

Design & Install Guide

A DALI-2 Lighting control system that can easily scale thanks to a unique distributed application controller design.



1 Select DALI-2 Lighting



- General Lighting to be supplied with DALI-2 Drivers.
- Architectural Lighting to be supplied with DALI-2 Drivers.
- DALI-2 Type 8 Driver to be selected for Tuneable white and RGBW Lighting.
- DALI-2 Relays and Phase Dimmers to be selected where DALI-2 Drivers are not available.

2 Select DALI-2 Emergency and Exit Lighting



- One lighting control system for the whole site.
- DALI-2 International Standard.
- Meets AS/NZS 2293.
- Multiple luminaire manufacturers to select from.
- Automated reporting and testing functions.

3 Select DALI-2 Movement Sensors and Switches



- DALI-2 Sensors and Switches connect directly to the DALI Bus.
- Movement sensors are available with in-built light level sensor for daylight harvesting.
- Various sensors can be selected for different applications. Eg. White, Black, 8m diameter, 24m diameter, high ceiling, low ceiling, IP65 etc.
- DALI-2 open standard allows interoperability between manufacturers.

Select and allow for DALI-2 Controllers and Power Supplies

- 2 Line or 4 Line DALI-2 Zone Controllers are available.
- DALI-2 Power Supplies to be allowed as required and based on number of DALI lines.
- Suggested rule of thumb is to allow for 1 or more DALI-2 Zone Controllers per lighting distribution board location.
- Number of DALI lines and controllers is determined by quantity of DALI addresses, including control gear, sensors and switches.



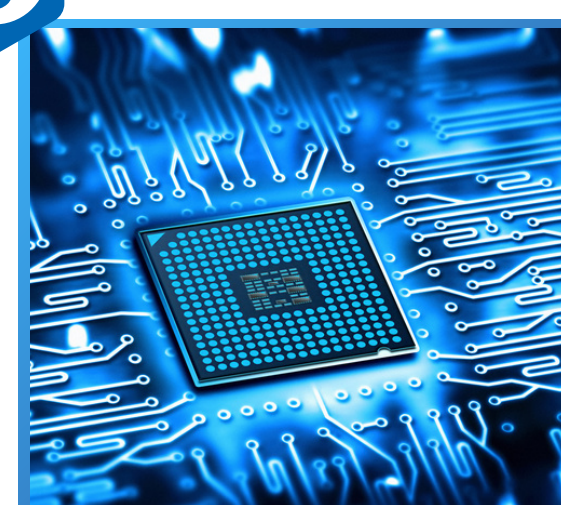
DALI-2 Design Allowances and Considerations

- 250mA MAX DALI line current per line.
- Allowance for up to 64 DALI Control Gear and 64 Control Devices per DALI line.
- As per the DALI Standard a 20% headroom on the DALI power supply must be allowed.
- A good rule of thumb for design is 50 DALI Addresses and 20 DALI Input Devices per DALI Line. This will allow for extra DALI addresses in the future and allow sufficient headroom on the DALI power supply.

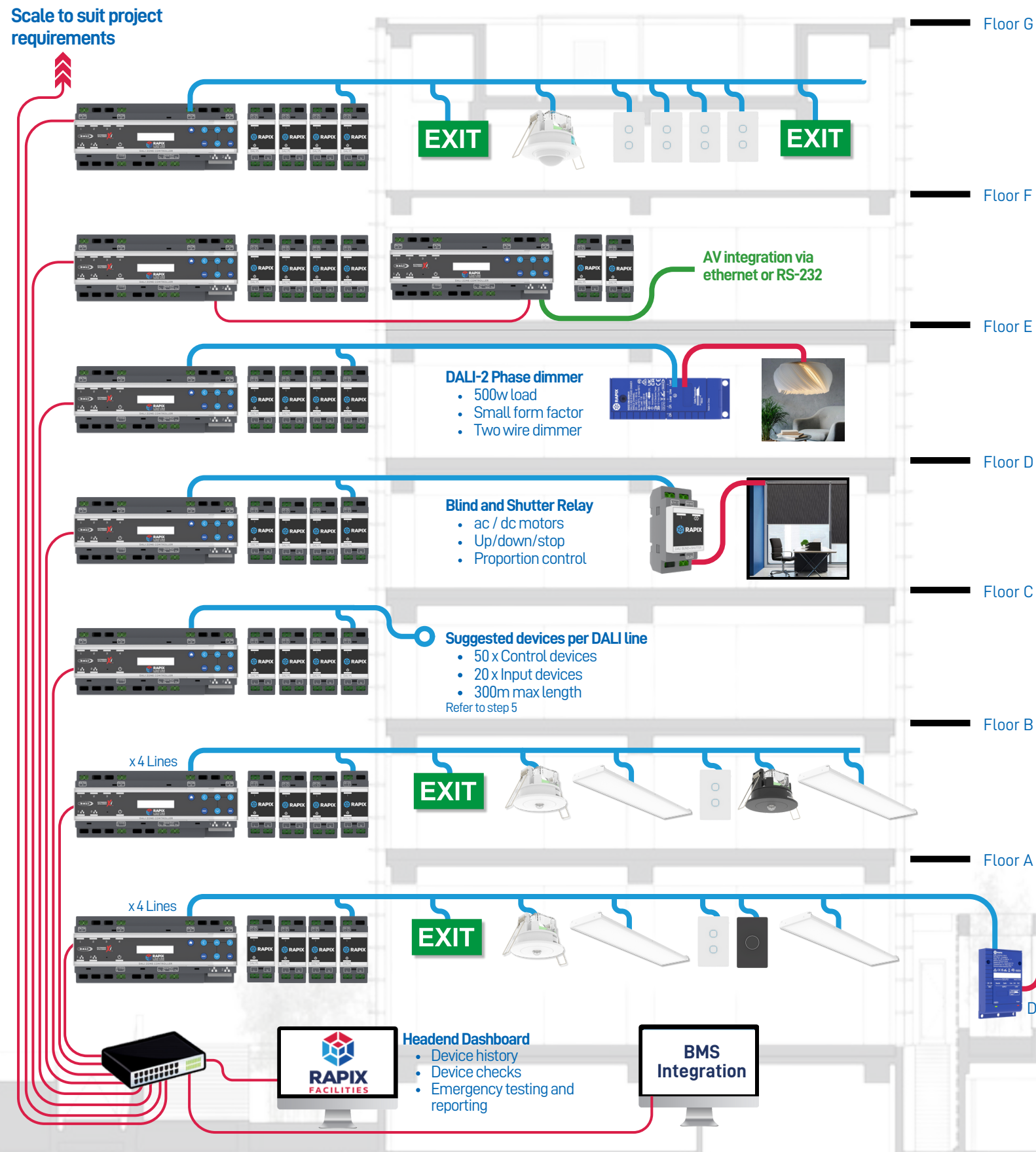


Security, Ethernet, 3rd Party Integration and Headend Visualisation and Reporting

- RAPIX DALI-2 Zone Controllers provide end to end encryption out of the Box.
- Encrypted communications between all Zone Controllers.
- 3rd Party Integrations available including BACNET, MQTT, MODBUS, RS-232 and JSON API.
- RAPIX Facilities available for Floor Plan Visualisation, Emergency Reporting, General Lighting Reporting, Device Reporting, Group Control, Scene Editing and Schedule Changes.



Typical Schematic



In a RAPIX DALI-2 system, the RAPIX Zone Controllers do not act as a central point of control: there is no central controller, and no single point of failure.



Ethernet and DALI

No additional Bus Systems or Gateways required.



The MIGHTY Zone Controller. One device to connect the whole building.



- 2 and 4 Channel models available
- 12M wide DIN rail mounted embedded controller
- Direct connect for up to four DALI lines
- Two Ethernet ports with in-built Ethernet switch for daisy chain connections
- LCD screen and control buttons with menu driven control interface for easy programming and initial commissioning



DALI-2 Design Guidelines

Bus Cable Size/Type

2C x 1.5mm or 2.5mm
Double Insulated



Maximum Length

← 300m per DALI line →



Qty Luminaires

64 Control Gear
per DALI line
(recommend 20% head room)



Qty Input Devices

64 Control Devices
per DALI line
(recommend 20% head room)



RAPIX products are DALI-2 tested and certified. This includes all controllers, gateways, relays, dimmers, switches and sensors.



01

A new IEC standard. Open protocol. Revised specifications. Tighter tolerances. Better performance.

02

A bus system for all your lighting system requirements including sensors, switches, light fittings, emergencies, relays and dimmers.

03

Manufacturer interoperability. Talk the same language across multiple vendors and manufacturers.

Product Range



DALI-2 Controllers



**DALI-2 Zone Controller
2 Channel & 4 Channel**

DGOZ-ZONEC-2DA
DGOZ-ZONEC-4DA



**DALI-2 Ethernet Interface
2 Channel**

DGLMIFE02

DALI-2 Relays, Blind and Shutter Relay and Phase Dimmer



**DALI-2 Relay
1 Channel**

DGOZ-RLY-16A-01



**DALI-2 DIN mount Relay
1 Channel & 2 Channel**

DGOZ-DINRLY-12A-01
DGOZ-DINRLY-12A-02



DALI-2 Phase Dimmer

DGOZ-DM-400W-01



DALI-2 Blind and Shutter Relay

DGOZ-DINBSR-01

Movement Sensors



**DALI-2 Movement and
Light Level Sensor**

DGOZ-SEN-PRLLSW



**DALI-2 Long Range Movement
and Light Level Sensor**

DGOZ-LRS-PRLLSW



**DALI-2 Movement and
Light Level Sensor**

DGOZ-SEN-PRLLSW-BK



**DALI-2 IP65 Long Range Movement
and Light Level Sensor**

DGOZ-SEN-PRLLSW-IP



DALI-2 Movement Sensor

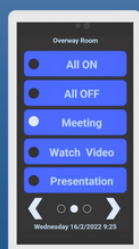
DGOZ-SEN-PRSW



**DALI-2 Miniature Movement
and Light Level Sensor**

DGOZ-SEN30-PRLLSW

LED Modular Switches and Touch Screen



**LCD 5" Capacitive Touchscreen
- White/Black trim**

DGOZ-TCSW-LR50-WH
DGOZ-TCSW-LR50-BK

*connects via DALI eHub



**DALI-2 LED Rotary Push Button
- Master/Slave**

DGOZ-DSW30M-RT
DGOZ-DSW30S-RT



**DALI-2 LED Classic Push Button
- Master/Slave**

DGOZ-DSW30M-PC
DGOZ-DSW30S-PC



**DALI-2 LED Diva Push Button
- Master/Slave**

DGOZ-DSW30M-PD
DGOZ-DSW30S-PD