

ETC Installation Guide

Unison Echo[®] DMX Scene Controller



Overview

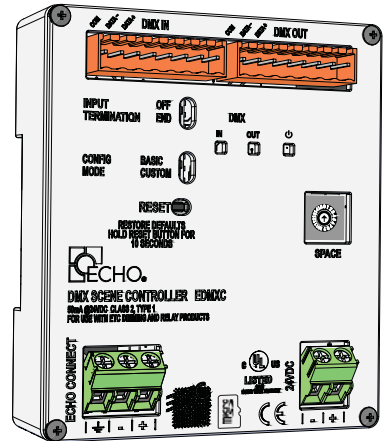
The DMX Scene Controller provides control of dimmers and LED fixtures by storing DMX output presets that can be recalled as part of an Echo system preset.

Features

The DMX Scene Controller is capable of outputting DMX (a full universe of 512 addresses) and supports up to 32 presets.

Additional features include:

- DMX snapshot record
- Live playback of DMX levels stored in Echo presets
- Input DMX levels pass-through to the DMX output and supports HTP with active internal “Arch” levels.
- Supports Off behavior for intensity and color zones
- DMX loss behavior reverts to current local control



The DMX Scene Controller is designed for installation on DIN rail and includes a DMX cable preparation kit for proper DMX termination.

Custom Configuration

This document guides you through the installation and local configuration of the Echo DMX Scene Controller. For more detailed information about the custom configuration options available using EchoAccess, reference the EchoAccess Mobile App integrated help system.



Note:

Settings made using EchoAccess are applied only when the Config Mode switch is set to Custom. Reference [Custom](#) on page 6.

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Accessory Kits

ETC offers a Low Voltage DIN rail Cover Kit (ETC part number 7186A1218) that allows installation of the DMX Scene Controller to a 4" (10.16cm) junction box (provided by others). Contact ETC for ordering details.

Specification



Note: *Installation should follow all local codes and standard electrical practices.*

For use with ETC Dimming and Relay products.

Ambient Environment

For indoor, commercial controls use only. Supports plenum rating.

- Operating temperature 0-50°C, 5-95% non-condensing humidity.

Compliance

UL/cUL listed, supporting use in a plenum space

CE compliant with EN55103:2009 for professional lighting control

WEEE marked

FCC compliant for conducted and radiated emissions

Electrical Requirements

The DMX Scene Controller requires 24 Vdc (Class II) power, supplied by an external 24 Vdc power supply. Termination for this connection is provided on a two position terminal, labeled 24 Vdc, accepting 26-14 AWG (0.4 - 1.6mm²) wires (typically a 16AWG black and red wire pair).



Note: *NEC Class 2 product are to be wired in accordance with NEC Article 725 and local jurisdiction requirements.*

All power and control wiring should be installed and terminated by a qualified installer and should follow standard wiring installation practices.

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Control Signal Requirements

EchoConnect

The DMX Scene Controller requires EchoConnect, Belden 8471 (or equivalent) plus one 14 AWG (2.5mm²) ESD ground wire, supporting control signal between the device and the connected Echo system.

EchoConnect is a bidirectional protocol that uses one pair of wires (data+ and data-). ETC recommends using Belden 8471 (or approved equal) Class II wire.

The total combined length of an EchoConnect wire run (using Belden 8471, or equal) may not exceed 1,640 feet (500m).

DMX

The DMX Scene Controller is designed for communication with a DMX controller, such as a DMX console for the DMX input, and DMX controlled devices including dimmers and LED drivers for the DMX output. Cable terminations are made to the 8 position removable pluggable connectors on the DMX Scene Controller.

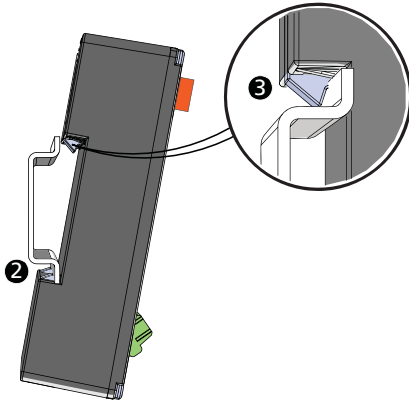
ETC recommends use of Belden 9729 (or equivalent) wiring for DMX control wiring. ETC recommends a maximum length of the wire run at 1600' (487 m). A DMX cable preparation kit is provided to prepare the Belden 9729 (or equivalent) cable before termination.

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Installation

Install to DIN Rail



- Step 1: Ensure the section of DIN rail to be used is mounted securely according to the manufacturers requirements. DIN rail is provided by others.
- Step 2: Hook the bottom of the DMX Scene Controller under the lower DIN rail as shown.
- Step 3: Pivot the bridge up and depress until the top clip on the bridge seats completely onto the DIN rail.

Connect Wiring

Connect EchoConnect

EchoConnect terminations require Belden 8471 (or equivalent) between the EchoConnect bus and DMX Scene Controller, plus one 14 AWG (2.5mm²) ESD ground wire.

- Step 1: Strip 3/8" (9-10mm) of insulation from the bare end of the Belden 8471 (or equivalent) wires and the ESD ground wire.
- Step 2: Loosen the three screw terminals (ground, -, +) on the EchoConnect terminals.
- Step 3: Insert the data + wire (white is typical) into terminal 3 (identified with a + symbol), insert the data - wire (black is typical) into terminal 2 (identified with a - symbol), and insert the ground wire (green/yellow is typical) into terminal 1 (identified with a ground symbol).
- Step 4: Secure the screws firmly onto each wire.

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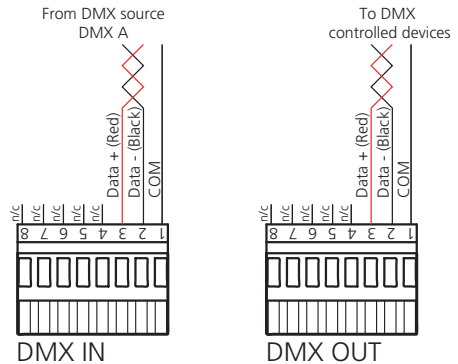
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Connect DMX In and Out

Locate the provided DMX cable preparation kit and follow the provided instruction to prepare the DMX cables, both input and output, using Belden 9729 or approved equivalent. Be aware that cable other than Belden 9729 may have a different color code for its wire pairs.

Reference the illustration to the right for DMX wire termination to the 8 position screw terminal connectors (provided). For best DMX performance, twist the wires together as close to the pluggable connector as possible.

Label each cable run accordingly and re-install the prepared connectors to the appropriate receptacle on the controller.



Connect 24 Vdc

An external 24 Vdc (Class II) power supply is required to power the DMX Scene Controller. Terminate to the DMX Scene Controller terminals labeled 24 Vdc.

Terminals accept 26-14 AWG (0.4 - 1.6mm²) wires (typically a 16AWG black and red wire pair).

- Step 1: Strip 9-10mm (3/8") of insulation from the bare end of each wire.
- Step 2: Loosen the two 24 Vdc screw terminals.
- Step 3: Insert the "negative -" wire (black wire typical) into terminal 1 (identified with a - symbol), and insert the "positive +" wire (red wire typical) into terminal 2 (identified with a + symbol) of the 24 Vdc terminals.
- Step 4: Secure the screws firmly onto each wire.

Set Space

The DMX Scene Controller participates in an Echo system using the configured Space, which is selectable using the rotary switch on the front of the unit.

Set the Space rotary switch to the desired Space number for this controller. All devices that are in the same Space will share control of the connected Echo stations and sensors.

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Set Configuration Mode

The “Config Mode” switch allows selection between Basic and Custom configurations of the DMX Scene Controller. Basic is the factory default setting.

Basic

Set the switch to *Basic* configuration mode to apply the following behaviors to the DMX Scene Controller:

- Preset snapshot record and recall for all 512 DMX addresses, for up to 32 presets.
- 2 second preset fade-time
- Zone patch data is not applied, therefore no zones will be individually controllable.
- Space Raise/Lower, as well as any other space intensity adjustments, will have no affect on any outputs.

Custom

Set the switch to *Custom* configuration mode to apply the settings that are supported by EchoAccess.

Reference the EchoAccess Mobile Application integrated help system for details about available configurable device parameters and actions available on the DMX Scene Controller including: configurable preset fade times, zone patch for intensity or color LED fixture control, and configuration of space raise/lower commands to affect unpatched DMX addresses.

Set Input Termination

The “Input Termination” switch allows selection of DMX input termination between Off and End. By factory default, this switch is set to End.

- Set the switch to Off when the DMX Scene Controller **is not** the last DMX device in the wire run.
- Set the switch to END when the DMX Scene Controller **is** the last DMX device in the wire run.

Reset Device

Using a ball point pen, press the **[Reset]** button to reset the DMX Scene Controller, cycling power and restoring the device to normal operation.

Reset to Factory Defaults

Using a ball point pen, press and hold the **[Reset]** button for 10 seconds to reset the DMX Scene Controller to factory defaults.

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Power Up

Once the DMX Scene Controller is connected to the EchoConnect station bus and power is applied, the power LED will indicate in blue.

When DMX is present on the Input connector the "DMX IN" LED indicates as follows:

- green = valid DMX
- blinking red = error
- no indication = no DMX is present

Remove the Bridge from DIN

If for any reason you need to remove the DMX Scene Controller from the DIN rail, follow these instructions.

- Step 1: Disconnect all wiring and cap off as necessary.
- Step 2: Insert a flat head screwdriver into the clip on top of the bridge, slide it straight up, then pivot the top of the bridge off of the DIN rail.