



8-Channel Relay Installation Guide

Supported Model

- C4-DIN-8REL-E 8-Channel Relay

Introduction

The Control4® 8-Channel Relay controls up to eight (8) devices from one (1) module in the Control4 system. It installs in a panelized backbox using typical wiring standards and communicates to the Control4 system using a CAT5 Ethernet connection.

Box Contents

- 8-Channel Relay
- Warranty Card
- 8-Channel Relay Installation Guide (this document)
- 8-Channel Relay Wiring Guide

Specifications and Supported Fixtures

The specifications are described below.

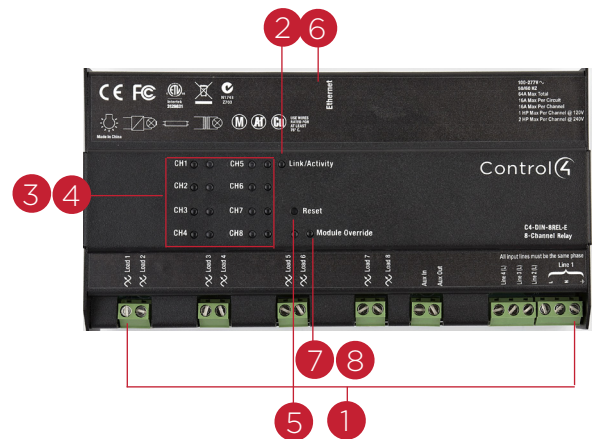
Model Number	C4-DIN-8REL-E		
Power Requirements	100-277VAC, 50/60 Hz		
Line Feeds (Circuits)	4		
Power Consumption	3W		
Supported Load Types	Incandescent, Halogen, Electronic Low Voltage Transformers (ELV); Magnetic Low Voltage Transformers (MLV); Fluorescents; Compact Fluorescents; LEDs; Motors.		
Control Communications	Ethernet		
Load Ratings			
	120V	240V	277V
Module Max	64A	64A	64A
Line-In 1 Max	16A	16A	16A
Line-In 2 Max	16A	16A	16A
Line-In 3 Max	16A	16A	16A
Line-In 4 Max	16A	16A	16A
Individual Channel Max	16A 1HP	16A 2HP	16A
Connectors			
Sixteen (16) Line Voltage Screw Terminals (Line 1, Line 2, Line 3, Line 4, Neutral, Earth Ground, Loads 1-8, Aux In, Aux Out, unused)	One (1) 26AWG to 12AWG (.12mm ² to 4mm ²) per terminal		
One (1) Ethernet	RJ-45		

Environmental	
Operational Temperature	32° F - 104° F (0° C - 40° C)
Humidity	5% - 95% Non-condensing
Storage	-4° F - 158° F (-20° C - 70° C)
Dimensions	
H x W x D	8.5" x 4.3" x 2.3" (215 mm x 109 mm x 57 mm)
DIN Module Width	12M
Weight	2.9 lbs. (1.3 kg)
Shipping Weight	3.3 lbs. (1.49 kg)

Warnings and Considerations

- WARNING!** This device must be installed by a licensed electrician in accordance with all national and local electrical codes.
- WARNING!** Improper use or installation can cause SERIOUS INJURY, DEATH or LOSS/DAMAGE OF PROPERTY.
- WARNING!** This device must be protected by a circuit breaker (20A max).
- WARNING!** Ensure that all circuit breakers feeding into the panel are OFF before installing or servicing the devices.
- CAUTION!** The panel used with this device is air cooled. Install the panel in a location where the vented cover is not blocked. At least 12 inches (30cm) clearance is required away from the front of the panel. Some local codes may require as much as 30 inches clearance.
- CAUTION!** Only install this device indoors.
- IMPORTANT!** Using this product in a manner other than outlined in this document voids your warranty. Further, Control4 is NOT liable for any damage incurred with the misuse of this product. See "Troubleshooting."
- IMPORTANT!** Changes or modifications not expressly approved by Control4 could void the user's authority to operate the equipment.

Figure 1. Front View



- Line Voltage Terminals
- Link/Activity LED
- Channel Status LEDs
- Channel Buttons

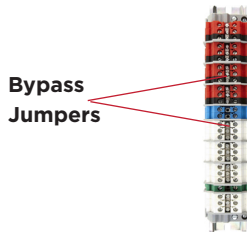
- 5 Reset Button (recessed)
- 6 Ethernet RJ-45 Port
- 7 Module Status LED
- 8 Module Override Button

Pre-Installation Instructions


Before You Install in a Control4 Panel

- 1 Use Composer Pro to add the 8-Channel Relay to a project, define its location in a panel, and print the Panel, Module, or Load Schedule Reports. See the *Composer Pro User Guide* for details.
- 2 Install the panel following the instructions in the *5-Slot and 2-Slot Panel Installation Guide*.
- 3 Install and wire the Terminal Block for the 8-Channel Relay following the instructions in the *Terminal Block Installation Guide* and in the location defined by the Composer Pro Panel Reports.
- 4 Verify that all bypass jumpers are securely installed in the Terminal Block assemblies. Each 8-Channel Relay Terminal Block assembly should have eight (8) bypass jumpers installed, connecting each black Terminal Block to two (2) red Terminal Blocks, and connecting each set of three (3) white Terminal Blocks together.

Figure 2. Terminal Block Bypass Jumpers




- 5 Turn on the circuit breaker(s) feeding the Terminal Block. Verify that the circuit breaker(s) do not trip. If a breaker trips, do not proceed with installation until the problem has been resolved.
- 6 Turn OFF the circuit breakers for all lines coming into the panel.
- 7 Remove the four (4) bypass jumpers that connect each black terminal to two (2) red terminals by unscrewing all three (3) screws in each bypass jumper until the entire bypass jumper can be pulled out. (Do NOT remove the bypass jumpers connecting the white Terminal Blocks together.)

 **IMPORTANT!** Store the bypass jumper for possible later use. The bypass jumper should be reinstalled any time the load will be serviced. Test the circuit with the jumper installed prior to removing the jumper again. Damage to the module caused by miswiring is not covered by the warranty.

Before You Install in a Third-Party DIN Rail Panel

- 1 Install the third-party panel according to the third-party instructions.
- 2 Install the panel in a well-ventilated area.

 **IMPORTANT!** Test all wiring for short circuits before installing the module. Damage to the module caused by miswiring is not covered by the Control4 warranty.

Installation Instructions

 **CAUTION!** Turn off all breakers feeding into the panel before proceeding.

Install in a Control4 Panel

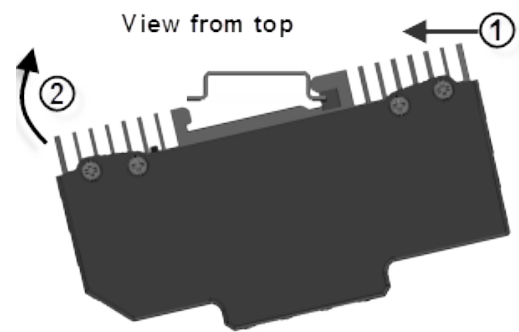
- 1 The 8-Channel Relay should be installed in the panel next to the previously-installed 8-Channel Relay Terminal Block. The location of the device in the panel is defined by the Composer Pro Panel Report.
- 2 With the green screw terminals on the left side of the 8-Channel Relay, hold the Relay upright and angle it to the right so that the right side of the module fits onto the rail in the panel.



NOTE: The 8-Channel Relay installs with the Line Voltage Connector on the left side and the Ethernet port on the right side.

- 3 With the right side already in place, push forward on the left side of the 8-Channel Relay to snap it onto the rail (see Figure 3).

Figure 3. Snap on the 8-Channel Relay - Control4 Panels



NOTE: To remove the module, push the module toward the left side, pull out from the left side, and remove it from the right side of the rail.

- 4 Wire the module according to the wiring diagrams in the *8-Channel Relay Wiring Guide* and the reports from Composer Pro.



NOTE: Wiring between the Terminal Blocks and the module will be easiest when stranded wire is used. All wires between the Terminal Block and the 8-Channel Relay must use the same gauge wire as the field wiring connected to the Terminal Block.

- At the terminal block side, strip the wires 0.35 in. (9 mm) and tighten to 7 in-lb (0.8Nm).
- At the module side, strip the wires 0.3 in. (7 mm) and tighten to 5.3 in-lb (0.6Nm).

- 5 On the right side of the 8-Channel Relay, connect the Ethernet CAT5 cable to the RJ-45 port.
- 6 Install the other modules in the panel as defined in the Panel Reports from Composer Pro and their respective installation guide.
- 7 Turn the circuit breakers back ON and test all connected loads by clicking the channel override buttons.

Install in a Third-Party Panel



CAUTION! Turn off all breakers feeding into the panel before proceeding.

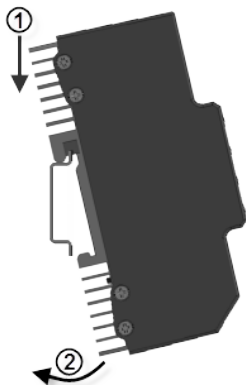
- 1 With the green screw terminals facing down, hold the 8-Channel Relay lengthwise and angle it up so that the top side of the module fits onto the rail.



NOTE: The 8-Channel Relay installs with the Line Voltage Connectors facing down and the Ethernet port facing up.

- 2 With the top side already in place, rotate the 8-Channel Relay down to snap it onto the rail (see Figure 4).

Figure 4. Snap on the 8-Channel Relay - Third-Party Panels



NOTE: To remove the module, pull the module out from the bottom, rotate the module up, and lift it off.

- Wiring the module according to the wiring diagram in the *8-Channel Relay Wiring Guide* and the reports from Composer Pro.
Strip the wires 0.3 in. (7 mm) and tighten to 5.3 in-lb (0.6Nm).
- On the top of the 8-Channel Relay, connect the Ethernet CAT5 cable to the RJ-45 port.
- Install the other modules in the panel as defined in their respective installation guide.
- Turn the circuit breakers back ON and test all connected loads by clicking the channel override buttons.

Wiring Diagrams

The wiring diagrams show the wiring details for Control4 8-Channel Relays. Refer to the *8-Channel Relay Wiring Guide* to view those diagrams.

Operation and Configuration

Composer Pro Configuration and Reports

Use Composer Pro to define the properties of each 8-Channel Relay, its location in a panel, and the loads that are connected to it. Composer Pro can then be used to generate Panel Reports, Module Reports, and Load Schedule Reports. These reports are essential to ensuring that each 8-Channel Relay is properly installed in the correct location and wired to the appropriate loads. Please refer to the *Composer Pro User Guide* for detailed information.

Browser Configuration Tool

Basic properties for each load as well as the network configuration for the 8-Channel Relay can be set using a standard web browser.

To open the configuration page, simply start the browser and type in the IP address of the Relay. Alternatively, the Properties page for the module in Composer Pro > System Design view has a link to the browser configuration page.

The browser configuration tool can be used to set the following properties:

- Network Settings
 - DHCP Enable/Disable
 - IP Address
 - Subnet Mask
 - IP Gateway
- Control Settings for each Channel
 - Module Override Level

Additionally, the browser configuration tool can be used to view the current temperature of the module as well as any channel short circuit faults.

LEDs

The indicator lights on the front of the 8-Channel Relay communicate the status of the device.

Indicator	LED Color	Status	Notes
Module Override	Blue	Power on, normal operation	
	Black	Off	
	Red	Thermal overload	See "Faults" section below
Channels	Blue	Load on	
	Black	Load off	
	Red	Short Circuit Fault	See "Faults" section below
Link/Activity	Solid Green	Link	
	Orange	Activity	
	Flashing Green	Firmware updating	Flashing gets faster as update proceeds

Channel and Module Override Buttons

During normal operation, the buttons on the front of the 8-Channel Relay behave in the following manner:

Button	Action	Result
CH1-CH8	Click	Toggles the load on and off.
Module Override	Click	Toggles between the module override scene and all channels off.
	Hold for five (5) seconds	Sets the module override scene to current channel on/off settings. The Module Override LED will blink rapidly to indicate that the override scene has been saved.

The following button tap sequences are available using the CH1 and CH8 buttons.

Function	CH1	CH8	CH1
Identify	4		
Reboot Device	15		
Factory Reset	9	4	9

Reset Button



NOTE: The Reset button is recessed and must be pressed using a paperclip or similar device.

A single click of the Reset button is equivalent to powering the 8-Channel Relay off and back on. Additionally, certain special activities can be accomplished by pressing and holding a specific button while clicking the Reset button. Note that the same activity is possible by pressing and holding the designated button while power cycling the 8-Channel Relay:

Hold Button While Clicking Reset	Result
CH7	Sets the device to DHCP-disabled and forces the IP address to 192.168.1.200.
CH8	Toggles between DHCP-enabled and DHCP-disabled.
Module Override	Restores the factory image (do not perform unless directed to do so by Control4 Technical Support).

Symptom	Possible Solution
	Verify that all line inputs on the module (Line 1, 2, 3, & 4) are all receiving power.
	Verify that the light bulb is not burned out.
Loads do not turn off	Verify that the Terminal Block jumpers that connect the black Terminal Block to the red Terminal Blocks have been removed.
Module overheats	Verify that the module is receiving proper ventilation.

Overtemp Fault

- Occurs if the module reaches an unsafe operating temperature.
- All loads attached to the module will turn off.
- The Module Override LED will turn red.
- The fault condition cannot be cleared nor loads turned back on until the device has reached a safe operating temperature. Once the device has reached a safe operating temperature, the fault will automatically clear. Note, though, that loads will not automatically turn back on after the fault has cleared.

Manual Overrides

Prior to installation of the control system, or in case a problem occurs with the control system or the network, it is possible to control the loads attached to the 8-Channel Relay via several methods:

- **Override Scene**
 - The module override scene is stored in the module itself and does not require interaction from the control system.
 - The default setting for this override scene is all loads on.
 - The override scene settings can be changed using the buttons on the front of the module (see the "Channel and Module Overrides" section above), the Browser Configuration Tool, or Composer Pro.
- **Module Override Button**
 - Clicking the Module Override button toggles the attached loads between the stored override scene and all loads off.
- **Auxiliary Override Contacts**
 - The Aux In and Aux Out terminals on the 8-Channel Relay can be wired to a standard line-voltage toggle switch installed in a hidden but convenient location, such as a closet.
 - Each time the attached switch is flipped, the 8-Channel Relay will toggle between the stored override scene and all loads off.
 - If desired, a single toggle switch can be wired to the Aux In contact on multiple Control4 Panelized Lighting modules, but all modules sharing an auxiliary override switch MUST BE ON THE SAME ELECTRICAL PHASE.
 - The desired location of the Auxiliary Override Switch can be defined in Composer Pro for each module. This information will appear in the Module Report generated by Composer Pro.
- **Channel Override Buttons**
 - The channel override buttons on the front of the module provide individual control of each load attached to the 8-Channel Relay. Click the specific Channel Override button to toggle the load on/off.

Regulatory/Safety Information

To review Regulatory information for your particular Control4 products, see the information located on the Control4 website at: <http://www.control4.com/regulatory/>.

Warranty

For complete warranty information, including details on consumer legal rights as well as warranty exclusions, review the Warranty card or visit www.control4.com/warranty.

About this Document

Part Number: 200-00235, Rev A 09/28/2012

Troubleshooting

Symptom	Possible Solution
Module does not power on	Verify that the circuit breaker is on.
	Verify that Line-In 1 is connected to the power.
Load does not turn on	Verify that the load is wired to the proper channel terminal.