

DALI 2.0 – What is it?



What is DALI?

Digital Addressable Lighting Interface, named DALI, is a communication language. DALI facilitates the communication and therefore control of multiple devices such as ballast, transformers and other lighting equipment. Devices which speak the same language can exchange information, in much the same way people can exchange information when they communicate using the same language.

The benefits of DALI

Simple 5-core wiring, no special control cable, no polarity, no termination and no segregation

Removes the special wiring needed for 24 hour power

Removes the special wiring needed for emergency generator use

Removes the special wiring required for monitored emergency lighting

Easy base-building commissioning

Easy commissioning for tenancies

Integration of standard and emergency lighting

No need to switch the mains voltage (handled internally by the ballasts)

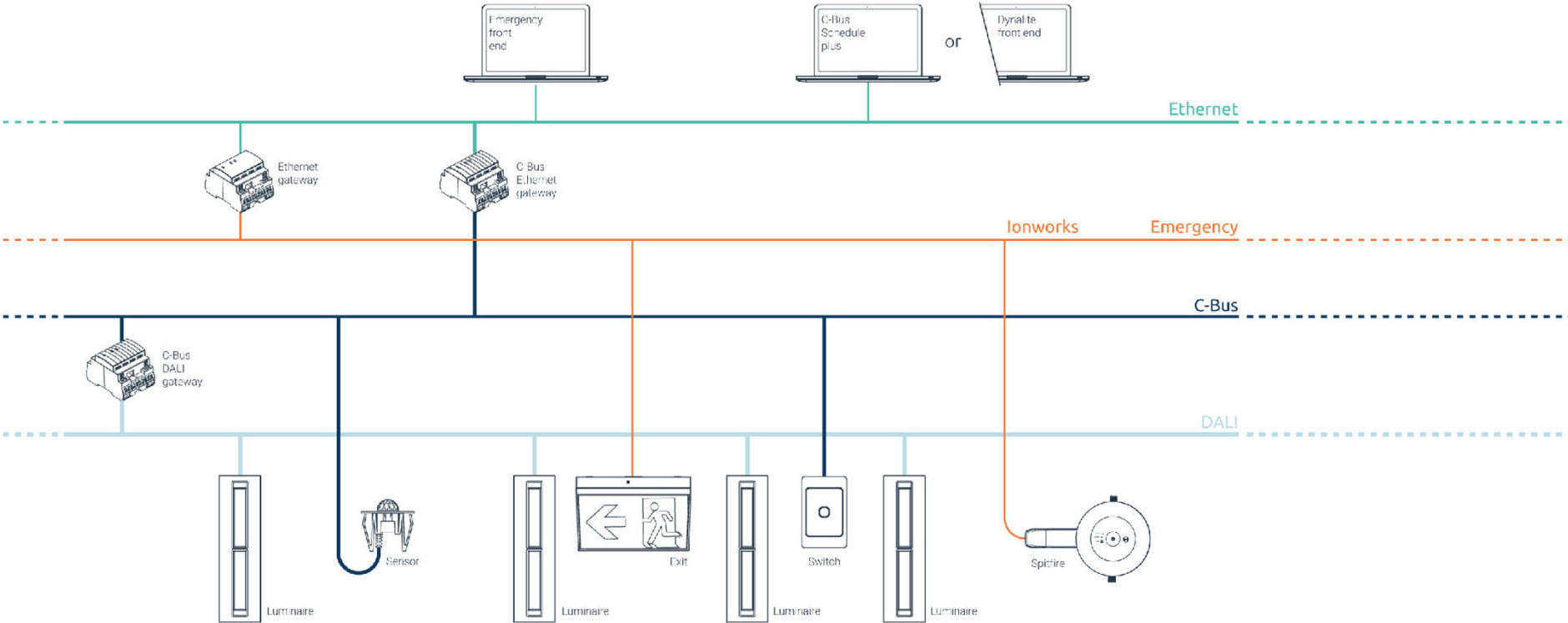
Dali Wiring / Installation

DALI cables can be wired next to normal mains carrying wires reducing the need to segregate the control wires. Thanks to a high signal to noise ratio and wide ranges for the digital signal, it is virtually impossible for the DALI data signal to be affected by interference.

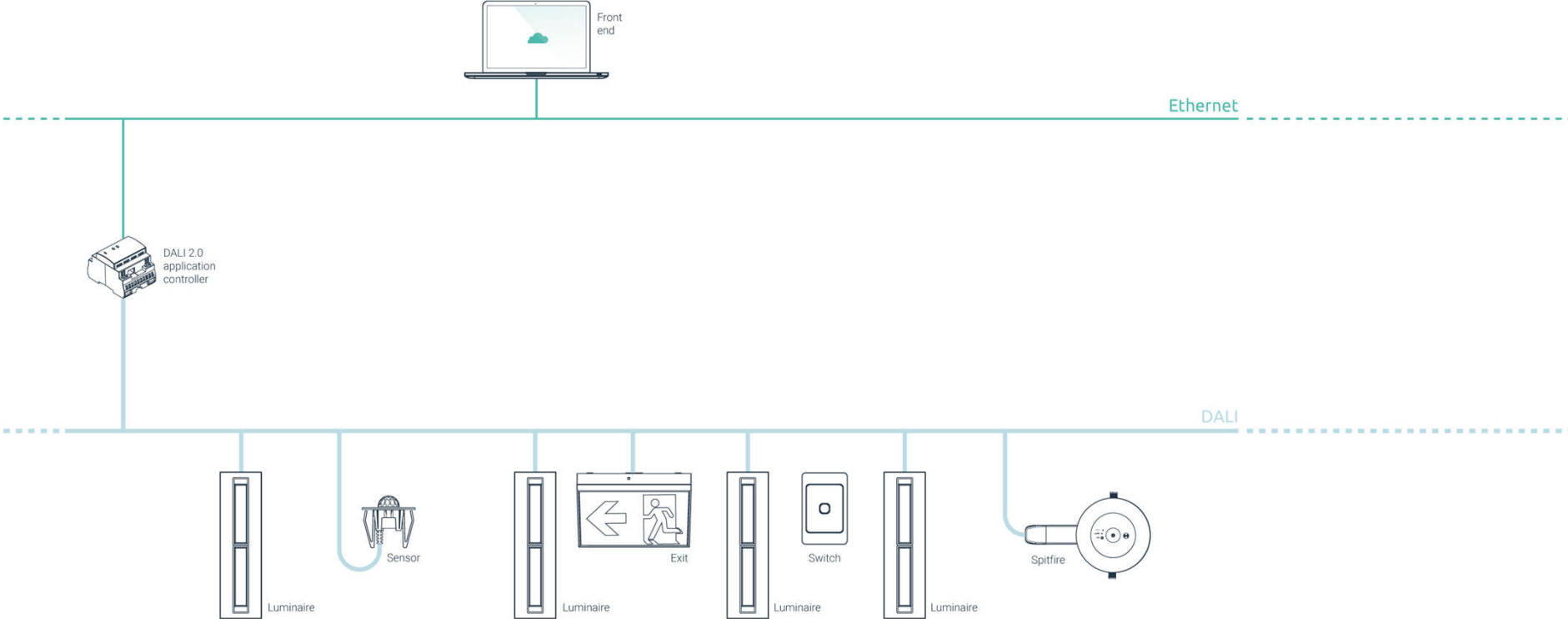
The DALI line

- The DALI line can be run up to **300m** using **1.5mm** squared twin active cable.
- The DALI specification allows for maximum 2V drop in the communication signal.
- The DALI line does not require termination of the line and supports all wiring typologies except rings and closed loops (trees, branches and chains are all acceptable).
- The DALI line is a 4 or 5 wire system (requiring active, neutral and two control wires). An earth wire is required in single insulated devices.
- A DALI line can be connected to a maximum of **64 DALI type devices**.
- Every DALI line requires a DALI power supply. The DALI power supply is a current limited device ensuring that the line current does not exceed 250mA.

Traditional Lighting



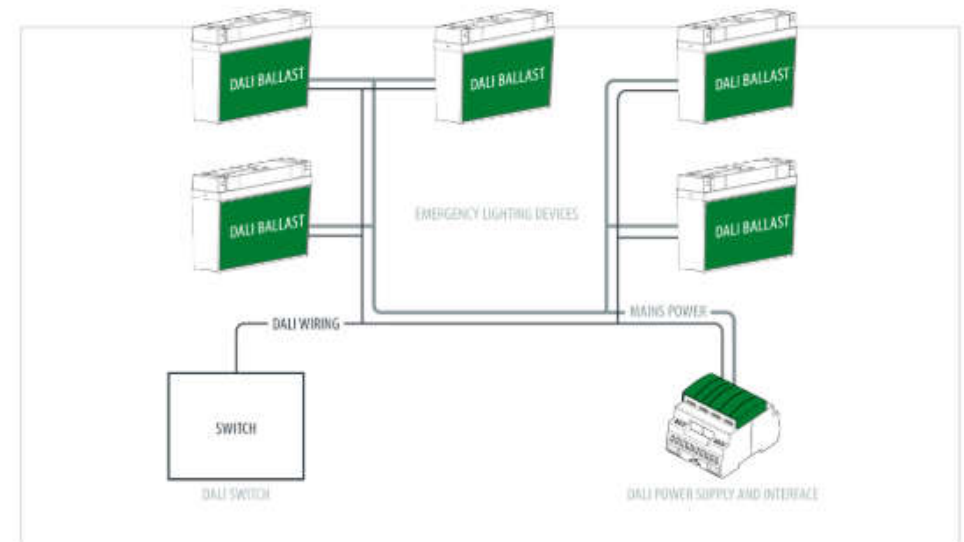
DALI 2.0/I.0



Dali Features & Information

Simple DALI line

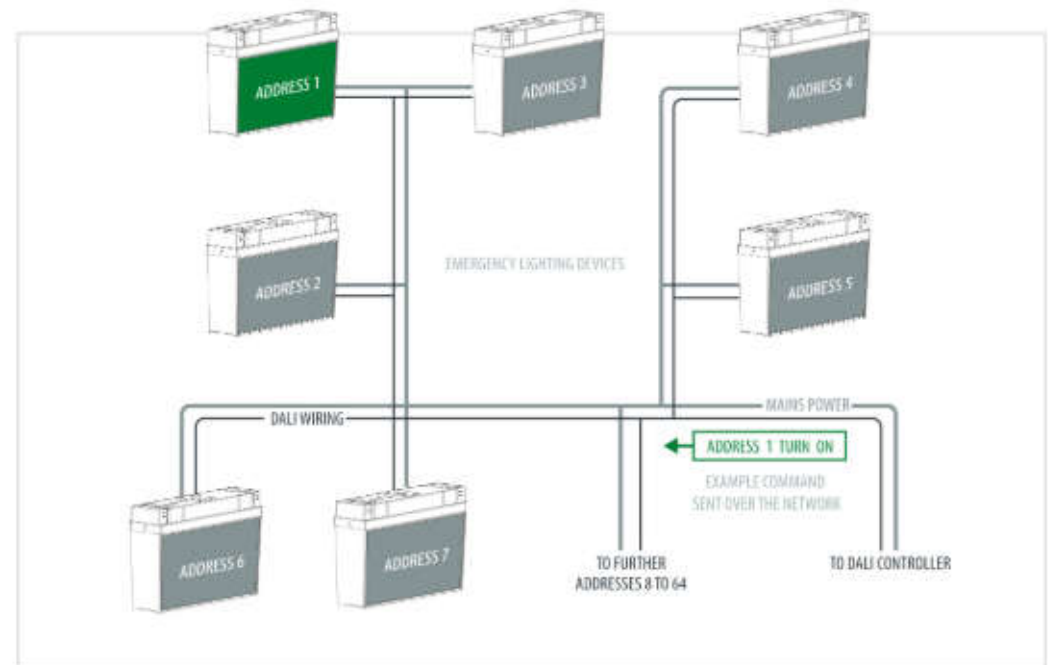
- Here you can see DALI devices, these can be ballasts, transformers, LED controllers or emergency devices compatible with DALI.
- Up to 64 DALI devices can be connected to a line.
- Sensors, switches, groups or scene controllers can be connected anywhere on the DALI line. These are optional devices.
- A DALI power supply is required for every DALI loop and a DALI controller allows control of a DALI line.
- The DALI protocol allows for multiple controllers per DALI loop. Also these devices are optional.



Dali Features & Information

Individual control

- Each DALI device has its own address which enables individual communication and control over a single DALI line.
- This means that you can wire up to 64 DALI devices together and control them separately, whereas traditionally you would need to wire each device separately.
- Individual control provides the means to gain the maximum power savings and comfort.



HINT: Think of a command as a letter sent via the post. Only the person it is addressed to will open and read the letter.

Dali Features & Information

Groups

- Groups allow multiple DALI Devices on the same line to be grouped together which allows the devices to perform an action together.
- Each DALI device can be assigned membership to a group or multiple groups.
- This grouping allows commands to be sent out in groups with all members of the group reacting to one individual group command.
- If a device is not part of the group it will be ignored.

HINT: You can group devices together into rooms or areas to perform functions easier



Why zencontrol ?

We believe it is the smartest building control on the market

- *Works out of the box*
- *Removes the complication*
- *Fixes contractor mistakes automatically*
- *Built using a “Just works” philosophy*
- *Hassle-free commissioning process*

zencontrol is modern lighting control

- *Full DALI support*
- *DALI 2.0 and DALI 1.0 compliant*
- *Automatic commissioning of standard features*
- *Cloud connectivity for commissioning / monitoring, but not required for operation*
- *Advanced programming and integration possible through web interface and mobile devices*

zencontrol

zencontrol.com

Room Controller



- The room controller provides a new way to install lighting
- Zero commission base builds (standard features)
- Installed in the field
- The zencontrol room controller provides power distribution and automatic grouping via its 10-channel output. With support for up to three input power circuits the room controller can supply up to 3 x 16 A.

Includes

- DALI 2.0 power supply
- DALI 2.0 application controller
- Ethernet 10 / 100
- 10 room control outputs
- 10 DALI relays (240V 10A max. AC1)
- 10 SELV switch inputs
- 2 volt-free SELV relays
- RS232 interface

Room Controller (cont)



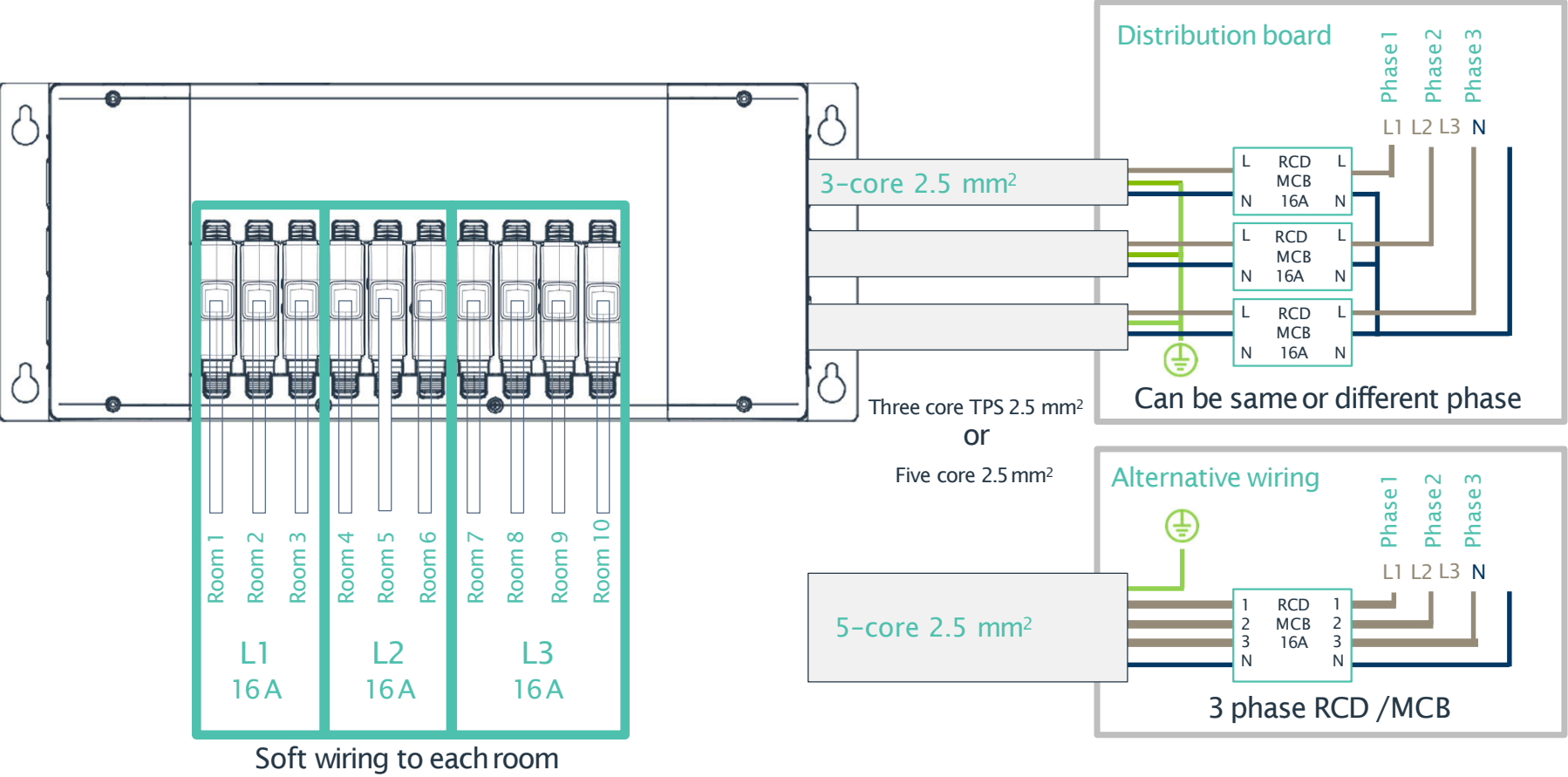
Out of the box

- 30-minute time out on sensors
- Room areas automatically grouped by output
- Devices addressed & setup
- Sensors work in presence mode
- Switches and sensors work together in a room automatically
- Switch has on/off and dimming control

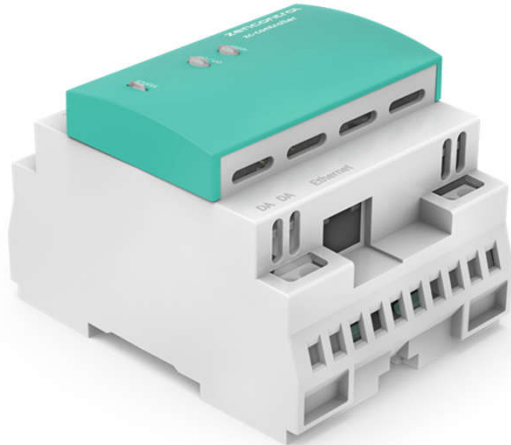
Before installation, dip switch settings can be adjusted to change between

- Absence and presence
- 4-time settings
- Standard single profile, or smart building profile

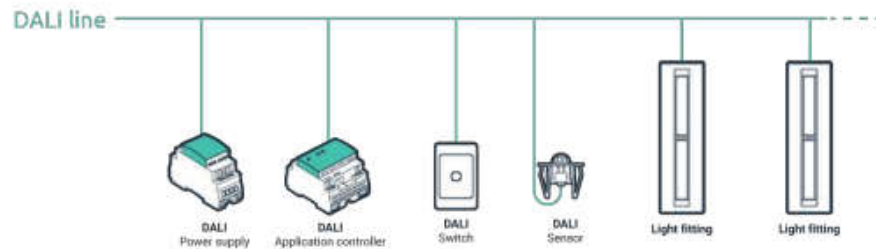
Room Controller Wiring



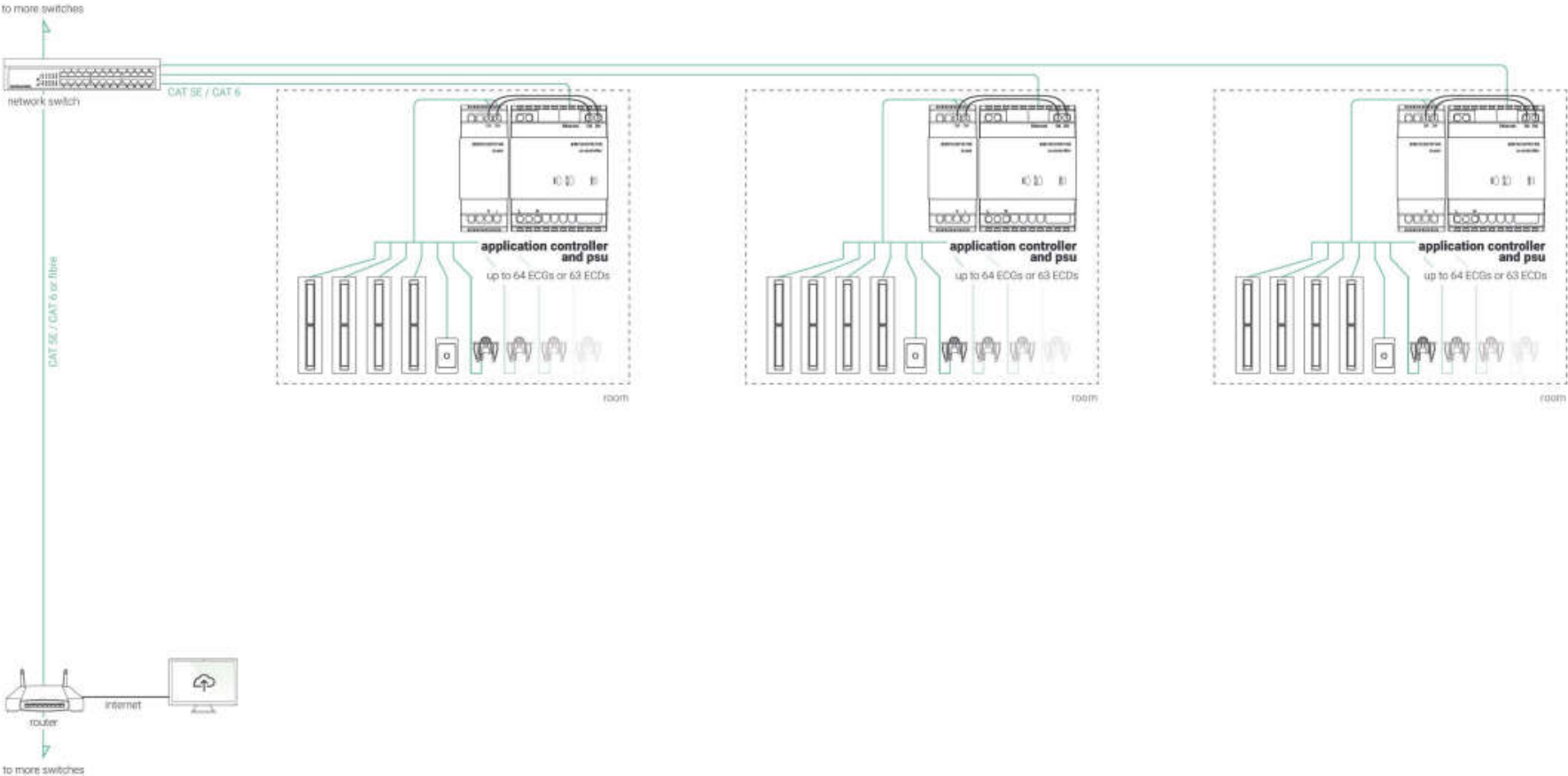
Application Controller



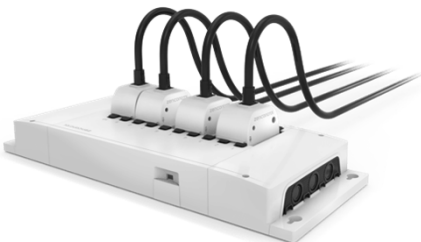
- Fast
- Best used with stairwells/lobbies/carparks
- Suits exposed ceilings
- Supports 64 luminaires (ECG) and 63 DALI control devices (ECD)
- Manual commissioning of groups/rooms
- Auto replacement features found on Room control are not available on application controllers.
- Install in conjunction with the Dali Power Supply



Typical Application Controller layout



Product Range



DALI Blind Controller



DALI Relay



DALI ScenePanel



Illuminated Push Button



DALI Application Controller



Sensors



DALI PSU



Push button



Dry Contact Input