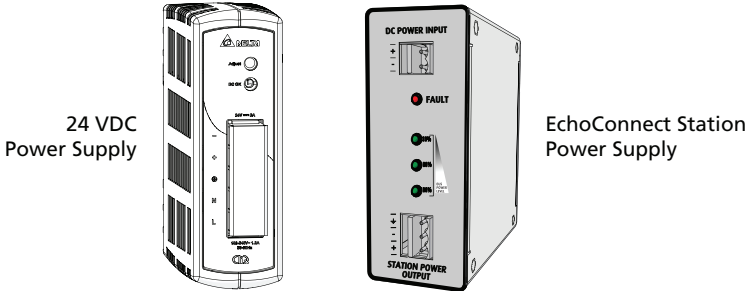


Echoflex Installation Guide

Elaho EchoConnect DIN rail Station Power Supply

Overview

The EchoConnect DIN rail Station Power Supply provides bus power for up to 16 control and 16 output products as well as Auxiliary 24 VDC for Elaho products that require it. This product consists of two components that must be used together: the EchoConnect DIN rail Station Power Supply and the 24 VDC Power Supply that feeds DC power to it.



Included in the shipment are the EchoConnect DIN rail Station Power Supply, 24 VDC Power Supply, Auxiliary power harness (red and black wire pair), and a three-position removable pluggable connector for EchoConnect.

Specifications

Ambient Environment

For indoor use only. Suitable for air handling/plenum use. 0°C–50°C (32°F–122°F) operating temperatures in 5–95% non-condensing humidity.

Electrical Specification

- **24 VDC Power Supply:** Mains input 100–240 VAC, 50/60 Hz, provides 30 W at 24 VDC in addition to the power required for the EchoConnect DIN rail Station Power Supply
- **EchoConnect DIN rail Station Power Supply:** 24 VDC input, powers up to 16 Elaho control and 16 output devices over EchoConnect

Compliance

- cULus listed
- CE compliant



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Station Power Supply

EchoConnect

EchoConnect is a two-wire topology-free system that provides the EchoConnect DIN rail Station Power Supply with the flexibility to connect anywhere in the system and provide power for up to 16 Elaho control and 16 output products.

EchoConnect is a bi-directional protocol that uses one pair of wires (data + and data -) for both data and power. Echoflex recommends using Belden 8471 Class 2 wire (or approved equal - see the Echoflex cable cross database echoflexsolutions.com/files/Elaho_Data_Cable_Wire_Spec for equal alternatives). The total combined length of an EchoConnect wire run using Belden 8471 may not exceed 500 m (1,640 ft), with a maximum distance of 400 m (1,312 ft) between any two devices.



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

Prepare for Installation

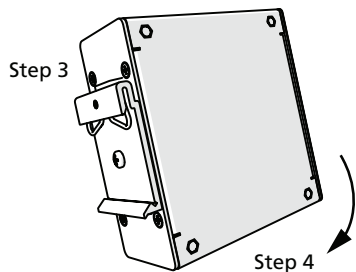
The EchoConnect DIN rail Station Power Supply and 24 VDC Power Supply are designed for mounting directly to DIN rail (provided by others) anywhere on the EchoConnect station bus.

Installation



Note: Installation must follow all national and local codes for electrical equipment. NEC Class 2 product to be wired in accordance to NEC Article 725 and local jurisdiction requirements.

1. Locate the circuit breaker panel and turn off the power to the circuit.
2. Locate both the 24 VDC Power Supply and the EchoConnect DIN rail Station Power Supply.
3. Hook the top DIN rail clip of one power supply over the top of the DIN rail.
4. Rock the power supply downward until the bottom clip snaps into place, securing the unit to the DIN rail.
5. Repeat for the second power supply.



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Station Power Supply

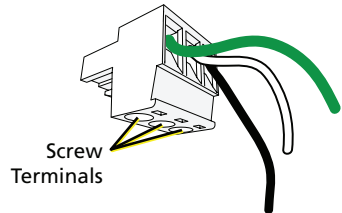
Connect EchoConnect



Note: *When using Category 5 (or equivalent) cable on the EchoConnect communication bus, please note the following:*

- *Cat5 wiring must be terminated using EchoConnect Cat5 Termination Kit and must be installed using a bus topology. Refer to the installation guide that is provided with the Cat5 Termination Kit (8186A1207) for information to terminate Cat5 wiring.*
 - *Not all topologies are supported using Cat5; careful planning is required to ensure the proper termination kits are available and the wire is pulled appropriately.*
-

1. Pull all required wiring (data +, data -, and ground wire) to the power supply. Strip each wire 6 mm (1/4 in).
2. Remove the three-position connector from the EchoConnect DIN rail Station Power Supply.
3. Use a flatblade screw driver to loosen the terminals.
4. Insert the ground wire (green/yellow) into a terminal and tighten the screw.
5. Insert the black (data -) wire into a terminal and tighten the screw.
6. Insert the white (data +) wire into a terminal and tighten the screw.
7. Reattach the green header to the EchoConnect DIN rail Station Power Supply.



Connect Mains Power Input

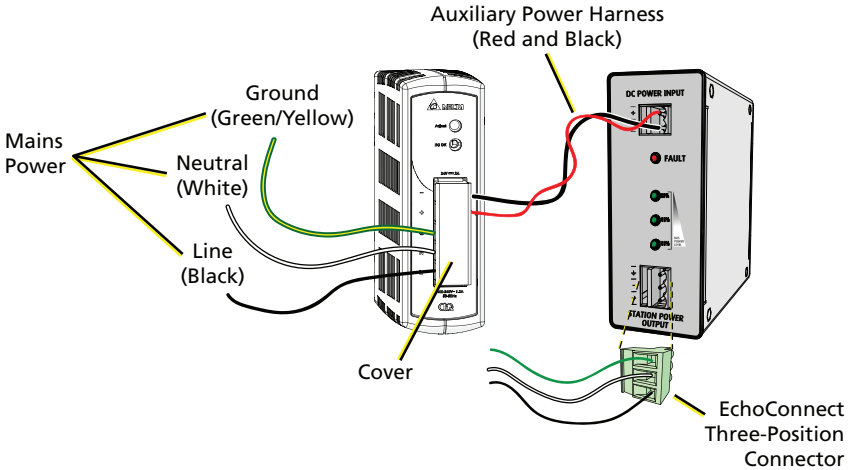
The mains power input connects to the face of the 24 VDC Power Supply.

1. Pull all required wiring (ground, line hot, and neutral) to the installed 24 VDC Power Supply and crimp the end of each wire with a Y-connector (not provided).
2. Gently remove the plastic cover protecting the screw terminals.
3. Remove the L (line hot), N (neutral), and (ground) termination screws.
4. Place the crimped connector of the ground (typically green) wire (1.5 mm²/16 AWG) over the ground terminal and reattach the screw, tightening it completely.
5. Place the crimped connector of the neutral (typically white) wire (1.5 mm²/16 AWG) over the N terminal and reattach the screw, tightening it completely.

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Station Power Supply

- Place the crimped connector of the hot (typically black) wire (1.5 mm²/16 AWG) over the L termination hole and reattach the screw, tightening it completely.



- Locate the provided Auxiliary power harness (red and black wire pair).
- Loosen the (+) and (-) screws on the 24 VDC Power Supply.
- Place the Y-connector of the black wire under the (-) screw and tighten the screw firmly, holding the wire in place.
- Place the Y-connector of the red wire under the (+) screw and tighten the screw firmly, holding the wire in place.
- Reattach the cover over the screw terminations.
- Plug the black connector into the DC POWER INPUT on the face of the EchoConnect DIN rail Station Power Supply.

Power Up and Test

Restore power to the circuit. The BUS POWER LEVEL LED will display green when auxiliary power is present.

If a fault is discovered in the control wiring, the BUS POWER LEVEL LED will turn off and the FAULT indicator will illuminate. This condition typically means that the station wiring has a fault; however it could mean a connected device is having an issue. A qualified technician should inspect the system wire and terminations first, and then proceed to disconnecting devices to pinpoint the fault and correct it.

The Elaho EchoConnect DIN rail Station Power Supply will update the fault indicator automatically when the fault condition is cleared.