SpaceLogic C-Bus Commission Software

Dimmers and Relays

v1.0 May 2025

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Aim of this Document

The aim of this document is to introduce you to the supported dimmers and relays in the SpaceLogic C-Bus Commission software application, this content has been developed using:

- C-Bus Toolkit v1.18.1
- SpaceLogic C-Bus Commission v2.9.0

Listed below are the contents of this document:

1. Software Environment: Supported Dimmers & Relays
2. SpaceLogic C-Bus Commission: Dimmer & Relay Properties
3. Unit Firmware Upgrade
4. Categories & Sections
5. Interlock Channels

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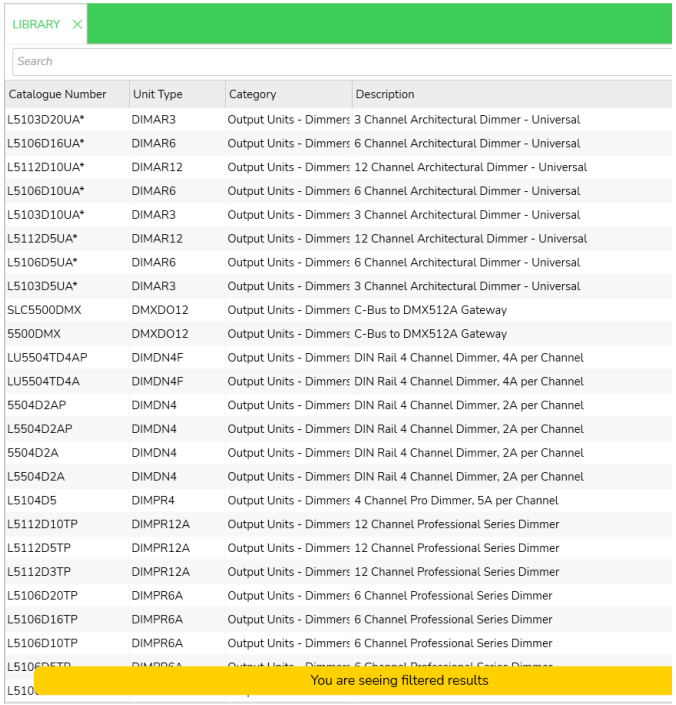
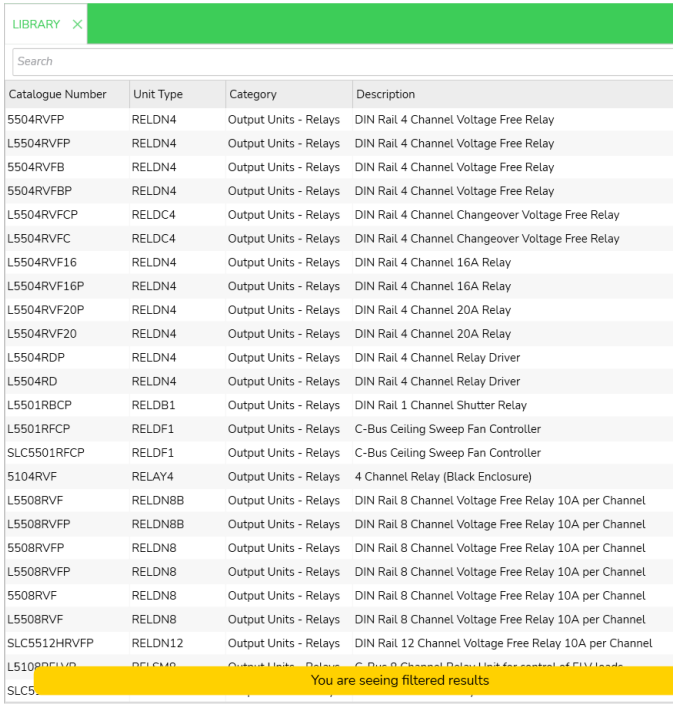
Software Environment: Supported Dimmers & Relays

The **SpaceLogic C-Bus Commission v2.9.0** device library supports **74 Dimmer Devices** & **51 Relay Devices***:





*These numbers were achieved by using the **Filter** in the Library

Software Environment: Supported Dimmers & Relays

The following dot points are designed to help guide you on what support SpaceLogic C-Bus Commission provides for Dimmers & Relays:

SpaceLogic C-Bus Commission

Supported (can be configured/commission)

- C-Bus Digital Dimmers
  - 5508D1D
  - 5504D2D
- C-Bus High Powered Dimmer
  - 5504DHD
- C-Bus Voltage Free Relays
  - 5504RVF
  - 5508RVF
  - 5516RVF

Unsupported (cannot be configured/commission)

- Remaining Dimmers and Relays from the Library (as of March 2025)

Unsupported devices cannot be:

- Deployed or Extracted
- Loaded into the Properties window (limited common properties displayed only)

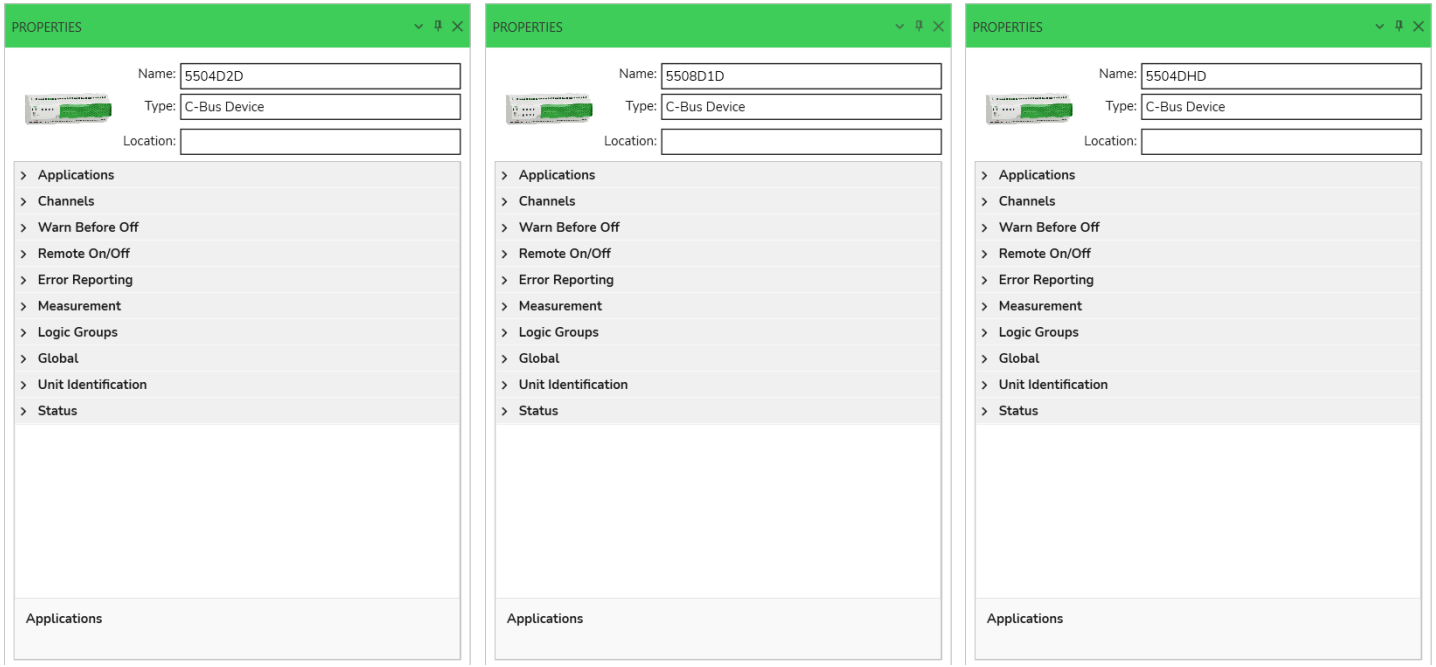
Unsupported devices can be:

- Scanned and unravelled
- Readdressed (Unit Address)
- Added and Deleted from the project

SpaceLogic C-Bus Commission: Dimmer & Relay Properties

When loaded into the properties window, the dimmers (**5504D2D**, **5508D1D** & **5504DHD**) all have the following categories:

- Name
- Type
- Applications
- Channels*
- Warn Before Off
- Remote On/Off
- Error Reporting
- Measurement
- Logic Groups
- Global
- Unit Identification
- Status

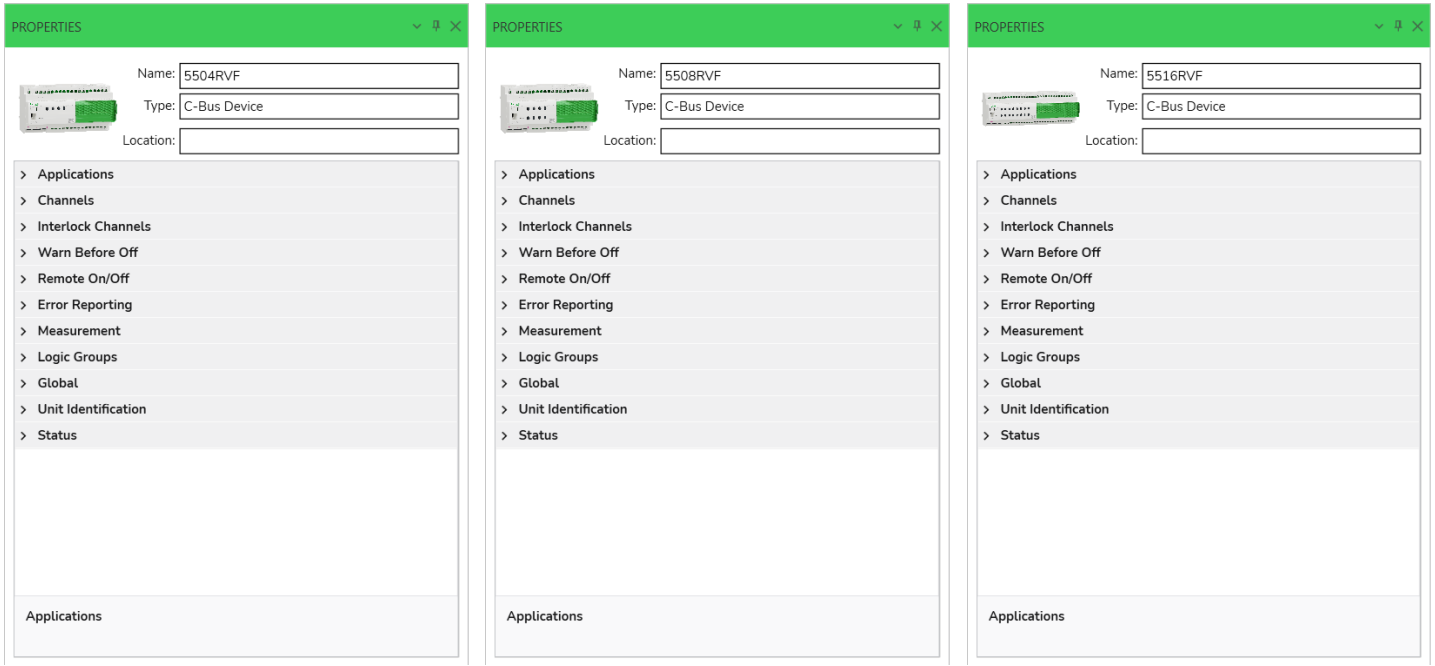


*The 5508D1D will have 8 Channels, whilst the 5504D2D & 5504DHD will have 4 Channels

SpaceLogic C-Bus Commission: Dimmer & Relay Properties

When loaded into the properties window, the relays (**5504RVF**, **5508RVF** & **5516RVF**) all have the following categories:

- Name
- Type
- Applications
- Channels*
- Interlock Channels
- Warn Before Off
- Remote On/Off
- Error Reporting
- Measurement
- Logic Groups
- Global
- Unit Identification
- Status

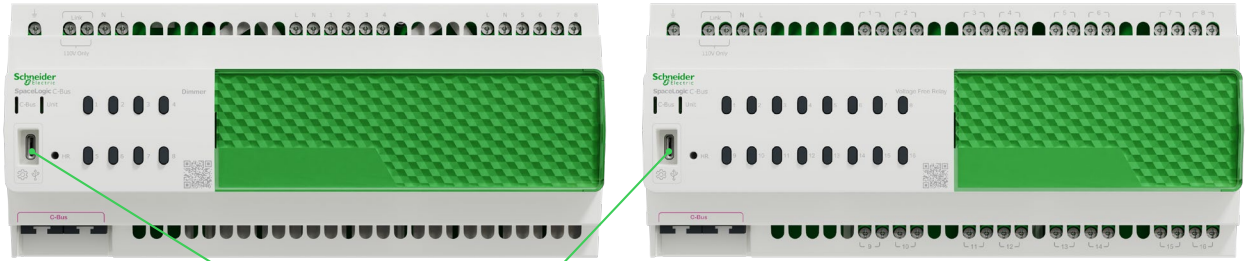


*The 5504RVF will have 4 Channels, 5508RVF will have 8 Channels & the 5516RVF will have 16 Channels

SpaceLogic C-Bus Commission: Firmware Upgrade

The Digital Dimmers and Voltage Free Relays need to be connected directly to the programming computer/laptop using the front USB-C port.

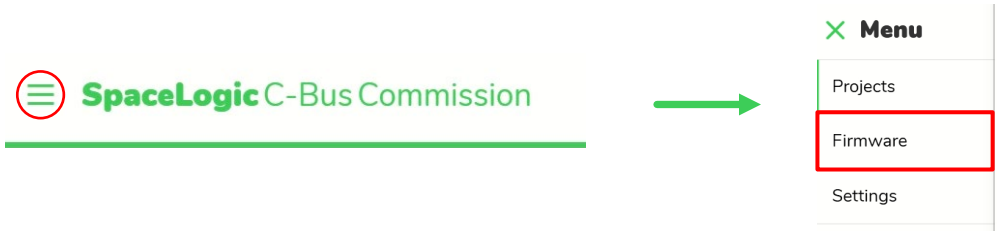
For the Digital Dimmer, a Firmware Upgrade can be done both on the physical unit **and each channel**. To upgrade the Firmware of the Digital Dimmer or Relay, the unit **does not need to be** powered by mains; **however**, mains power to the channels is required to Firmware Upgrade the channels of the Digital Dimmer.



Use a **USB-C** cable to connect the unit to your computer / laptop to perform the Firmware Upgrade using SpaceLogic C-Bus Commission

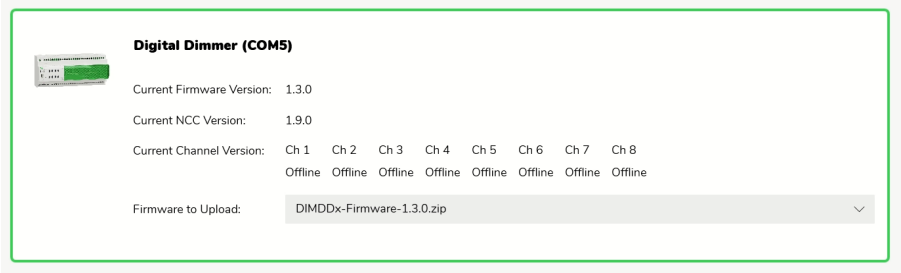
SpaceLogic C-Bus Commission: Dimmer Firmware Upgrade

1. In SpaceLogic C-Bus Commission, click the **Menu Icon**:

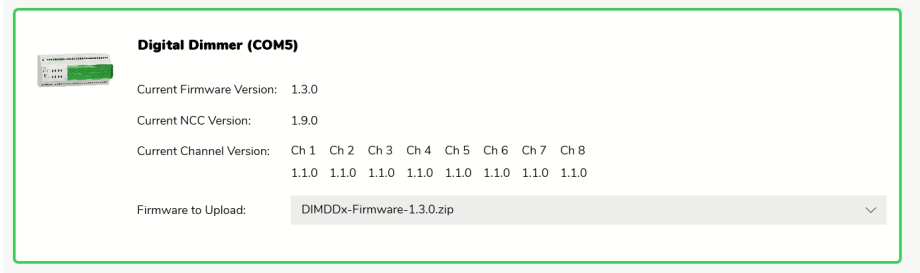


2. In the Menu Bar, click **Firmware**, which displays the units connected to the programming laptop

Digital Dimmer Firmware Upgrade
No Mains Power applied to channels
All Channels Offline

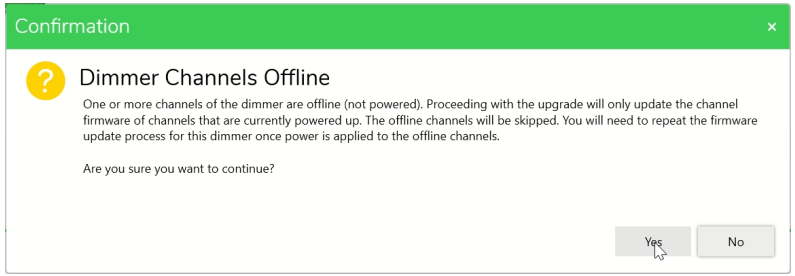


Digital Dimmer Firmware Upgrade
Mains Power applied to channels
Upgrade Channel Firmware



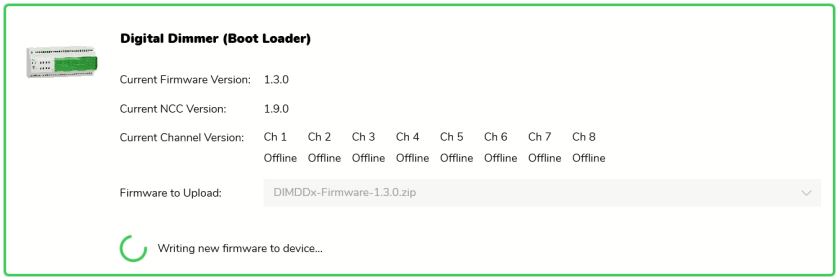
SpaceLogic C-Bus Commission: Dimmer Firmware Upgrade

3. Click **Upgrade**, you will receive the following dialog box if the Digital Dimmer channels are not powered by mains.

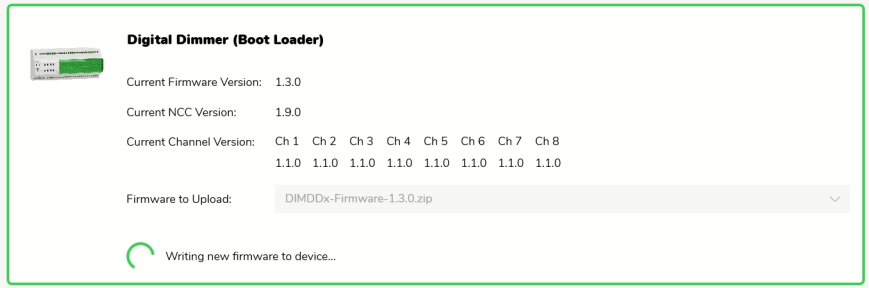


4. Click **Yes** on the **Confirmation** dialog box to begin the Firmware Upgrade process.

Digital Dimmer Firmware Upgrade
No Mains Power applied to channels
All Channels Offline



Digital Dimmer Firmware Upgrade
Mains Power applied to channels
Upgrade Channel Firmware



SpaceLogic C-Bus Commission: Dimmer Firmware Upgrade

5. A successful Firmware Upgrade is highlighted once the process is complete

Digital Dimmer Firmware Upgrade
No Mains Power applied to channels
All Channels Offline



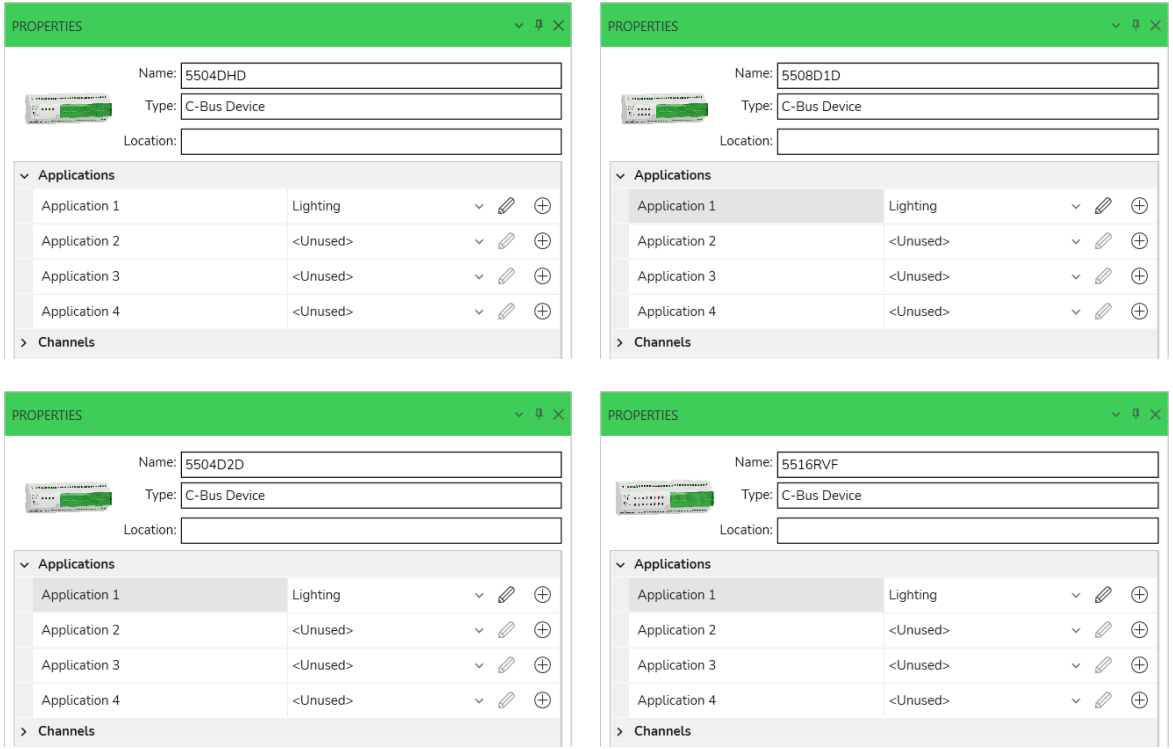
Digital Dimmer Firmware Upgrade
Mains Power applied to channels
Upgrade Channel Firmware



*The same process can be applied to upgrade the Firmware of the Voltage Free Relays; however, its channels do not have their own firmware

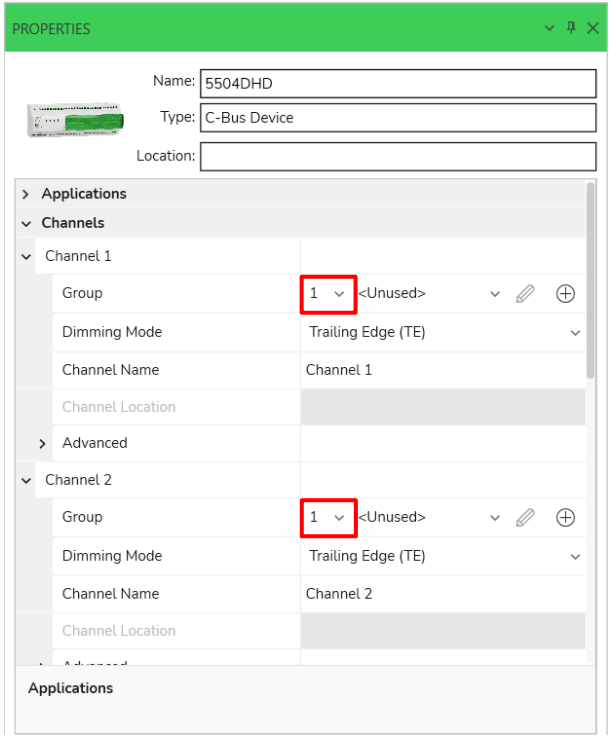
Dimmer & Relay: Categories & Sections

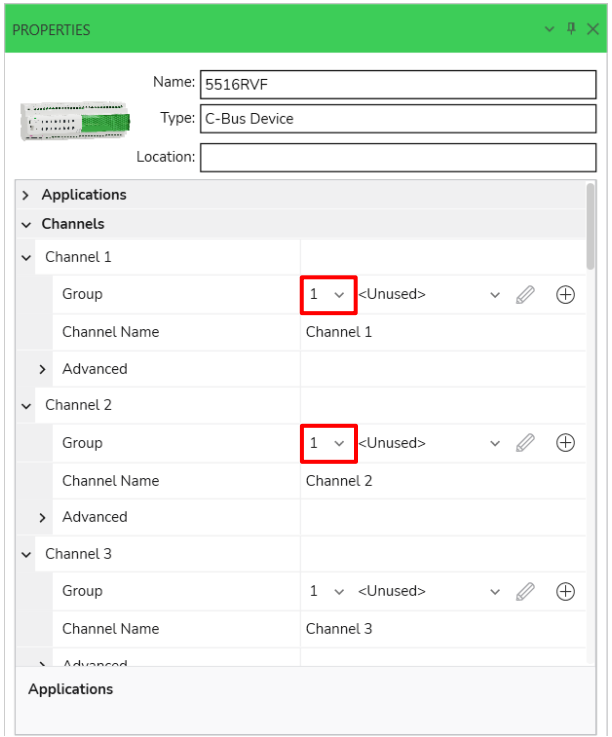
In SpaceLogic C-Bus Commission, the Digital Dimmers and Voltage Free Relays can support up to **4 Applications**:



Dimmer & Relay: Categories & Sections

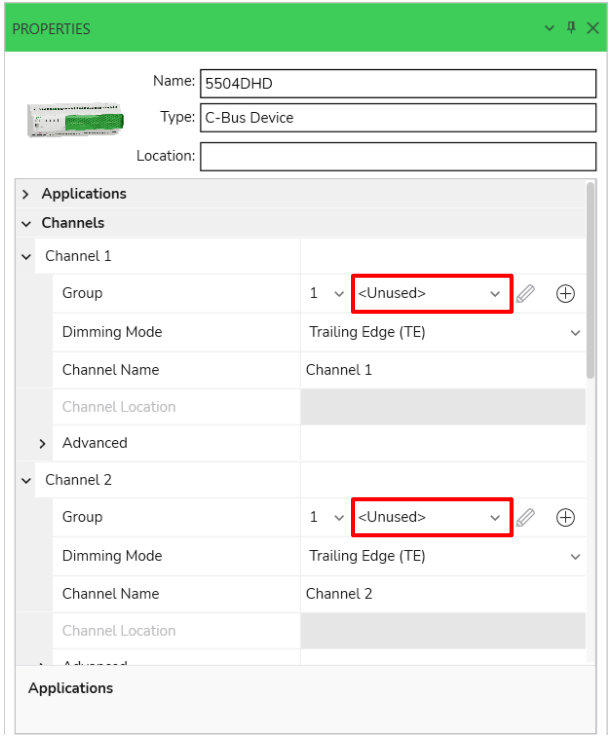
In the **Channels** category, the **Application** for each Channel can be set via the **Application Number** next to the **Group** field:

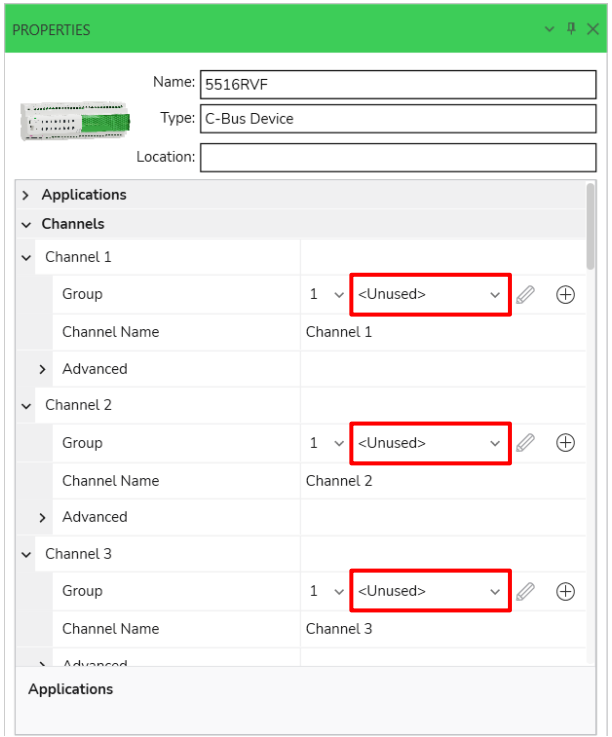




Dimmer & Relay: Categories & Sections

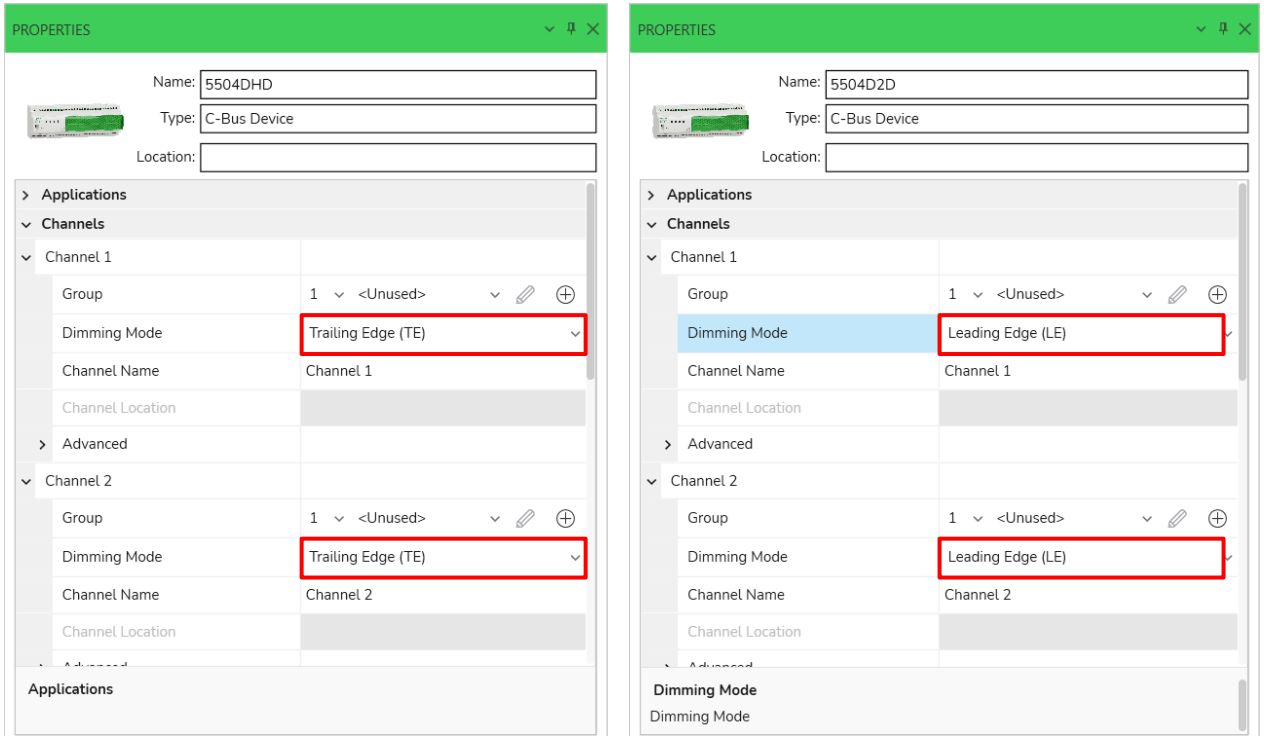
The **Group Addresses** can then be selected via the **Group Address** field:





Dimmer & Relay: Categories & Sections

For the Digital Dimmers, the **Dimming Mode** field gives you the capability to configure the dimming mode for the channel:



Dimmer & Relay: Categories & Sections

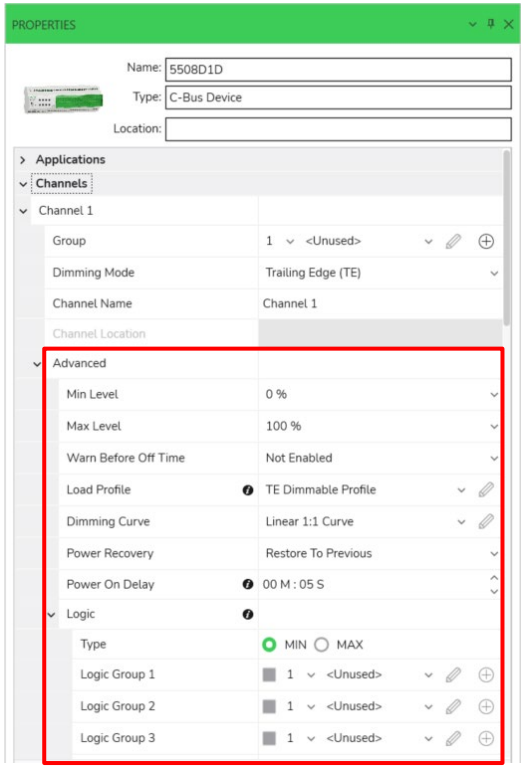
Each channel field also supports an **Advanced** section, providing additional programming fields, including (but not limited):

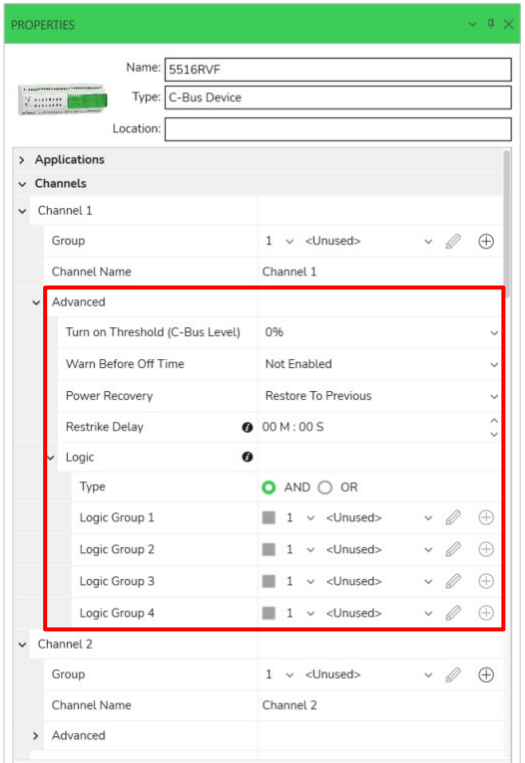
[Digital Dimmers]

- Min & Max level
- Warn Before Off Time
- Load Profile
- Dimming Curve
- Logic

[Relays]

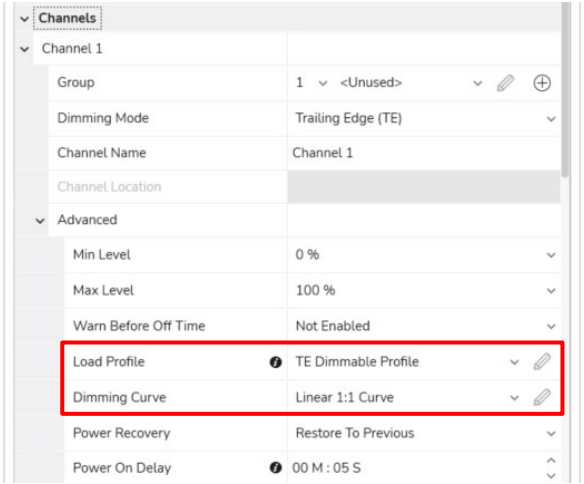
- Turn On Threshold (C-Bus Level)
- Warn Before Off Time
- Logic

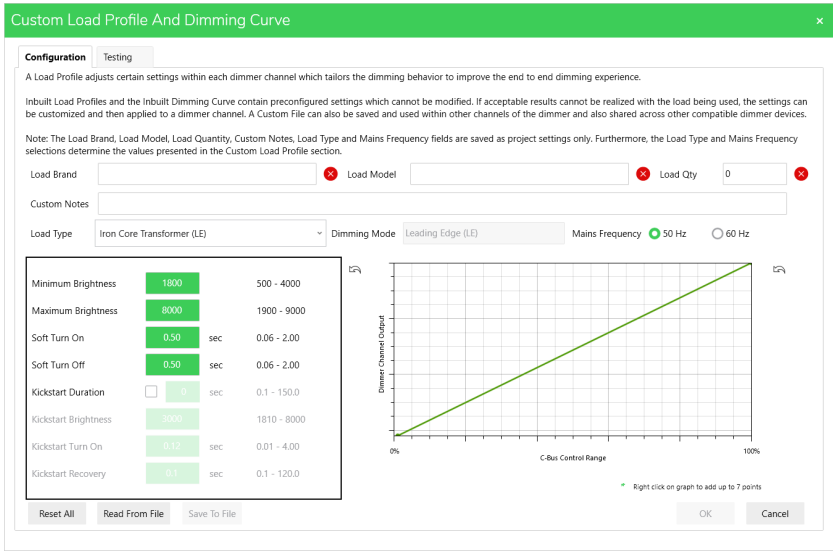




Dimmer: Load Profile & Dimming Curve

Each channel of the digital dimmer can be configured with an adjustable **Load Profile** and **Dimming Curve**:



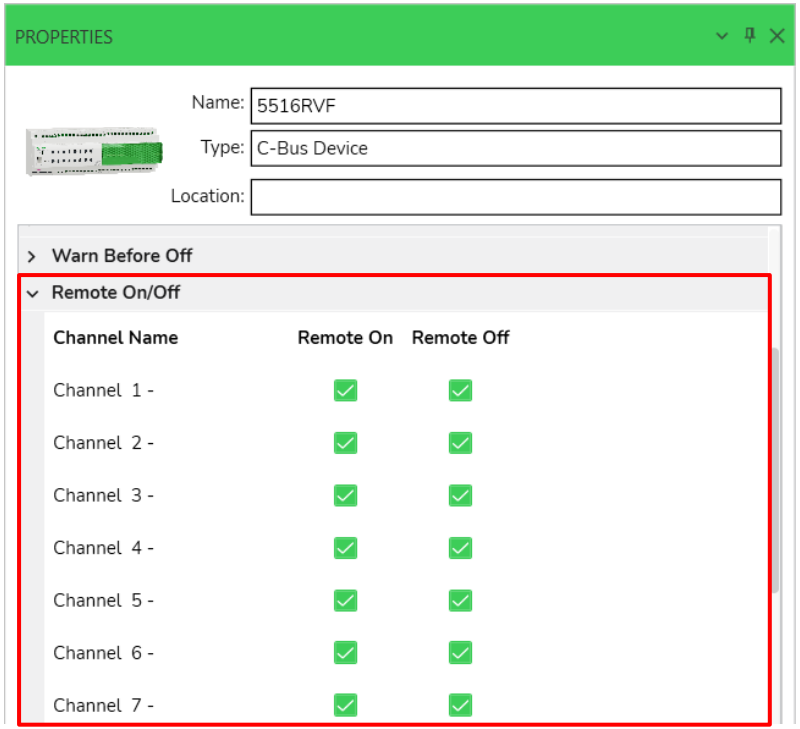


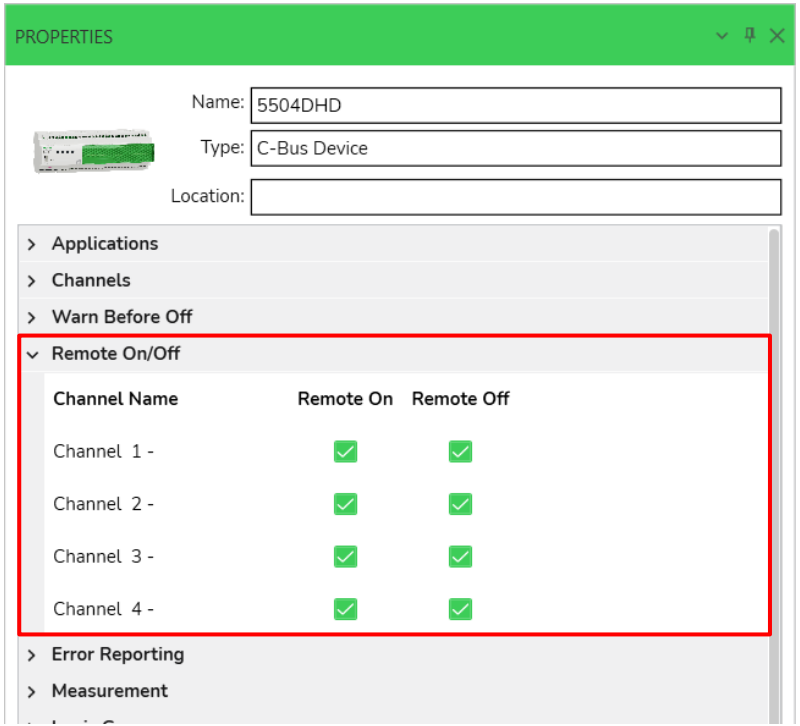
- The default Load Profile is set to suit the Dimming Mode; if needed, it can be customised to suit a particular load*
- By default, the default Dimming Curve is Linear 1:1 Curve; however, it can be customised to suit a particular load*

*This customisation activity will be covered in a separate guide

Remote On/Off

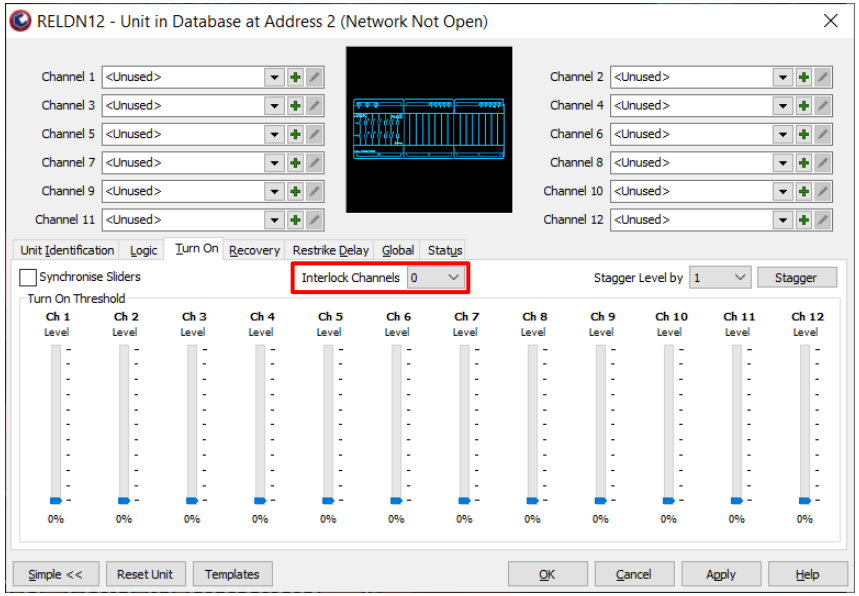
Remote Override is a high priority signal sent on the C-Bus network to lock all channels of any output unit **On** or **Off**. In SpaceLogic C-Bus Commission, you can select which **channels** of the output unit will respond to the **Remote On** or **Off** signal:

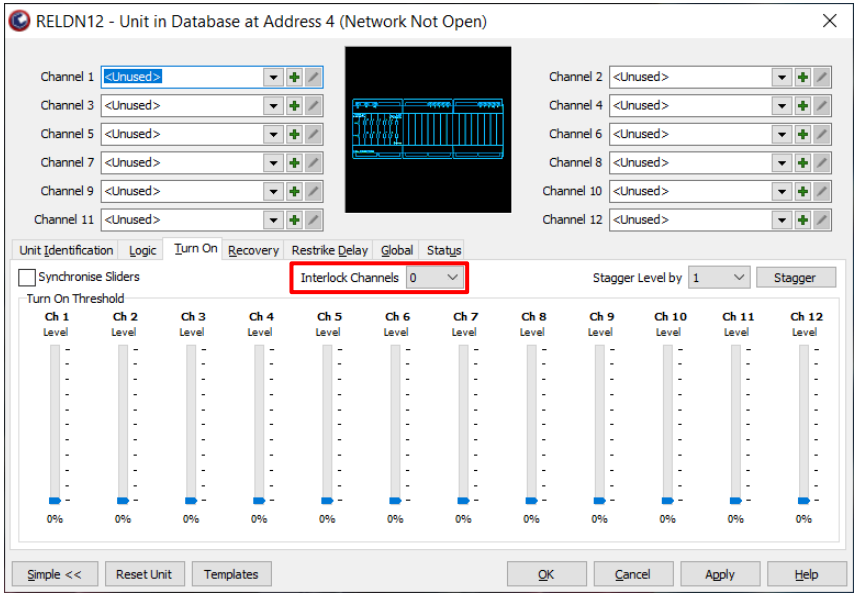




Relay: Interlock Channels

The C-Bus 12 Channel Voltage Free Relays, **L5512RVF** and **L5512RVFP**, can have their channels interlocked* using C-Bus Toolkit:

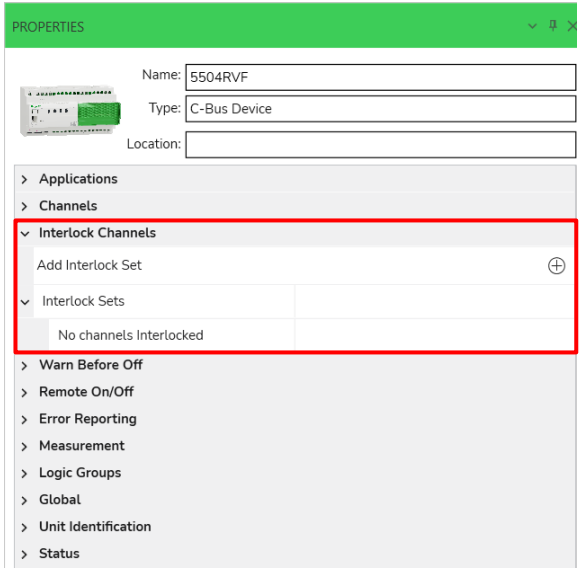


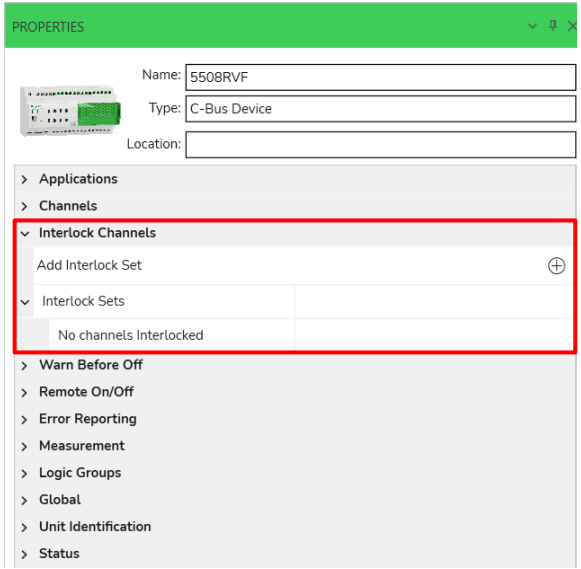


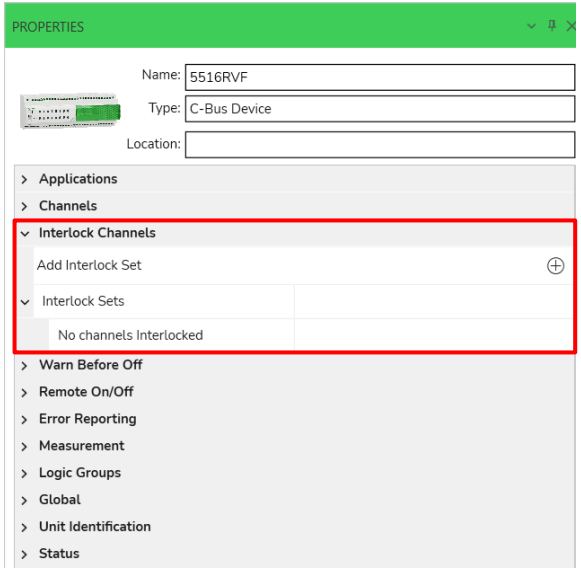
*When relay channels are interlocked, they are unable to be switched on at the same time. In C-Bus Toolkit, the Interlock Channels option sets the number of sequential output channels to be ***interlocked together***. When they are interlocked, only the highest number interlocked channel will respond to an enabled group; for example, if the **Interlock** value is set to **4**, channels **1** to **4** will be interlocked.

Relay: Interlock Channels

In SpaceLogic C-Bus Commission, the voltage free relays, **5504RVF** ,**5508RVF** and **5516RVF**, all support the capability to have their channels **Interlocked***:



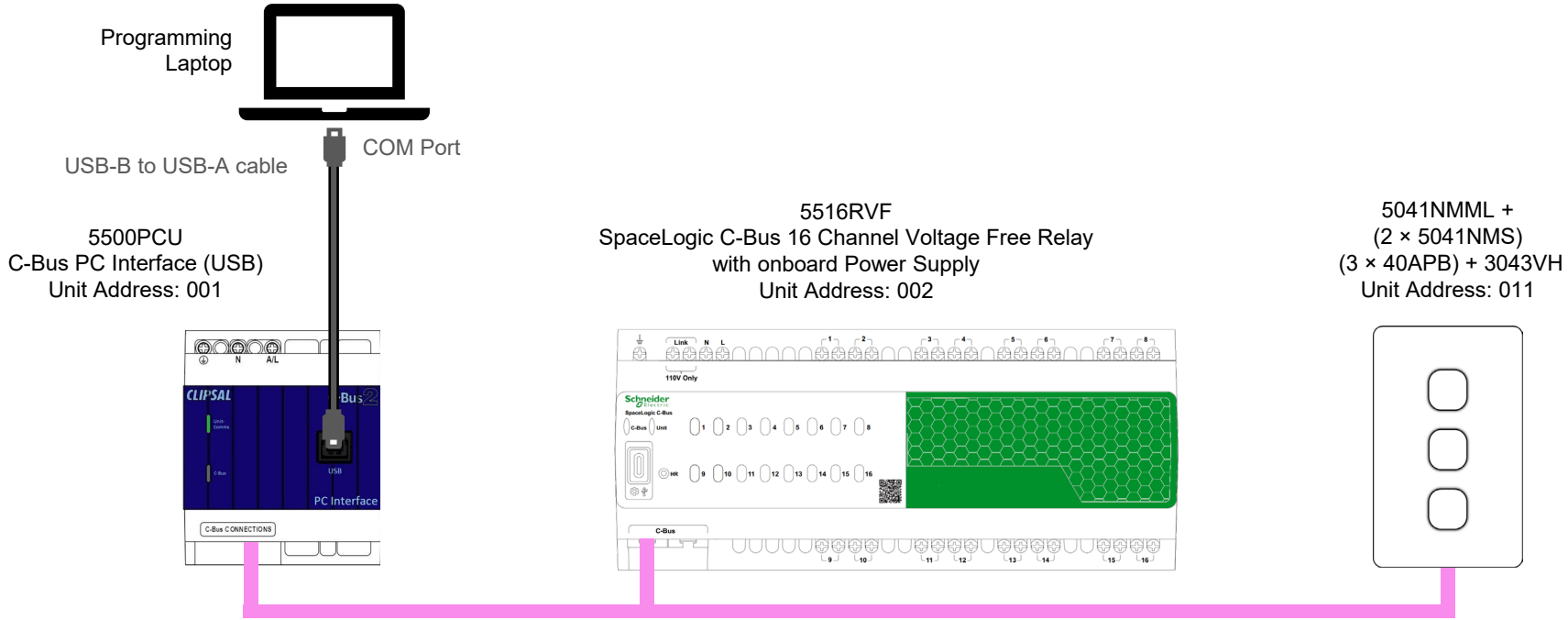




*In C-Bus Toolkit, the legacy relay channels can only be interlocked **interlocked sequentially**; however, in SpaceLogic C-Bus Commission, this is not mandatory

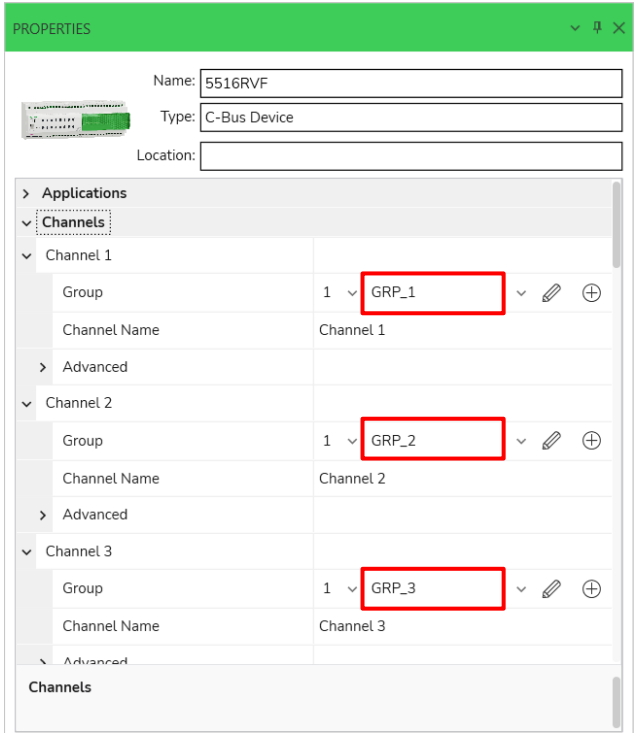
Example C-Bus Solution: Interlock Channels

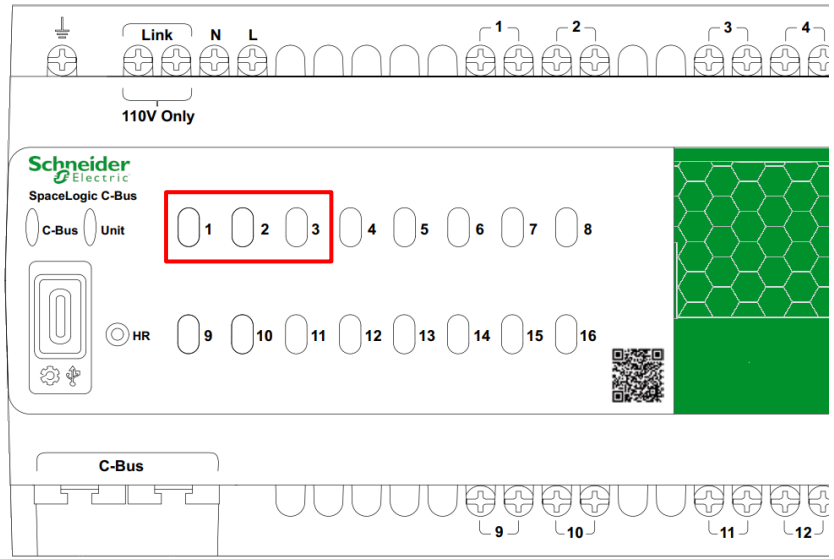
The following C-Bus Solution will be used to demonstrate the **Interlock Channel** function in SpaceLogic C-Bus Commission:



Example C-Bus Solution: Interlock Channels

Channels 1 to 3 of the **5516RVF**, will be programmed with following group addresses:

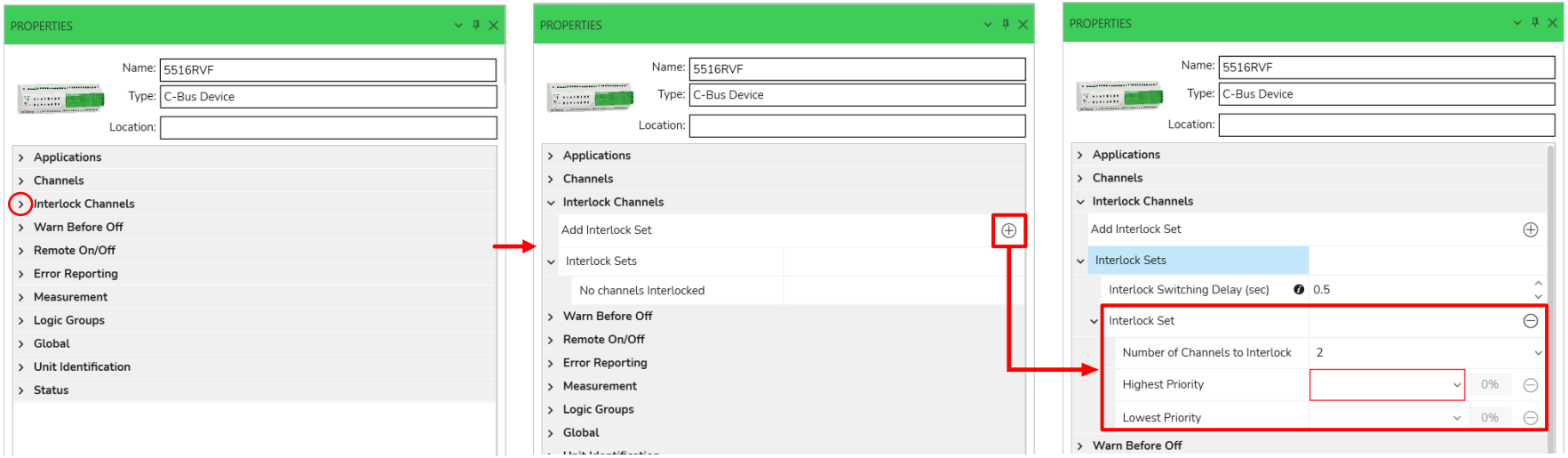




Example C-Bus Solution: Interlock Channels

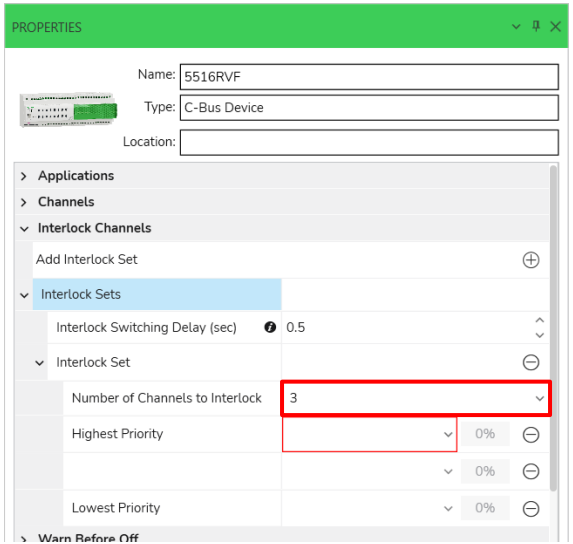
Channels 1 to 3 will now be interlocked:

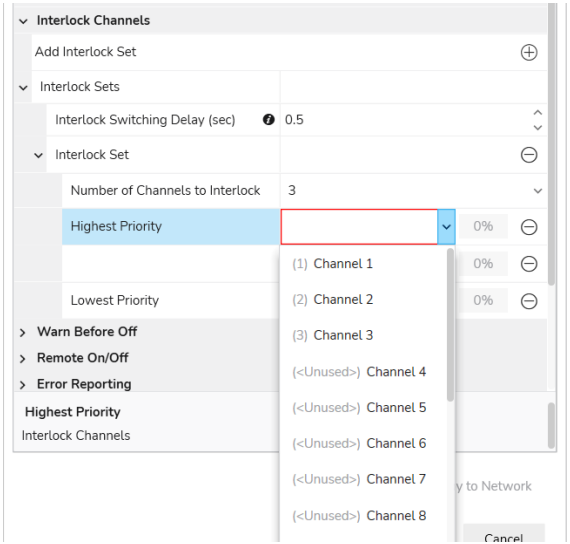
1. In the Voltage Free Relay, expand the **Interlock Channels** field
2. Click the **Add Interlock Set** button to add a new **Interlock Set**

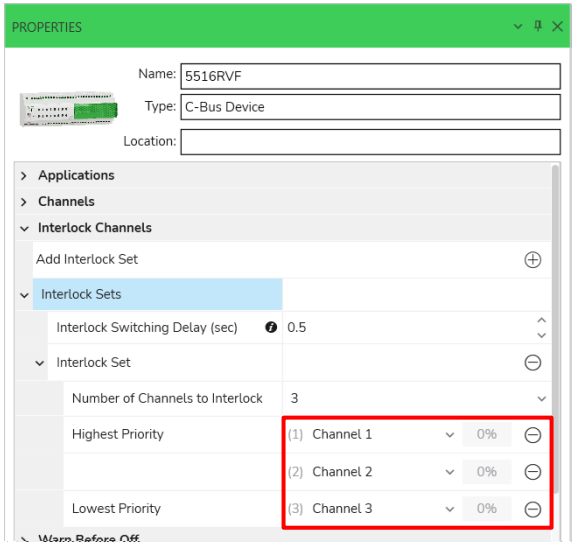


Example C-Bus Solution: Interlock Channels

3. For this Interlock Set, set the **Number of Channels to Interlock** field to **3**
4. The number of entries between the **Highest Priority** and **Lowest Priority** fields will adjust to match the entry from the previous step (in this example, **3**)
5. You can then assign a channel to each of the rows in the Interlock Set using the drop-down arrows (shown below)







Example C-Bus Solution: Interlock Channels

Channels 1 to 3 have now been interlocked with the following priority:

1. **Highest Priority**: Channel 1
2. **Next Priority**: Channel 2
3. **Lowest Priority**: Channel 3

Based on this priority, **if Channel 1** is **ON**:

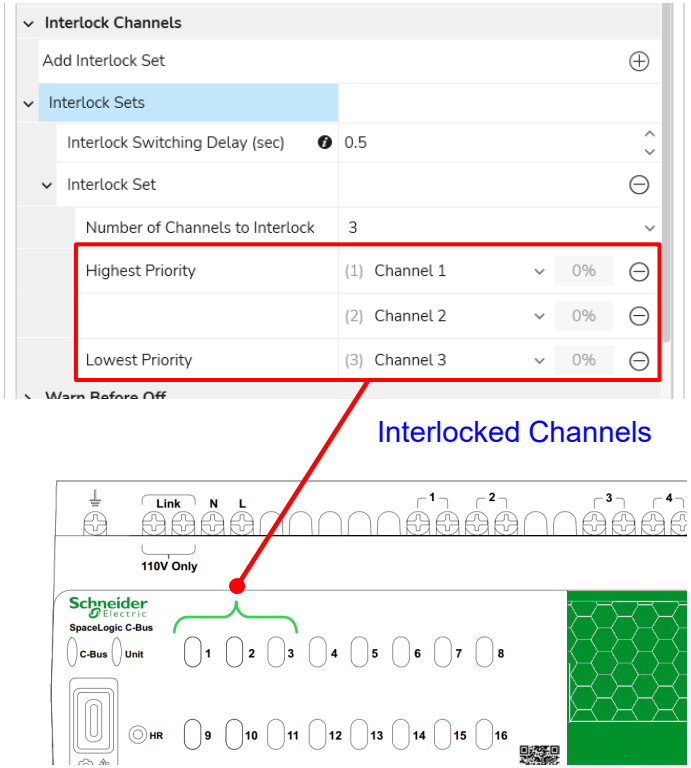
- Channel 2 **cannot be turned ON**
- Channel 3 **cannot be turned ON**

If Channel 1 is **OFF**:

- Channel 2 **can be turned ON**
- Channel 3 **cannot be turned ON if Channel 2 is ON**

If Channel 1 and **Channel 2** are **OFF**:

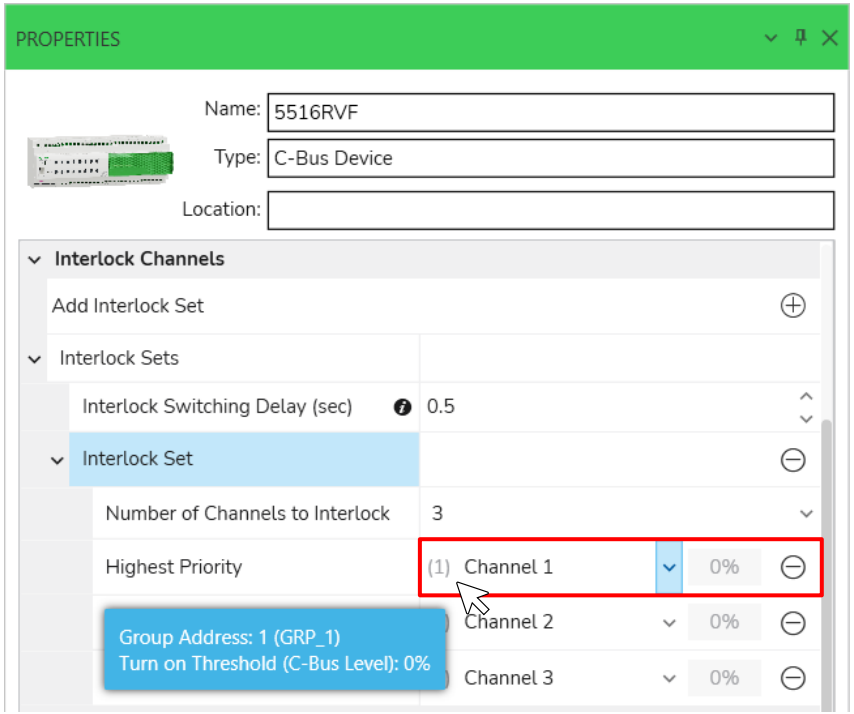
- Channel 3 **can be turned ON**



Example C-Bus Solution: Interlock Channels

In an **Interlock Set**, if you hover your mouse over a channel a tooltip appears, displaying:

- The Channel Group Address information
- Turn On Threshold for that Channel



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