Control4® DIN Rail Lighting FAQ

What is Din Rail?
DIN rail (also known as top-hat rail) is a standardised 35mm metal rail with a hat shaped cross section. It is used primarily for mounting circuit breakers and control equipment inside equipment racks and enclosures.

What is Control4 DIN Rail Lighting System?
Control4’s DIN rail solution is a centralised lighting solution that allows you to quickly install lighting modules into a standard DIN enclosure. In a DIN rail lighting system all the lighting circuits in a property wire back to a central location and are controlled via a multi channel lighting module which are in turn controlled by the Control4 automation system.

Can the DIN Rail Lighting System just for lighting?
No, the DIN Rail system can be used for controlling a wide variety of other devices, and also sensing input from other devices. For example the relay module can be used for turning on ceiling fans, heaters, gates etc. Also, the I/O module could be used for sensing contact closures from third party toggle and contacts switches which can in turn be programmed to do any number of actions with the Control4 system.

How do I connect it to the rest of my Control4 system?
The Control4 DIN Rail solution is connected to the Control4 system via an RS-232 cable. This provides full 2-way communication between the Control4 controller and the lighting system.

What controllers can I use to control the Control4 DIN system?
You need to use either an HC-300 or I/O Extender to connect via RS-232 to the Control4 DIN Rail system. The HC-200 is not compatible with the serial connection of the Control4 DIN Rail system. When using an HC-300 the RS-232 interface is only compatible with port two of the controller.

Does DIN Rail form part of the ZigBee mesh?
No, Control4 DIN modules do not have Zigbee on-board and do not connect via Zigbee.

How do I control LEDs?
LEDs can be controlled by the Control4 DIN modules in a number of different ways. If the LED light fitting is mains voltage dimmable via a leading edge compatible ELV transformer then the dimmer modules can simply be wired into the transformers for the LEDs. Alternatively the Control4 DIN I/O module or Universal Ballast Controller give the option for 0-10V, DMX, DALI and DSI control of light fittings which are all commonly used by LED light fittings.

Can a third party light switch be used to control DIN Rail?
Yes, with a Contact Input Module you can wire contact switches into the Control4 DIN system which can then be programmed in the same way as a Control4 in-wall Zigbee keypad.

Do I need to use a neutral when wiring my light fittings?
If you are wiring mains cabling back to the dimmer modules and there is a neutral at the light fitting then you do not need to run that neutral from the light fitting to the dimmer, you can just wire the switched live and earth. The dimmer module itself will require its own live, neutral and earth power supply as per the supplied installation documents.

What if the Control4 system goes offline? Can I have manual control of my lights?
If a Network Processor Unit is installed, it can act as a failover for the Control4 Director; automatically assuming control of the DIN Rail lighting modules and allowing them to respond to any Mode M-Bus keypads and third party light switches that are part of the system.

If a Network Processor Unit is not installed, control of DIN Rail lighting modules will not be possible while the Control4 Director is offline.

Is there a limit to the amount of devices per project?
When the Control4 DIN Rail lighting system is installed in standalone mode there is a limit of 510 of each type of module. In such an installation special consideration needs to be given to the data bus length as repeaters would be needed for each 1km segment as well as the addition of extra PSUs.
When part of a Control4 automation system there is a maximum of 512 total modules in a system. The same considerations for data bus length and PSU specification should be taken into account.

What is the minimum and maximum load rating for each dimmer?
The minimum load of each dimmer is approximately 1W (approximately 0.4mA). The maximum loading of the 4x3A dimmer is approximately 750W per channel with a maximum total module load of 10A (approximately 2.3kW). The maximum loading of the 8x2A dimmer is approximately 500W per channel with a maximum total module load of 10A (approximately 2.3kW).

Can I dim low energy bulbs?
The Control4 DIN 8x2A and 4x3A dimmers are able to dim electronic dimmable (dimmerable) low energy bulbs, it is not possible to dim standard low energy bulbs.

Can I dim fluorescent lights?
So long as the light fitting is leading edge compatible electronic ballast it should be possible to dim through a Control4 DIN module. Alternatively you can control some fluorescent ballasts via 0-10V, DSI or DALI, all of which can be done via the I/O or Universal Ballast modules.

Where can I buy an enclosure for my devices?
There are a number of different manufacturers and suppliers of suitable DIN enclosures, suitable manufacturers include Hager, Kaedra, Pragma or Merlin Gerin. Contact your local electrical wholesaler for more information.

Do I need the Network Processor unit?
You don’t need a Network Processor Unit to use a Control4 DIN rail system, you can use just an RS-232 module. You would only need a Network Processor if you want the lighting system to be able to function independent of Control4.

Do I need an RS232 module?
You must have an RS-232 module if you want to control your lighting from a Control4 automation system. You will not need an RS-232 if you plan to operate your lighting independently of a Control4 automation system.

What is the power rating on the relay and I/O modules?
The total maximum load for the relay module is 20A with a maximum of 5A per channel (approximately 1100W) of either resistive or inductive load. The I/O module has a maximum input rating of 2mA per channel and a maximum output rating of 250mA per channel.

Can anyone install these or do I have to be a qualified electrician?
You must be a qualified electrician to install this solution into a home. Please seek advice from your local electrical safety regulator for specific information about what qualifications you may need in your local country.