

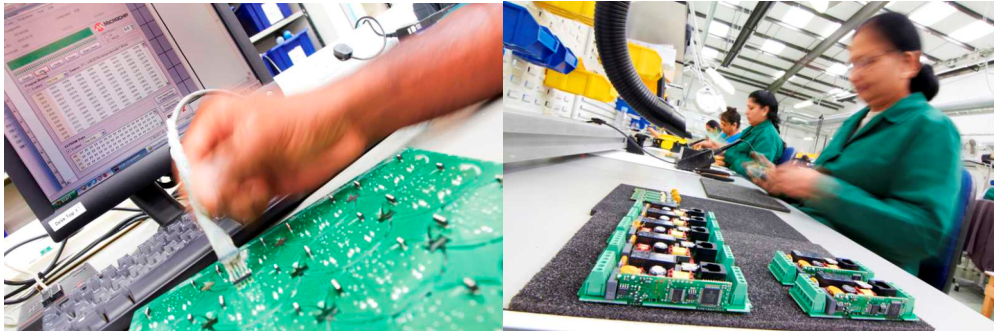
TECHNICAL SUBMITTAL

Contract Number	Project Name	Technical Submittal No.	Issue Date
CES529	Pall Mall	CES529-CES-XX-XX-TS-E-0002	03/06/24
Revision	Author	Services	Status
P02	Gary Macrauld	Lighting Control	Preliminary
Description of items issued for Approval/Comment			
Please find attached technical submittal for the above-mentioned services.			
Technical Information Issued			
1) Tech Sub Pall Mall, Manchester P02			

Comments by Consultant/Client:		
STATUS		
☐	(A)	ACCEPTED – NO COMMENTS
☐	(B)	ACCEPTED – WITH COMMENTS
☐	(C)	REJECTED – WITH REASONS
Completed by reviewing consultant		
Approving Persons Name (Employee's name)	Name of Employer (Company Name)	Review Date

Technical Submittal Pall Mall, Manchester





Company Introduction: -

- Established for over 40 years
- The largest manufacturer in the UK of lighting control energy saving products.
- Manufactures over 50,000 finished products per month
- 35000 square foot factory
- Product 1st time failure rate less 0.01%
- 5 Year Product Warranty (subject to terms and conditions)
- Every product fully tested before leaving the factory
- Factory located in Hangar Lane London NW10
- Nationwide sales force over 40 people
- CP employee number over 160
- 65% of products ordered are shipped within 48 hours
- Supply to many UK lighting manufacturers (Branded)
- Large in-house technical support (nationwide)
- In house R & D department
- We are constantly innovating new energy saving products



LIGHTING CONTROL -

Application – Hybrid system of Dali addressable in CAT B tenant spaces, landlord meeting spaces and basement gym. All other areas 230v switched fixed output.

It is proposed to install a hybrid lighting control system into Pall Mall, Manchester. The system will provide energy conservation via automatic control of luminaires.

There will be area controllers located throughout the building which will be located adjacent to the relevant DB's. Areas with inaccessible ceilings will be controlled via hardwired DALI controllers which will be located adjacent to the DB's, these will be linked back to the relevant area controller by a Belden twisted pair cable type 8719 mains rated to 600v. The DALI controllers will provide a DALI signal to the luminaires, DALI PIR's and DALI switch input units. This system will provide individual control for each luminaire and control device. Any area that does not have the requirement for dimmable controls such as W.C's, CAT A office areas etc will be controlled via a 230v presence detector. The time out periods of these detectors can be set via a remote control.

System features:

- Daylight linking
- Presence or absence detection
- Zonal override
- Zonal control
- Notional corridor lighting
- Time scheduling
- Individual addressing of system inputs and outputs

Basement Gym:

The lighting installation to this area will be dimmable and controlled from local 7 button scene set plates. Each scene set plate will provide 8 scenes, off and raise and lower buttons. PIR's will be provided and set to absence detection with a time out period set to 20 minutes. Scenes TBC.

Basement Contemplation Room:

The lighting installation to this area will be dimmable and controlled from local 7 button scene set plates. Each scene set plate will provide 8 scenes, off and raise and lower buttons. PIR's will be provided and set to absence detection with a time out period set to 20 minutes. Scenes TBC.

Lower Ground/Ground Floor Lounges:

The lighting installation to this area will be dimmable and controlled from local 7 button scene set plates. Each scene set plate will provide 8 scenes, off and raise and lower buttons. PIR's will be provided and set to absence detection with a time out period set to 20 minutes. Scenes TBC.

Focus Rooms:

The lighting installation to this area will be dimmable and controlled via a 2 position retractive switch to provide on, off, dim up and dim down. PIR's will be provided and set to absence detection with a time out period set to 20 minutes.

Multi Person Office Lighting:

The lighting installation to these areas will be dimmable and controlled via PIR's. The presence time will initially be set to 20 minutes in all open plan areas. Where applicable, luminaires adjacent to the windows will dim should sufficient daylight be detected.

Meeting Rooms:

The lighting installation to this area will be dimmable and controlled from local 7 button scene set plates. Each scene set plate will provide 8 scenes, off and raise and lower buttons. PIR's will be provided and set to absence detection with a time out period set to 20 minutes. Scenes TBC.

CAT A Office Space, Landlord Circulation Spaces, Changing Areas, showers & WC's:

The lighting installation to these areas will be controlled via PIR's. The presence time will initially be set to 20 minutes.

Staircases:

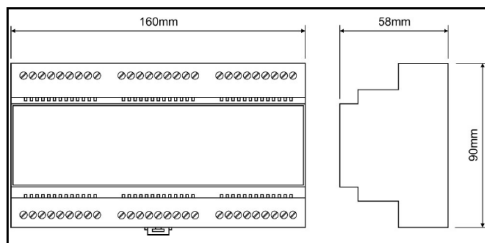
The lighting installation to these areas will be controlled via PIR's. The presence time will initially be set to 20 minutes. The PIRs will be programmed to operate the lighting in the level you enter, along with the lighting above and below so you never enter darkness.

Plant Rooms, Risers & Comms Rooms:

These areas will be manually switched.

Product Details

EBR-HW-AC-ET – Supplied with enclosure **Network area controllers**



The RAPID Area Controller has 3 switchable field BUS outputs for connection of floor networks including LCMs, hardwired modules, and DALI gateways.

In addition to this there are 3 corresponding RJ45 ports for RAPID field BUS monitoring via the engineer's laptop. There is also an optional TCP/IP addressability via an on-board Ethernet Port which allows for connectivity to the building network.

Connectivity

Mains is connected and looped (if required) by the dual Live, Earth, and Neutral terminals. 8 ELV inputs also allow for direct connection of switches to the Area Controller, there is also an integrated volt free output for connection of emergency test or other interfaces.

Timed Events

Built into the new Area Controller is a time scheduler with battery back up to allow for timed events such as local lighting and emergency test schedules. Functions such as emergency lighting test can now be easily implemented via the push buttons and numerical keypad on the front of the area controller.

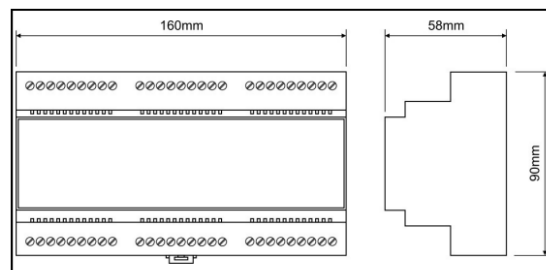
Key features:

- 3 switchable Field Bus outputs
- Ethernet connection
- 8 ELV switch inputs
- Numerical keypad with 3 access level PIN lock
- Easy to mount enclosure (supplied complete)
- 5-year warranty

Pre-programmed emergency test durations of 3 hours, 1 hour and 10 minutes are available. The numerical keypad allows for a PIN lock as well as three levels of access for an engineer, contractor, or facilities management. There are also status LED's for each RAPID field BUS network and the backbone network between area controllers.

EBR-HW-DALIG64 – Supplied with enclosure

Hard wired addressable DALI lighting control module



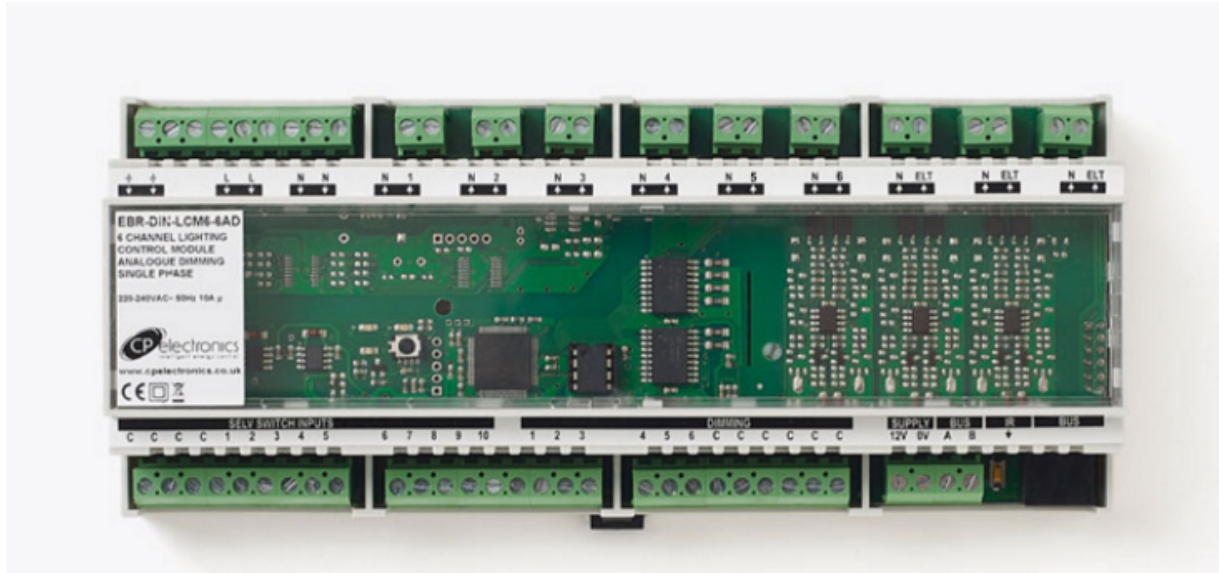
The DALI 64 can control and be programmed to address DALI devices such as fluorescent or LED lighting ballasts. There is a relay providing a switched live output and a second relay for emergency test. Additionally, the EBR-DIN-DALIG64 is a Rapid lighting control module designed for controlling 64 addressable DALI devices with a volt free contact to control external devices.

This LCM also has a total of 8 switch inputs and 2 DALI connections.

Used in conjunction with our range of DALI presence detectors a single DALI wire can be run to digitally control all the lighting and power the sensors. This saves time and money on additional specialist cable. It is ideal for chilled beam, continuous run lighting, and core areas. A maximum of 10 detectors and 40 ballasts is permitted on any single DALI network cable run. The number of ballasts can be increased if the detector number is decreased.

EBR-HW-LCM6-6

6 Dali/DSI Broadcast Channels with relay switching outputs



The DIN rail series of lighting control modules provide a flexible solution for the control of lighting loads where a traditional 10 way lighting control module (LCM) may not be practical.

The units can be supplied as DIN rail modules or mounted within a DIN rail enclosure (HW in part code).

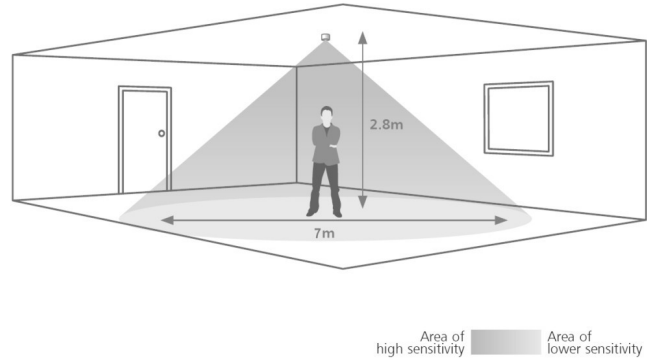
The EBR-DIN-LCM6-6AD & EBR-DIN-LCM6-6DD series of lighting control modules (LCMs) are used as part of the RAPID lighting control system to control lighting. The RAPID DIN rail mounted LCM has six individually addressable outputs to allow for fully independent control of DALI/DSI (DD version), 1-10V (AD version) or switching only fittings.

Key features:

- Every channel of input and outputs can be regrouped by software
- Six channels of relay switching
- Six channels of dimming
- 10 SELV wall switch input points
- Emergency light test capability with an additional test relay

EBR-CPIR-Dali

Networked ceiling presence and daylight detector



The EBR-CPIR-DALI presence detector provides automatic control of lighting. It is connected to the RAPID DALI Gateway via a DALI network.

Functioning as a presence detector, the unit can turn lights on when a room is occupied and off when the room is empty.

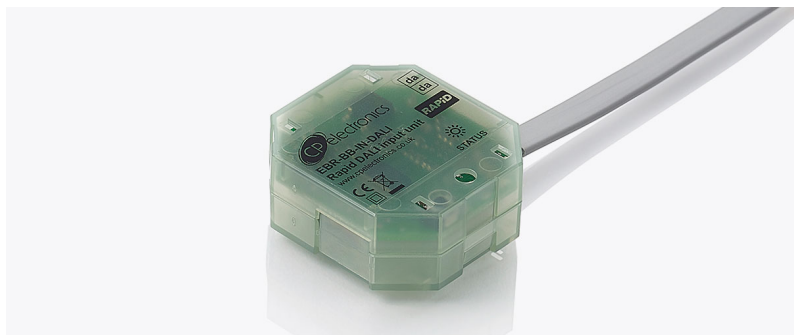
The detector can be mounted either flush into a ceiling tile or using a surface mounting box.

An adjustable internal light sensor provides light level information to the RAPID system to allow lights to be kept off if sufficient daylight is present, and to enable maintained illuminance for dimming systems.

Connection by a DALI 2 core flex.

EBR-BB-IN-DALI

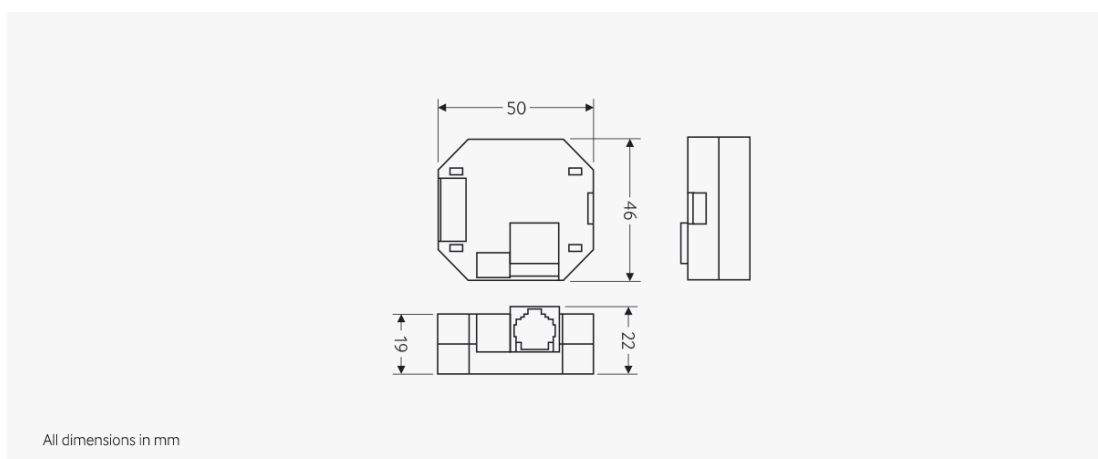
Networked DALI switch interface



The EBR-BB-IN-DALI input unit provides an interface between a RAPID DALI lighting control system and external devices such as switches, security systems and AV equipment.

The unit features 7 volt-free switch inputs that can be activated by the contact closure of pushbuttons, switches or relays. Activating an input causes the unit to transmit a scene, raise or lower light levels messages to the DALI system.

Connection by a DALI 2 core flex.



EBR-4SC

Rapid Scene Setting Plate



The EBR-4SC provides advanced scene setting functions for the Rapid Lighting Control System. When used in conjunction with Rapid dimming LCMs and suitable dimming luminaires, complex dimming can be achieved to suit applications from conference rooms to individual offices. This product provides for the selection of scenes and the programming of LCMs to provide set dimming levels. The EBR-4SC provides the following features:

- Up to 8 scenes selectable using 4 buttons, plus a separate off scene
- Up/down override
- Adjustable fade rates up to 99 minutes, individually selectable for each scene
- Room divide (if applicable)
- Support for up to 99 individual dimming circuits
- IR support for scene selection and programming
- Keypad scene programming

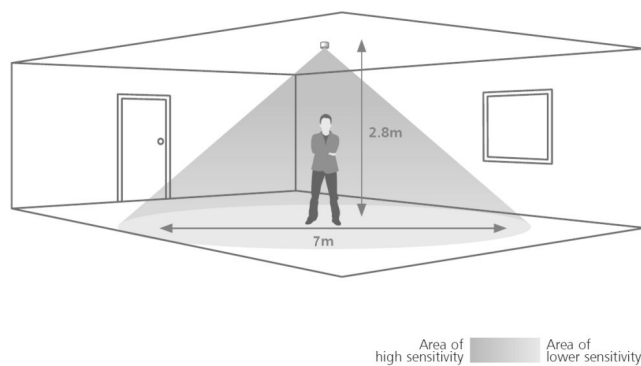
EBDSPIR-AT-PRM

Compact, flush mounted, ceiling PIR presence detectors



These compact PIR detectors provide automatic control for lighting, heating and ventilation loads. The PIR sensor can be mounted either flush into a ceiling tile or using a surface mounting box.

The low-profile design means the unit can be mounted in a narrow ceiling void. No external control boxes are required as the unit is self-contained. The simple plug-in connections reduce installation time. The optional infrared remote handset allows the user to override the set up on some models. PRM, DD and AD versions' functionality is fully programmable using either the UHS5 or UNLCDHS handsets.



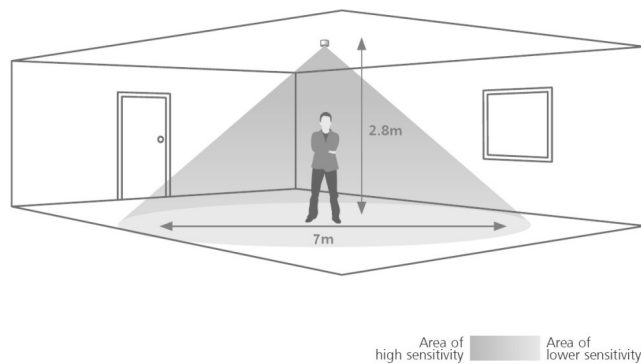
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EBDMR-PRM

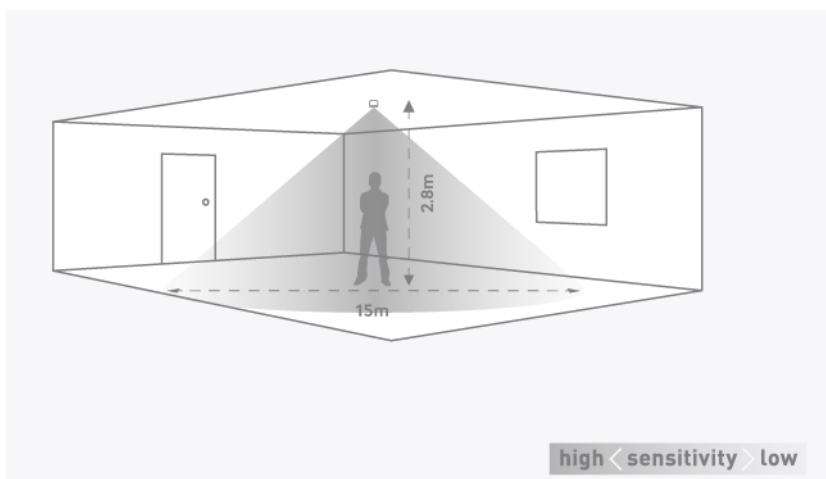
Mid-Range Recessed Presence Detector



Part of our mid-range, ceiling, flush mounted detectors. A superior detection pattern using a high performance faceted lens suitable for use in open plan spaces or where a larger detection range is required.

Key features:

- New mid-range lens with concentric lens facets for improved detection
- 360° presence and absence detection
- Ideal for open plan offices
- IP40 rated



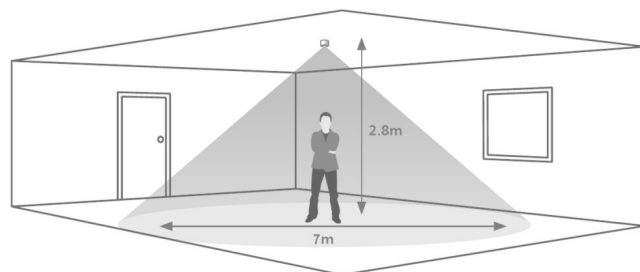
EBDSM-PRM

Surface Mounted Presence Detector



These compact surface mounted PIR detectors provide automatic control for lighting, heating and ventilation loads. No external control boxes are required as the unit is self contained.

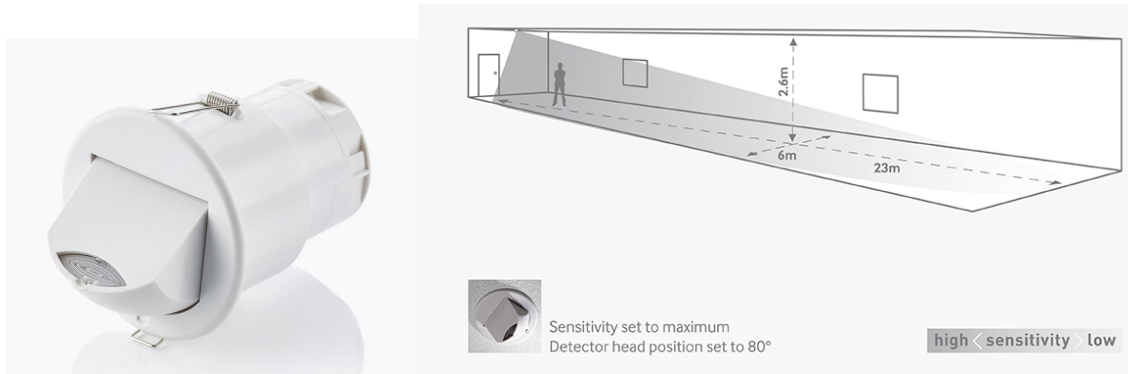
Three models are available: premium (PRM), direct dim (DD), and analogue dim (AD) all of which will switch a wide range of luminaires. The direct dim variant controls DALI or DSI digital dimming ballasts whilst the analogue dim variant controls 1–10V dimming ballasts.



Area of high sensitivity Area of lower sensitivity

MWS3A-PRM

Adjustable head, long range, flush mounted, ceiling, microwave presence/absence detectors



Unlike fixed head microwave presence detectors the MWS3A offers a unique presence/absence detection capability by using an adjustable head.

This incorporates an innovative locking mechanism to prevent tampering. By changing the angle of the head, different detection patterns can be achieved to suit the application. An integral sensitivity adjustment allows the detector to be fine-tuned to its environment.

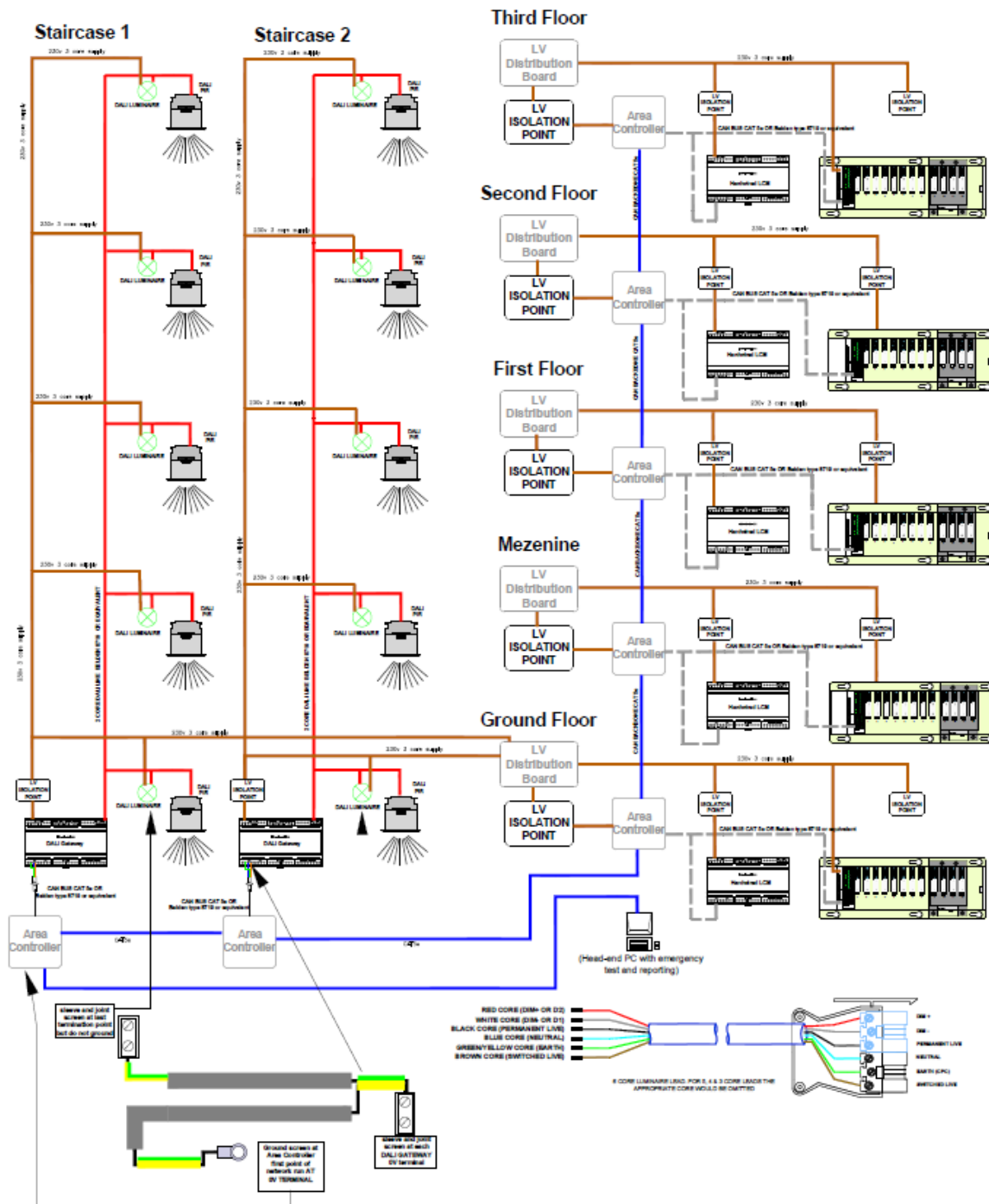
The MWS3A is ideal for corridor lighting control.

The microwave presence detector is self-contained and can be flush or surface mounted using a separate detector back box. The microwave sensor is sensitive to movement. The simple plug-in connections reduce installation time.

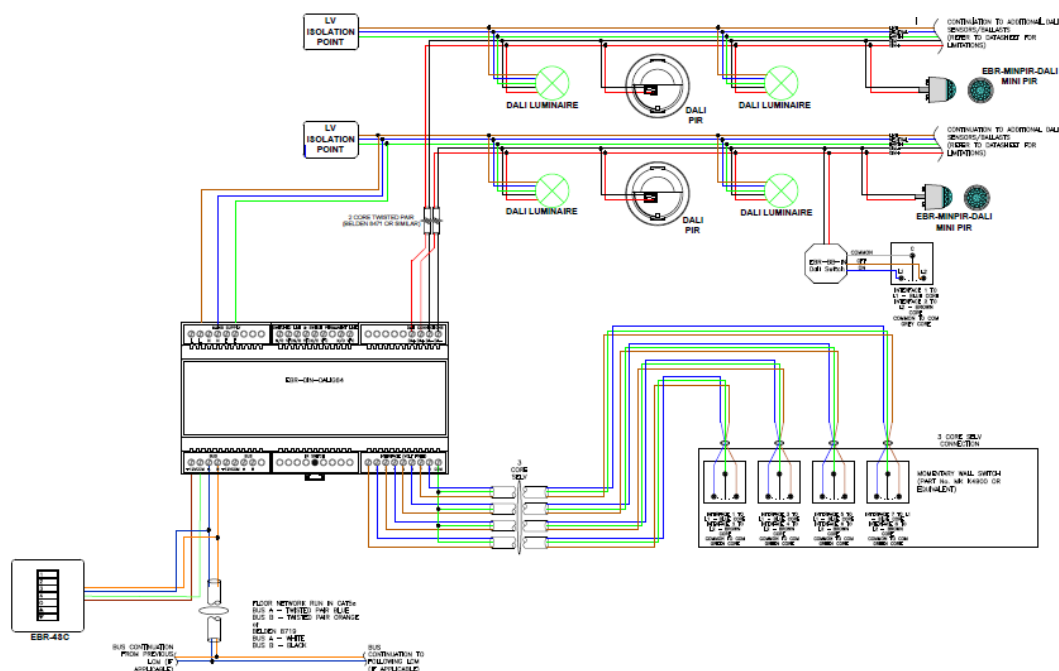
The optional infrared remote handset allows the user to override the set up on some models. Functionality is fully programmable using either the UHS5 or UNLCDHS handsets.

Schematics

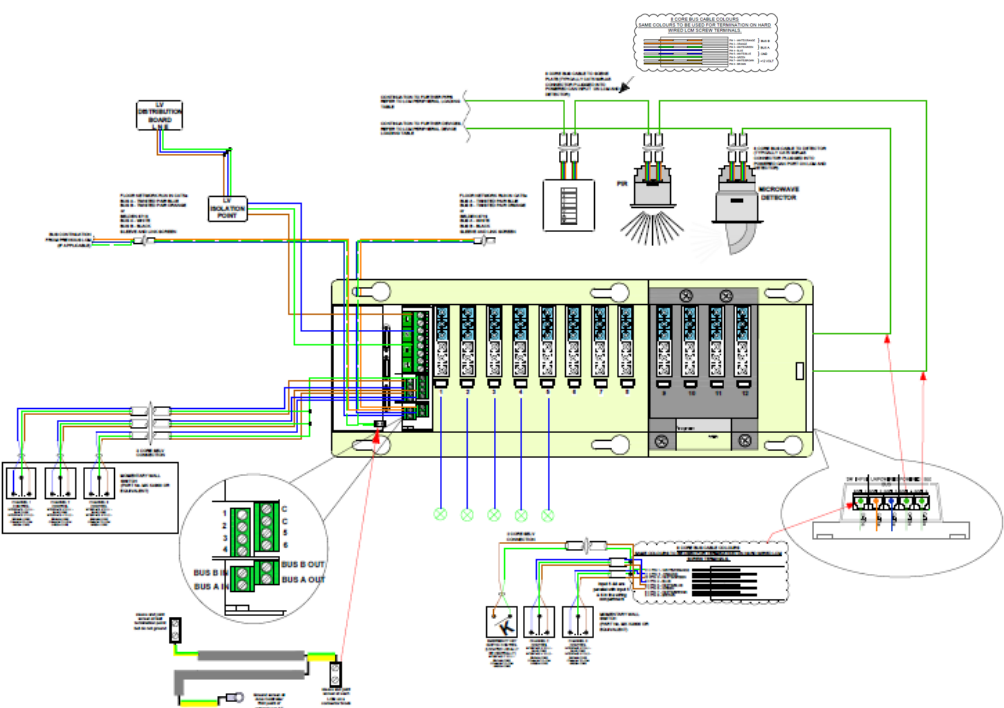
Typical Building Schematic



Typical Hardwired DALI Controller Connections



Typical Pluggable Lighting Control Module Connections



Example Projects – Aberdeen Arena



- ☐ Total Value £150,000 lighting control
- ☐ Contractor FES
- ☐ Approximately 3000 DALI addresses
- ☐ Front end computer package with scene control app
- ☐ Pluggable DALI LCM in the offices
- ☐ Hard Wired LCMs
- ☐ Scene setting in meeting rooms, bar areas, lounges & VIP booths
- ☐ Room partition for multi room use
- ☐ AV interfacing

Example Projects - Royal Mail Mount Pleasant



- ☐ Total Value £250,000 lighting control
- ☐ Contractor Michael J Lonsdale
- ☐ Approximately **8000 DALI addresses**
- ☐ Pluggable DALI LCM in the offices
- ☐ Hard Wired LCMs in the sorting areas
- ☐ Front end PC with full **DALI Emergency monitoring**
- ☐ Works carried out over 18 months

Example Projects - Euston Tower (Warren Street)



- ❑ Total Value £150,000 lighting control
- ❑ End users are Atkins Global and Faithful & Gould
- ❑ Front end computer package
- ❑ Pluggable DALI LCM throughout
- ❑ Works carried out in phases

Example Projects - Channel 4 (Victoria)



- ☐ Total Value £60,000 lighting control
- ☐ Contractor KLM (Ex Trilectric)
- ☐ Pluggable DALI LCM in the offices
- ☐ Hard Wired LCMs
- ☐ Front end PC
- ☐ Scene setting in meeting rooms
- ☐ Room partition for multi room use