Displays the name of the group.
- **Access Level:** Displays the predefined access level assigned to the group (**Administrator** or **Operator**).

Select the information icon  in the Actions column to view detailed group information.

Operation

Use the buttons located on the front of the DIN-DLI to reset the device, test connections, enter override mode, or replace a single failed device.

Factory Reset

A factory restore may be performed when troubleshooting to restore all factory default settings on the device.

> **CAUTION:** This hardware procedure should only be performed to recover an unresponsive device. The factory restore procedure will clear certain device settings that cannot be recovered once the procedure is complete. Before performing this procedure, please contact Crestron True Blue Support via phone, email or chat as described at www.crestron.com/support.

To factory reset the device, press and hold **RESET** for ten seconds. LEDs will flash when the factory reset process begins.

Test Ballasts

To verify that all ballasts have been properly wired, use the **TEST** button.

- To toggle all ballasts on the network on or off, quickly tap the **TEST** button.
- To dim all ballasts on the network up or down, press and hold the **TEST** button.

Override Mode

The Override mode overrides the control system program and sets all DALI devices on the DALI loop to their emergency levels. To enable Override mode, press and release the **OVR** button. The **OVR** LED flashes slowly.

> **NOTE:** If Override mode was enabled from an external device (for example, a contact closure is present on the **OVERRIDE** terminals), the **OVR** LED flashes quickly. Pressing the **OVR** button has no effect.

To disable Override mode, press the **OVR** button again. The **OVR** LED extinguishes and the outputs return to the states set by the control system program.

Single Device Replacement

In the event that a single DALI device added to the DALI loop of the DIN-DLI fails, it can be replaced from the DIN-DLI front panel.

NOTES:

- A replacement DALI device of the same type as the device it is replacing must be connected to the DIN-DLI for this sequence to complete successfully.
- If multiple devices must be replaced at once, use the **Discover Devices** feature in the **DALI Commissioning** accordion of the web interface. Refer to Web Configuration on page 21 for further information.

To replace a single failed device, hold the **TEST** button for five seconds. The following automatic device replacement sequence will occur:

1. The **DALI** LED will flash on and off slowly for the duration of the sequence.
2. A DALI loop discovery will be performed to identify the missing device and the new replacement device.
3. If the new device's type matches the missing device, the missing device will be forgotten and the new device will be added with the same short address.
4. The DALI LED will stop flashing to indicate that the sequence is complete and the operation was successful.

If the operation was unsuccessful, the **DALI** LED will flash a pattern to indicate an error state. For example, when a **2-1** LED flash pattern occurs, the LED flashes two times, pauses for 1 second, flashes once, pauses for 5 seconds, and then repeats this code until the error is corrected.

The flash patterns are listed in the following table:

DIN-DLI DALI LED Error Codes

LED Error Code	Error State
2-1	Short or no voltage was detected on the DALI loop. Clear the fault to clear this error.
2-2	Multiple or no missing DALI devices were found during the bus discovery. This error clears after five minutes or a press of the **TEST** button.
2-3	Multiple or no new DALI devices were found during the bus discovery. This error clears after five minutes or a press of the **TEST** button.
2-4	Multiple or no missing DALI devices and multiple or no new DALI devices were found during the bus discovery. This error clears after five minutes or a press of the **TEST** button.
2-5	The device types of the missing and new DALI devices do not match. This error clears after five minutes or a press of the **TEST** button.

Resources

The following resources are provided for the DIN-DLI.

> **NOTE:** You may need to provide your Crestron.com web account credentials when prompted to access some of the following resources.

Crestron Support and Training

- Crestron True Blue Support
- Crestron Resource Library
- Crestron Online Help (OLH)
- Crestron Training Institute (CTI) Portal

Programmer and Developer Resources

- help.crestron.com: Provides help files for Crestron programming tools such as SIMPL, SIMPL#, and Crestron Toolbox™ software
- developer.crestron.com: Provides developer documentation for Crestron APIs, SDKs, and other development tools

Product Certificates

To search for product certificates, refer to the Product Certificates section of the Crestron Resource Library.

Related Documentation

- www.knx.org
- support.knx.org

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