RIDI GROUP CONTROLS

Control 3

Overview

Control^3 is a comprehensive building wide DALI lighting control system. It is based on the powerful Control^3 processor, a stand alone lighting controller which can also be integrated onto your building's IP network.

Control^3 provides exhaustive functionality and energy saving. The system is simple to install, cost effective and built around open industry standards.

Functions

Energy Saving

Motion Detection

DALI multisensor sensors detect occupancy and allow both presence and absence control regimes.

Using presence detection, lights switch on and off automatically with occupancy. With absence detection, lights need to be switched on manually but still switch off automatically.

Daylight Harvesting

A room with daylight is more natural and comfortable to work in. It also means that less artificial light is needed. Automatic dimming and switching of the lighting maintains the right lighting levels and reduces energy usage.

Time Control

Lighting output and settings can be timed to match your building's usage. Each area can respond to the type of usage based on day and time.

Energy Monitoring

The system constantly monitors and records the output of each light fitting. The resulting graph of power usage can be viewed for any areas within the building, allowing you to fine tune the settings for the best use of resources.

Comfort, Convenience and Wellbeing

Scene Setting and Sequences

Change the mood or function of a room at the touch of a button. And you can fine tune those scenes any time using the simple web based UI built right into each Control^3 system. Used with RGB luminaires we can create sequences of changing colour.

AV Integration

Connect to with your AV system so that at a touch of button the blinds will close, the projector and sound system will switch on and of course the perfect light level will be set.

Circadian rythms and Tuneable White

Daylight is never static, it changes in colour and intensity from dawn to dusk. Used with RIDI group tuneable white luminares, Control^3 is able to mimic this cycle to promote wellbeing.

Smart Circulation

We don't hold on a whole building's corridors and circulation areas, jut because one office is occupied.

Smart Circulation puts a bubble of light around building users so that they never enter a dark corridor or stairwell, while minimising the lit area to save energy.

Functions

Maintenance, Monitoring and BMS integration

Fault Monitoring

Control³ constantly checks all the DALI devices in the building. Should a fault occur, such as a lamp failure, a severed cable or power outage it will immediately raise a fault alarm and if required notify you by email.

Emergency Testing

Emergency lights are automatically tested with both functional and duration tests. The test results are stored in the system and can be accessed via a web browser or sent via email.

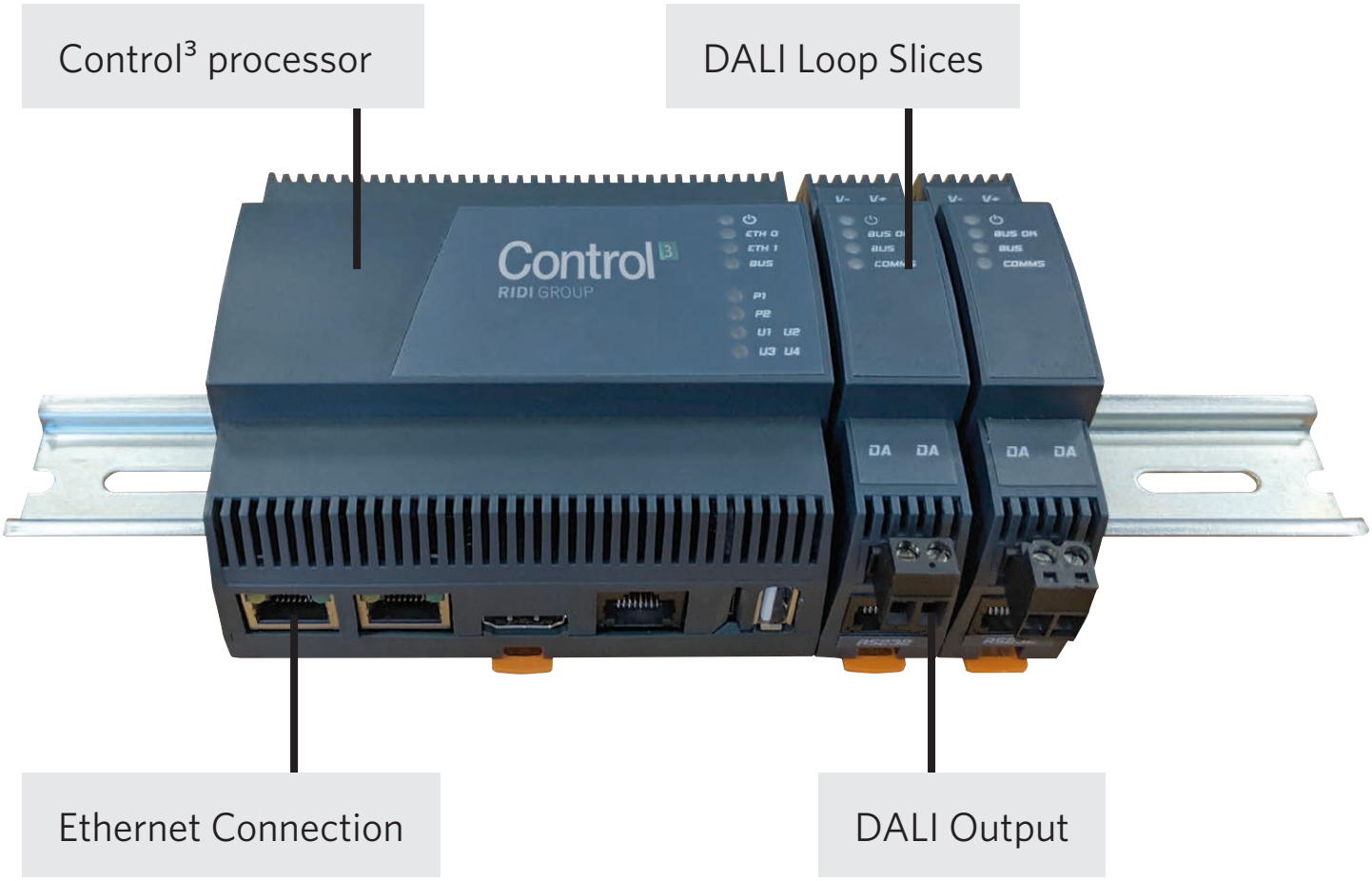
Occupancy Monitoring

Control³ knows where people are in your building and records that information for you. For each area you can see when people are present and get an indication of how busy that area is. Great information for building managers and retail operators.

BMS Integration

Control³ has built in communication for BACnet and TREND building management protocols. Information such as occupancy status, light levels, emergency testing results and alarms can be passeed to the BMS. In addition lighting setings can be accessed and changed directly by the BMS.

Hardware



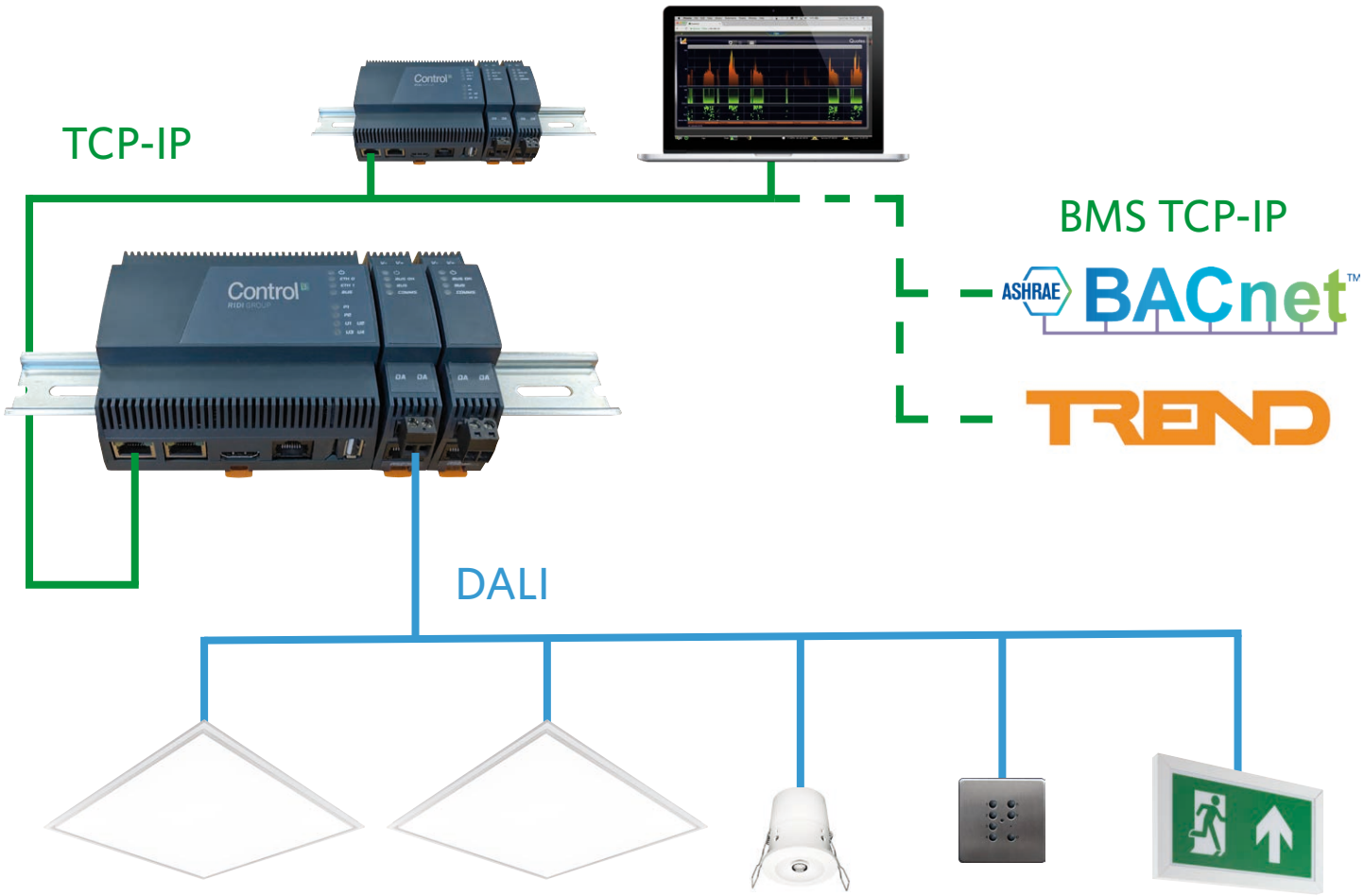
The Control³ processor contains all the software and has an integrated web server allowing setup control and modification of the entire system without the need to install specialsed software on the clients PC.

The modular DALI Loop Slices connect the system to the DALI light fittings and devices throughout the building. Any number from one to eight slices can connect to the processor, allowing up to 512 DALI addresses per processor.

Multiple processors may be networked to allow unlimited DALI addresses and a truly building wide management.

Fitting on standard top hat DIN rail, the Control 3 system is simple to install and efficient in terms of space required.

Topology



Control^3 processors are connected with a standard TCP-IP ethernet network. Any laptop or PC on the network can access the web based user interface for control and configuration.

Control^3 can also connect to either a BACnet or Trend BMS via ethernet to allow transfer of data about the lighting between the systems.

DALI is used to connect all lighting, emergency lighting, multi-sensors and switches/scene plates. A maximum of 64 devices can be connected to any DALI slice, with a maximum DALI load of 250mA. Up to 8 DALI slices may be connected to one processor for a total of up to 512 DALI devices per processor.

Components

A multitude of DALI components can be connected to the Control[3] system to create a complete lighting control and management system.

System Devices

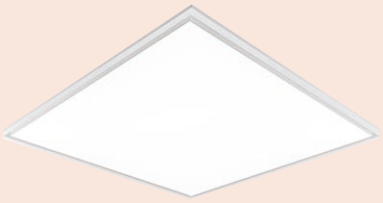
Processor

Up to 8 slices, 512 DALI devices

DALI Slice

Modular comms and DALI PSU for up to 64 DALI devices or 250m

Output Devices



DALI Luminaires

LED, Fluorescent, HID, Halogen, Tuneable White / RGB (DT8)

Emergency Luminaires

Self-contained, integrated into luminaires, central battery

Relays

Stand Alone, Multi Channel, Integrated into luminaires. T

Input

Multisensors

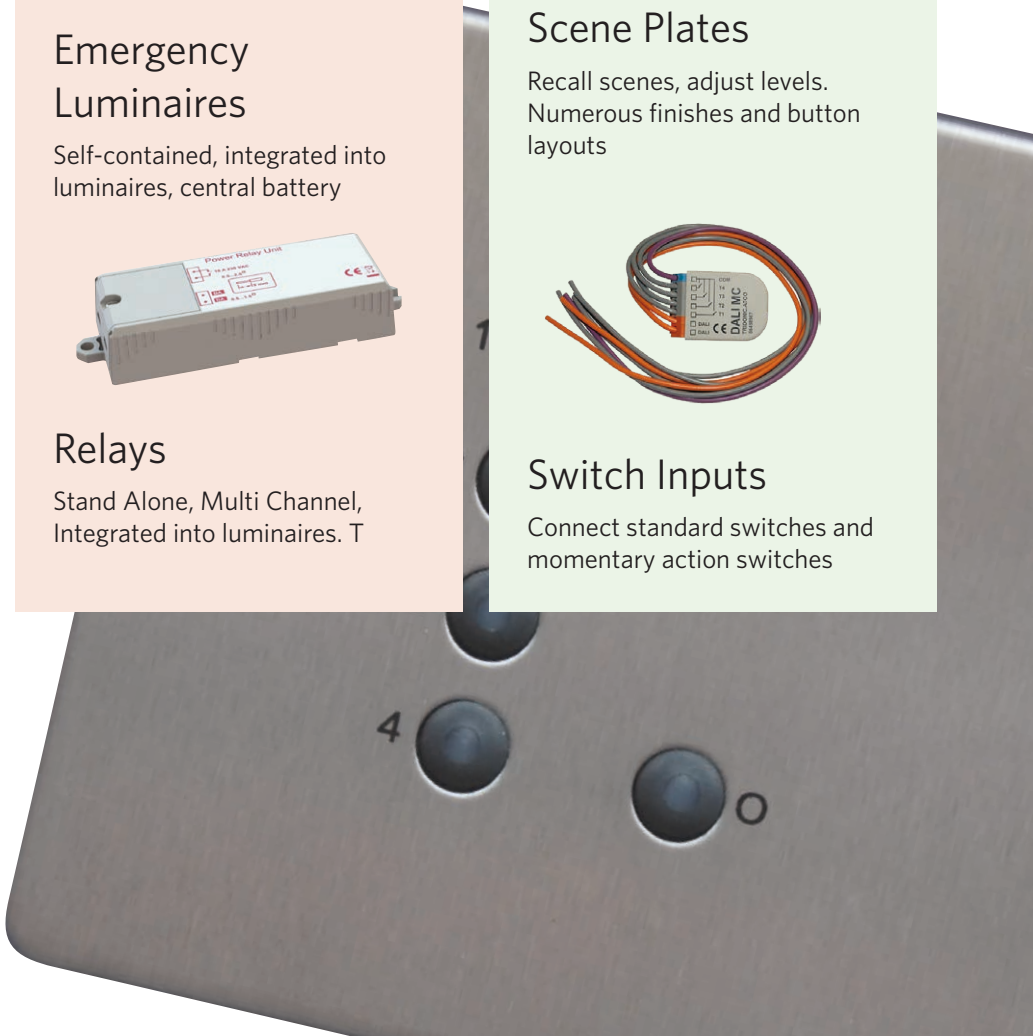
Movement, Daylight sensing. Recessed, Surface & Integral in luminaires

Scene Plates

Recall scenes, adjust levels. Numerous finishes and button layouts

Switch Inputs

Connect standard switches and momentary action switches

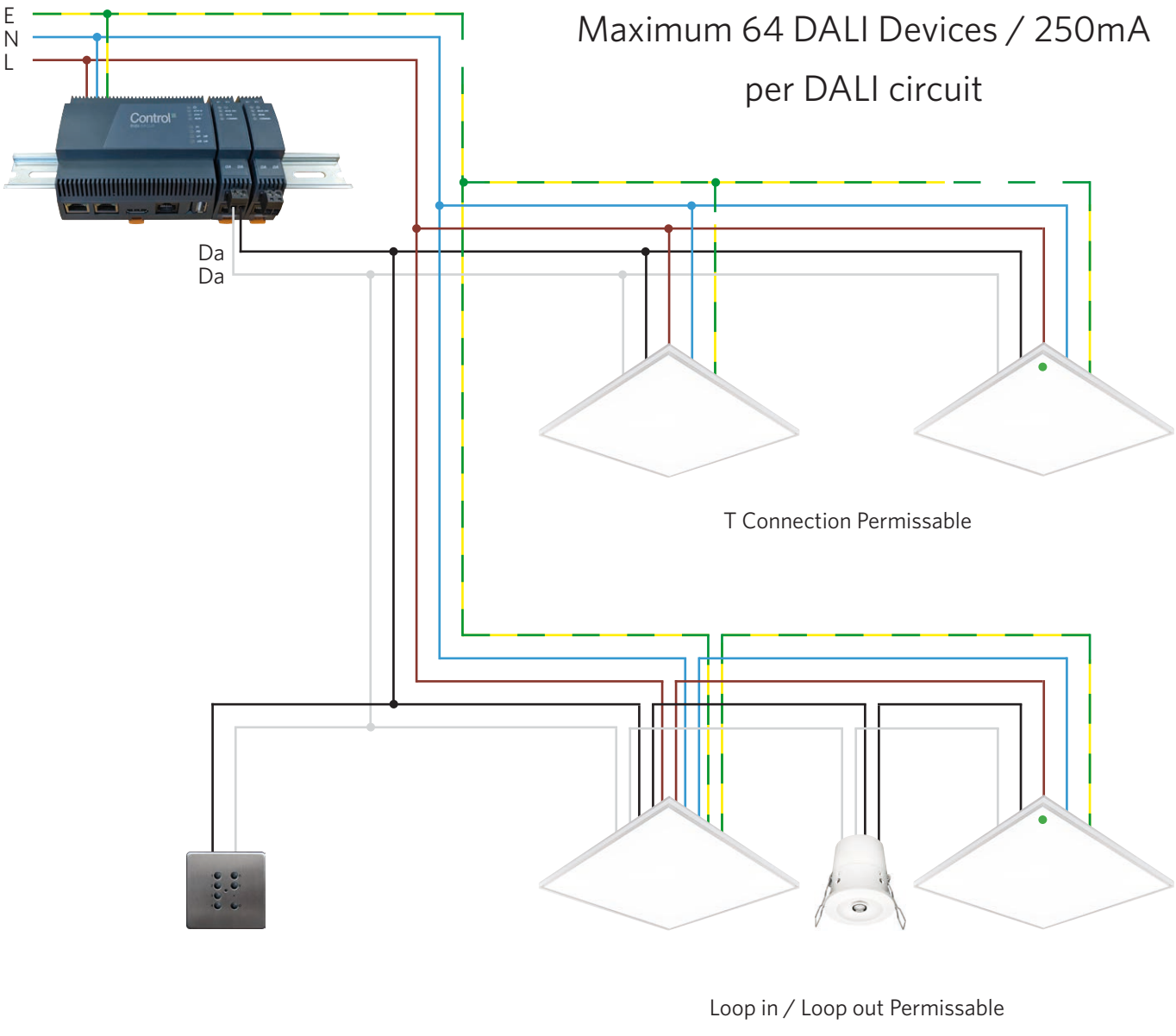


Wiring

DALI wiring is designed for flexibility and simplicity. Each luminaire is connected to the mains supply and also to a two core DALI circuit which allows two communication.

The DALI circuits should be wired in 1.5mm2 mains rated cables, and can be arranged in daisy chain, star topologies or a mixture of the two. DALI circuits should not form a loop.

DALI sensors, scene plates and switches are powered by the BUS and do not require connection to mains.



BMS Integration

Control^3 appears to the BMS as a number of outstations, with each outstation representing a group of lights (room). A maximum of 100 groups can be exported from each Control^3 processor to the BMS in common with the limits of a Trend LAN.

The following data are able to be transferred between Control^3 and the BMS.

Sensors

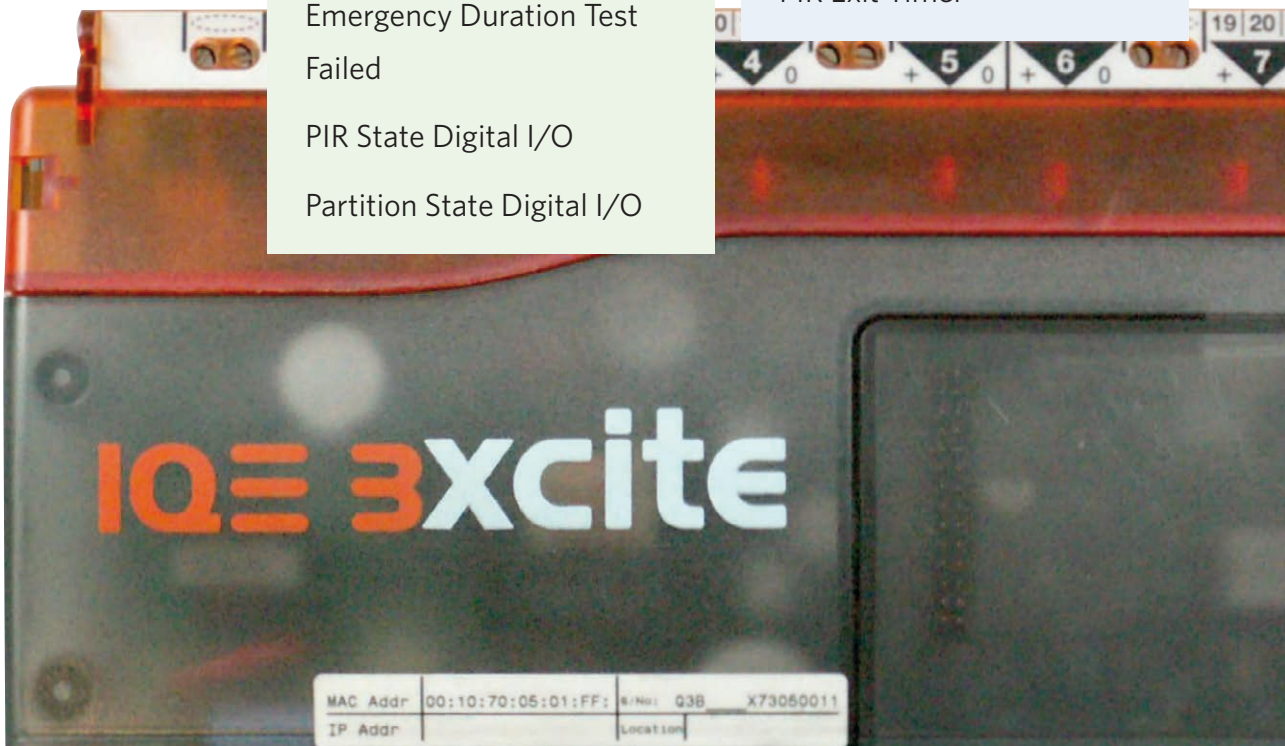
- Average Ballast Level
- Lux Level
- Button State
- No of Failed Ballasts

Inputs

- PIR State
- Partition Status
- Common Fault
- Lamps Energised
- Emergency Function Test Running
- Emergency Function Test Failed
- Emergency Duration Test Running
- Emergency Duration Test Failed
- PIR State Digital I/O
- Partition State Digital I/O

Knobs

- Setpoint
- Min Level
- Max Level
- Current Macro Scene
- Time Period (Circadian)
- Manual Level
- 0-Auto/1-Hand/2-Off
- PIR On Timer
- PIR Min Timer
- PIR Exit Timer



Parts

System Devices

Control[3] Central processor runs all control processes and supplies power and comms to DALI slices.

Part Number	97-LIGOV2
Power Supply	12-36 VDC
Max DALI Devices	512
Max Connected Slices	8

DALI Slice provides comms and BUS power to DALI circuit.

Part Number	97-LIGOV2
DALI BUS Voltage	22VDC
DALI Bus Current (Max)	210 mA
Max Connected Addreses	64

DALI Input Devices

Medium range recessed DALI multisensor featuring PIR movement detection and light level sensing

Part Number	97-5DPI-14RC
DALI Power Consumption	6mA
DALI Addresses	1

Wide range recessed DALI multisensor featuring PIR movement detection and light level sensing

Part Number	97-02-5DPI-41RC
DALI Power Consumption	10mA
DALI Addresses	1

Medium range recessed DALI multisensor featuring PIR movement detection and light level sensing for mounting into luminaires

Part Number	97-5DPI-14F
DALI Power Consumption	6mA
DALI Addresses	1

DALI scene plate allows recall of lighting scenes and adjustment of levels. Four scene buttons, raise, lower and off. Brushed Steel

Part Number	97-125-202
DALI Power Consumption	15mA
DALI Addresses	1

DALI Input Devices

DALI Switch input. Allows the connection of up to four momentary action switches. Inputs are freely configureable.

Part Number	97-DALI-MC
DALI Power Consumption	6mA
DALI Addresses	0
eDALI Addresses	1-4

DALI Output Devices

Single Channel relay for switching non DALI loads. Inline case with cable strain relief.

Part Number	97-492
DALI Power Consumption	2mA
DALI Addresses	1
Switching Channels	1
Max Switching Load	16A

Eight Channel relay for switching non DALI loads. DIN rail mounting.

Part Number	97-498
DALI Power Consumption	2mA
DALI Addresses	8
Switching Channels	8
Max Switching Load	8x16A

Four Channel relay for switching non DALI loads. DIN rail mounting.

Part Number	97-494
DALI Power Consumption	2mA
DALI Addresses	4
Switching Channels	4
Max Switching Load	4x16A

1000W universal dimmer. For dimming most common load types. Leading or trailing edge dimming. Din rail mounted.

Part Number	97-452
DALI Power Consumption	2mA
DALI Addresses	1
Dimming Channels	1
Max Dimming Load	4.4A

1-10V / DSI Convertor. Connect and dim analogue or legacy digital dimmable ballasts. Integral 16A relay for analogue dimming. DIN rail mounting.

Part Number	97-472
DALI Power Consumption	2mA
DALI Addresses	1
Dimming Channels	1
Max Switching Load	4x16A
Max DSI Ballasts	50
Max 1-10V Ballasts	16

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