CP electronics
ENERGY CONTROLS

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Product Catalogue

Energy control for commercial, professional and domestic environments

Catalogue Issue 5.5

Welcome to CP Electronics

Leaders in energy saving controls for commercial, public sector and domestic environments

Our family of energy saving controls and services:

Our flagship range of programmable energy saving controls, systems and connection products for lighting, heating and ventilation.

www.cpelectronics.co.uk

Our off-the-shelf range of easy-to-fit and plate-mounted energy saving controls and connection products for lighting, heating and ventilation.

www.green-i.co.uk

Download free energy saving lighting specifications for instant compliance with Part L of the building regulations and BREEAM.

www.cpelectronics.co.uk/apps

Training

Helping planners, specifiers and contractors to understand the full capabilities of the CP Electronics and green-i ranges.

www.cpelectronics.co.uk/training

Technical Services

Benefit from full support across our entire product range including project consultancy, commissioning and on-site assistance.

www.cpelectronics.co.uk/support-services

OEM

Bespoke solutions for a wide variety of large-scale commercial, professional and public service projects.

www.cpelectronics.co.uk

The global move towards energy saving

Reducing the energy consumption of buildings is no longer something to work towards. A range of pressing global drivers has made it an immediate requirement.

The unprecedented rise in energy prices, coupled with the radically altered economic landscape, has forced organisations to reduce their energy overheads in order to remain competitive.

Greater focus on preserving our natural environment is also forcing organisations to reduce their carbon footprint, not only to meet new legislation, but also the growing pressure from customers that their suppliers have proactive environmental policies.

Helping organisations to achieve their objectives

CP Electronics is a world leader in helping organisations to achieve their energy consumption objectives. We benefit from over 40 years in the design and manufacture of cutting-edge energy saving controls for heating, lighting and ventilation.

Our products and solutions are used in commercial, public sector and domestic environments of all sizes. Furthermore, we provide technical advice and customer care that ensure you always achieve the best results and an optimal return on investment.

Innovation. Functionality. Simplicity.

Every single CP Electronics product brings something new to lighting, heating and ventilation control. Our ethos has always been to innovate new ways for our customers to save money and minimise their environmental impact without sacrificing functionality or aesthetic.

These underpinning values are complemented by a constant drive towards simplicity. Design, installation and maintenance professionals benefit from practical simplicity, whilst end-users benefit from highly intuitive user-friendly controls.

A reputation for detail and quality

Attention to detail and quality has made CP Electronics a name to trust. Exceptional reliability has even enabled us to provide a 5 year warranty as standard, on all our products.

Our quality assurance processes dictate strict assembly and test procedures that comply with ISO 9001:2008, and our products carry the CE mark where applicable. Furthermore, our environmental management systems are accredited to BS EN ISO 14001:2004, and we are active members of the Energy Systems Trade Association (ESTA).

bsi. ISO 9001 Quality Management FM 45789 | ISO 14001 Environmental Management EMS 534520 | OHSAS 18001 Occupational Health and Safety Management OHS 642036

ESTA energy services and technology association

CE

MEMBER KNX

CPD MEMBER Construction CPD Certification Service

5 YEAR WARRANTY

UK DESIGN

BIM READY

Contents

Our Service Philosophy

CP Electronics has been a leading manufacturer of energy savings controls for over 40 years. We offer holistic solutions – from our 5 year warranty on our cutting-edge products, to our exceptional customer care and technical support services.

Global Projects & Sector Coverage

We can work with any light source, in any building and any space, from a sports stadium to a CEO's boardroom.

Technical Resources

Download BIM objects, and use our free energy saving lighting specifications via our CP APPs tool. Learn more about lighting control through our CPD seminars.

Technology Guide

Learn more about the technology and functionality of our key energy saving control products and solutions.

Programming Handsets

CP Electronics produces a range of infrared (IR) handsets to allow simple programming and provide added user convenience.

Stand-alone Presence Detectors

A wide range of passive infrared (PIR) and microwave presence detectors for the automatic control of lighting, heating and ventilation.

Light Level Controls

Our accurate and reliable photocells allow switching and maintained illuminance (daylight harvesting).

Lighting Connection Systems

Save money and time with Lighting Connection Systems that are specifically designed for fast and accurate installation.

Lighting Control Systems

Easy to install and flexible enough to meet your specifications. Our cost-effective modular lighting control systems are perfect for industrial, office and retail applications.

Emergency Lighting Test Switches

Simple control switches that help you meet the legal obligation to test emergency luminaires regularly.

green-i Product Overview

Our range of easy-to-fit energy saving controls and connection products for lighting, heating and ventilation.

Our Service Philosophy

Customer needs

With over 40 years of experience, CP Electronics recognise the individual needs of businesses; how energy control has to work within their overall objectives.

Develop solutions

Our product depth and quality enable us to develop solutions in commercial, public sector and domestic environments of all sizes.

- Our sales engineers are expert at working closely with you to achieve effective and efficient results.

Deliver solutions

Attention to detail and quality has made CP Electronics a name to trust.

- Exceptional reliability has enabled us to provide a 5 year warranty as standard, on all our products.

Implement & support solutions

CP Electronics offer an unrivalled level of technical support to our customers during specification, installation, commissioning and maintenance. You will benefit from:

- Experienced engineers with a broad knowledge of specifier, contractor and client requirements.
- Comprehensive advice that you can rely on with all aspects of lighting control design and installation.
- Telephone and on-site support as necessary.
- Downloadable product user guides from www.cpelectronics.co.uk
- APPs free downloadable lighting specifications that are Part L building regulation and BREEAM compliant. For more information on CP APPs please see page 8.

Commissioning, maintenance and training

CP Electronics' Technical Services division delivers unrivalled levels of support to customers during specification, installation, commissioning and maintenance. This ensures the best use of lighting control for the end user.

Commissioning

Technical Services provides a comprehensive commissioning service which can include a period of on-site presence, a dedicated handover experience and 5 year warranty on all CP Electronics' products.

Maintenance

Maintenance protects the customer's investment and gives peace of mind. If required, CP Electronics provides a tailor-made contract which offers further flexibility.

Training

CP Electronics' Technical Services shares structured information through training modules on all its technology by updating customers continuously on product development and legislation.

Global Projects & Sector Coverage

Kärcher, UK

Brief:

The UK division of the world's leading cleaning technology brand, Kärcher, commissioned the design and build of its new headquarters - 84,500 square feet of space comprising offices, an academy, a retail centre, warehouse and workshop areas. Ridge and Partners specified CP Electronics' controls in the office space, to reflect Kärcher's commitment to energy efficient cleaning solutions.

Product solution:

Vitesse Plus lighting control module **VITP-MB** and the **MWS3A** microwave presence/ absence detectors minimises energy use and is fine tuneable to adapt to surroundings for the building's occupants.

Winyu House, Australia

Brief:

A new, four-storey ACT Government office block in Canberra, designed with a large public accessible ground floor and three levels of office space connected by a central atrium.

With a minimum 4.5 star NABERS rating specified, the energy efficient lighting needed to incorporate zone controls, using natural light where possible from the central atrium.

Product solution:

400 **KNX-compatible** compact ceiling mounted PIR presence detectors - with two switch inputs, programmable logic block and full scene selection. Also includes absence detection, and user-configurable logic functions and timers.

Reading Station Car Park, UK

Brief:

To improve the existing lighting scheme and provide effective control for 10 levels and 1600 car parking spaces, in use 24 hours a day. This required combining energy control products with new installation of LED luminaires to maximise cost savings and ROI.

Importantly, the scheme had to provide security, safety and overall comfort on entry/exit of the car park.

Product solution:

One **EBMPIR-MB** batten mount PIR detector- controlling every third LED luminaire.

Luminaires dimmed to 10% when not in use, to fulfil safety requirements, brightening when sensing vehicle or user movement.

APPS from CP Electronics

CP APPs is a professional tool to download energy saving lighting control specifications to assist with compliance of Part L of the building regulations and BREEAM.

Key Features

- Downloadable lighting control applications and specifications.
- Downloadable dwg or pdf schematics for tender documents.
- Fully editable V21 Documentation.

To register, simply visit www.cpelectronics.co.uk/apps and apply for your password and username.

CPD Seminars

Certified by the Construction CPD Certification Service, CP Electronics offer focused CPD courses on topics such lighting control design and applications, DALI and and fully addressable lighting control solutions.

Key Features

- Our dedicated team share their industry experience so you gain a competitive edge.
- Enables your business to adapt positively to changes in your industry.
- Availability at CP London Head Quarters or in your offices across the UK.
- Our CPD seminars count towards an individual's CPD requirement and follow best practice guidelines.

For more information on our CPD seminars please contact cpd@cpelectronics.co.uk

CP Electronics is BIM ready

Building Information Modelling (BIM) describes the process of designing a building collaboratively using one digital system of computer models rather than as separate sets of drawings.

CP Electronics recognise the importance of a single digital system and prefer REVIT as the chosen software platform to provide our extensive portfolio in BIM ready format.

Content Partner

CP Electronics has worked with bimstore, one of the leading authorities on BIM in the industry, to develop and bring our offering to market.

For more information please contact us at bim@cpelectronics.co.uk

Technology Guide

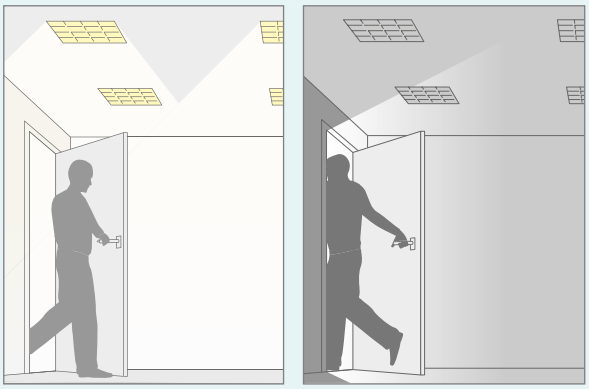
CP Electronics bring you its most comprehensive technology guide ever.

Learn more about the innovative energy-saving features of our product ranges. You can also download free BREEAM compliant lighting specifications from www.cpelectronics.co.uk/apps

Presence and Absence Detection Explained

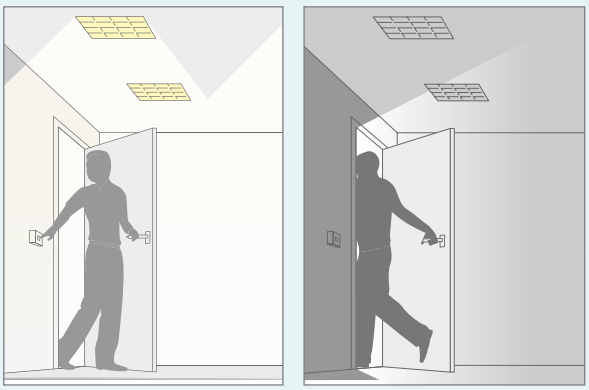
The choice between presence and absence detection for different spaces can make a big difference in user-friendliness and the amount of energy saved.

Presence Detection



Detectors will switch on lighting automatically when a person enters the room, and switches off lighting automatically when no movement is detected.

Absence Detection



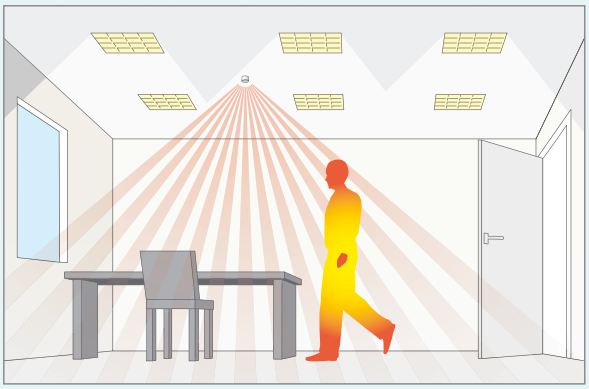
Upon entering the room the person switches on the light as normal, but on leaving the detector switches off the lighting automatically. Lights can also be switched off manually.

PIRs and Microwave Detectors Compared

PIR Detectors

PIR (Passive Infrared) presence detectors detect body heat and movement and are ideally suited where a defined detection pattern is required.

PIR (Passive Infrared) Detection

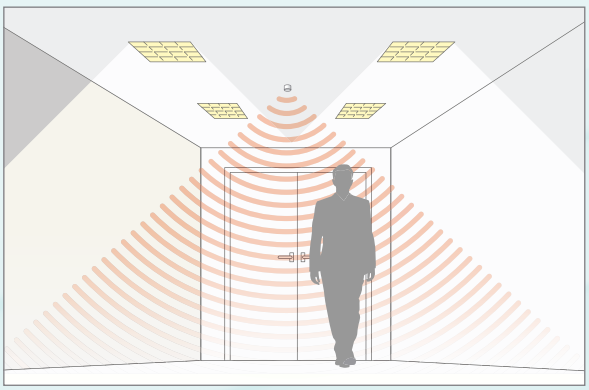


PIR detectors work on detecting the movement of body heat. They are better suited to smaller spaces or where a defined detection pattern is required.

Microwave Detectors

Microwave presence detectors are sensitive to movement and are ideal for large spaces and areas that have an awkward shape or where fine motion detection is required.

Microwave Detection



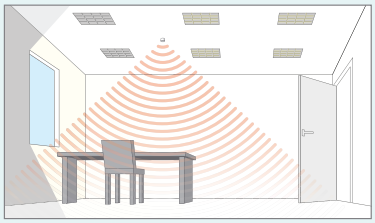
Microwave Detectors are sensitive to objects that move, with much greater coverage and sensitivity. They can detect through glass, therefore careful consideration on location is needed in certain applications.

Switching Detectors with Lux Level Sensing

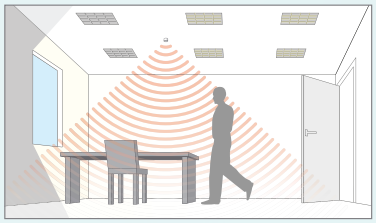
These presence detectors have built-in adjustable lux sensors which will keep the lighting switched off if there is sufficient natural light.

All ceiling mounted PRM detectors can be set up from ground level using our simple programming handsets. A time delay can be set to avoid nuisance switching with constantly varying lux levels.

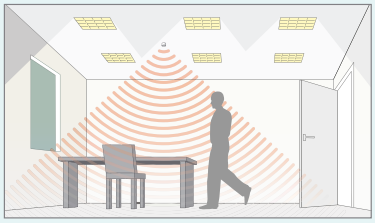
Lux level sensing with absence or presence detection



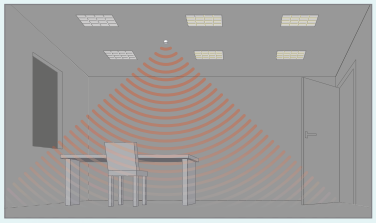
No presence detected, daylight, lights off.



Presence detected, sufficient daylight, lights off.



Presence detected, insufficient daylight, all lights on.



No presence detected, lights off.

Our range of switching presence detectors with lux level sensing

Ceiling Mounted Detectors			
	Code	Description	Pg
	**EBDSPIR-PRM**	Compact PIR presence/absence detector	18/19
	**EBDSM-PRM**	Surface mount PIR presence/absence detector	20/21
	**EBMHS-PRM**	Miniature PIR presence/absence detector	22/23
	**EBMPIR-MB-PRM**	Batten mount PIR presence detector	24/25
	**EBMINT-PRM**	Integrated PIR presence detector	26/27
	**EBDHS-PRM**	High sensitivity, high bay PIR presence/absence detector	28/29
	**EBDHS-MB-PRM**	Luminaire mount high bay PIR presence detector	30/31
	**MWS3A-PRM**	Adjustable head microwave presence/absence detector	32/33
	**MWS5-PRM-SA-C**	Compact microwave presence/absence detector	34/35
	**MWS6-PRM**	Low profile microwave presence/absence detector	36/37
	**MWS6SM-PRM**	Surface mount microwave presence/absence detector	38/39
	**MWS1A-C-PRM**	Ceiling mounted microwave presence detector	40
	**MWS1A-C-IP-PRM**	Moisture-proof ceiling mounted microwave presence detector	40
	**Minus30**	Cold storage and refrigeration PIR detectors that operate and perform at aggressive -30˚C temperatures	42/43
	**KNX**	Microwave and PIR detectors specifically designed for KNX applications	44/45
	green-i	Range of basic non-programmable switching detectors	122/123

Wall Mounted Detectors			
	Code	Description	Pg
	**MWS1A-PRM**	Wall mounted microwave presence detector	41
	**MWS1A-IP-PRM**	Moisture-proof wall mounted microwave presence detector	41
	green-i	Range of basic non-programmable switching detectors	122/123

Lighting Control Systems		Pg
	4 different types of lighting control system, all are modular in nature and utilise simple connectivity making them very flexible and easy to install	64–117

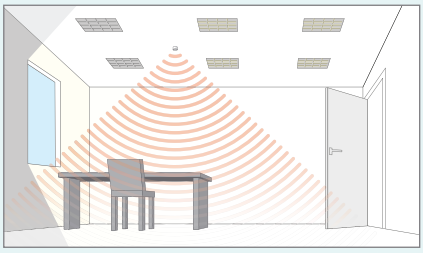
For Detectors with Lux Level Sensing look out for this icon PRM

Direct Dimming Detectors with Lux Level Sensing

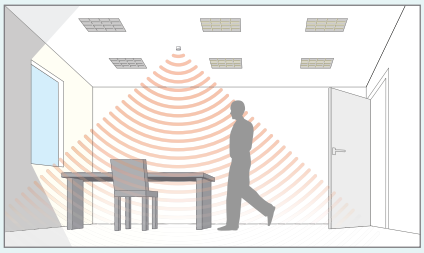
In addition to lux level sensing, dimming detectors are able to provide automatic control of lighting output.

A dimming detector can be used to control the light output of luminaires that are fitted with dimming ballasts. The detector measures the overall light level in the detection area and regulates the output of the luminaires, ensuring the correct lux level (maintained illuminance) for the area and saving energy when natural daylight can be used to replace/supplement luminaires (daylight harvesting).

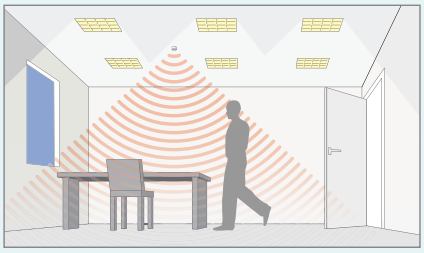
Maintained illuminance with absence or presence detection



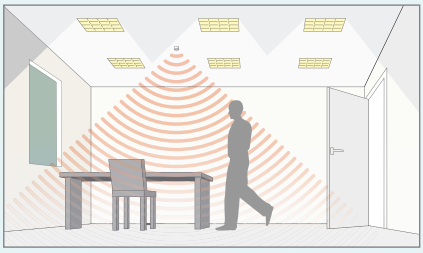
No presence detected, daylight, lights off.



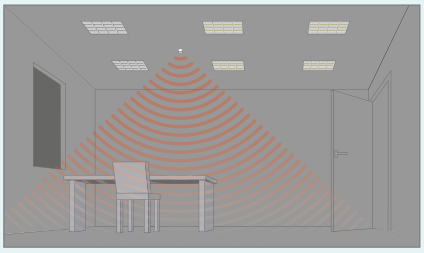
Presence detected, sufficient daylight, lights off.



Presence detected, some daylight. Lights on and dimmed to maintain lux level.



Presence detected, insufficient daylight. Dimming detector measures and implements maintained illuminance.



No presence detected, lights off.

Additional features and applications:

- Provides either **presence or absence detection with maintained illuminance** in an office or area, allowing the user to manually override the maintained level, by dimming up or down, or switching off and on via wall switch.
- After occupation and the time delay has ended, **the dimming level can be programmed to dim for a time period before switching off, or programmed to never switch off**, but instead stays at a low dimmed output during non-occupation. Very useful for warehousing with 24/7 operations, or corridors for health and safety reasons.
- **Direct dimming detectors can also be programmed to switch on and off (at separate light levels)** according to the local light level when the area is occupied, with or without a time delay (to avoid nuisance switching). This can be programmed as well as maintained illuminance on the same sensor.
- Many lighting schemes can be 'over lit' because of the initial brightness of the new lamps, over compensation for dirt/lamp life, and over-design due to room shape and size. **Dimming detectors allow installed lighting to be 'dimmed' to achieve the correct illuminance level**, and increase gradually to compensate for the anticipated light loss over time.
- If the dimming and switched channels are separated, **one channel can work in absence detection, whilst the other channel works in presence detection**. For example, meeting room with: fixed output wall washers in presence detection mode on Channel 1 (no dimming), always on when room is occupied; Dimming fittings in centre of room (over table) on Channel 2 in absence mode, for dimming down/extinguishing when making presentations, etc.

Additional features and applications continued:

Combined maintained illuminance with switching

- **Combined maintained illuminance with switching.** The dimming detector can be configured to dim a row of luminaires (those closest to window) whilst simultaneously switching the other luminaires in the room.

Our range of dimming presence detectors with lux level sensing

Ceiling Mounted Detectors – Digital Dimming DSI / DALI			
	Code	Description	Pg
	**EBDSPIR-DD**	PIR presence/absence detector with Direct Dim DALI/DSI	18/19
	**EBDSM-DD**	Surface mount PIR presence/absence detector with Direct Dim DALI/DSI	20/21
	**EBMHS-DD-SA-C**	Miniature PIR presence/absence detector with Direct Dim DALI/DSI	22/23
	**EBMPIR-MB-DD**	Batten mount PIR presence detector with Direct Dim DALI/DSI	24/25
	**EBMINT-DD**	Integrated DALI/DSI PIR presence detector with Direct Dim DALI/DSI	26/27
	**EBDHS-DD**	High sensitivity, high bay PIR presence/absence detector with Direct Dim DALI/DSI	28/29
	**EBDHS-MB-DD**	Luminaire mount high bay PIR presence detector with Direct Dim DALI/DSI	30/31

	**MWS3A-DD**	Adjustable head microwave presence/absence detector with Direct Dim DALI/DSI	32/33
	**MWS5-DD-SA-C**	Compact microwave presence/absence detector with Direct Dim DALI/DSI	34/35
	**MWS6-DD**	Low profile microwave presence/absence detector with Direct Dim DALI/DSI	36/37
	**MWS6SM-DD**	Surface mount microwave presence/absence detector with Direct Dim DALI/DSI	38/39
	**Minus30**	Range of cold storage and refrigeration PIR detectors that operate and perform at aggressive -30˚C temperatures	42/43
	**KNX**	Microwave and PIR detectors specifically designed for KNX applications	44/45

Lighting Control Systems		Pg
	4 different types of lighting control system, all are modular in nature and utilise simple connectivity making them very flexible and easy to install.	64–117

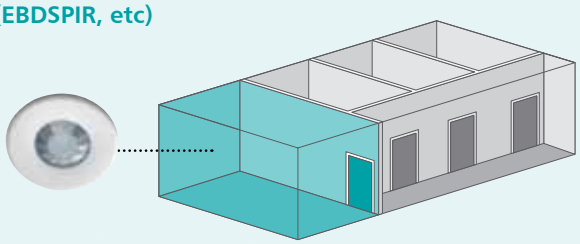
PLEASE NOTE: All detectors are available as analogue 1–10V dimming

Stand-alone Detectors and Lighting Controls Systems Compared

The choice of system to control a building's lighting can be determined by a number of factors:

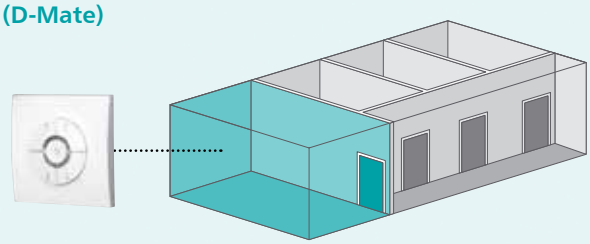
Functionality requirements (e.g. dimming, scene setting, front end monitoring or emergency testing); new build or retrofit; flexibility; ease of use; and of course budget.

Stand-alone Detectors (EBDSPIR, etc)



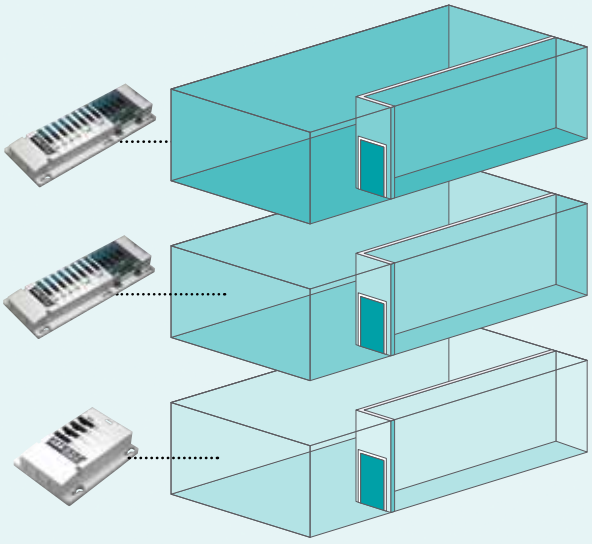
A single presence detector is used to control lighting, turning lights off if a room is unoccupied or if there is sufficient natural light. See pages 18–45.

Room by Room with Scene Setting (D-Mate)



D-Mate provides scene setting and energy saving functionality for single area applications. See pages 66–72.

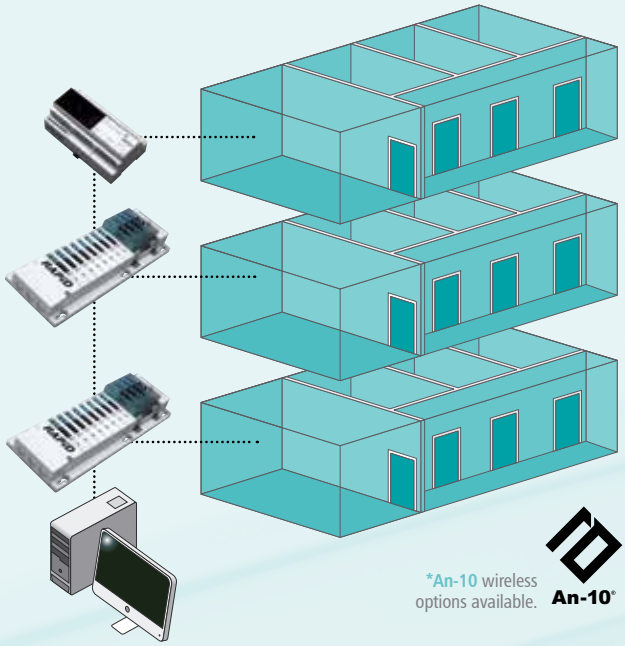
Area by Area (Vitesse Plus and Vitesse Modular™)



Vitesse Plus is a flexible seven-channel lighting control system specially designed for educational and commercial applications, as well as retail spaces. It is a stand-alone system with a built-in pre-set configuration menu which enables users to set up and re-configure spaces quickly and intuitively. See pages 73–88.

Vitesse Modular is packed with innovative features, and is a cost effective method of providing power and control for lighting installations in industrial, commercial and retail buildings. See pages 48–63.

Complete Building Control (RAPID)



RAPID is ideal for fully addressable lighting installations which have demanding lighting needs owing to changing room configurations, or where there is a need to re-configure or monitor the lighting via a PC. See pages 100–115.

*An-10 wireless technology allows you to install a fully featured lighting control system easily and with minimal disruption, while at the same time offering all of the features and functionality demanded by modern day lighting control systems. See pages 89–99.

Programming Handsets

Our range of infrared (IR) handsets have been designed to allow simple configuration, programming and maximum user convenience.

There's a handset to suit every user whether it's the commissioning engineer configuring hundreds of detectors, a contractor setting up two or three, or a user who simply wishes to override a setting or switch between pre-programmed scenes.

Commissioning handset

The UHS5 is a compact infrared handset used for the basic programming of IR enabled CP products.

Order Code	Description
UHS5	Commissioning handset

For Professional commissioning LCD handset please see over page

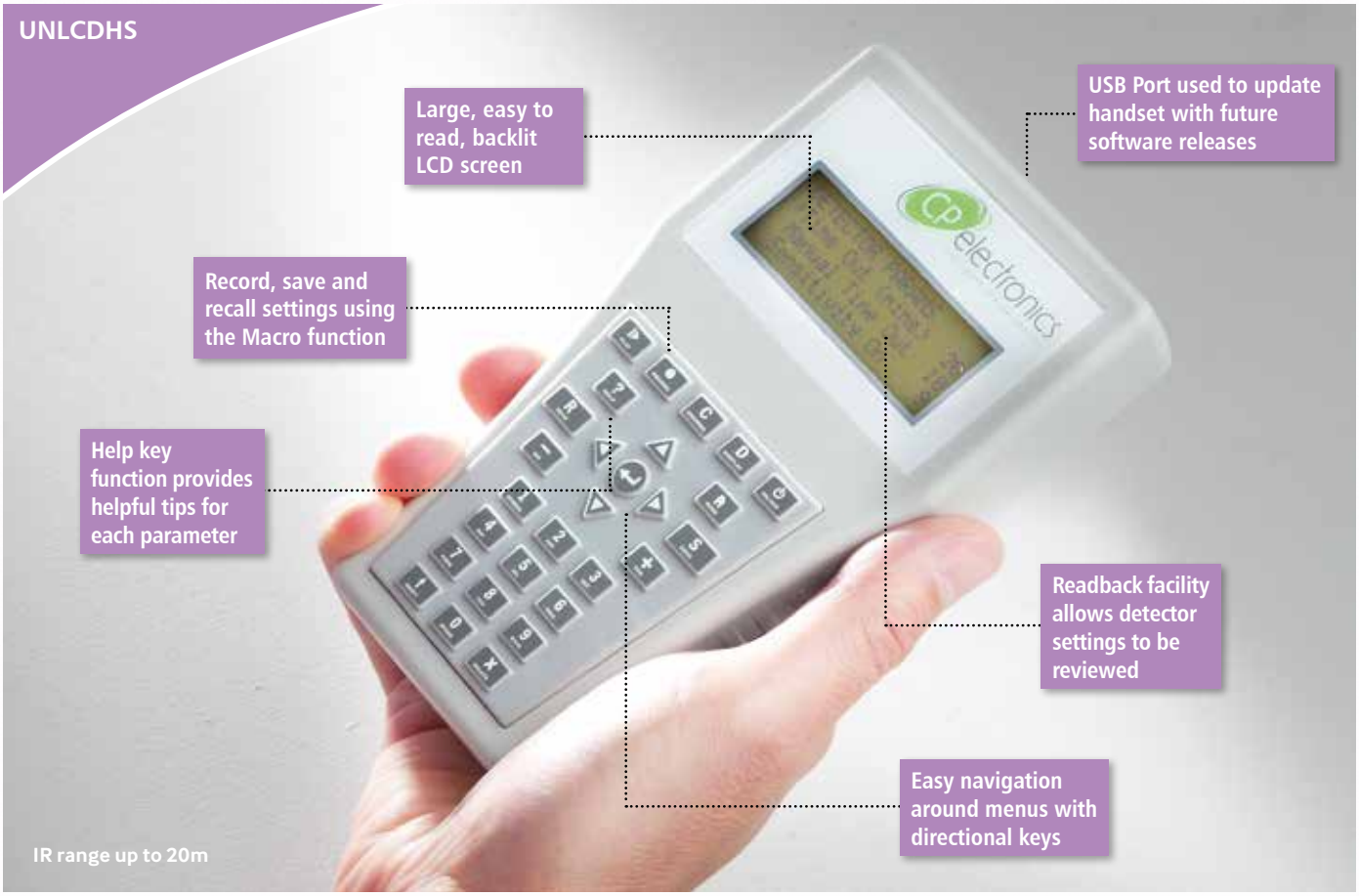
User handset

User handset for simple scene setting, on off, raise + lower.

Order Code	Description
UHS7	User handset

Programming Handsets

UNLCDHS



Professional commissioning LCD programming handset

The UNLCDHS is a compact infrared handset used for the operation, configuration and programming of CP products that have the ability to be programmed via IR. These include the PRM, DD, AD, Vitesse Plus, RAPID, D-Mate and An-10 ranges.

Readback Facility

Intuitive readback screen allows settings to be read from a device

Connectivity

Used to update handset with future software releases.

Order Code	Description
UNLCDHS	Professional commissioning LCD programming handset

Stand-alone Presence Detectors

Presence detectors provide automatic control of lighting, heating and ventilation.

Presence detectors can help you reduce energy consumption by automatically turning off lighting, heating or ventilation that is needlessly left on. They can also contribute to public and workforce safety by automatically illuminating dark corridors and stairwells, for example.

Load Capacity Key

Suitable for the control of:

Lighting

Heating

Ventilation

This compact ceiling mounted PIR presence detector provides automatic control 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.

Key Product Features

- Low profile design
- Self contained unit
- Pluggable

Switching Detectors

Basic version functionality (B)
Switching with lux level sensing (manual adjustment)
Time delay function (manual adjustment)
Presence detection switching

PRM version functionality (in addition to Basic)
Switching with lux level sensing (IR handset adjustment)
Active photocell
Time delay function
Presence detection switching
Absence detection switching
Programmable via IR handset
Adjustable detection sensitivity
On/off override via optional IR handset
Manual on/off override via switch input

Dimming Detectors

DD and AD version functionality (in addition to PRM)
Dimming functionality
Two channel flexibility
Step-down illuminance
Maintained illuminance (daylight harvesting)
Scene setting and recall
Burn in feature for fluorescent tubes
Control of DALI, DSI or 1–10V loads depending on product
Integral relay to reduce parasitic power
Suitable for all lighting types
Manual dimming with IR
Manual dimming with switch inputs

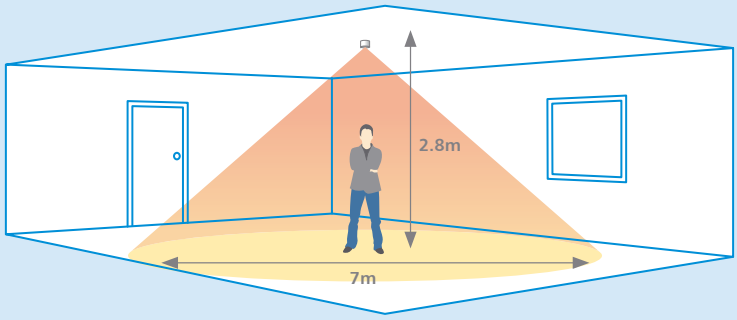
Selected switching detectors are available with the following options
Low voltage 12–24V AC/DC
Voltage free Contact
2 channel
2 channel normally closed for fail safe applications
Contact our sales office for the variants available

Learn more about detector types on pages 10–14

KNX Selected KNX versions also available. See page 45

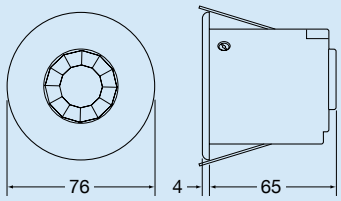
Selected Minus30 cold store versions also available. See page 42

Detection Pattern



Area of high sensitivity — Area of lower sensitivity

Dimensions



All dimensions in mm

	Order Code	Description	Load Rating at 230VAC					Time Delay
			R	I	F	CF	LED	
B	**EBDSPIR**	Compact ceiling mounted PIR presence detector with lux level sensing and time delay function. Manual adjustment only	8A	8A	6A	3A	3A	10s–30m
	EBDSPIR-L3	As EBDSPIR plus pre-wired with 3m lead. Manual adjustment only	8A	8A	6A	3A	3A	10s–30m
	EBDSPIR-IP	As EBDSPIR plus suitable for damp environments (IP55). Manual adjustment only	8A	8A	6A	3A	3A	10s–30m
PRM	**EBDSPIR-PRM**	Compact ceiling mounted PIR presence/absence detector with lux level sensing, time delay function and infrared override	10A	10A	10A	10A	10A	10s–99m
	EBDSPIR-PRM-L3	As EBDSPIR-PRM plus pre-wired with 3m lead	10A	10A	10A	10A	10A	10s–99m
	EBDSPIR-PRM-IP	As EBDSPIR-PRM plus suitable for damp environments (IP55)	10A	10A	10A	10A	10A	10s–99m
	EBDSPIR-PRM-LV	Compact ceiling mounted PIR presence/absence detector 12–24V AC/DC	10A	8A	6A	3A	3A	10s–99m
	EBDSPIR-PRM-VFC	Compact ceiling mounted PIR presence/absence detector with volt free contact*	6A	6A	6A	3A	3A	10s–99m
	EBDSPIR-PRM-2CH	Compact ceiling mounted PIR presence/absence detector, 2-channel	6A	6A	6A	6A	6A	10s–99m
	EBDSPIR-DD	Compact ceiling mounted PIR presence/absence detector with Direct Dim and time delay function (up to 20 ballasts). DALI/DSI	10A	10A	10A	10A	10A	10s–99m
	EBDSPIR-DD-LV	Compact ceiling mounted PIR presence/absence detector with Direct Dim DALI/DSI 12–24V AC/DC	10A	8A	6A	3A	3A	10s–99m
	EBDSPIR-AD	Compact ceiling mounted PIR presence/absence detector with 1–10V analogue dimming output (up to 10 ballasts)	10A	10A	10A	10A	10A	10s–99m

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

	Accessories	Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	UHS7	User handset. See page 15
	**DBB**	Surface mount back box
	**DBB-EXT**	Surface mount back box extender
	**EBD-ENCIP1**	Detector enclosure IP65

* Please supply voltage requirement

KNX Selected KNX versions also available. See page 45

Selected Minus30 cold store versions also available. See page 42

See pages 10–14 for our **Presence Detector technology guide**

This range of surface mounted PIR presence detectors are perfect for simple attachment when flush mounting is not possible.

The EBDSM provides automatic control for lighting, heating and ventilation loads. As the EBDSM range has no external control boxes installation time is dramatically reduced.

Key Product Features

- Self contained unit
- Easy to install via a back plate
- IP54 rated

Switching Detectors

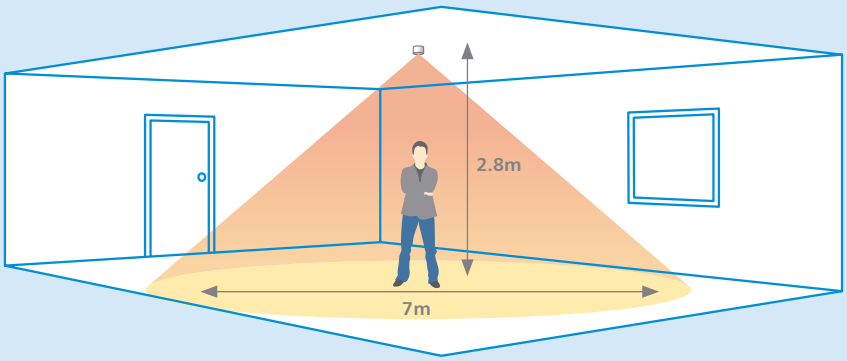
PRM version functionality
Switching with lux level sensing (IR handset adjustment)
Active photocell
Time delay function
Presence detection switching
Absence detection switching
Programmable via IR handset
Adjustable detection sensitivity
On/off override via optional IR handset
Manual on/off override via switch input

Dimming Detectors

DD and AD version functionality (in addition to PRM)
Dimming functionality
Two channel flexibility
Step-down illuminance
Maintained illuminance (daylight harvesting)
Scene setting and recall
Burn in feature for fluorescent tubes
Control of DALI, DSI or 1–10V loads depending on product
Integral relay to reduce parasitic power
Suitable for all lighting types
Manual dimming with IR
Manual dimming with switch inputs

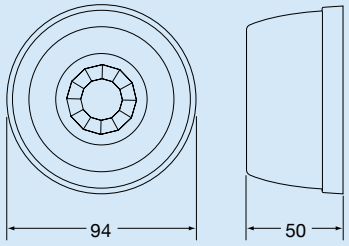
Learn more about detector types on pages 10–14

Detection Pattern



Area of high sensitivity
Area of lower sensitivity

Dimensions



All dimensions in mm

	Order Code	Description	Load Rating at 230VAC					Time Delay
			R	I	F	CF	LED	
PRM	**EBDSM-PRM**	Surface mounted PIR presence/absence detector with lux level sensing, time delay function and infrared override	10A	10A	10A	10A	10A	10s–99m
	EBDSM-DD	Surface mounted PIR presence/absence detector with Direct Dim and time delay function (up to 20 ballasts). DALI/DSI	10A	10A	10A	10A	10A	10s–99m
	EBDSM-AD	Surface mounted absence/presence detector with 1–10V analogue dimming output (up to 10 ballasts)	10A	10A	10A	10A	10A	10s–99m

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

	Accessories	Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	UHS7	User handset. See page 15

This small, unobtrusive, but highly capable EBMHS detector is supplied pre-wired and with a connector that snap-fits into the power supply unit (PSU) for ease of installation, and comes with a flush mounting ring for easy fitting into the ceiling.

Three models are available: premium (PRM), direct dim (DD), and analogue dim (AD) all of which will control 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.

Key Product Features

- Ultra compact design
- High sensitivity head for increased detection range
- Detector head leads are available in 300mm and 1m lengths
- IP40 rated

Switching Detectors

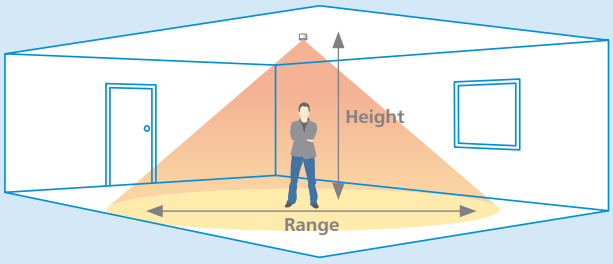
PRM version functionality	PRM
Switching with lux level sensing (IR handset adjustment)	
Active photocell	
Time delay function	
Presence detection switching	
Absence detection switching (standard PSU only)	
Programmable via IR handset	
Adjustable detection sensitivity	
On/off override via optional IR handset	
Manual on/off override via switch input	

Dimming Detectors

DD and AD version functionality (in addition to PRM)
Dimming functionality
Two channel flexibility
Step-down illuminance
Maintained illuminance (daylight harvesting)
Scene setting and recall
Burn in feature for fluorescent tubes
Control of DALI, DSI or 1–10V loads depending on product
Integral relay to reduce parasitic power
Suitable for all lighting types
Manual dimming with IR
Manual dimming with switch inputs (standard PSU only)

Learn more about detector types on pages 10–14

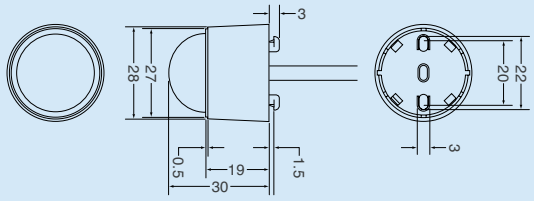
Detection Pattern	Height	Range
	2.8m	9m
	7m	16m



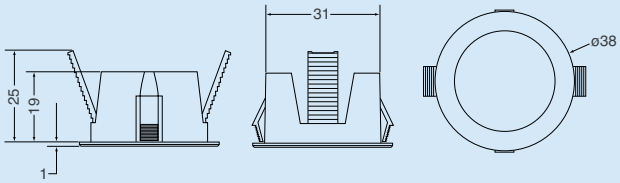
Area of high sensitivity — Area of lower sensitivity

Dimensions

Sensor Head



Flush Ring



All dimensions in mm

	Order Code	Description	Load Rating at 230VAC					Time Delay
			R	I	F	CF	LED	
PRM	**EBMHS-PRM-SA-C**	Miniature PIR presence/absence detector with lux level sensing and c/with pre-wired power supply unit (PSU)	6A	6A	6A	3A	3A	10s–99m
	EBMHS-DD-SA-C	Miniature PIR presence/absence detector with Direct Dim DALI/DSI c/with pre-wired PSU (up to 10 ballasts)	6A	6A	6A	3A	3A	10s–99m
	EBMHS-AD-SA-C	Miniature PIR presence/absence detector with 1–10V analogue dimming output c/with pre-wired PSU (up to 10 ballasts)	6A	6A	6A	3A	3A	10s–99m

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

What's in the Box

Miniature PIR sensor head complete with 300mm lead
Power supply unit
Miniature PIR head flush ring

	Accessories	Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	UHS7	User handset. See page 15

The EBMPIR-MB series of miniature batten mount PIR presence detectors provide automatic control of lighting loads. They have been specifically designed for mounting onto a batten style luminaire. The units are IP65 rated and are therefore suitable for outdoor use, as well as wet and damp environments.

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.

Key Product Features

- Integrated unit – no separate power supply required
- Retrofit solution
- IP65 rated
- Suitable for a wide range of luminaires
- Supplied with comprehensive fitting kit

Switching Detectors

PRM version functionality
Switching with lux level sensing (IR handset adjustment)
Active photocell
Time delay function
Presence detection switching
Programmable via IR handset
Adjustable detection sensitivity
On/off override via optional IR handset

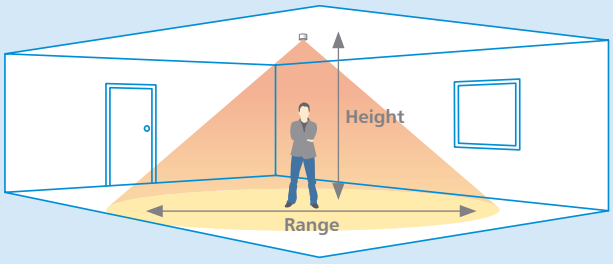
Dimming Detectors

DD and AD version functionality (in addition to PRM)
Dimming functionality
Step-down illuminance
Maintained illuminance (daylight harvesting)
Scene setting and recall
Burn in feature for fluorescent tubes
Control of DALI, DSI or 1–10V loads depending on product
Suitable for all lighting types
Manual dimming with IR

Learn more about detector types on pages 10–14

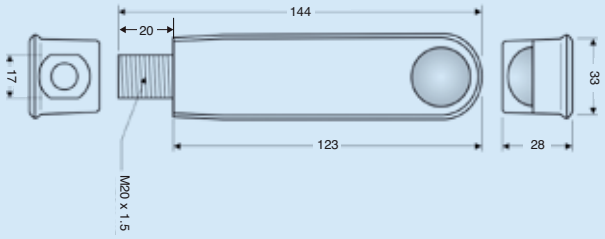
Selected Minus30 cold store versions also available. See page 42

Detection Pattern	Height	Range
	2.8m	9m
	7m	16m



Area of high sensitivity — Area of lower sensitivity

Dimensions



All dimensions in mm

	Order Code	Description	Load Rating at 230VAC					Time Delay
			R	I	F	CF	LED	
PRM	**EBMPIR-MB-PRM**	Batten mount PIR presence detector with lux level sensing	2A	2A	2A	2A	2A	10s–99m
	EBMPIR-MB-PRM-110	Batten mount PIR presence detector with lux level sensing 110V	2A	2A	2A	2A	2A	10s–99m
	EBMPIR-MB-DD	Batten mount PIR presence detector with Direct Dim DALI/DSI (up to 10 ballasts)	N/A	N/A	N/A	N/A	N/A	10s–99m
	EBMPIR-MB-AD	Batten mount PIR presence detector with 1–10V analogue dimming output (up to 4 ballasts)	2A	2A	2A	2A	2A	10s–99m

Bulk pack (BP) options available

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

What's in the Box

Miniature PIR integrated power supply unit
Silicon washer
M20 Nut
IP spacer with silicon coating
5° spacer
5° washer

	Accessories	Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	UHS7	User handset. See page 15

Selected Minus30 cold store versions also available. See page 42

See pages 10–14 for our **Presence Detector technology guide**

EBMINT

EBMINT fitted to louvre

PATENTED DESIGN

IP40

The EBMINT series of miniature PIR presence detector is designed to be retrofitted to luminaires quickly and effectively. It is specifically designed for mounting onto a lamp or louvre (using the louvre fitting bracket).

Three models are available to suit lighting control requirements: Premium (switched), Direct Dim up to 4 dimming ballasts (DALI or DSI) and analogue dim (1–10V). All are suitable for use with high efficiency lamps such as LED, linear fluorescent and compact fluorescent.

Key Product Features

- Integrated unit – no separate power supply required
- Sensitive movement detection up to 7 metres
- Fixings for T5, T8 battens and louvre reflectors
- Easy to install – no specialist tools required
- Quick to set up via infrared handset control
- IP40 rated

Switching Detectors

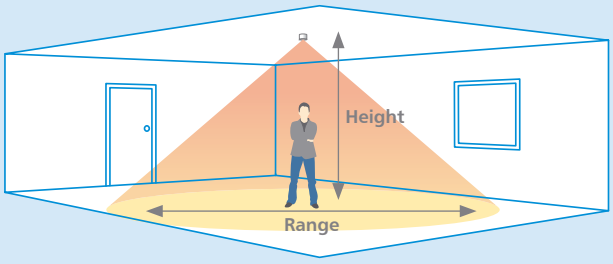
PRM version functionality
Switching with lux level sensing (IR handset adjustment)
Active photocell
Time delay function
Presence detection switching
Programmable via IR handset
Adjustable detection sensitivity
On/off override via optional IR handset

Dimming Detectors

DD and AD version functionality (in addition to PRM)
Dimming functionality
Step-down illuminance
Maintained illuminance (daylight harvesting)
Scene setting and recall
Burn in feature for fluorescent tubes
Control of DALI, DSI or 1–10V loads depending on product
Suitable for all lighting types
Manual dimming with IR

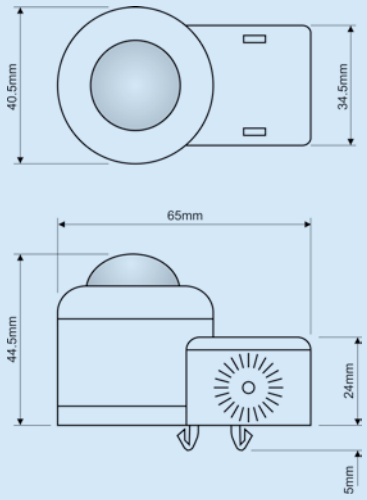
Learn more about detector types on pages 10–14

Detection Pattern	Height	Range
	2.8m	9m
	7m	16m



Area of high sensitivity — Area of lower sensitivity

Dimensions



All dimensions in mm

	Order Code	Description	Load Rating at 230VAC					Time Delay
			R	I	F	CF	LED	
PRM	**EBMINT-PRM**	Integrated PIR presence detector with lux level sensing, time delay function and infrared override	2A	2A	2A	2A	2A	10s–99m
	EBMINT-DD	Integrated PIR presence detector with Direct Dim and time delay function (up to 4 ballasts). DALI/DSI	2A	2A	2A	2A	2A	10s–99m
	EBMINT-AD	Integrated 1–10V PIR presence detector for 1–10V analogue dimming output (up to 4 ballasts)	2A	2A	2A	2A	2A	10s–99m

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

What's in the Box

Miniature PIR integrated power supply unit
T5 clip
T8 clip
Louvre clip
1m silicon lead

	Accessories	Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	UHS7	User handset. See page 15

EBDHS is an increased performance PIR presence detector developed for lighting control in areas with demanding spaces and increased mounting heights or where higher sensitivity is required.

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.

Key Product Features

- Ground breaking detection range up to 40m (dependent on location)
- Mounting height up to 20m
- Unique lens technology – high sensitivity within the detection range
- Ideal for high bay applications
- Adjustable masking shields to tailor detection zones
- Verify feature – reduce false triggering by ensuring detection from more than one of the internal sensors
- IP65 rated

Switching Detectors

PRM version functionality
Switching with lux level sensing (IR handset adjustment)
Active photocell
Time delay function
Presence detection switching
Absence detection switching
Programmable via IR handset
Adjustable detection sensitivity
On/off override via optional IR handset
Manual on/off override via switch input

Dimming Detectors

DD and AD version functionality (in addition to PRM)
Dimming functionality
Two channel flexibility
Step-down illuminance
Maintained illuminance (daylight harvesting)
Scene setting and recall
Burn in feature for fluorescent tubes
Control of DALI, DSI or 1–10V loads depending on product
Integral relay to reduce parasitic power
Suitable for all lighting types
Manual dimming with IR
Manual dimming with switch inputs

Selected switching detectors are available with the following options
Low voltage 12–24V AC/DC
Voltage free contact
2 channel
2 channel normally closed for fail safe applications
Contact our sales office for the variants available

Learn more about detector types on pages 10–14

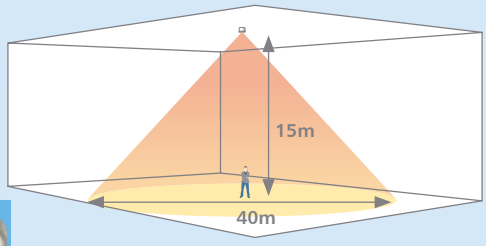
PROGRAM FROM GROUND LEVEL

The IR transmitting and receiving technology in our handsets and detectors has been carefully designed to allow programming from ground level.

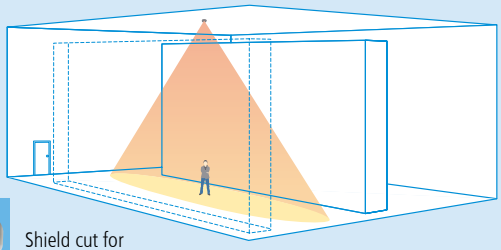
Selected KNX versions also available. See page 45

Selected Minus30 cold store versions also available. See page 43

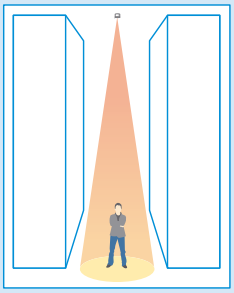
Detection Pattern

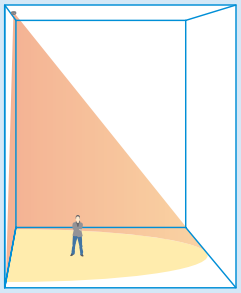



No shield




Shield cut for
aisle detection pattern



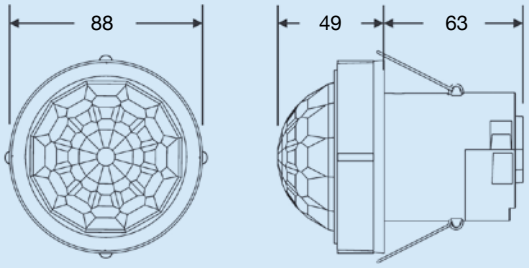



Shield cut for focused
detection pattern


Shield cut for end of
aisle detection pattern

Area of high sensitivity
Area of lower sensitivity

Dimensions



All dimensions in mm

For detailed detection information please refer to the product user guide on our website.

	Order Code	Description	Load Rating at 230VAC					Time Delay
			R	I	F	CF	LED	
PRM	**EBDHS-PRM**	High sensitivity PIR presence/absence detector	10A	10A	10A	10A	10A	10s–99m
	EBDHS-DD	High sensitivity PIR presence/absence detector with Direct Dim DALI/DSI (up to 20 ballasts)	10A	10A	10A	10A	10A	10s–99m
	EBDHS-AD	High sensitivity PIR presence/absence detector with 1–10V analogue dimming output (up to 10 ballasts)	10A	10A	10A	10A	10A	10s–99m

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

	Accessories	Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	UHS7	User handset. See page 15
	**EBDHS-DBB-WBRKT**	Wall mounting bracket for EBDHS series
	**DBB**	Surface mount back box
	**DBB-EXT**	Surface mount back box extender

KNX Selected KNX versions also available. See page 45

Selected Minus30 cold store versions also available. See page 43

The EBDHS-MB luminaire mount high bay PIR presence detector range provides exceptionally sensitive and long range detection. The detectors are ideal for high bay lighting control in areas with demanding spaces and increased mounting heights such as warehouses and factories, and are simple to retrofit to commercial luminaires and basic battens.

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

Key Product Features

- Ground breaking detection range up to 40m (dependent on location)
- Easy to retrofit to commercial luminaires and basic battens
- Mounting height up to 20m
- Unique lens technology – high sensitivity within the detection range
- IP65 rated
- Ideal for high bay applications
- Adjustable masking shields to tailor detection zones
- Quick install via M20 gland
- All models come pre-wired with a 1m silicon cable
- Supplied with two masking shields and a silicone ingress protection gasket

Switching Detectors

PRM version functionality	PRM
Switching with lux level sensing (IR handset adjustment)	
Active photocell	
Time delay function	
Presence detection switching	
Programmable via IR handset	
Adjustable detection sensitivity	
On/off override via optional IR handset	
Verify feature – reduce false triggering by ensuring detection from more than one of the internal sensors	

Dimming Detectors

DD and AD version functionality (in addition to PRM)
Dimming functionality
Two channel flexibility
Step-down illuminance
Maintained illuminance (daylight harvesting)
Scene setting and recall
Burn in feature for fluorescent tubes
Control of DALI, DSI or 1–10V loads depending on product
Integral relay to reduce parasitic power
Suitable for all lighting types

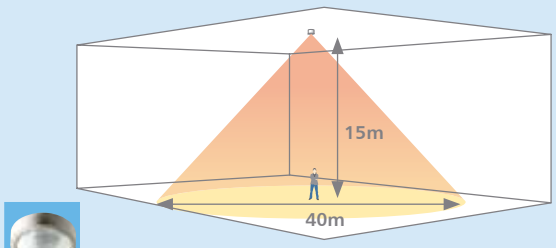
Learn more about detector types on pages 10–14

PROGRAM FROM GROUND LEVEL

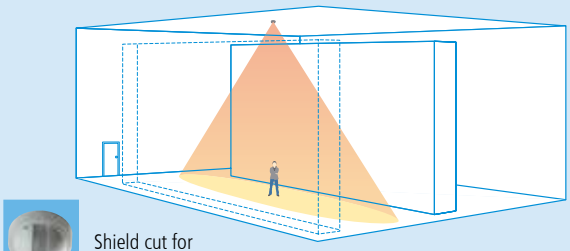
The IR transmitting and receiving technology in our handsets and detectors has been carefully designed to allow programming from ground level.

Selected Minus30 cold store versions also available. See page 43

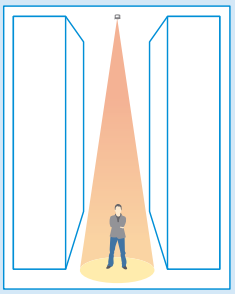
Detection Patterns



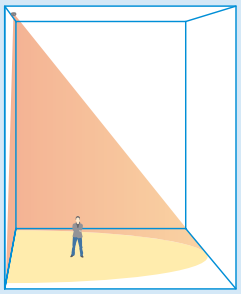
No shield



Shield cut for aisle detection pattern



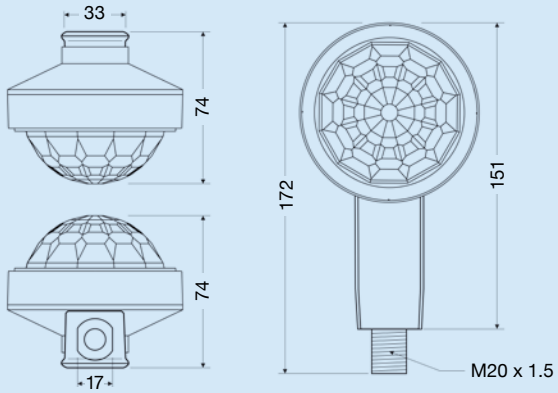
Shield cut for focused detection pattern



Shield cut for end of aisle detection pattern

Area of high sensitivity — Area of lower sensitivity

Dimensions



All dimensions in mm

For detailed detection information please refer to the product user guide on our website.

	Order Code	Description	Load Rating at 230VAC					Time Delay
			R	I	F	CF	LED	
PRM	**EBDHS-MB-PRM**	Luminaire mount high bay PIR presence detector with lux level sensing, time delay and infrared override	2A	2A	2A	2A	2A	10s–99m
	EBDHS-MB-DD	Luminaire mount high bay PIR presence detector with Direct Dim DALI/DSI (up to 10 ballasts)	2A	2A	2A	2A	2A	10s–99m
	EBDHS-MB-AD	Luminaire mount high bay PIR presence detector for 1–10V analogue dimming output (up to 4 ballasts)	2A	2A	2A	2A	2A	10s–99m

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

What's in the Box

Power supply unit
Silicon washer
M20 Nut
IP spacer with silicon coating
5° spacer
5° washer

	Accessories	Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	UHS7	User handset. See page 15

Selected Minus30 cold store versions also available. See page 43

See pages 10–14 for our **Presence Detector technology guide**

Unlike fixed head microwave 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 detector is self contained and can be flush or surface mounted using a separate detector back box.

Key Product Features

- Unique adjustable head design
- Locking mechanism to prevent tampering
- Can be flush or surface mounted
- IP40 rated

Switching Detectors

PRM version functionality
Switching with lux level sensing (IR handset adjustment)
Active photocell
Time delay function
Presence detection switching
Absence detection switching
Programmable via IR handset
Adjustable detection sensitivity
On/off override via optional IR handset
Manual on/off override via switch input

Dimming Detectors

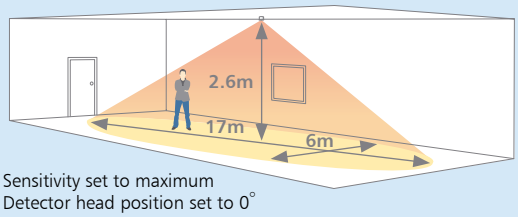
DD and AD version functionality (in addition to PRM)
Dimming functionality
Two channel flexibility
Step-down illuminance
Maintained illuminance (daylight harvesting)
Burn in feature for fluorescent tubes
Control of DALI, DSI or 1–10V loads depending on product
Integral relay to reduce parasitic power
Suitable for all lighting types
Manual dimming with IR
Manual dimming with switch inputs

Selected switching detectors are available with the following options
Low voltage 12–24V AC/DC
Voltage free contact
2 channel
2 channel normally closed for fail-safe applications
Contact our sales office for the variants available

Learn more about detector types on pages 10–14

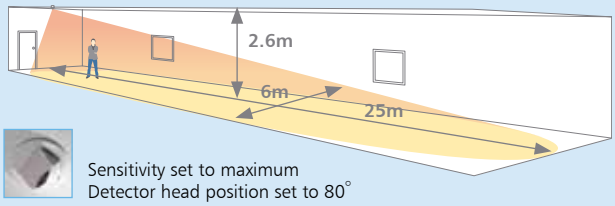
KNX Selected KNX versions also available. See page 45

Detection Pattern – e.g. mid-sized office



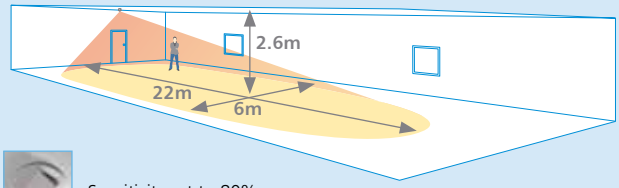
Sensitivity set to maximum
Detector head position set to 0°

Detection Pattern – e.g. corridors



Sensitivity set to maximum
Detector head position set to 80°

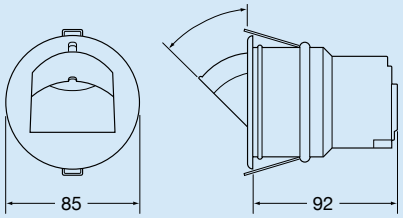
Detection Pattern – e.g. large office or classroom



Sensitivity set to 80%
Detector head position set to 40°

Area of high sensitivity — Area of lower sensitivity

Dimensions



Adjustment 0°-90°

All dimensions in mm

	Order Code	Description	Load Rating at 230VAC					Time Delay
			R	I	F	CF	LED	
PRM	**MWS3A-PRM**	Adjustable head ceiling mounted microwave presence/absence detector	10A	10A	10A	10A	10A	10s–99m
	MWS3A-PRM-L3	Adjustable head ceiling mounted microwave presence detector with 3m lead	10A	10A	10A	10A	10A	10s–99m
	MWS3A-PRM-LV	Adjustable head ceiling mounted microwave presence/absence detector 12–24V AC/DC	10A	8A	6A	3A	3A	10s–99m
	MWS3A-PRM-VFC	Adjustable head ceiling mounted microwave presence/absence detector with volt free contact*	6A	6A	6A	3A	3A	10s–99m
	MWS3A-DD	Adjustable head ceiling mounted microwave presence/absence detector with Direct Dim DALI/DSI (up to 20 ballasts)	10A	10A	10A	10A	10A	10s–99m
	MWS3A-DD-LV	Adjustable head ceiling mounted microwave presence detector with Direct Dim DALI/DSI 12–24V AC/DC	10A	8A	6A	3A	3A	10s–99m
	MWS3A-AD	Adjustable head ceiling mounted microwave presence/absence detector with 1–10V Analogue dimming output (up to 10 ballasts)	10A	10A	10A	10A	10A	10s–99m
	MWS3A-AD-LV	Adjustable head ceiling mounted microwave presence detector with 1–10V analogue dimming output 12–24V AC/DC	10A	10A	10A	10A	10A	10s–99m

Product variants are available where a different regional frequency is required. **R** = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

	Accessories	Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	UHS7	User handset. See page 15
	**MWS3A-DBB**	Surface mount back box
	**MWS3A-DBB-WBRKT**	Wall mounting bracket for MWS3A series
	**MWS3A-VPPC**	Wall mounted clear protective cover. Use in conjunction with the wall mounting bracket
	**MWS3A-DBB-EXT**	Surface mount back box extender

* Please supply voltage requirement

KNX Selected KNX versions also available. See page 45

The MWS5 range is a miniature microwave presence/absence detector.

A flush fit ceiling clip allows the detector head to be mounted into a ceiling tile; alternatively the detector head can be mounted either on the wall, ceiling or within a suitable luminaire using the surface mount base plate. The power supply unit can be mounted remotely for easy access. The MWS5 has a compact head size, is simple to set up and easy to adjust.

Key Product Features

- Compact unobtrusive design
- Can be flush or surface mounted
- Remote power supply allows head to be fitted in confined spaces
- IP40 rated

Switching Detectors

PRM version functionality
Switching with lux level sensing (IR handset adjustment)
Active photocell
Time delay function
Presence detection switching
Absence detection switching
Programmable via IR handset
Adjustable detection sensitivity
On/off override via optional IR handset
Manual on/off override via switch input

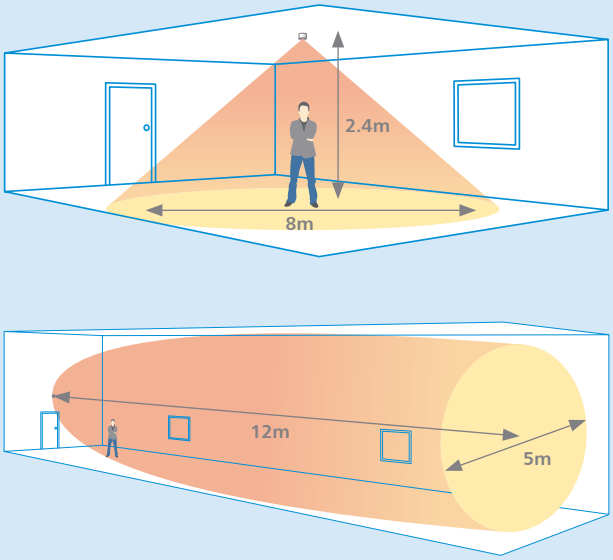
Dimming Detectors

DD and AD version functionality (in addition to PRM)
Dimming functionality
Two channel flexibility
Step-down illuminance
Maintained illuminance (daylight harvesting)
Burn in feature for fluorescent tubes
Control of DALI, DSI or 1–10V loads depending on product
Integral relay to reduce parasitic power
Suitable for all lighting types
Manual dimming with IR
Manual dimming with switch inputs

Selected switching detectors are available with the following options
Low voltage 12–24V AC/DC
Voltage free contact
Contact our sales office for the variants available

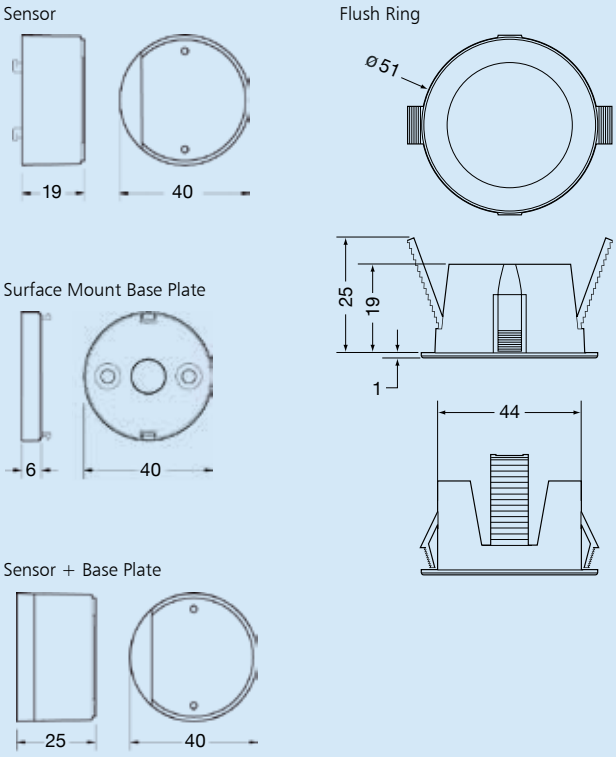
Learn more about detector types on pages 10–14

Detection Pattern



Area of high sensitivity | Area of lower sensitivity

Dimensions



All dimensions in mm

	Order Code	Description	Load Rating at 230VAC					Time Delay
			R	I	F	CF	LED	
PRM	**MWS5-PRM-SA-C**	Compact microwave presence/absence detector c/with pre-wired power supply unit (PSU)	6A	6A	6A	3A	3A	10s–99m
	MWS5-DD-SA-C	Compact microwave presence/absence detector with Direct Dim DALI/DSI c/with pre-wired PSU (up to 10 ballasts)	6A	6A	6A	3A	3A	10s–99m
	MWS5-AD-SA-C	Miniature microwave Direct Dim Analogue 1–10V standalone complete kit	6A	6A	6A	3A	3A	1m-30m

Product variants are available where a different regional frequency is required.

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

What's in the Box

Compact microwave detector
Power supply unit
Surface mount base plates
Flush ring

	Accessories	Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	UHS7	User handset. See page 15

The MWS6 is a low profile microwave presence/absence detector for the automatic control of lighting, heating and ventilation.

This flush design means it can be mounted into a ceiling tile. Its reduced head size makes it unobtrusive to occupants.

Key Product Features

- Low profile design
- Self contained unit
- Pluggable
- IP40 rated

Switching Detectors

PRM version functionality
Switching with lux level sensing (IR handset adjustment)
Active photocell
Time delay function
Presence detection switching
Absence detection switching
Programmable via IR handset
Adjustable detection sensitivity
On/off override via optional IR handset
Manual on/off override via switch input

Dimming Detectors

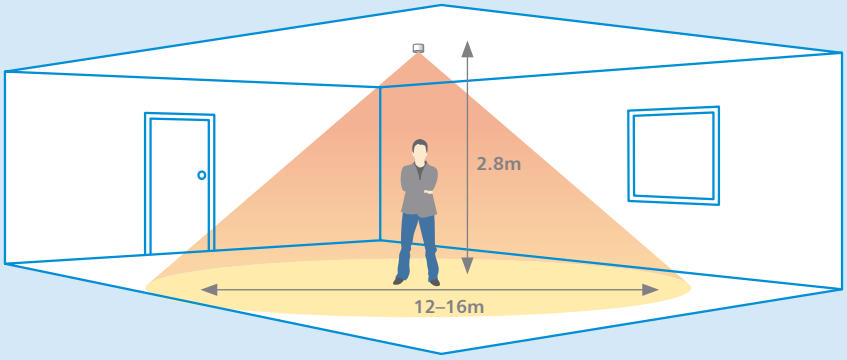
DD and AD version functionality (in addition to PRM)
Dimming functionality
Two channel flexibility
Step-down illuminance
Maintained illuminance (daylight harvesting)
Burn in feature for fluorescent tubes
Control of DALI, DSI or 1–10V loads depending on product
Integral relay to reduce parasitic power
Suitable for all lighting types
Manual dimming with IR
Manual dimming with switch inputs

Selected switching detectors are available with the following options
Low voltage 12–24V AC/DC
Voltage free contact
2 channel
2 channel normally closed for fail-safe applications
Contact our sales office for the variants available

Learn more about detector types on pages 10–14

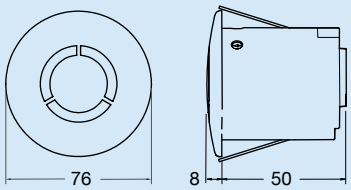
KNX Selected KNX versions also available. See page 45

Detection Pattern



Area of high sensitivity
Area of lower sensitivity

Dimensions



All dimensions in mm

	Order Code	Description	Load Rating at 230VAC					Time Delay
			R	I	F	CF	LED	
PRM	**MWS6-PRM**	Low profile microwave presence/absence detector	10A	10A	10A	10A	10A	10s–99m
	MWS6-PRM-LV	Low profile microwave presence/absence detector 12–24V AC/DC	10A	8A	6A	3A	3A	10s–99m
	MWS6-PRM-VFC	Low profile microwave presence/absence detector with volt free contact*	6A	6A	6A	3A	3A	10s–99m
	MWS6-PRM-2CH	Low profile microwave presence/absence detector 2-channel	6A	6A	6A	6A	6A	10s–99m
	MWS6-DD	Low profile microwave presence/absence detector with Direct Dim DALI/DSI (up to 20 ballasts)	10A	10A	10A	10A	10A	10s–99m
	MWS6-AD	Low profile microwave presence/absence detector with Analogue 1–10V analogue dimming output (up to 10 ballasts)	10A	10A	10A	10A	10A	10s–99m

Product variants are available where a different regional frequency is required. **R** = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

	Accessories	Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	UHS7	User handset. See page 15

* Please supply voltage requirement

KNX Selected KNX versions also available. See page 45

See pages 10–14 for our **Presence Detector technology guide**

The MWS6M is a surface mounted mid-range microwave presence/absence detector for the automatic control of lighting, heating and ventilation.

The MWS6SM detects movement using a highly sensitive microwave detector.

Key Product Features

- Surface mounted
- IP40 rated
- Self contained unit
- Easy to install via a back plate

Switching Detectors

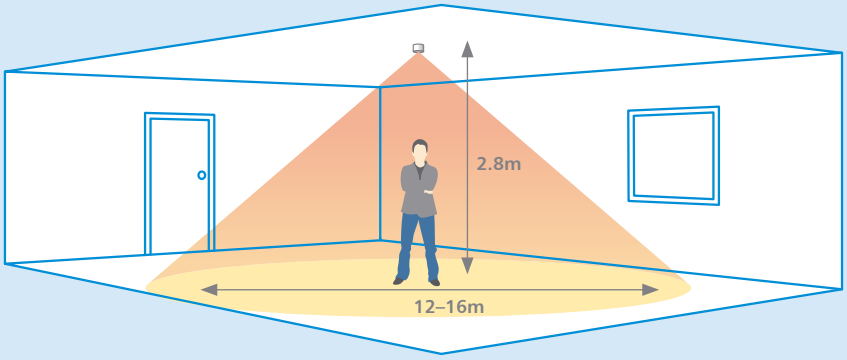
PRM version functionality
Switching with lux level sensing (IR handset adjustment)
Active photocell
Time delay function
Presence detection switching
Absence detection switching
Programmable via IR handset
Adjustable detection sensitivity
On/off override via optional IR handset
Manual on/off override via switch input

Dimming Detectors

DD and AD version functionality (in addition to PRM)
Dimming functionality
Two channel flexibility
Step-down illuminance
Maintained illuminance (daylight harvesting)
Burn in feature for fluorescent tubes
Control of DALI, DSI or 1–10V loads depending on product
Integral relay to reduce parasitic power
Suitable for all lighting types
Manual dimming with IR
Manual dimming with switch inputs

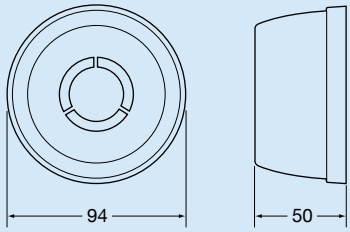
Learn more about detector types on pages 10–14

Detection Pattern



Area of high sensitivity
Area of lower sensitivity

Dimensions



All dimensions in mm

	Order Code	Description	Load Rating at 230VAC					Time Delay
			R	I	F	CF	LED	
PRM	**MWS6SM-PRM**	Surface mounted microwave presence/absence detector with lux level sensing	10A	10A	10A	10A	10A	10s–99m
	MWS6SM-DD	Surface mounted microwave presence/absence detector with Direct Dim DALI/DSI (up to 20 ballasts)	10A	10A	10A	10A	10A	10s–99m
	MWS6SM-AD	Surface mounted microwave presence detector with 1–10V analogue dimming output (up to 10 ballasts)	10A	10A	10A	10A	10A	10s–99m

Product variants are available where a different regional frequency is required. **R** = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

	Accessories	Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	UHS7	User handset. See page 15

This discrete series of wall or ceiling mounted microwave presence detectors are designed to fit onto any single gang switch box.

There are two detection ranges available – either 30 metres, which is ideal for wall mounting, or 10 metres suitable for ceiling mounting. Both detectors can be configured via one of our programming handsets. IP66 versions are also available for use in damp and wash down areas.

Key Product Features

- Unobtrusive design – vandal resistant
- Built in lux level sensing – enhanced energy saving
- Fixing screw cap covers – smooth plate finish
- Low voltage and volt free options – suitable for BMS and other control applications
- Low power in off state – minimal parasitic power
- User control – facility for override if required

Learn more about detector types on pages 10–14

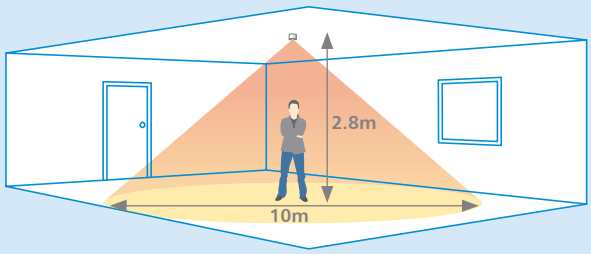
	Order Code	Description	Supply Voltage	Load Rating at 230VAC					Time Delay
				R	I	F	CF	LED	
PRM	MWS1A-C-PRM	Ceiling mounted microwave presence detector	230VAC	10A	10A	10A	10A	10A	10s–99m
	MWS1A-C-IP-PRM	Moisture-proof ceiling mounted microwave presence detector (IP66)	230VAC	10A	10A	10A	10A	10A	10s–99m
	MWS1A-C-PRM-LV	Ceiling mounted microwave presence detector – low voltage	11.5VDC–36VDC 10VAC–26.5VAC	16A	10A	10A	10A	10A	10s–99m
	MWS1A-C-IP-PRM-LV	Moisture-proof ceiling mounted microwave presence detector – low voltage (IP66)	11.5VDC–36VDC 10VAC–26.5VAC	16A	10A	10A	10A	10A	10s–99m
	MWS1A-C-PRM-VFC	Ceiling mounted microwave presence detector – volt free contact*	230VAC	6A	3A	3A	3A	3A	10s–99m
	MWS1A-C-IP-PRM-VFC	Moisture-proof ceiling mounted microwave presence detector – volt free contact* (IP66)	230VAC	6A	3A	3A	3A	3A	10s–99m

Product variants are available where a different regional frequency is required. **R** = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

Accessories		Description
	UNLCDHS	Professional commissioning LCD programming handset. See page 16
	UHS5	Commissioning handset. See page 15
	UHS7	User handset. See page 15

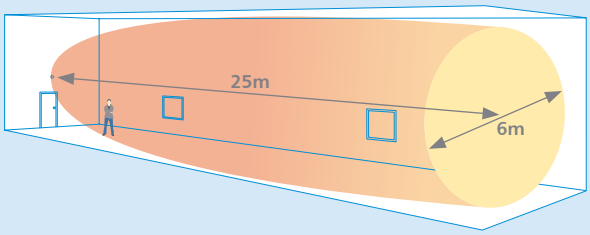
* Please supply voltage requirement

Detection Pattern – Ceiling Mounted



Area of high sensitivity | Area of lower sensitivity

Detection Pattern – Wall Mounted



Area of high sensitivity | Area of lower sensitivity

	Order Code	Description	Supply Voltage	Load Rating at 230VAC					Time Delay
				R	I	F	CF	LED	
PRM	MWS1A-PRM	Wall mounted microwave presence detector	230VAC	10A	10A	10A	10A	10A	10s–99m
	MWS1A-IP-PRM	Moisture-proof wall mounted microwave presence detector (IP66)	230VAC	10A	10A	10A	10A	10A	10s–99m
	MWS1A-PRM-LV	Wall mounted microwave presence detector – low voltage	11.5VDC–36VDC 10VAC–26.5VAC	16A	10A	10A	10A	10A	10s–99m
	MWS1A-IP-PRM-LV	Moisture-proof wall mounted microwave presence detector – low voltage. (IP66)	11.5VDC–36VDC 10VAC–26.5VAC	16A	10A	10A	10A	10A	10s–99m
	MWS1A-PRM-VFC	Wall mounted microwave presence detector – volt free contact*	230VAC	6A	3A	3A	3A	3A	10s–99m
	MWS1A-IP-PRM-VFC	Moisture-proof wall mounted microwave presence detector – volt free contact. (IP66)*	230VAC	6A	3A	3A	3A	3A	10s–99m

Product variants are available where a different regional frequency is required. **R** = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

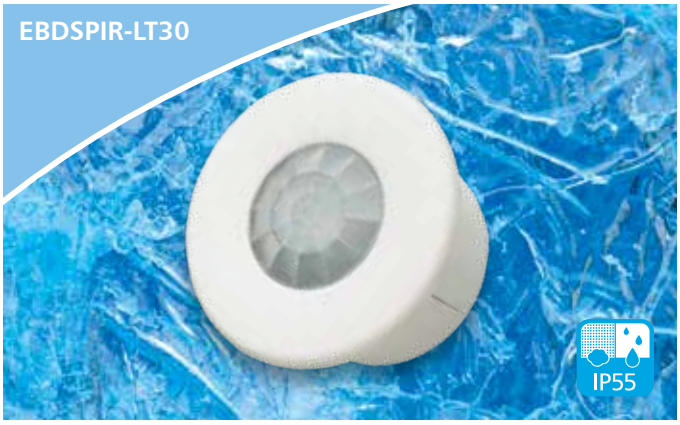
Accessories		Description
	UNLCDHS	Professional commissioning LCD programming handset. See page 16
	UHS5	Commissioning handset. See page 15
	UHS7	User handset. See page 15

* Please supply voltage requirement

Minus30 cold storage and refrigeration lighting controls

Cold storage environments such as warehousing, docking bays and car parks can reach ambient temperatures from -10°C to -30°C. These areas normally have uncontrolled lighting resulting in expensive use of energy.

Following rigorous testing in climatic chambers and on-site, the new Minus30 range of cold storage and refrigeration PIR detectors from CP Electronics operate and perform at aggressive -30°C temperatures.



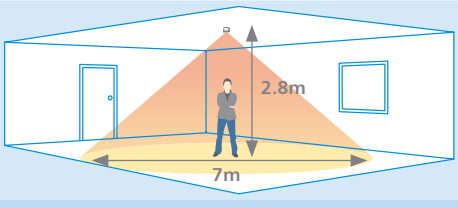
These compact PIR detectors provide automatic control for lighting used in cold storage and refrigeration environments.

The PIR sensor can be mounted either flush into a ceiling tile or using a suitable surface mounting box making it perfect for refrigeration rooms where low level lighting has been fitted.

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.

	Order Code	Description
PRM	**EBDSPIR-PRM-IP-LT30**	Compact ceiling mounted PIR presence/absence detector low temperature
	EBDSPIR-DD-IP-LT30	Compact ceiling mounted PIR presence/absence detector with Direct Dim DALI/DSI, low temperature (up to 20 ballasts)
	EBDSPIR-AD-IP-LT30	Compact ceiling mounted PIR presence/absence detector with 1–10V analogue dimming output, low temperature (up to 10 ballasts)
	EBD-ENCIP1	Detector enclosure IP65

Detection Pattern



Area of high sensitivity | Area of lower sensitivity

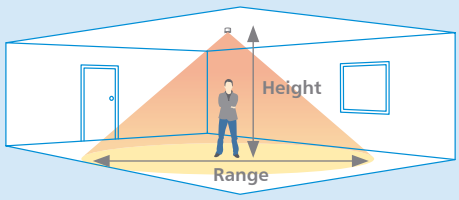
For further information please refer to the product user guide on our website.

In car parks and where low bay freezer rooms are used, the EBMPIR-MB-LT30 is the ideal retrofit solution as it easily mounts to a luminare fitting.

The units are IP65 rated, making them suitable for outdoor use and in damp areas.

	Order Code	Description
PRM	**EBMPIR-MB-PRM-LT30**	Batten mount PIR presence detector, low temperature
	EBMPIR-MB-DD-LT30	Batten mount PIR presence detector with Direct Dim DALI/DSI, low temperature (up to 10 ballasts)
	EBMPIR-MB-AD-LT30	Batten mount PIR presence detector with 1–10V analogue dimming output, low temperature (up to 4 ballasts)

Detection Pattern	Height	Range
	2.8m	9m
	7m	16m



Area of high sensitivity | Area of lower sensitivity

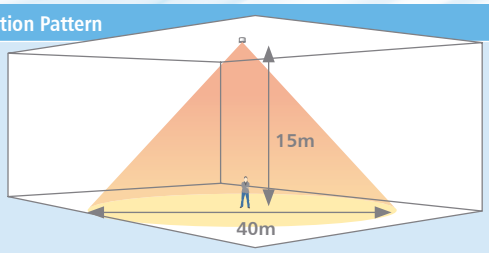
For further information please refer to the product user guide on our website.

In refrigeration warehousing high bays can be up to 20m in height and detection is required at floor level where the ambient temperature can be low. The EBDHS-LT30 range of high sensitivity detectors is perfect for this application with its operating temperature of -30°C and detection range of up to 40m.

The masking shields supplied with this product provide a varied use of tuning the detection pattern to meet the needs of the warehouse.

	Order Code	Description
PRM	**EBDHS-PRM-LT30**	High sensitivity PIR presence/absence detector with lux level sensing, infrared override and time delay function, low temperature
	EBDHS-DD-LT30	High sensitivity PIR presence/absence detector with Direct Dim DALI/DSI, low temperature (up to 20 ballasts)
	EBDHS-AD-LT30	High sensitivity PIR presence/absence detector with 1–10V analogue dimming, low temperature (up to 10 ballasts)
	EBD-ENCIP1	Detector enclosure IP65

Detection Pattern



No shield

Area of high sensitivity | Area of lower sensitivity

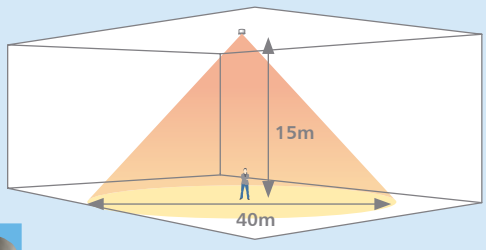
For further information please refer to the product user guide on our website.

The EBDHS-MB-LT30 luminaire mount high bay PIR presence detector range provides exceptionally sensitive and long range detection in -30°C conditions. In refrigeration warehousing high bays can be 15m in height and detection is required at floor level where the ambient temperature can be low.

The detectors are ideal for high bay lighting control in areas, and are simple to retrofit to commercial luminaires and basic battens.

	Order Code	Description
PRM	**EBDHS-MB-PRM-LT30**	Luminaire mount high bay PIR presence detector, low temperature
	EBDHS-MB-DD-LT30	Luminaire mount high bay PIR presence detector with Direct Dim DALI/DSI, low temperature (up to 10 ballasts)
	EBDHS-MB-AD-LT30	Luminaire mount high bay PIR presence detector with 1–10V analogue dimming output, low temperature (up to 4 ballasts)

Detection Pattern



No shield

Area of high sensitivity | Area of lower sensitivity

For further information please refer to the product user guide on our website.

See pages 10–14 for our **Presence Detector technology guide**

KNX Presence Detectors

CP Electronics introduce a new range of microwave and PIR detectors specifically designed for KNX applications.

KNX unites all of the functions under one roof which were previously controlled separately, allowing systems to be constructed using components from any manufacturer. CP Electronics provide the presence detector as part of the KNX system which will control luminaires or HVAC systems from other manufacturers.

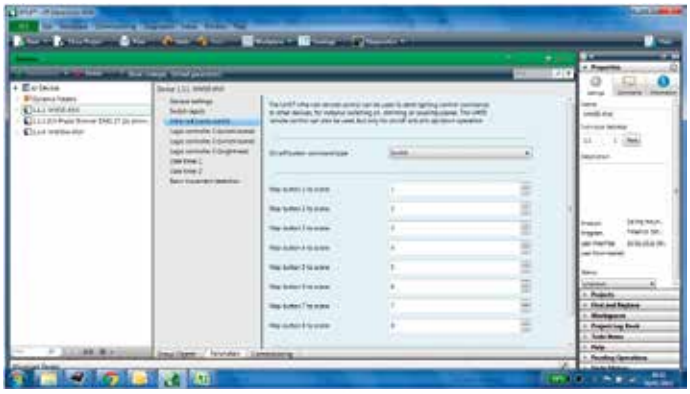
The units offer a number of configuration options, designed to provide the installer with maximum flexibility and minimum installation time.

Key Features:

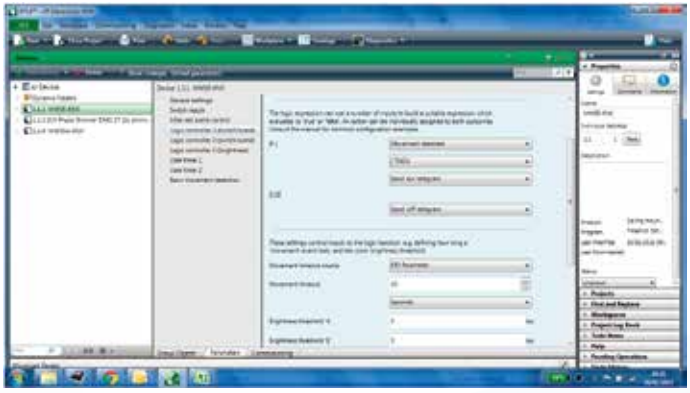
- Presence detector, either PIR or microwave
- Absence detection
- Walk test LED
- Light level sensor
- Two ELV switch inputs
- Infrared remote control sensor to facilitate control of lighting
- User-configurable logic functions and timers

Configuration of devices on the KNX bus takes place via the standard ETS software application, allowing all aspects of the presence detector's behaviour to be configured and controlled.

Example screen shots of control settings within ETS software



Infrared scene control



Logic controller settings

Accessories availabe for KNX Presence Detectors

Accessories		Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15

EBDSPIR-KNX

EBDSPIR-KNX is a compact PIR detector suitable to be mounted either flush or in a surface mount box.

Designed with switch input connectors, the simple to install EBDSPIR-KNX is suitable for narrow ceiling voids and still offers sensitive detection.

Order Code	Description
EBDSPIR-KNX	Compact PIR presence/absence detector – KNX

For detection pattern please see page 18.

MWS3A-KNX

Unlike fixed head microwave detectors the MW3SA-KNX 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.

Order Code	Description
MWS3A-KNX	Adjustable ceiling mounted microwave presence/absence detector – KNX

For detection pattern please see page 32.

EBDHS-KNX

EBDHS-KNX is a high bay PIR presence detector range which provides exceptionally sensitive and long range detection.

The detectors are ideal for high bay lighting control in areas with demanding spaces and increased mounting heights such as warehouses and factories.

The EBDHS-KNX is IP65 approved and can be surface mounted using an IP65 mounting box.

Order Code	Description
EBDHS-KNX	High sensitivity PIR presence/absence detector – KNX

For detection pattern please see page 28.

MWS6-KNX

MWS6-KNX is a low profile microwave detector suitable to be flushed mounted or in a surface mount box.

Designed with switch input connectors, the simple to install MWS6-KNX is suitable for a variety of applications where aesthetic, unobtrusive lighting control is required.

The MWS6-KNX is a highly sensitive microwave device.

Order Code	Description
MWS6-KNX	Low profile microwave presence/absence detector – KNX

For detection pattern please see page 36.

Light Level Controls

Light level controls provide a cost-effective and simple solution to energy saving.

Our accurate and reliable photocells allow switching and maintained illuminance (daylight harvesting).

Load Capacity Key

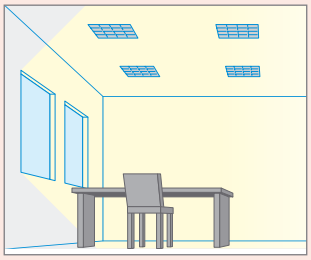
Suitable for the control of:

Lighting

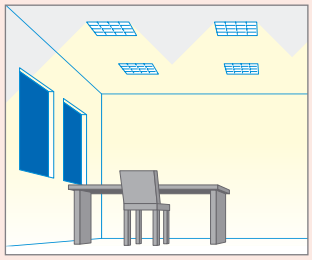
Light level controls explained

As the level of ambient light in a room increases, our light level controls can be used to either dim or turn off the lights.

Switching Photocell



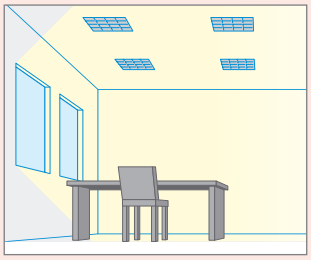
Sufficient daylight, lights off



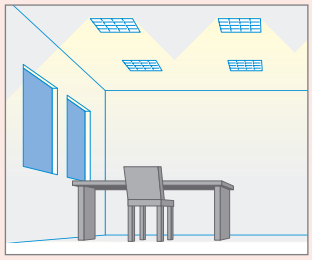
Insufficient daylight, lights on

The photocell within the sensor ensures that lights will not be switched on until ambient lux levels drop below a preset value, and will be switched off at a preset time or once the desired lux level is reached.

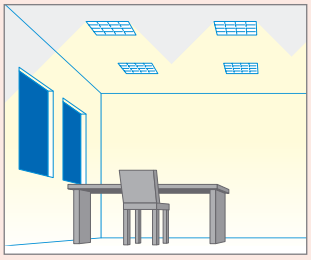
Dimming Photocell



Sufficient daylight, lights off



Some daylight, lights dimmed to a maintained level



Insufficient daylight, lights on

These photocells have a wide range of functionality to enable lux levels to be maintained whilst using the minimum amount of energy. These photocells are ideally suited to applications where maximum efficiency and flexibility are required.

ALC-PRM-VFC

The ALC-PRM-VFC photocell will turn lighting on when the ambient light falls below a preset level. The lighting will then be turned off when the total light level rises above a separate preset level.

An integral, adjustable time delay prevents nuisance switching (e.g. dark clouds).

The ALC-PRM-VFC can be mounted flush or surface on a ceiling.

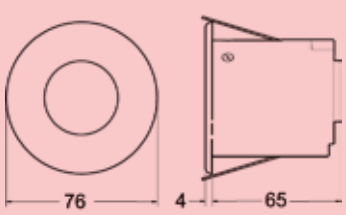
Order Code	Description
ALC-PRM-VFC	Ceiling mounted photocell with voltage free contact

Accessories		Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	**DBB**	Surface mount back box
	**DBB-EXT**	Surface mount back box extender

Load Rating at 230VAC					Lux Time
R	I	F	CF	LED	
10A	10A	6A	3A	3A	0–99m

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

Dimensions



All dimensions in mm

ALC-DD

The ALC-DD dimming photocell automatically adjusts the light output of luminaires depending on the amount of natural light available, to a maintained illuminance level. Suitable for use with dimming ballasts only.

An optional manual control, via a switch input, allows the user to override the dimming levels and turn the output on and off.

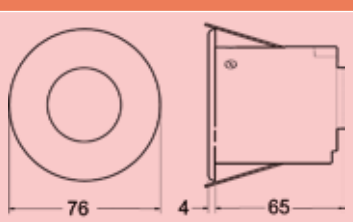
Order Code	Description
ALC-DD	Ceiling mounted photocell for DALI/DSI dimming
ALC-AD	Ceiling mounted photocell 1–10V analogue dimming output

Accessories		Description
	**UNLCDHS**	Professional commissioning LCD programming handset. See page 16
	**UHS5**	Commissioning handset. See page 15
	**DBB**	Surface mount back box
	**DBB-EXT**	Surface mount back box extender

Load Rating at 230VAC					Lux Time
R	I	F	CF	LED	
10A	10A	6A	3A	3A	0–99m

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

Dimensions

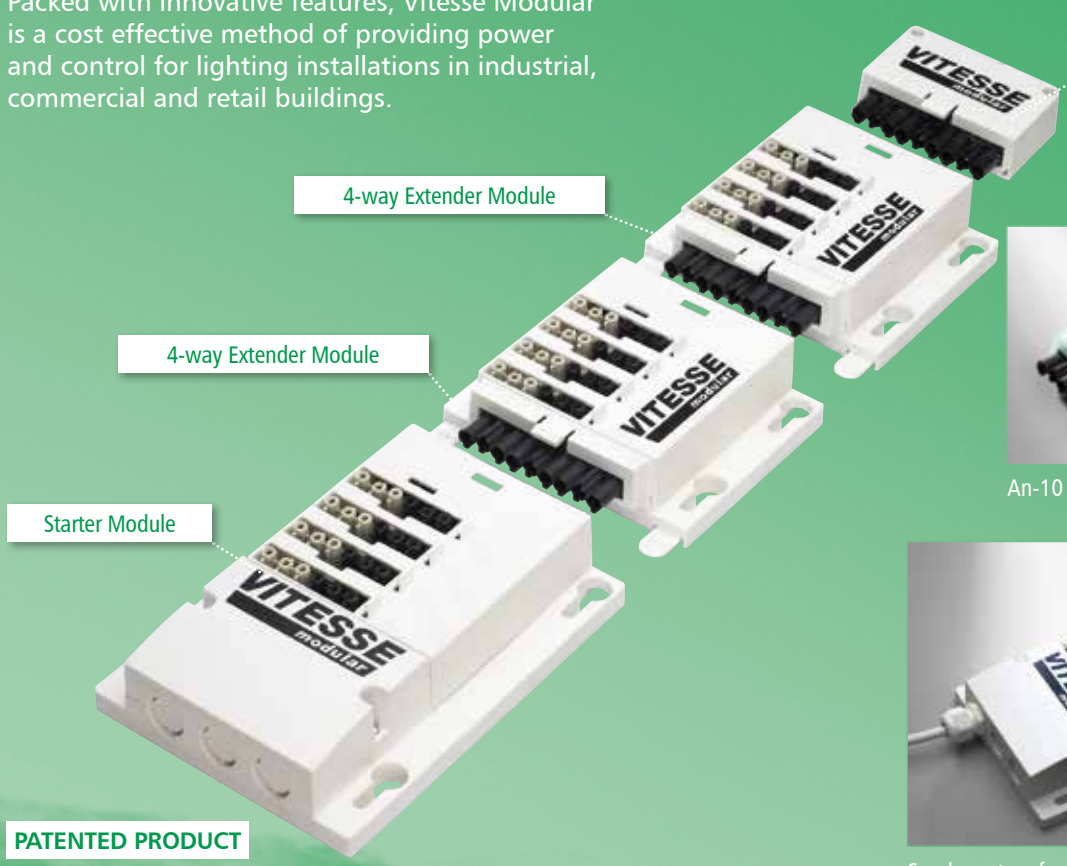


All dimensions in mm

The Vitesse Modular™ System

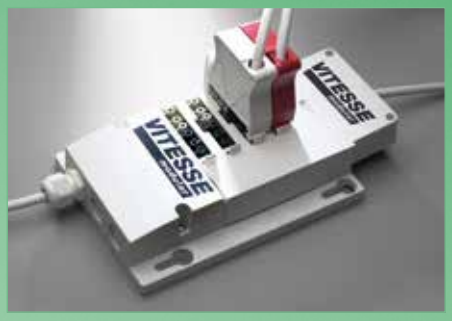
As its name suggests, Vitesse Modular relies on a modular design which means you simply add 'modules' as and when they are needed.

Packed with innovative features, Vitesse Modular is a cost effective method of providing power and control for lighting installations in industrial, commercial and retail buildings.



PATENTED PRODUCT

An-10 wireless switching module.

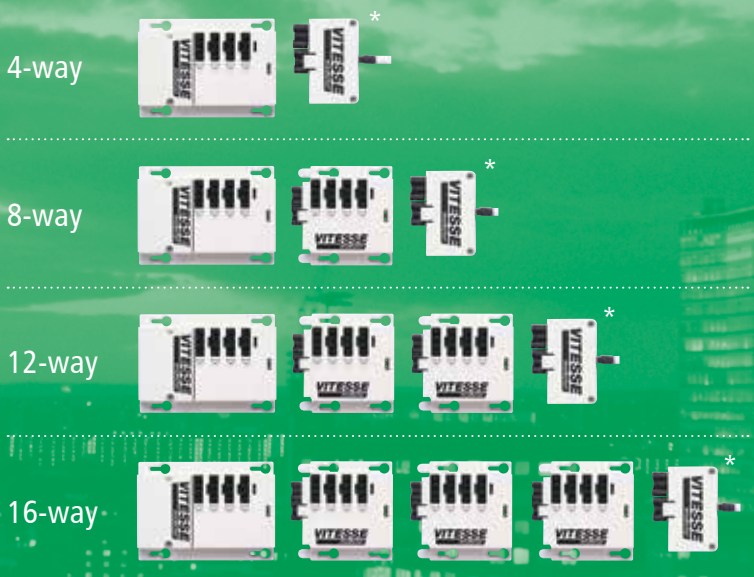


6 pole system for dimming illustrated. 4 pole system also available for simple switching.

It grows and adapts to suit the installation

From 4-way to 16-way using the 4-way extender modules… it couldn't be simpler.

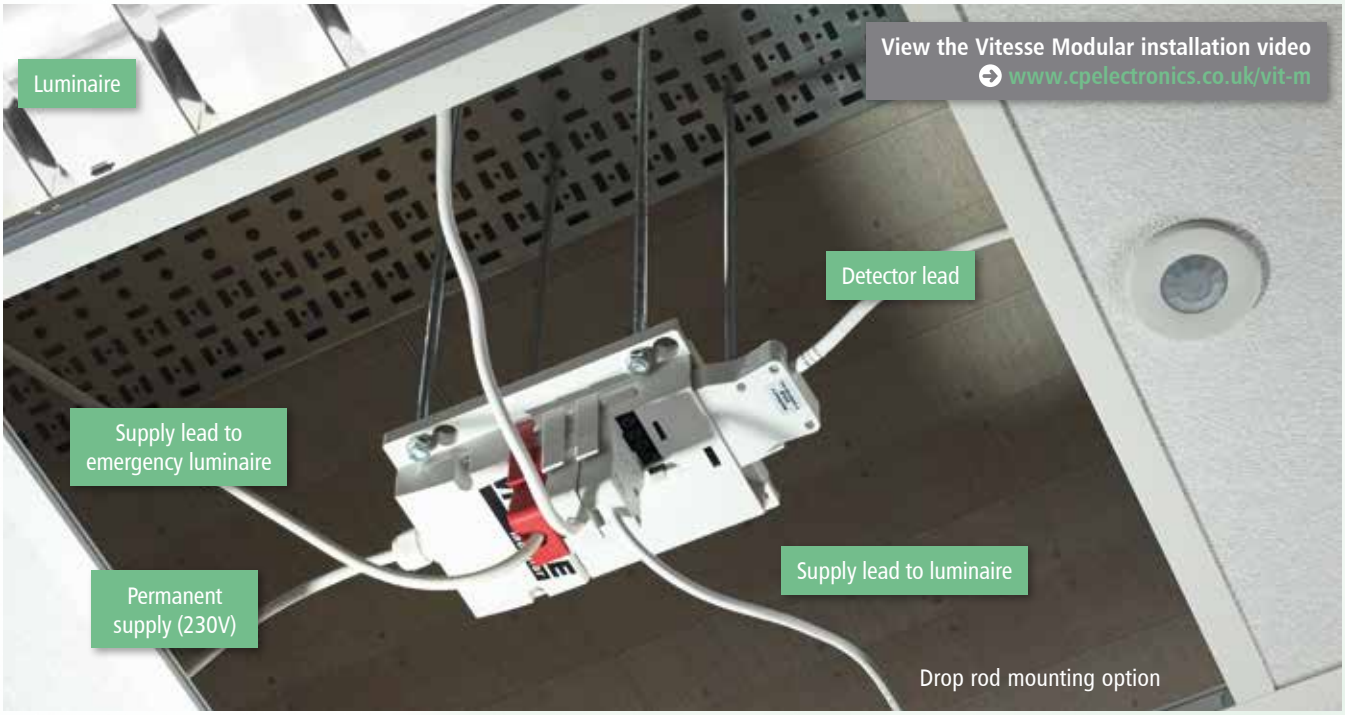
Once Vitesse Modular is installed, modules can be added (or removed) depending on future requirements. Also, as there are so few parts, you don't have to waste space in a warehouse or vehicle with a huge variety of different parts just in case you might need them.



*Connection Module only required for dimming, detector or SELV switch connections.

Simple connectivity

The mains input is connected using the spacious wiring compartment; and control inputs and outputs are pluggable using industry standard connectors as shown as a typical layout below.



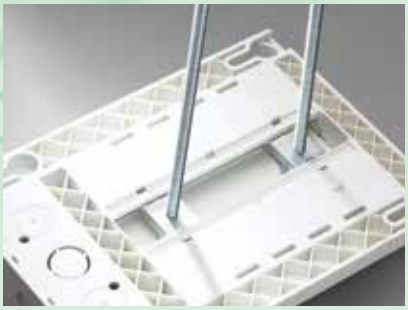
Ease of fixing

Vitesse Modular provides easy installation options for all locations.

Slab mounting

Can be mounted directly onto slab.

Channel nut mounting



Can be mounted using channel nut fixings.

BESA box connection

Compatible with BESA box connection.

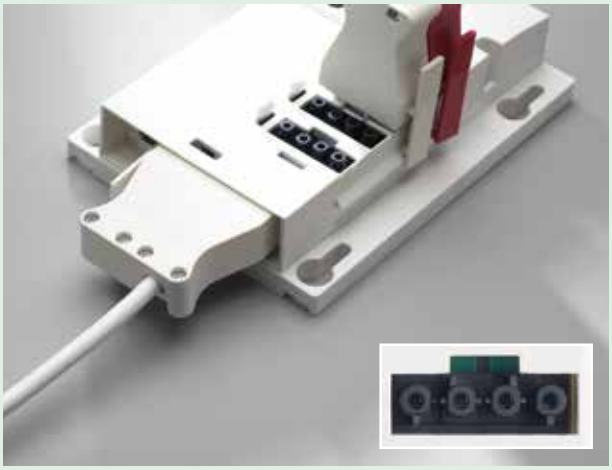
Marco clip mounting

Can be mounted using Marco clips.

Choice of switching or dimming

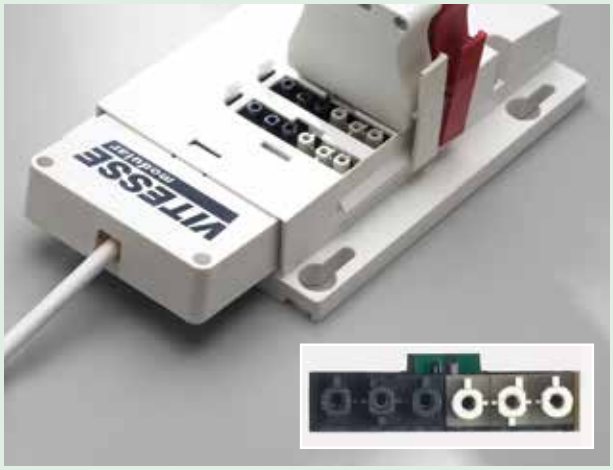
Vitesse Modular offers you the choice of switching or dimming to suit your installation.

Four pole connection for switching



Four pole connections for standard non-dimming luminaires allows switching or automatic control with presence detectors or a SELV switching module. Available with 2-channel switching, see page 58.

Six pole connection for dimming



Six pole connections for luminaires fitted with a dimming ballast allows switching and dimming when used with presence detectors or a SELV dimming module.

Flexible to your project demands

Vitesse Modular can adapt to various installation requirements with regards to functionality and connectivity.

SELV switching module

The Vitesse Modular SELV module removes the need for RCD protection and provides IEE 17th Edition compliant lighting installations.

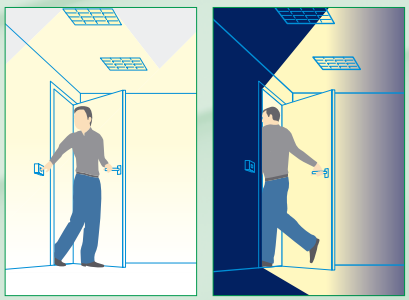
Separate pluggable connections

Separate pluggable connections for detectors and control devices so valuable channel outputs are not wasted.

PIR and microwave detectors

Full range of lighting control products such as PIR and microwave presence detectors. Presence detection provides automatic switch on and automatic switch off.

Easy presence/absence detector connection



Simple pluggable connection to provide presence/absence detection when used with our full range of available detectors.

see page 10 for more information

Future-proof your lighting design

A project might evolve over time. Our simple solutions make adaption easy.

Programming handsets


UNLCDHS


UHS5

Our range of infrared (IR) handsets have been designed to allow simple configuration, programming and maximum user convenience.

There's a handset to suit every user whether it's the commissioning engineer configuring hundreds of detectors, or a contractor setting up two of three detectors.

See pages 15–16

Embracing wireless technology through our An-10 system

An-10 wireless technology allows you to install a fully featured lighting control system easily and with minimal disruption.

An-10 has been specifically created to allow you to embrace the advantages of wireless technology, while at the same time offering all of the features and functionality demanded by modern day lighting control systems.

See pages 89–99

Versatile wiring options

Vitesse Modular has been designed for hassle-free wiring on-site.

Large terminal compartments and blocks

Lots of space for really easy connection.

Large terminals accept 4mm² cable.

Detachable cable entry plate and integral cable clamps

Detachable cable entry plate for hassle-free wiring.

Cable clamps can be used with grommets or cable glands.

Red luminaire connectors for emergency fittings

Red luminaire connectors – easy to track emergency circuits whilst on-site.

Connectors can be configured as rear or side entry.

Series 166 format pluggable connectors

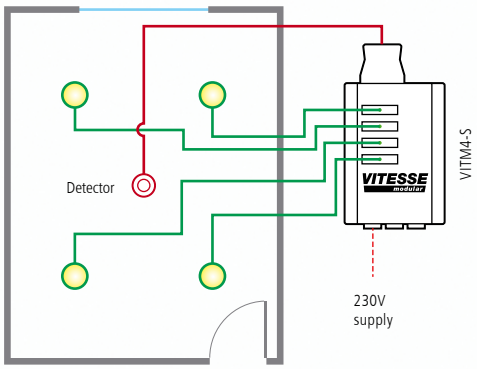
Series 166 format connectors – no need for proprietary connectors.

Connectors can be configured as rear or side entry.

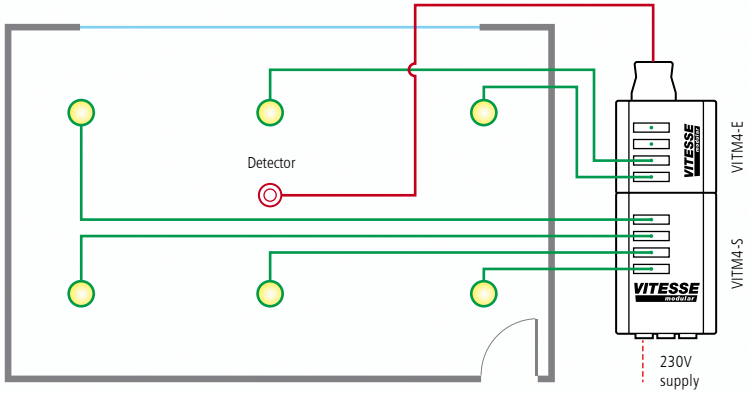
Easy to connect pluggable luminaires.

Typical wiring layouts for switching and dimming detectors

Switching

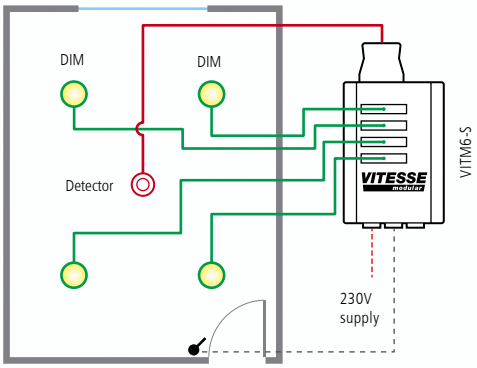


Four luminaire room
Presence non-dimming room with detector.

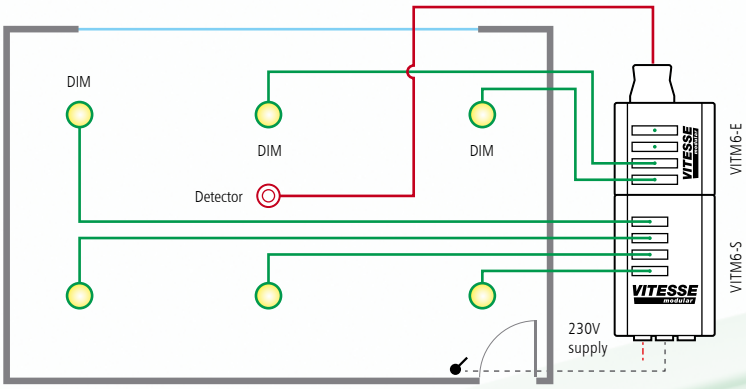


Six luminaire room
Presence non-dimming room with detector.

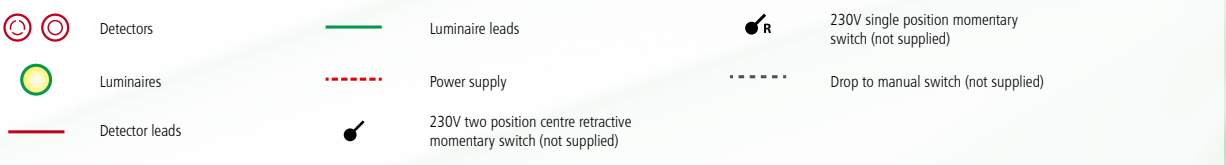
Dimming



Four luminaire room
Absence and window row dimming room with detector.



Six luminaire room
Absence and window row dimming room with detector.



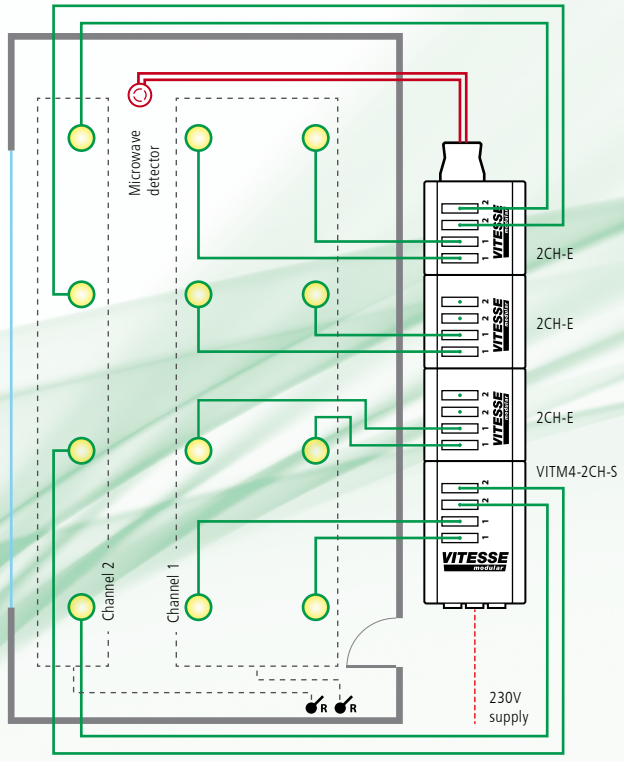
PLEASE NOTE: These wiring diagrams are to be used as a guide only. For further details please refer to our product user guides.

2-channel switching

Ideal for installations that have essential and non-essential supplies.

Non-dimming distribution box for use in applications that require supplies for switching lighting and/or ventilation circuits.

The 2-channel, 2-supplies VITM4-S-2CH-2S is ideal for hospitals where there is essential and non-essential supply.
See pages 58–60 for 2-channel products.

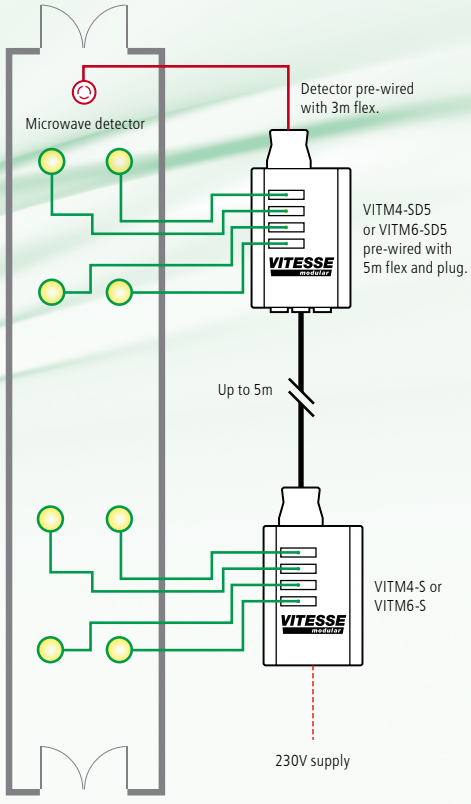


Dedicated corridor solution

Vitesse Modular offers a dedicated corridor solution.

Switching and dimming versions are available in a pre-wired configuration, VITM4-SD5 and VITM6-SD5, enabling luminaires in corridors or passageways to be easily connected.

See pages 55 and 61 for corridor solution products.



PLEASE NOTE: VITM4 and VITM6 are not intercompatible

Product overview

Switching Products			
	Code	Description	Pg
	VITM4-S	Starter module with 4 pole, 4 outputs	55
	VITM4-E	Extender module with 4 pole, 4 outputs	55
	VITM4-SL1	Pre-wired package	55
	VITM4-SD5	Pre-wired corridor module.	55
	VITM4-EBDSPIR-PRM	Compact PIR presence/absence detector	56
	VITM4-EBMHS-PRM	Miniature PIR presence detector	56
	VITM4-MWS6-PRM	Low profile microwave presence/absence detector	56
	VITM4-MWS3A-PRM	Adjustable head microwave presence/absence detector	56
	VITM-MCFUSC	VITM Marco basket fixing clip	56
	VITM4-SELVMOD	SELV switching module	57
	VITM-ROSE	Ceiling rose	57
		Luminaire Leads & Connectors	57

2-Channel Switching Products			
	Code	Description	Pg
	VITM4-S-2CH	Starter module with 4 pole, 4 outputs	58
	VITM4-E-2CH	Extender module with 4 pole, 4 outputs	58
	VITM4-S-2CH-2S	Starter module with 4 pole, 4 outputs. 2-channel, 2-supplies	58
	VITM4-E-2CH-2S	Extender module with 4 pole, 4 outputs. 2-channel, 2-supplies	58
	EBDSPIR-PRM-2CH	Compact PIR presence/ absence detector	59
	MWS6-PRM-2CH	Low profile microwave presence/absence detector	59
	MWS3A-PRM-2CH	Adjustable head microwave presence/absence detector	59
		2-channel detector leads	59
		Luminaire Leads & Connectors	60
	VITM-MCFUSC	VITM Marco basket fixing clip	60

Dimming Products			
	Code	Description	Pg
	VITM6-S	Starter dimming module with 6 pole, 4 outputs	61
	VITM6-E	Extender dimming module with 6 pole, 4 outputs	61
	VITM6-SL1	Pre-wired dimming package	61
	VITM6-SD5	Pre-wired corridor module, 5 metres of cable	61
	VITM6-EBDSPIR-DD	Compact PIR presence/absence detector	62
	VITM6-EBMHS-DD	Miniature PIR presence detector	62
	VITM6-MWS6-PRM	Low profile microwave presence/absence detector	62
	VITM6-MWS3A-PRM	Adjustable head microwave presence/absence detector	62
	VITM6-L3-DD	Detector Leads	62
	VITM-MCFUSC	VITM Marco basket fixing clip	62
	VITM6-SELVMOD	SELV switching and dimming module	63
	VITM6-ROSE	Ceiling rose	63
		Luminaire Leads & Connectors	63
		Tee Modules	63

Programming Handsets			
	Code	Description	Pg
	UNLCDHS	Professional commissioning handset	56, 60, 62
	UHS5	Commissioning handset	56, 60, 62
	UHS7	User handset	56, 60, 62

Vitesse Modular switching modules, detectors & accessories

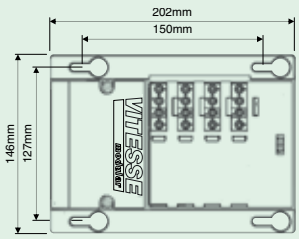
Vitesse Modular provides easy installation options for all locations.

VITM4-S

Starter Module

Order Code	Description
VITM4-S	Starter module with 4 pole, 4 outputs. Power rating of system 16A (at 230VAC). Rating of each output 10A (at 230VAC)

Dimensions

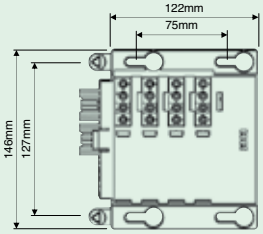


VITM4-E

Extender Module

Order Code	Description
VITM4-E	Extender module with 4 pole, 4 outputs. Power rating of system 16A (at 230VAC). Rating of each output 10A (at 230VAC)

Dimensions



VITM4-SL1

Order Code	Description
VITM4-SL1	Pre-wired package includes 4 pole 4 output starter module, ceiling rose, 4 pole connector plug and 1 metre of cable. BESA box not included

VITM4-SD5

Order Code	Description
VITM4-SD5	Pre-wired corridor module c/with 5m cable

EBDSPIR

Supplied with 3m lead and plug

Order Code	Description
VITM4-EBDSPIR-PRM	Compact ceiling mounted PIR absence/presence detector with lux level sensing, time delay function and infrared override
VITMR-EBDSPIR-PRM	Same as VITM4-EBDSPIR-PRM plus pre-wired with connector and ceiling rose

For detection pattern please see page 19.

EBMHS

Supplied with 3m lead and plug (from PSU)

Order Code	Description
VITM4-EBMHS-PRM	Miniature PIR absence/presence detector with lux level sensing, time delay function and infrared override

For detection pattern please see page 23.

MWS6

Supplied with 3m lead and plug

PATENTED DESIGN

Order Code	Description
VITM4-MWS6-PRM	Low profile microwave absence/presence detector with lux level sensing, infrared override and time delay function
VITMR-MWS6-PRM	Same as VITM4-MWS6-PRM plus pre-wired with connector and ceiling rose

For detection pattern please see page 37.

MWS3A

Supplied with 3m lead and plug

PATENTED DESIGN

Order Code	Description
VITM4-MWS3A-PRM	Adjustable head microwave absence/presence detector with lux level sensing, infrared override and time delay function
VITMR-MWS3A-PRM	Same as VITM4-MWS3A-PRM plus pre-wired with connector and ceiling rose

For detection pattern please see page 33.

PROGRAM FROM GROUND LEVEL

The IR transmitting and receiving technology in our handsets and detectors has been carefully designed to allow programming from ground level.

	Order Code	Description
	**UNLCDHS**	Professional commissioning handset
	**UHS5**	Commissioning handset
	**UHS7**	User handset

Marco Basket Fixing Clip

Order Code	Description
VITM-MCFUSC	VITM Marco basket fixing clip

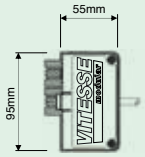
VITM4-SELVMOD

See page 96 for An-10 options

Switching Module.
To be used for manual switching only – no detector

Order Code	Description
VITM4-SELVMOD	Switching module – simple connection of switches using SELV removes the need for RCD protection. Includes integral time delay feature

Dimensions



Luminaire Leads & Connectors Switching

Connectors can be configured as rear or side entry

PATENTED DESIGN

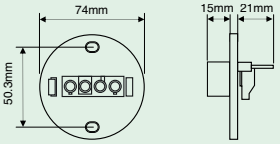
Order Code	Description
VITM4L303100W	3 core luminaire lead (white), 1.0mm², (3 metres)
VITM4L305100W	3 core luminaire lead (white), 1.0mm², (5 metres)
VITM4L403100R	4 core luminaire lead (red), 1.0mm², (3 metres)
VITM4L405100R	4 core luminaire lead (red), 1.0mm², (5 metres)
VITM4-LPW	4 pole luminaire connector (white)
VITM4-LPR	4 pole luminaire connector (red)

Other cable lengths are available upon request

Ceiling Rose

Order Code	Description
VITM-ROSE	Ceiling rose with connector plug. BESA box not included. Power Rating of system 16A (at 230VAC)
VITM-ROSE-R	Ceiling rose with Red connector plug. Suitable for emergency fittings. BESA box not included. Power Rating of system 16A (at 230VAC)
VITM-ROSE-NP	Ceiling rose, no connector plug. BESA box not included. Power Rating of system 16A (at 230VAC)

Dimensions



Dual Detector Leads

Order Code	Description
VITM4-LD3-PRM*	Dual detector lead for two PRM detectors (3 metre)
VITM4-L3-PRM*	Detector lead for single PRM detectors (3 metre)

*Only for single channel detectors.

Order Code Guidelines for Cables

Prefix	Poles	Lead	Core	Length in Metres	Cable Area	Type	Plug Colour
VITM	4	L	3/4	03 or 05 (other lengths to order)	1.0mm² (1.5mm² to order)	0 = lsf	W (White) or R (Red) B (Black) to order

See pages 10–14 for our **Presence Detector technology guide**

2-channel switching options

Non-dimming distribution box for use in applications that require two independently switched lighting circuits, or lighting and ventilation circuits. Learn more on page 53.

VITM4-S-2CH

Starter Module

Order Code	Description
VITM4-S-2CH	Starter module with 4 pole, 4 outputs. 2-channel. Power rating of system 16A (at 230VAC). Rating of each output 10A (at 230VAC)

VITM4-E-2CH

Extender Module

Order Code	Description
VITM4-E-2CH	Extender module with 4 pole, 4 outputs. 2-channel. Power rating of system 16A (at 230VAC). Rating of each output 10A (at 230VAC)

2-channel, 2-supplies switching options

Non-dimming distribution box for use in applications that require two independent supplies for switching, lighting and/or ventilation circuits. Essential and non-essential. Learn more on page 53.

VITM4-S-2CH-2S

Starter Module

Order Code	Description
VITM4-S-2CH-2S	Starter module with 4 pole, 4 outputs. 2-channel, 2-supplies. Power rating of system 16A (at 230VAC). Rating of each output 10A (at 230VAC)

VITM4-E-2CH-2S

Extender Module

Order Code	Description
VITM4-E-2CH-2S	Extender module with 4 pole, 4 outputs. 2-channel, 2-supplies. Power rating of system 16A (at 230VAC). Rating of each output 10A (at 230VAC)

EBDSPIR

N.B. please order leads separately

Order Code	Description
EBDSPIR-PRM-2CH	Compact ceiling mounted PIR presence/absence detector with lux level sensing, time delay function and infrared override. 2-channel
EBDSPIR-PRM-2CH-NC	Compact ceiling mounted PIR presence/absence detector with lux level sensing, time delay function and infrared override. Normally closed fail safe contacts. 2-channel

For detection pattern please see page 19.

MWS6

N.B. please order leads separately

Order Code	Description
MWS6-PRM-2CH	Low profile microwave presence/absence detector with lux level sensing, infrared override and time delay function. 2-channel
MWS6-PRM-2CH-NC	Low profile microwave presence/absence detector with lux level sensing, infrared override and time delay function. Normally closed fail safe contacts. 2-channel

For detection pattern please see page 37.

MWS3A

N.B. please order leads separately

Order Code	Description
MWS3A-PRM-2CH	Adjustable head microwave presence/absence detector with lux level sensing, infrared override and time delay function. 2-channel
MWS3A-PRM-2CH-NC	Adjustable head microwave presence/absence detector with lux level sensing, infrared override and time delay function. Normally closed fail safe contacts. 2-channel

For detection pattern please see page 33.

Detector Leads

Order Code	Description
VITM4-L3-2CH	2-channel detector lead for single detector (3 metre)
VITM4-LD3-2CH	2-channel dual detector lead for two detectors (3 metre)
VITM4-L3-2CH-2S	2-channel, 2-supplies detector lead for single detector (3 metre)
VITM4-LD3-2CH-2S	2-channel, 2-supplies dual detector lead for two detectors (3 metre)

Order Code Guidelines for Cables

Prefix	Poles	Lead	Core	Length in Metres	Cable Area	Type	Plug Colour
VITM	4	L	3/4	03 or 05 (other lengths to order)	1.0mm² (1.5mm² to order)	0 = lsf	W (White) or R (Red) B (Black) to order

Marco Basket Fixing Clip

Order Code	Description
VITM-MCFUSC	VITM Marco basket fixing clip

Luminaire Leads & Connectors Switching

Order Code	Description
VITM4L303100W	3 core luminaire lead (white), 1.0mm², (3 metres)
VITM4L305100W	3 core luminaire lead (white), 1.0mm², (5 metres)
VITM4L403100R	4 core luminaire lead (red), 1.0mm², (3 metres)
VITM4L405100R	4 core luminaire lead (red), 1.0mm², (5 metres)
VITM4-LPW	4 pole luminaire connector (white)
VITM4-LPR	4 pole luminaire connector (red)

Other cable lengths are available upon request

	Order Code	Description
	**UNLCDHS**	Professional commissioning handset
	**UHS5**	Commissioning handset
	**UHS7**	User handset

PROGRAM FROM GROUND LEVEL

The IR transmitting and receiving technology in our handsets and detectors has been carefully designed to allow programming from ground level.

Vitesse Modular dimming modules, detectors and accessories

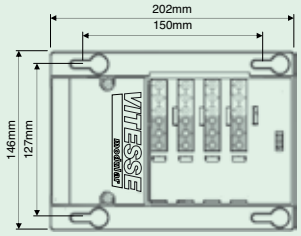
Our VITM6 range is designed for use with dimming luminaires.

VITM6-S

Starter Dimming Module

Order Code	Description
VITM6-S	Starter module with 6 pole, 4 outputs. Power rating of system 16A (at 230VAC). Rating of each output 10A (at 230VAC)

Dimensions

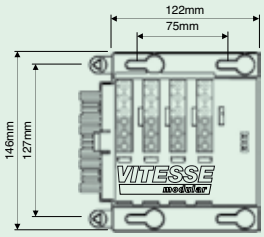


VITM6-E

Extender Dimming Module

Order Code	Description
VITM6-E	Extender module with 6 pole, 4 outputs. Power Rating of system 16A (at 230VAC). Rating of each output 10A (at 230VAC)

Dimensions



VITM6-SL1

Pre-wired Dimming Package

Order Code	Description
VITM6-SL1	Pre-wired dimming package includes 6 pole 4 output starter dimming module, Ceiling Rose, 4 pole connector plug and 1 metre of cable. BESA box not included

VITM6-SD5

Order Code	Description
VITM6-SD5	Pre-wired corridor module c/with 5m cable

EBDSPIR

Order Code	Description
VITM6-EBDSPIR-DD	Compact ceiling mounted PIR presence/absence detector with Direct Dim and time delay function (up to 20 ballasts). DALI/DSI

For detection pattern please see page 19.

EBMHS

Order Code	Description
VITM6-EBMHS-DD	Miniature PIR presence detector with Direct Dim and time delay function (up to 10 ballasts). DALI/DSI

For detection pattern please see page 23.
(Note: this detector does not support Absence detection)

MWS6

Order Code	Description
VITM6-MWS6-DD	Low profile microwave presence/absence detector with Direct Dim and time delay function (up to 20 ballasts). DALI/DSI

For detection pattern please see page 37.

MWS3A

Order Code	Description
VITM6-MWS3A-DD	Adjustable head microwave presence/absence detector with Direct Dim and time delay function (up to 20 ballasts). DALI/DSI

For detection pattern please see page 33.

Analogue dimming (AD) detectors available on request

PROGRAM FROM GROUND LEVEL

The IR transmitting and receiving technology in our handsets and detectors has been carefully designed to allow programming from ground level.

	Order Code	Description
	**UNLCDHS**	Professional commissioning handset
	**UHS5**	Commissioning handset
	**UHS7**	User handset

Detector Leads

Order Code	Description
VITM6-L3-DD	Detector lead for single DD detectors (3 metre)

Marco Basket Fixing Clip

Order Code	Description
VITM-MCFUSC	VITM Marco basket fixing clip

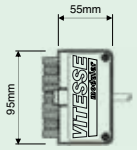
VITM6-SELVMOD

See page 96 for An-10 options

Dimming and Switching Module.
To be used for manual switching/dimming only – no detector

Order Code	Description
VITM6-SELVMOD	Dimming and switching module – simple connection of switches using SELV removes the need for RCD protection. When used in conjunction with DALI/DSI ballasts, the Module allows switching and up/down dimming

Dimensions



Luminaire Leads & Connectors Dimming

Blue/black connectors also available

PATENTED DESIGN

Order Code	Description
VITM6L303100W	3 core luminaire lead (white), 1.0mm² (3 metres)
VITM6L305100W	3 core luminaire lead (white), 1.0mm² (5 metres)
VITM6L403100R	4 core luminaire lead (red), 1.0mm² (3 metres)
VITM6L405100R	4 core luminaire lead (red), 1.0mm² (5 metres)
VITM6L503100W	5 core luminaire lead (white), 1.0mm², (3 metres)
VITM6L505100W	5 core luminaire lead (white), 1.0mm², (5 metres)
VITM6L603100R	6 core luminaire lead (red), 1.0mm², (3 metres)
VITM6L605100R	6 core luminaire lead (red), 1.0mm², (5 metres)
VITM6-LPW	6 pole luminaire connector (white)
VITM6-LPR	6 pole luminaire connector (red)

Other cable lengths are available upon request

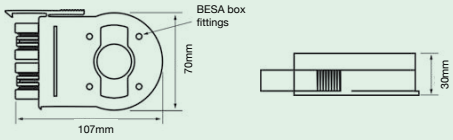
Connectors can be configured as rear or side entry.

Ceiling Rose

Blue/black connectors also available

Order Code	Description
VITM6-ROSE-B	6 pole ceiling rose (blue/black) with connector plug
VITM6-ROSE-B-R	6 pole ceiling rose (blue/black) with red connector plug
VITM6-ROSE-B-NP	6 pole ceiling rose (blue/black), no connector plug
VITM6-ROSE-G	6 pole ceiling rose (grey/black) with connector plug
VITM6-ROSE-G-R	6 pole ceiling rose (grey/black) with red connector plug
VITM6-ROSE-G-NP	6 pole ceiling rose (grey/black), no connector plug

Dimensions



Tee Modules

Blue/black connectors also available

Order Code	Description
BVITM6-L3T500	6 pole, 3 core, 0.5m lead, 1mm², tee module, white housing, black/blue coding
BVITM6-L4T500	6 pole, 4 core, 0.5m lead, 1mm², tee module, white housing, black/blue coding
BVITM6-L5T500	6 pole, 5 core, 0.5m lead, 1mm², tee module, white housing, black/blue coding
BVITM6-L6T500	6 pole, 6 core, 0.5m lead, 1mm², tee module, white housing, black/blue coding
VITM6-L3T500	6 pole, 3 core, 0.5m lead, 1mm², tee module, white housing, black/grey coding
VITM6-L4T500	6 pole, 4 core, 0.5m lead, 1mm², tee module, white housing, black/grey coding
VITM6-L5T500	6 pole, 5 core, 0.5m lead, 1mm², tee module, white housing, black/grey coding
VITM6-L6T500	6 pole, 6 core, 0.5m lead, 1mm², tee module, white housing, black/grey coding

Order Code Guidelines for Cables

Prefix	Poles	Lead	Core	Length in Metres	Cable Area	Type	Plug Colour
VITM	6	L	3/4/5/6	03 or 05 (other lengths to order)	1.0mm² (1.5mm² to order)	0 = lsf	W (White) or R (Red) B (Black) to order

See pages 10–14 for our **Presence Detector technology guide**

Lighting Control Systems

CP Electronics have four different types of lighting control system, all are modular in nature and utilise simple connectivity, making them very flexible and easy to install.

The wide range of presence detectors in each system ensure optimum energy efficiency and user comfort, meeting all the legislative requirements now in place for new and existing buildings.

Load Capacity Key

Suitable for the control of:

Lighting

D-Mate®

Room Control System

D-Mate is a simple and cost effective lighting control solution for small to medium size applications.

A 'fit and forget' answer to small but demanding areas requiring lighting control with easy expansion options and functionality that punches above its weight, D-Mate provides cost-effective networking via a two wire data bus. User-centric features include scene setting for user comfort and lux level switching to balance changes in daylight levels.

Pages 66–72

VITESSE plus

Stand-alone Lighting Control System

New Vitesse Plus heralds the next step in lighting control, with simple commissioning and total flexibility. It's a full 7-channel system that's ideal for education, commercial and retail spaces – anywhere that needs to control energy costs without affecting user convenience.

Pages 73–88

An-10®

Wireless Control System

An-10 wireless technology allows you to install a fully featured lighting control system easily and with minimal disruption.

An-10 has been specifically created to allow you to embrace the advantages of wireless technology, while at the same time offering all of the features and functionality demanded by modern day lighting control systems.

Pages 89–99

RAPiD

Fully Addressable Control System

RAPID is ideal for lighting installations which have demanding lighting needs owing to changing room configurations, or where there is a need to re-configure or monitor the lighting via a PC. Luminaires can be individually or collectively controlled, either across a floor or throughout an entire building. RAPID is also easily integrated into the facilities management of a building, including the full monitoring and testing of the emergency luminaires.

Pages 100–115

Economical Scene Setting and Energy Control

D-Mate from CP Electronics gives you all the benefits of a scene setting lighting control solution at a fraction of the cost.

D-Mate is easy to install, easy to configure, and has the flexibility you need to tailor solutions to the exact needs of the space.

The system allows organisations of all sizes to enjoy effective scene setting, whilst benefitting from advanced cost saving functionality such as presence detection and automatic adjustment for daylight.

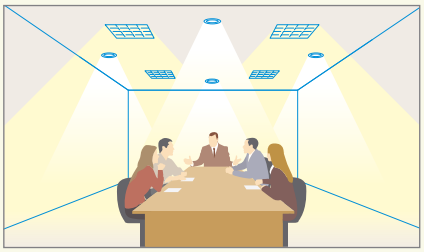
D-Mate is perfect for a wide range of applications, from offices and meeting areas to restaurants and hotel rooms.

Features and Benefits

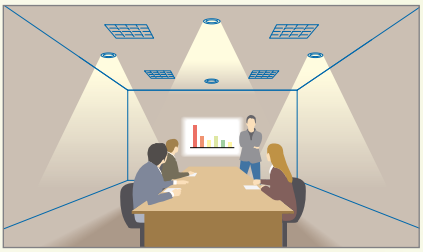
- Four independently dimmable lighting circuits for scene setting.
- Using the professional commissioning handset a further four circuits can be programmed.
- Presence and absence detection.
- Maintained illuminance saves energy where natural light is available.
- No specialist installation skills required.
- Quick installation time saves further costs.
- Cost-effective networking via two-wire data bus.

Scene Setting Simplicity...

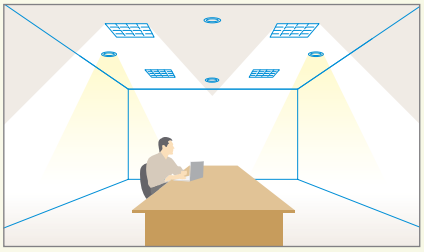
- Stylish scene plate provides intuitive scene programming.
- User-friendly scene setting via remote handset.
- Increase control and interfacing with an input unit.



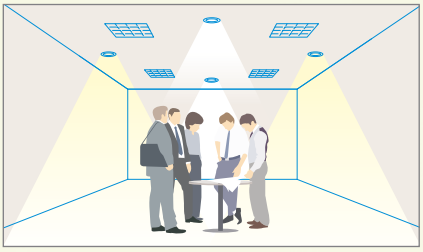
Meeting: All luminaires and downlights on.



Presentation: Luminaires off, downlights dimmed and lights near screen off.



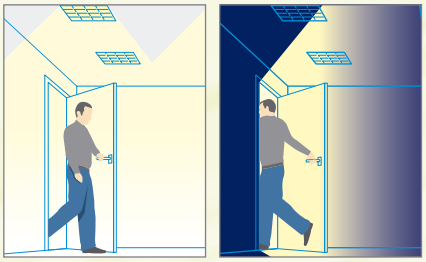
Hot desk working: Luminaires on, with left and right downlights dimmed.



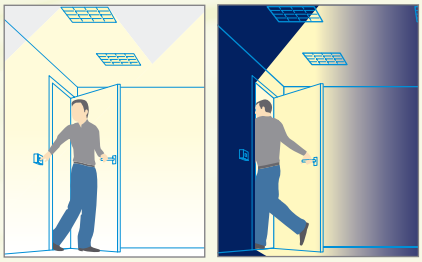
Informal Event: Luminaires off and downlights on.

..Energy Saving Functionality

- Set D-Mate for presence or absence detection modes, depending on room usage and/or specific regulations.

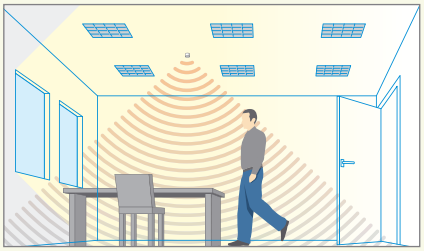


Presence detection: Detectors automatically switch lights on when a room is occupied, and off when the room is empty.

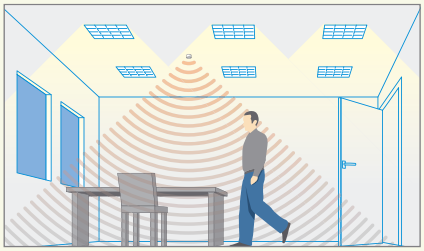


Absence detection: Requires a user to manually switch lights on. Detectors switch lights off when the room is empty.

- Save energy by ensuring that lights remain off when daylight is sufficient.
- Enjoy even greater energy savings with automatic adjustment of lighting based on daylight levels.



Lux switching: Presence detected, but lights only switch on when daylight falls below a minimum level.



Maintained illuminance: Presence detected, with automatic dimming working in conjunction with daylight.

Tailor your lighting solution to the exact needs of the space with D-Mate's simple to install system

Scene Plate

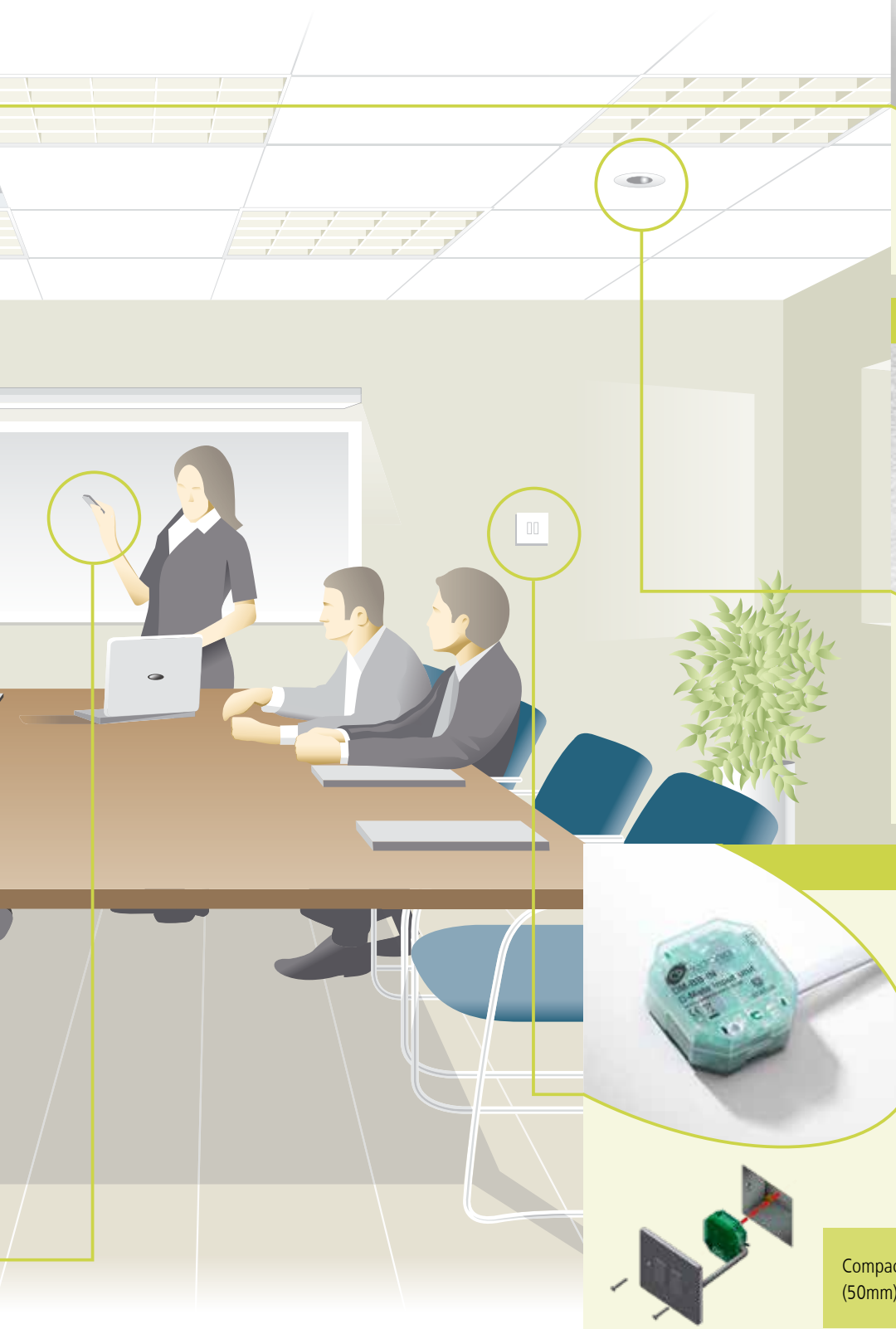
- Stylish push-button scene plate for on/off, scene selection and raise/lower control.
- User programming mode for quick and easy scene setting.
- Compact design allows installation into standard UK and European backboxes.
- Fascia available in a range of finishes.

Addressers

- Controls individual lighting circuits.
- Interfaces between D-Mate and third party ballasts or lighting devices.
- Capable of driving up to ten DALI, DSI or 1–10V ballasts.
- Relay switching option.

Remote Handset

- Multifunction buttons for easy programming of detectors.



Power Supply Unit

- Compact SELV 16V DC power supply.
- Integral LED to indicate healthy voltage output.

PIR Detector

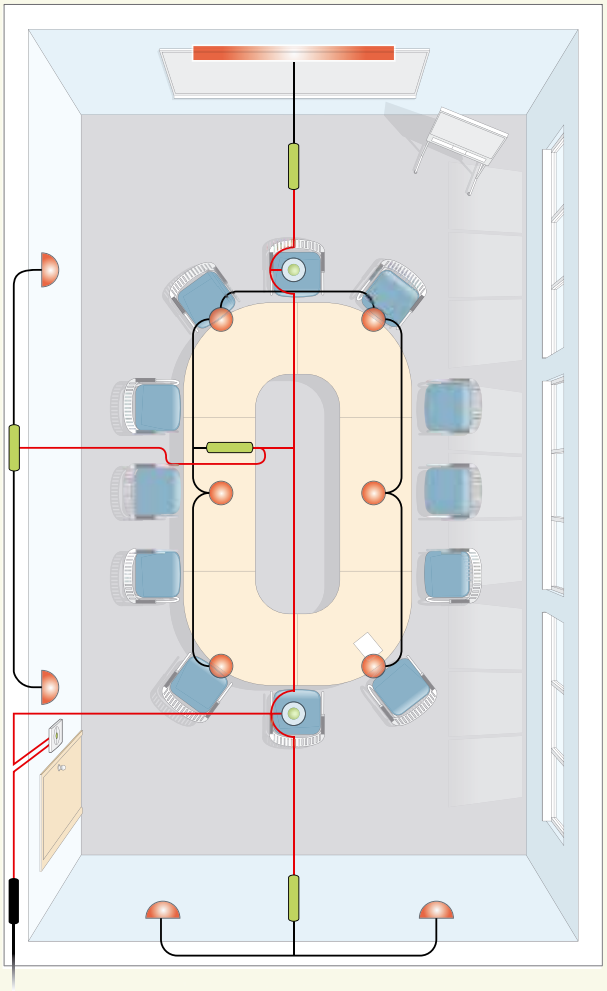
- PIR detector for presence/absence detection and maintained illuminance
- Ceiling mounted.
- Flush or surface mount, with optional back box.

Switch Input Unit

- Provides a control interface between D-Mate and external devices such as button/switch plates, security systems and AV equipment.
- Allows you to use existing wall switches to control D-Mate.
- Compact design fits standard UK and European back boxes.

Compact design allows installation into single BS (50mm) UK and European backboxes

Meeting Room



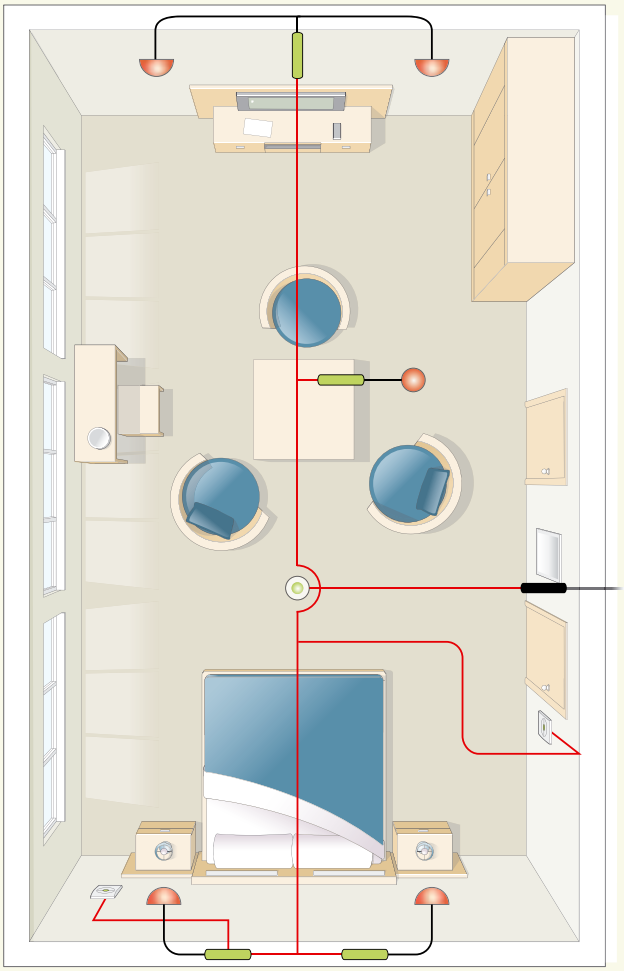
Set-up

- Four independent scenes accessible via the scene plate.
- Two PIR detectors configured for presence detection and maintained illuminance.
- Wall lights, downlights and whiteboard light on separate addressers for individual control.

Operation

- Lights switch on automatically when someone first enters the room.
- Four-button scene plate configured for different room tasks (e.g. presentation, meeting and informal gathering).
- Lights switch off automatically when the room is unoccupied.

Hotel Room



Set-up

- Four independent scenes accessible via the scene plate.
- Single PIR configured for absence detection.
- Overhead, bedside, and wall lights on separate addressers for individual control.

Operation

- Occupant switches lights on manually when entering the room.
- Four-button scene plate configured for highlighting specific areas (e.g. central area, bed and desk).
- Lights switch off automatically when the room is unoccupied.

Key:

- Luminaires
- Addresser
- Detector
- Scene Plate
- Power Supply Unit
- Load Connection
- Bus

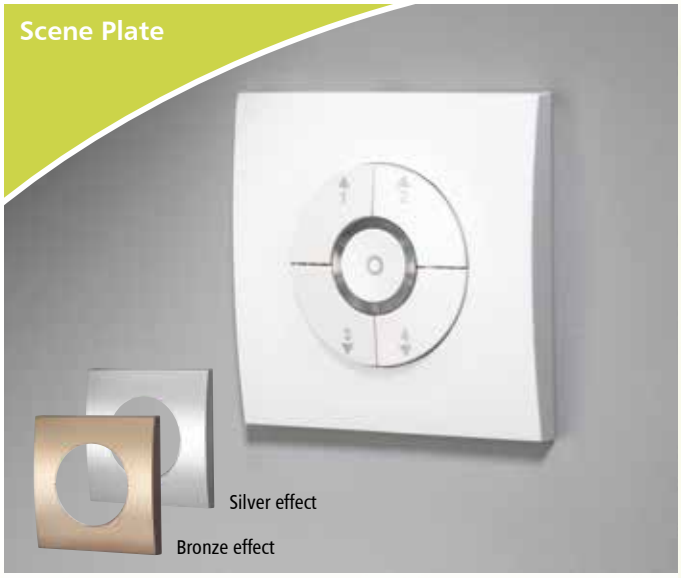
PIR Detectors

Order Code	Description
EBDSPIR-DM	D-Mate PIR presence/absence detector

Supply Voltage	16VDC (via D-Mate bus)
Dimensions	Dia. 76 x 69mm

For detection pattern please see page 19.

Scene Plate



Order Code	Description
DM-SG-4SM-W	D-Mate scene plate
GIFP-ST	Silver effect fascia
GIFP-BZ	Bronze effect fascia

Supply Voltage	16VDC (via D-Mate bus)
Backbox compatibility	UK and EU (minimum depth 25mm)
Dimensions	86 x 86 x 36.5mm

Addressers

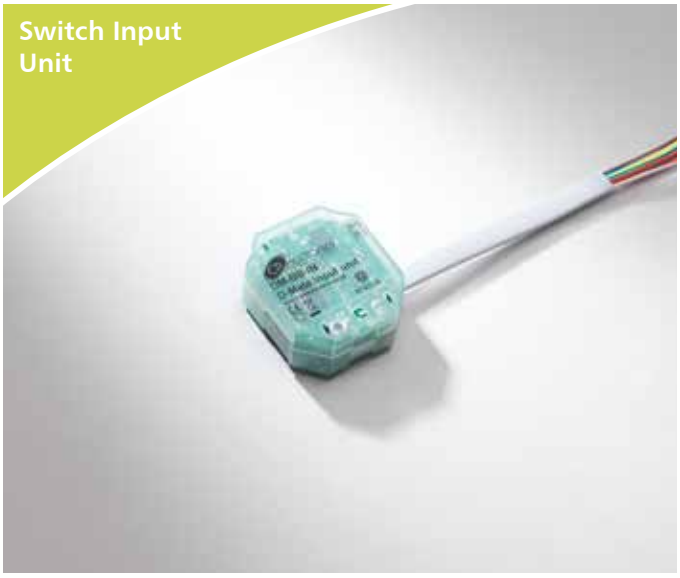
Order Code	DM-SL-ADD	DM-SL-ADAR	DM-SL-ADDR
Description	D-Mate addresser DIL DALI/DSI	D-Mate addresser DIL 1–10V relay	D-Mate addresser DIL DALI/DSI relay
Control Output	DALI or DSI (switch-able via DIL switch)	1–10V	DALI or DSI (switch-able via DIL switch)
Supply Voltage	16VDC (via D-Mate bus)	220–240VAC 50Hz	220–240VAC 50Hz
Relay Rating	–	2A 220–240VAC 50Hz	
Dimensions	20.5 x 22.5 x 184mm		
Maximum 10 ballasts			

Handsets

Order Code	UNLCDHS	UHS7
Description	Professional commissioning LCD programming handset See page 16	User handset. See page 15
Battery	6VDC (4 x AAA)	3VDC (1 x CR2025)
Dimensions	160 x 36 x 95mm	86 x 4 x 67mm

See pages 10–14 for our **Presence Detector technology guide**

Switch Input Unit



Allows up to seven volt-free inputs for use with standard or custom-made switch/button plates.

Simple configuration presets for typical scene selection and raise/lower operation. Advanced set up features for master override selection, etc.

Order Code	**DM-BB-IN**
Description	D-Mate input unit
Supply Voltage	16VDC (via D-Mate bus)
Dimensions	50 x 46 x 22mm

Power Supply Unit

The DM-SL-PSU is an SELV 16VDC power supply primarily designed for DALI.

The unit has an integral LED that is visible through the front window to indicate that the output voltage is healthy.

Order Code	**DM-SL-PSU**
Description	D-Mate power supply unit
Output	16VDC 200mA
Supply Voltage	220–240VAC 50Hz
Dimensions	20.5 x 22.5 x 184mm

VITESSE plus

Flexibility, Reliability and Simplicity at Your Fingertips

CP Electronics has built a global reputation for innovative, reliable, energy-saving lighting control systems. Now new Vitesse Plus heralds the next step in lighting control, with simple commissioning and total flexibility. It's a full 7-channel system that's ideal for education, commercial and retail spaces – anywhere that needs to control energy costs without affecting user convenience.

Time-saving pre-set menu

Some lighting control systems need time-consuming and costly expert programming. In contrast, the new Vitesse Plus system features a built-in pre-set configuration menu that allows the installer to configure the system quickly and intuitively for any location.

BIM ready

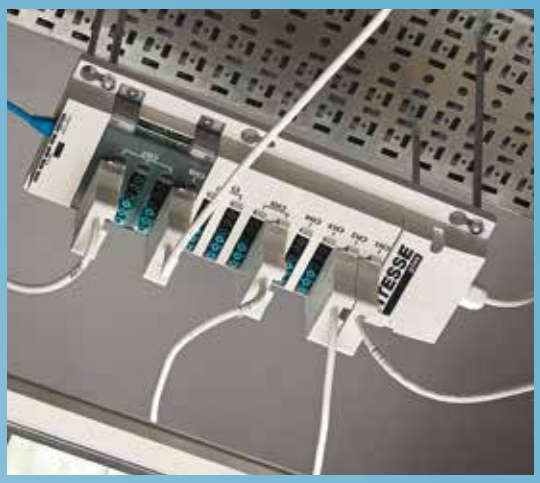
Its innovative design also helps the education sector meet emerging legislation and guidelines for classroom lighting control, including building information modelling (BIM) and Education Funding Agency (EFA) directives.

Controlling any light source, any building, any space.

Simple to install

With plug-in modular components the new Vitesse Plus 7-channel system is easy to install and set up, saving time and money.

See pages 79



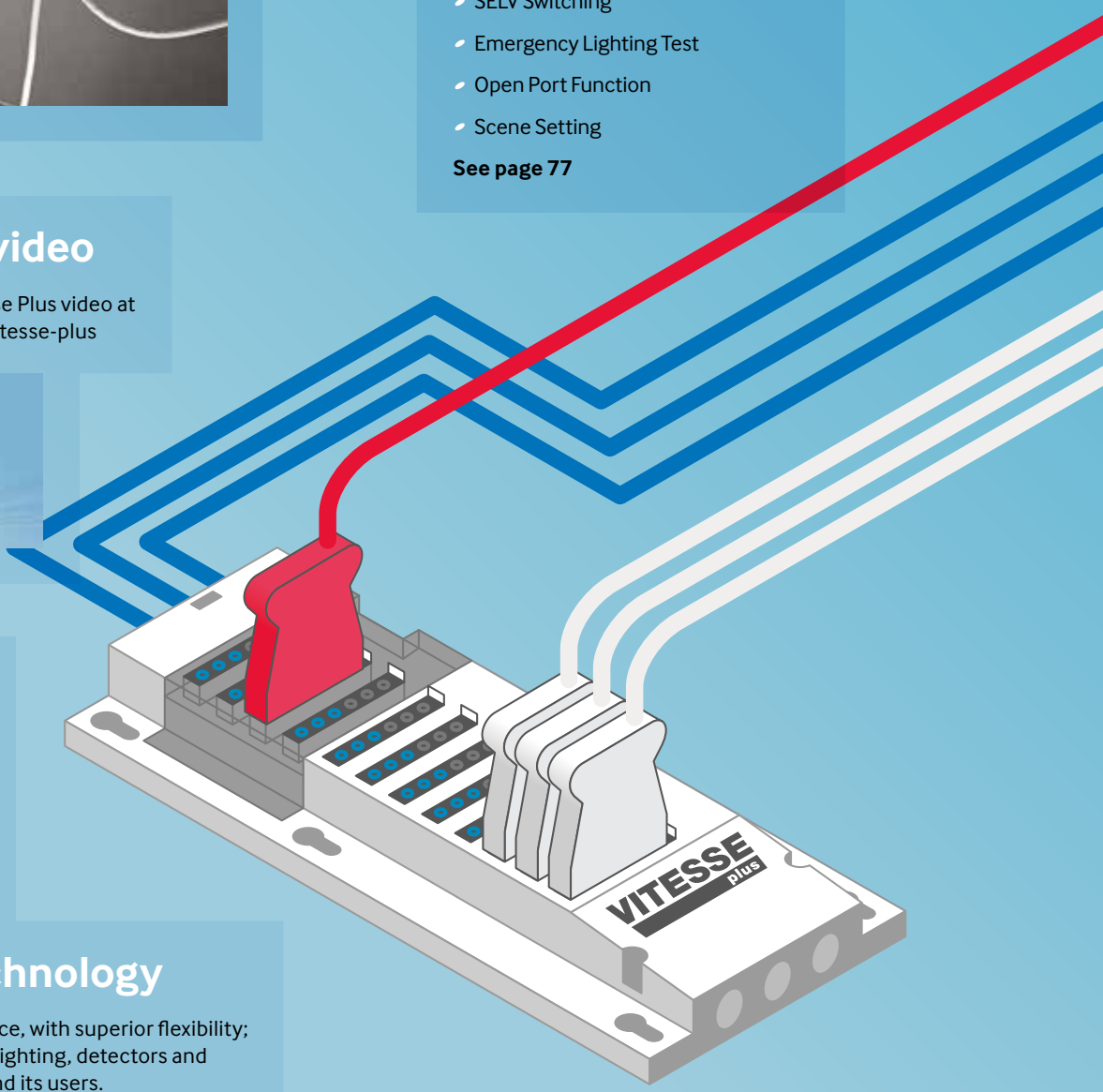
Feature-packed to suit your needs

- Graduated Dimming
- Corridor Hold
- SELV Switching
- Emergency Lighting Test
- Open Port Function
- Scene Setting

See page 77

Vitesse Plus video

View our introductory Vitesse Plus video at www.cpelectronics.co.uk/vitesse-plus



7-channel technology

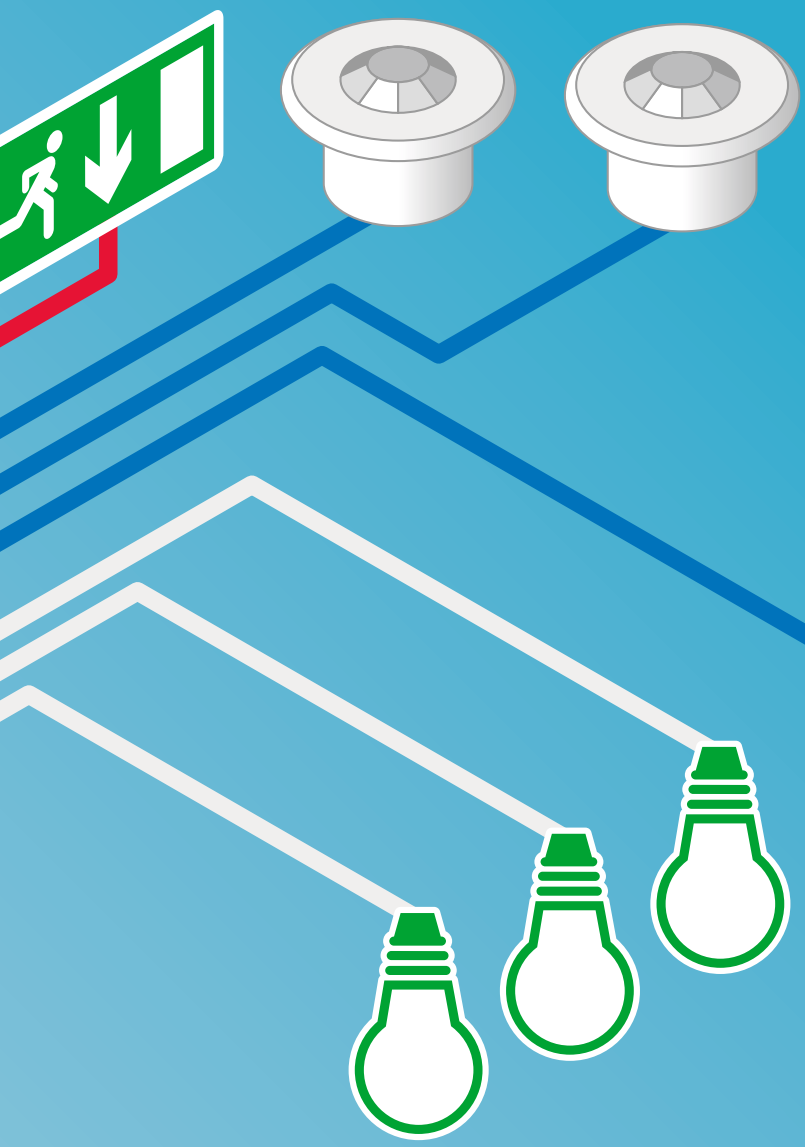
Complete control of any space, with superior flexibility; choose any combination of lighting, detectors and switches to suit the space and its users.

See page 84

Innovative products

Choose the ideal combination of lighting, presence and absence detectors, switches and scene-setting plates to suit your environment; Vitesse Plus seamlessly controls them all.

See pages 84-88



Control at your fingertips

The Vitesse Plus handset offers access to a menu of pre-set configurations to set up spaces quickly and intuitively. Features like corridor hold and graduated dimming are easy to set up and control.

See page 76

How Pre-set Configurations Work

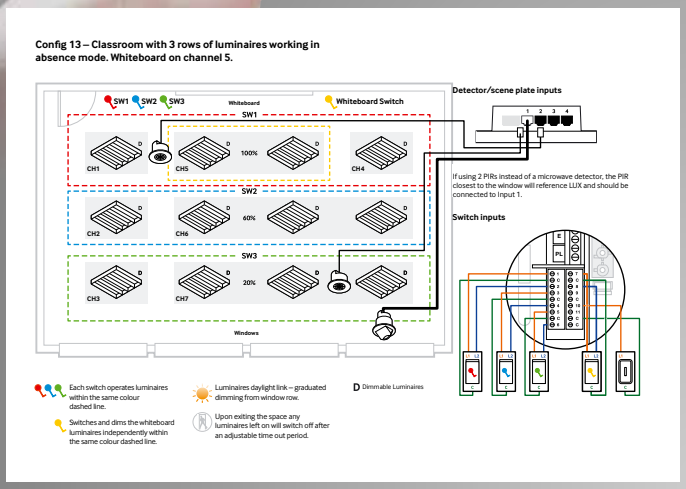
In the past, programming the right configuration for a specific application has required specialist skills. Not any more: the pre-set configurations within the latest Vitesse Plus system are easily accessed by the installer and end user.

Match pre-sets to your application

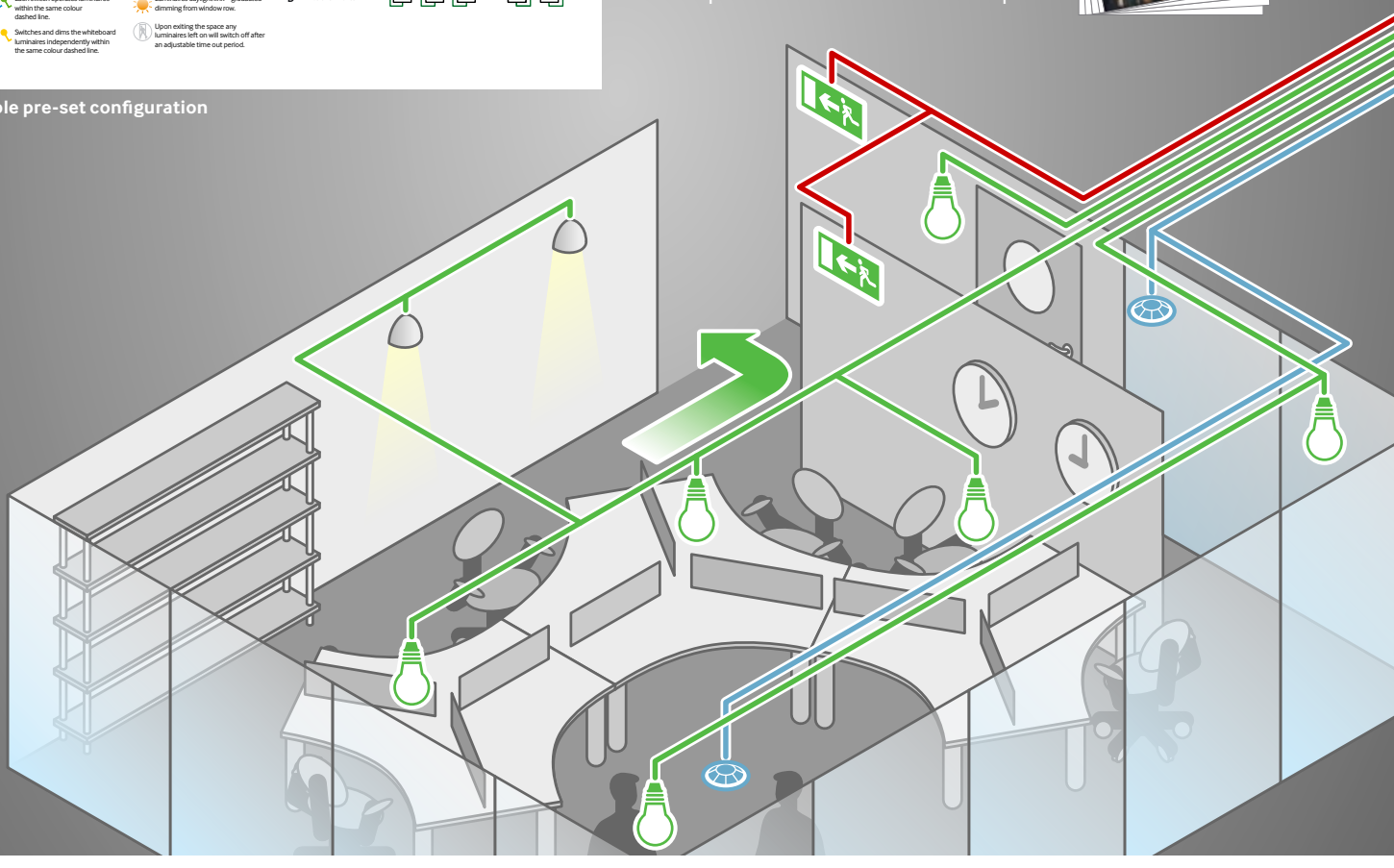
We have developed a collection of pre-set configuration schematics that can be matched to your requirements. Simply find your application within our online library or our handy booklet, and programme using our handset's intuitive, user-friendly menu. With just a few simple button pushes, your system is set up. Alternatively, you can customise elements individually to achieve your own bespoke configuration.

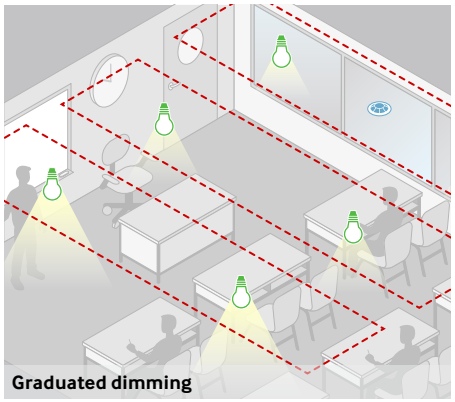
A sophisticated, 7-channel lighting control system like Vitesse Plus offers a near-infinite choice of configurations, making it fully adaptable to the building space.

For more information and to view the complete collection of configs, please refer to our Pre-set Configurations Booklet or visit: www.cpelectronics.co.uk/vitesse-plus.



Sample pre-set configuration




Graduated dimming


Corridor hold

SELV switching


Emergency lighting test


Open port function


Scene setting

Feature Packed

Graduated dimming

The lighting within a space dims progressively from the source of natural illuminance in response to changes in natural light levels. This maximises the use of daylight within a space and minimises energy consumption and over-lighting of the space.

Corridor hold

To allow safe local egress lighting a simple corridor hold output is provided via a pluggable connector on the lighting control module. If any of the control outputs are 'on' any other lighting control module connected via the corridor hold output will also be 'on'. By connecting the corridor hold between Vitesse Plus lighting control modules, simple notional corridor routes can be created.

SELV switching

The new Vitesse Plus lighting control module has 18 SELV inputs. Up to 5 centre biased retractive switches can be connected as well as an ELT keyswitch.

This allows cabling for manual switches to be non-mains rated and without the need for mechanical protection, saving you time and money.

Emergency lighting test

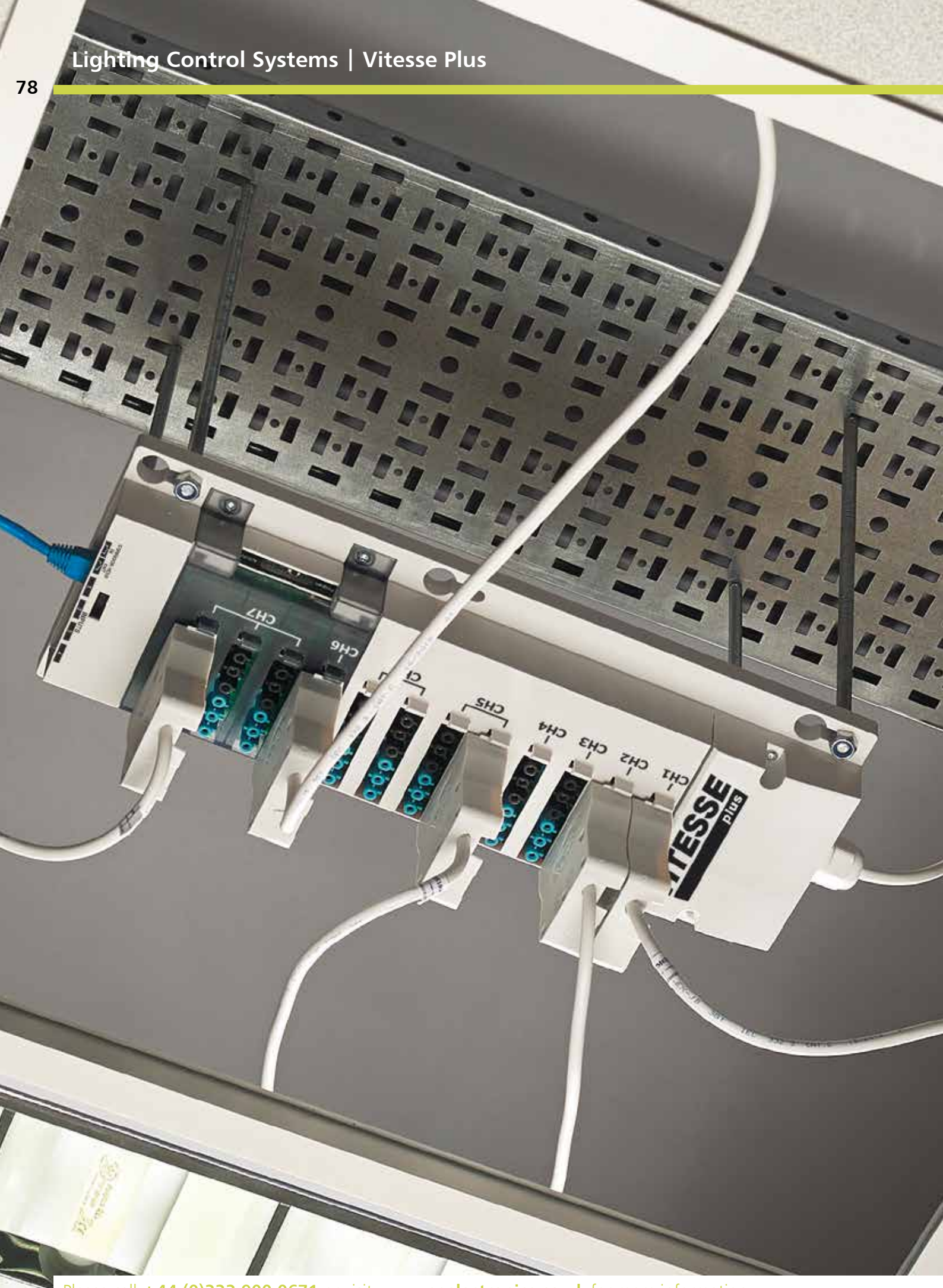
Dedicated SELV input allows for a local emergency test on the LCM. This can be linked across a number of LCMs to allow emergency test of a large open plan office for example.

Open port function

The LCM can be programmed via a connected presence detector using our professional commissioning LCD programming handset, UNLCDHS. This is ideal for when access to an LCM is limited.

Scene setting

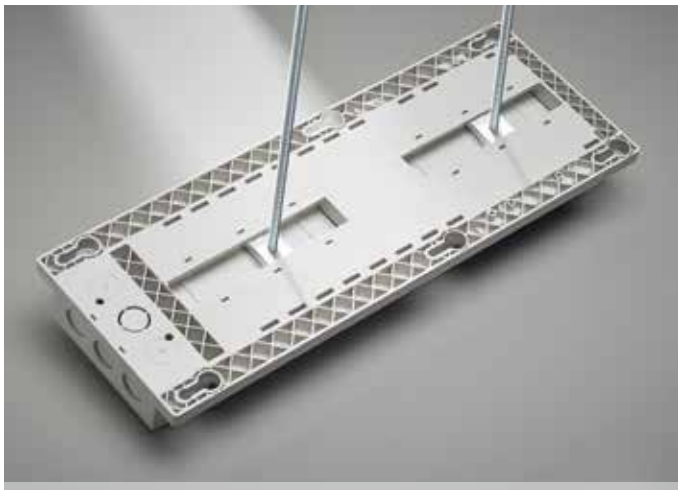
Scene selection allows the recall of pre-programmed lighting levels to create different moods or to suit different uses within an environment.


CH7
CH6
CH5
CH4
CH3
CH2
CH1
plus

Simple Installation and Connectivity

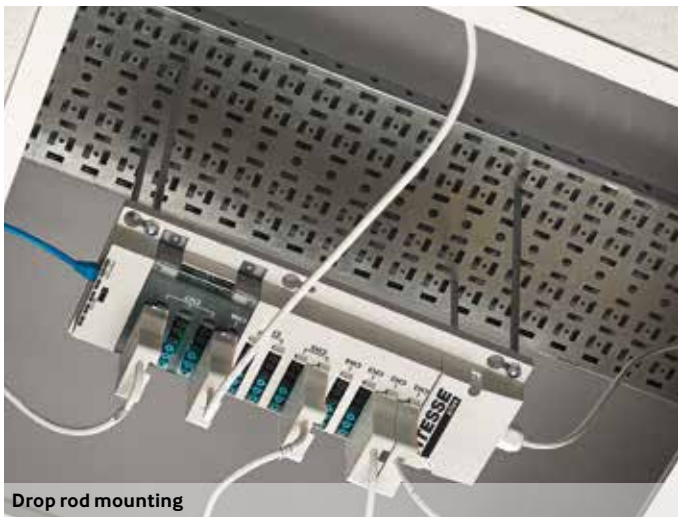
Vitesse Plus has been designed with the installer in mind and provides easy installation options for all mounting locations.

The mains input is connected using the spacious wiring compartment; and control inputs and outputs are pluggable using industry standard connectors as shown in the typical layout opposite.


Channel nut mounting

Marco clip mounting

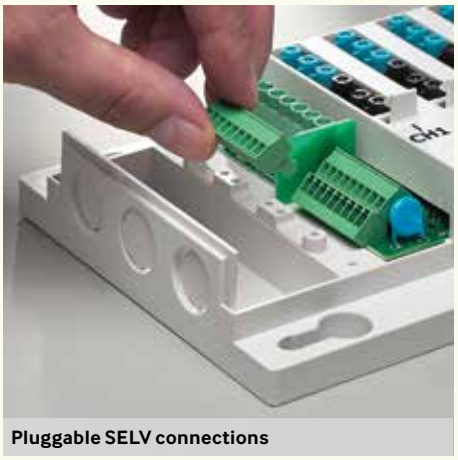

Slab mounting


Drop rod mounting

Versatile wiring connections

Vitesse Plus has been designed for hassle-free wiring on-site.

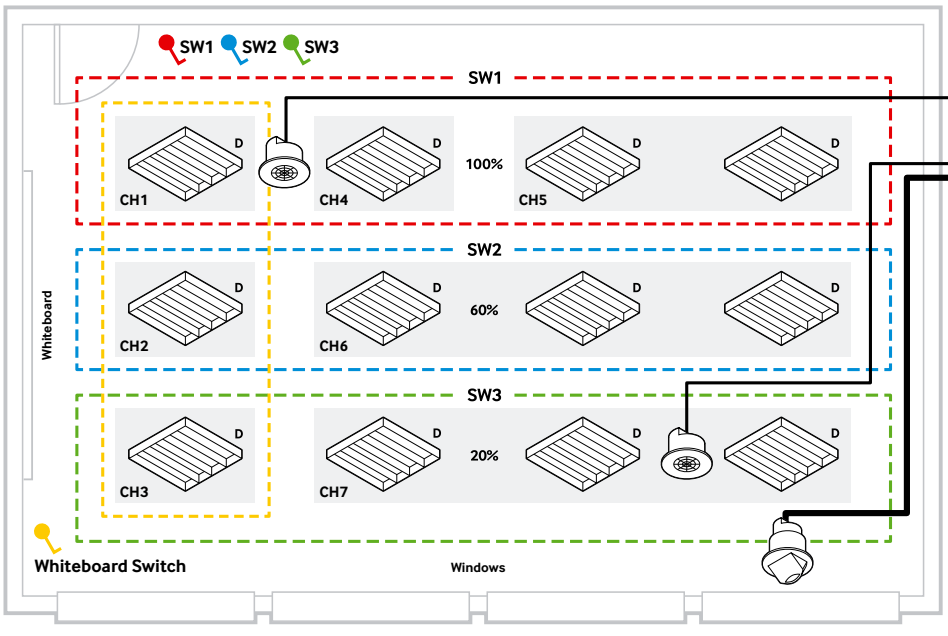

Spacious wiring compartment


Pluggable SELV connections

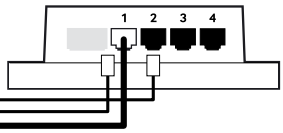
Education

Designed to help the education sector meet emerging legislative requirements for classroom lighting control.

Config 10 – Classroom with 3 rows of luminaires working in absence mode. Whiteboard on channels 1, 2 and 3.

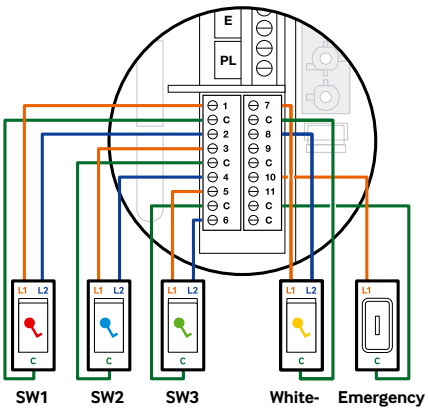


Detector/scene plate inputs



If using 2 PIRs instead of a microwave detector, the PIR closest to the window will reference LUX and should be connected to Input 1.

Switch inputs



Each switch operates luminaires within the same colour dashed line

Switches and dims the whiteboard luminaires independently within the same colour dashed line

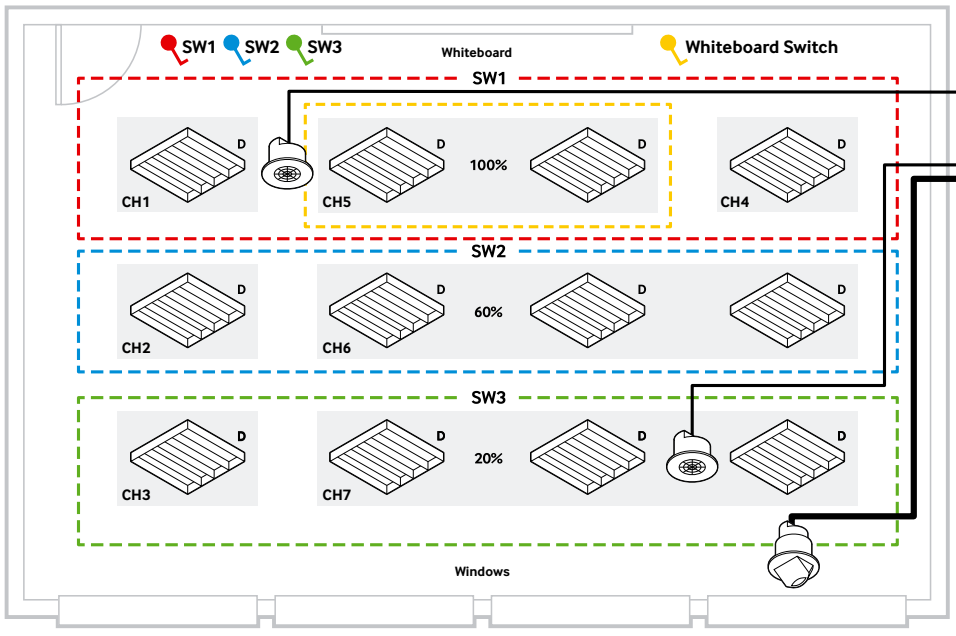
Luminaires daylight link – graduated dimming from window row

Upon exiting the space any luminaires left on will switch off after an adjustable time out period

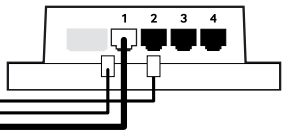
D Dimmable luminaires

- **Graduated dimming** – The lighting within a space dims progressively from the source of natural illuminance in response to changes in natural light levels. This maximises the use of daylight within a space and minimises energy consumption and over lighting of the space.
- **Scene setting** – Scene selection allows the recall of pre-programmed lighting levels to create different moods or to suit different uses within an environment.
- **Absence recovery** – This initiates presence mode in absence applications after a detector timeout period has elapsed. The default for this is 10 seconds. There is also a fade time with a pre-set default of 5 minutes, this means that any dimmable luminaires will dim down to 20% to give a visual indication that the fade time period has started.
- **Switch detection time** – This ensures that if a switch is activated to turn the lighting on and no occupancy is detected within 10 seconds of the switch being pressed, the lighting will turn off.
- **Default pre-set configurations for all education applications** – A series of inbuilt pre-set configurations designed specifically for the education sector ensure that the lighting control is flexible and intuitive and does not impinge on the teaching environment. It also allows for education spaces to be easily reconfigured with minimal disruption.

Config 13 – Classroom with 3 rows of luminaires working in absence mode. Whiteboard on channel 5.

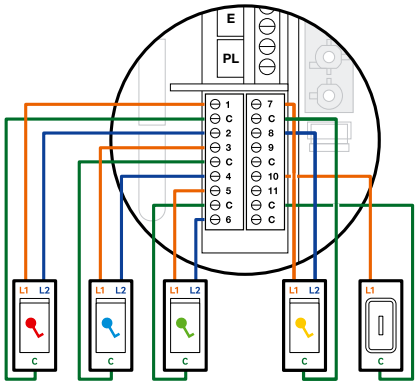


Detector/scene plate inputs



If using 2 PIRs instead of a microwave detector, the PIR closest to the window will reference LUX and should be connected to Input 1.

Switch inputs



Each switch operates luminaires within the same colour dashed line

Switches and dims the whiteboard luminaires independently within the same colour dashed line

Luminaires daylight link – graduated dimming from window row

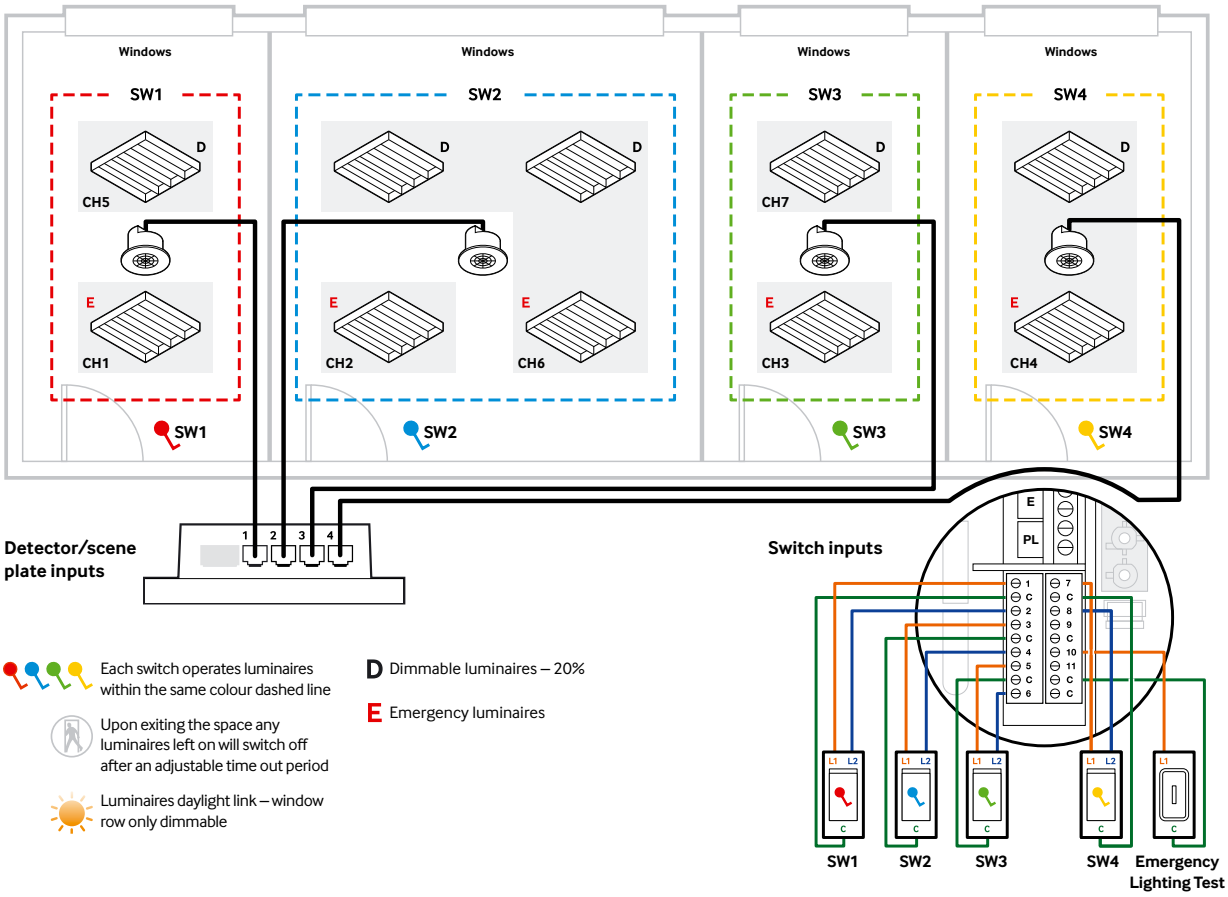
Upon exiting the space any luminaires left on will switch off after an adjustable time out period

D Dimmable luminaires

Commercial/Retail

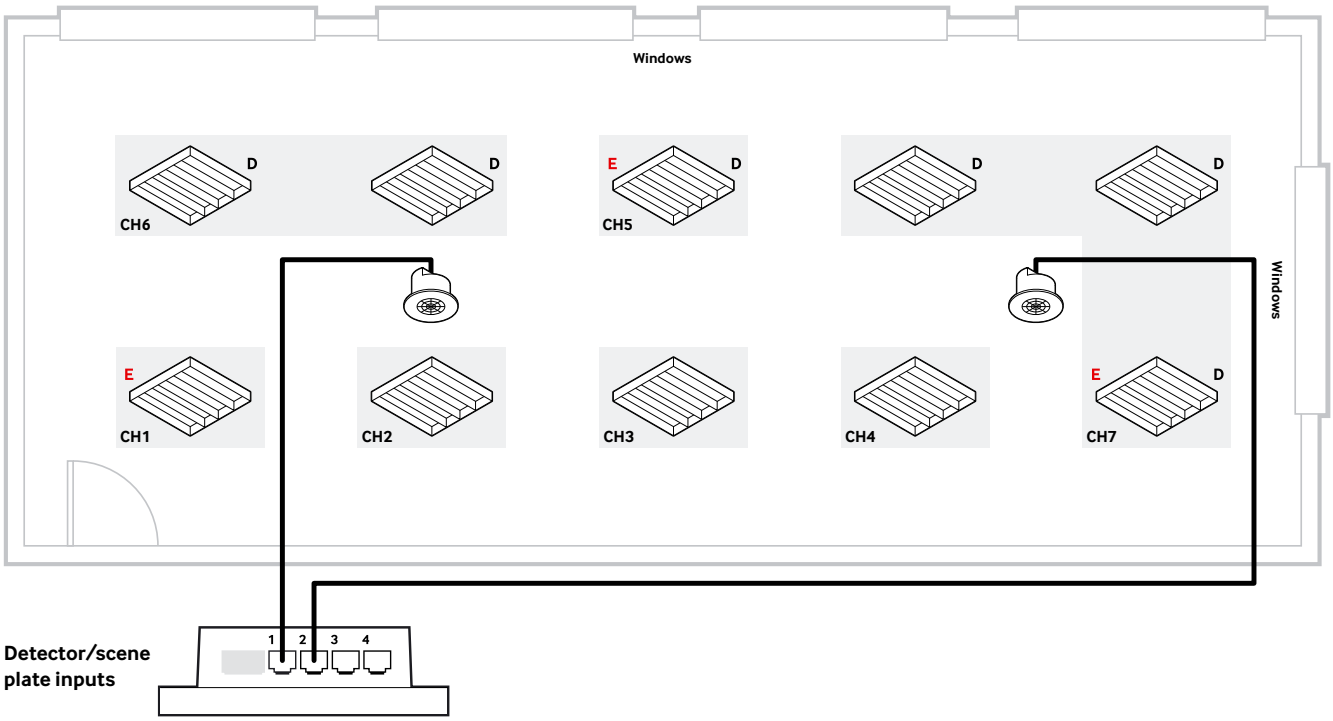
Perfect stand-alone solution for small to medium-sized commercial spaces, and the changeable retail model.

Config 1 – 4 cellular offices individually controlled with a presence detector and or manual switch in each.



- **Corridor hold** – For safety reasons, lights are kept on for entry exit routes, even when an adjacent area is unoccupied.
- **Scene setting** – Scene selection allows the recall of pre-programmed lighting levels to create different moods or to suit different uses within an environment.
- **Master on switch** – This switch turns on all the luminaires connected to an LCM regardless of channel or input arrangement.
- **Open port function** – No need to access the LCM to set the pre-set configuration.
- **Modular mechanics** – Luminaire leads, presence detectors and scene plates simply plug into the LCM making Vitesse Plus simple and easy to install without complicated wiring.

Config 3 – Open plan office working in presence mode with channels 5, 6 and 7 daylight dimming for perimeter row(s).



Upon entering the space luminaires will automatically switch on

Upon exiting the space any luminaires left on will switch off after an adjustable time out period

Luminaires daylight link – window row only dimmable

D Dimmable luminaires – 20%

E Emergency luminaires

Vitesse Plus Lighting Control Modules

The latest generation of Vitesse Plus LCM has been engineered to adapt to changing environments.

With 7 channels and 12 outputs, the installation process is simplified. Up to 6 PIRs or 3 microwave detectors can be connected to the Vitesse Plus LCM, maximising the capacity to save energy and money.

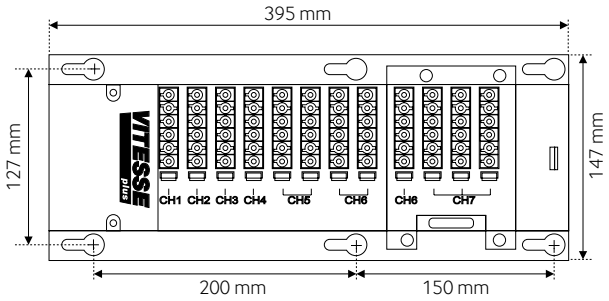
With 18 SELV connections and the ability to facilitate graduated dimming, the Vitesse Plus LCM takes lighting control to the next level of functionality.

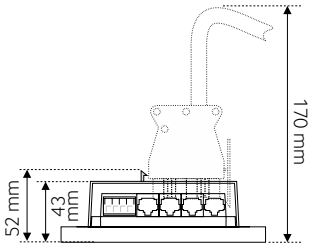
Key features:

- 12 outputs
- 7 channels
- 4 RJ45 inputs
- SELV switching
- DALI or DSI dimming
- Graduated dimming
- Scene setting
- Absence recovery
- Switch detection time

Order Code	Description
VITP7-MB	Lighting control module with switched output – 12 channel
VITP7-MB-DD	Lighting control module – DSI and DALI version combined
Maximum number of DIMMABLE ballasts = 10 per channel or 50 per LCM subject to electrical load constraints.	

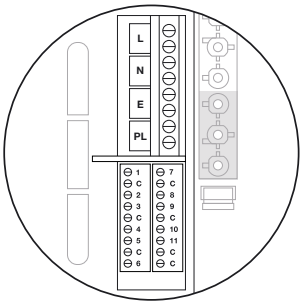
Dimensions



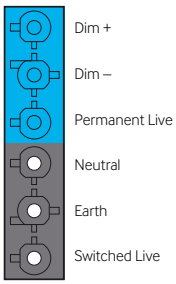


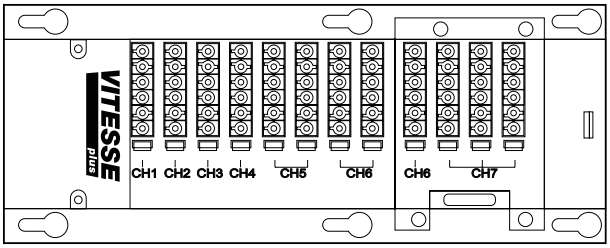
Connections

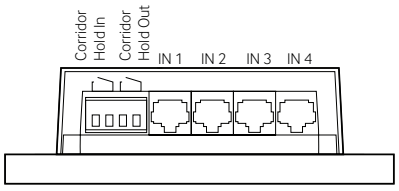
Wiring Compartment Connection



Luminaire Connections







Scene Control Plate

Scene selection allows the recall of pre-programmed lighting levels to create different moods or to suit different uses within an environment.

When used in conjunction with VITP7-MB and suitable dimming luminaires different lighting scenes can be achieved for applications such as classrooms and meeting rooms.

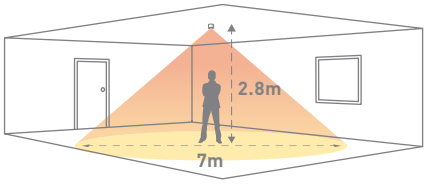
Order Code	Description
VITP7-4SC-W	Scene plate with white cover
VITP7-4SC-SS	Scene plate with stainless steel cover

Vitesse Plus Presence Detectors

Compact PIR

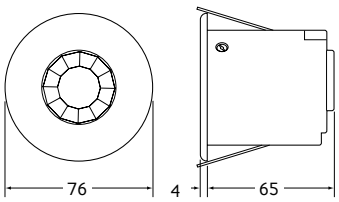
- Low profile design
- RJ45 connection
- Can be flush or surface mounted (see page 88)
- Infrared programmable

Detection pattern



high < sensitivity > low

Dimensions

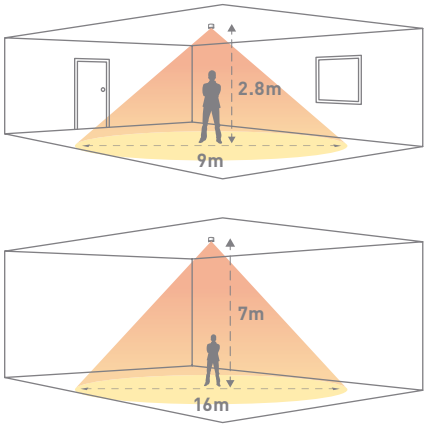


Order Code	Description
VITP7-EBDSPIR	Vitesse Plus ceiling mounted PIR presence/absence detector with IR control

Miniature PIR

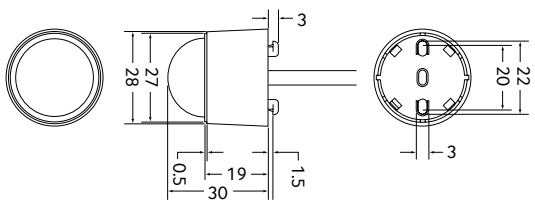
- Small and unobtrusive design
- RJ45 connection – supplied with 300mm lead
- Multiple mounting options included
- Infrared programmable

Detection patterns



high < sensitivity > low

Dimensions

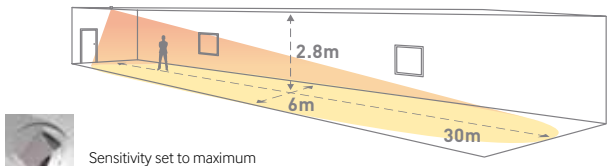


Order Code	Description
VITP7-MINPIR	Vitesse Plus miniature ceiling mounted PIR presence/absence detector with IR control
RJ45-COUPLER	RJ45 coupler

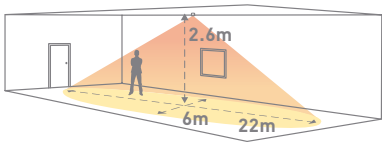
Adjustable head microwave

- Adjustable head
- Adjustable detection sensitivity
- RJ45 connection
- Can be flush or surface mounted (see page 88)
- Ideal for corridors or corner mounted applications
- Infrared programmable

Detection patterns



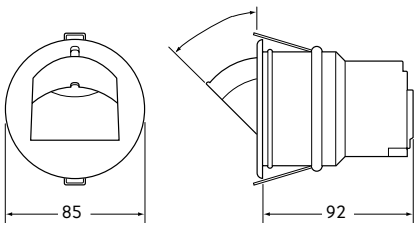
Sensitivity set to maximum
Detector head position set to 80°



Sensitivity set to maximum
Detector head position set to 0°

high < sensitivity > low

Dimensions



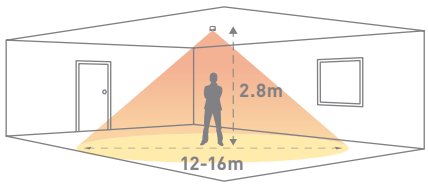
Adjustment 0°-90°

Order Code	Description
VITP7-MWS3A	Vitesse Plus adjustable head microwave presence/absence detector

Compact microwave

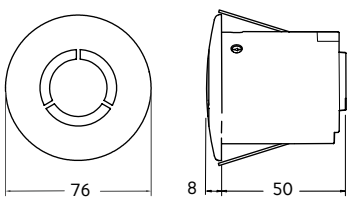
- Adjustable detection sensitivity
- RJ45 connection
- Can be flush or surface mounted (see page 88)
- Various regional frequencies
- Infrared programmable

Detection pattern



high < sensitivity > low

Dimensions



Order Code	Description
VITP7-MWS6	Vitesse Plus compact microwave presence/absence detector

See pages 10–14 for our **Presence Detector technology guide**

Vitesse Plus Accessories

Handsets

Used to programme pre-set configurations.

Order Code	Description
UNLCDHS	Professional commissioning LCD programming handset

Tee modules

Used to provide a simple interlinking connection of lighting within fixed wiring installations.

Order Code	Description
BVITM6-L3T500	6 pole, 3 core, 0.5m lead, 1mm², tee module, white housing, black/blue coding
BVITM6-L4T500	6 pole, 4 core, 0.5m lead, 1mm², tee module, white housing, black/blue coding
BVITM6-L5T500	6 pole, 5 core, 0.5m lead, 1mm², tee module, white housing, black/blue coding
BVITM6-L6T500	6 pole, 6 core, 0.5m lead, 1mm², tee module, white housing, black/blue coding

Accessories

Order Code	Description
DBB	Surface mount box for use with VITP7-MWS6 and VITP7-EBDSPIR
MWS3A-DBB-WBKRT	Wall mounting bracket for MWS3A series

Luminaire leads and connectors

All Vitesse Plus models use black/blue connectors.

Order Code	Description
BVITM6L303100W	3 core luminaire lead 3 metre 1.0mm² c/w white plug black/blue coding
BVITM6L305100W	3 core luminaire lead 5 metre 1.0mm² c/w white plug black/blue coding
BVITM6L308100W	3 core luminaire lead 8 metre 1.0mm² c/w white plug black/blue coding
BVITM6L403100R	4 core luminaire lead 3 metre 1.0mm² c/w red plug black/blue coding
BVITM6L405100R	4 core luminaire lead 5 metre 1.0mm² c/w red plug black/blue coding
BVITM6L408100R	4 core luminaire lead 8 metre 1.0mm² c/w red plug black/blue coding
BVITM6L503100W	5 core luminaire lead 3 metre 1.0mm² c/w white plug black/blue coding
BVITM6L505100W	5 core luminaire lead 5 metre 1.0mm² c/w white plug black/blue coding
BVITM6L508100W	5 core luminaire lead 8 metre 1.0mm² c/w white plug black/blue coding
BVITM6L603100R	6 core luminaire lead 3 metre 1.0mm² c/w red plug black/blue coding
BVITM6L605100R	6 core luminaire lead 5 metre 1.0mm² c/w red plug black/blue coding
BVITM6L608100R	6 core luminaire lead 8 metre 1.0mm² c/w red plug black/blue coding
BVITM6-LPW	6 pole male connector (mates with LCM output) white cover black/blue coding
BVITM6-LPR	6 pole male connector (mates with LCM output) red cover black/blue coding
BVITM6-LPW-F	6 pole female connector white cover black/blue coding
BVITM6-LPR-F	6 pole female connector red cover black/blue coding

An-10 wireless technology allows you to install a fully featured lighting control system easily and with minimal disruption

An-10 has been specifically created to allow you to embrace the advantages of wireless technology, while at the same time offering all of the features and functionality demanded by modern day lighting control systems.

Simple Installation

- Wireless signals can pass through walls, floors and ceilings, so you can position switches and detectors exactly where you need them.
- No need to run costly control wires between devices or back to a central controller.
- Reduces installation times and minimises disruption, making it an ideal solution for retrofit and new builds alike.
- Easier to meet building regulations and today's demands for greater energy efficiency.
- Ideal for historic and listed buildings where disturbing the building fabric is difficult or impossible.

Flexible Functionality

- System functionality is achieved by programming, not hard wiring, making it incredibly easy to design the operation of your lighting control system.
- If you need to reorganise your living or working space, simply move and/or reprogram devices for the new layout. This is particularly useful for open-plan environments.

Easy Expansion

- Adding extra devices is simple. No additional control wiring is required; simply install the extra device, program it into the system and you are ready to go!

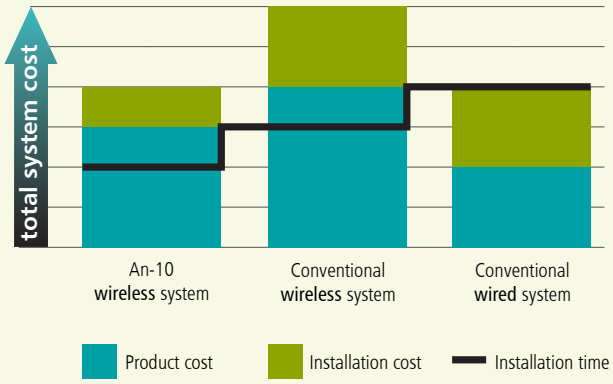
Cost Effective, Safe and Dependable

Cost Effective

As well as being competitively priced, the An-10 system offers considerable savings over conventional wireless lighting control systems, whilst providing a very cost effective alternative to conventional wired systems.

The An-10 wireless range achieves significant reductions in total system cost through cheaper installation.

An-10 allows for a system to be expanded simply and cost effectively.



Completely Safe

Concern about being exposed to radio waves is something we take very seriously. Wireless technology is already in common usage around the home and in the workplace, such as in alarm systems and computer networks.

The An-10 product range is fully compliant with European Regulations [ETSI EN 300 220-1 V2.1.1 (2006-04)] making it completely safe to use in sensitive environments like schools.

Dependable

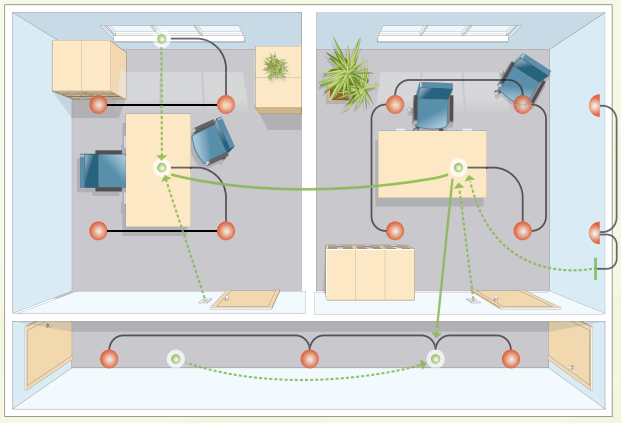
Wireless radio frequency (RF) devices are often perceived to be less reliable than their wired counterparts. Not so with An-10.

An-10 uses a unique 'hybrid mesh' network topology, together with a communication protocol, that has been specifically designed to meet the needs of lighting control.

Control messages are routed only to specific devices according to the needs of the system. Compared to other wireless lighting systems, An-10 significantly reduces the amount of data traffic generated, resulting in faster and more efficient operation.

Furthermore, unlike other systems, An-10 makes multiple attempts to deliver a control message. The ability to redirect control messages in different ways around the network gives An-10 exceptional immunity to transient conditions such as interference from other RF systems.

The An-10 hybrid mesh network in action



Flexible, Independent Device Addressing

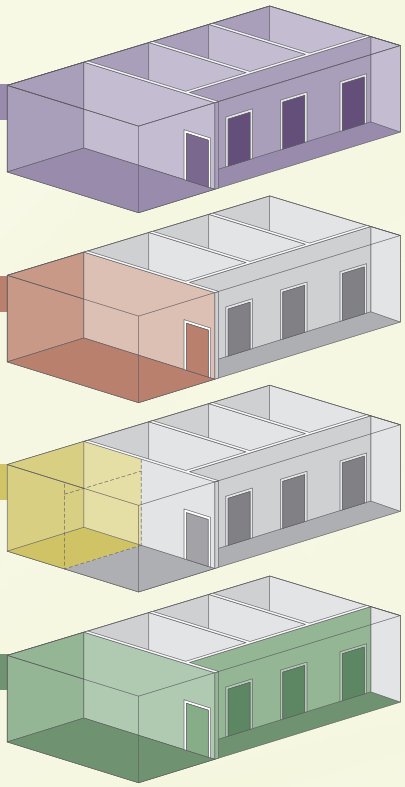
An-10 Device Addressing

Every An-10 device within a system uses a number of different address codes that identify its place within that system and how it interacts with other devices.

A **Building Code** is used to identify devices that form part of the same overall system. This allows An-10 systems in adjacent buildings to be completely independent and prevents cross-system interference.

A **Local Code** typically defines all devices in a specific location. For example, the switch plates, sensors and dimmers in one room may all share the same Local Code so that only the devices in that room are controlled and do not affect, or are affected by, devices in other rooms. An optional **Sub Local Code** can also be used to further subdivide devices within a room if required.

One or more **Area Codes** will allow common control across multiple locations. Typical applications of Area Codes include 'corridor hold' schemes (see page 77).



Scene Selection Functionality

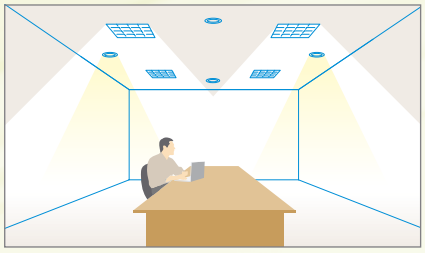
The Perfect Lighting Level at the Flick of a Switch

Scene selection allows the recall of pre-programmed lighting levels to create different moods or to suit different uses within an environment.

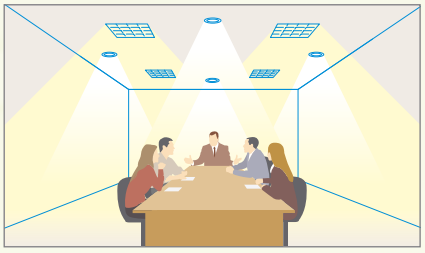
A scene is a selection of circuits that are set to individual lighting levels and stored. They can then be invoked by a switch connected to the An-10 input unit or the presence detector detecting a person.

For example, in a meeting room you may want one scene that sets all lights at maximum level for meetings, but another scene that sets the individual circuits to different levels for presentations.

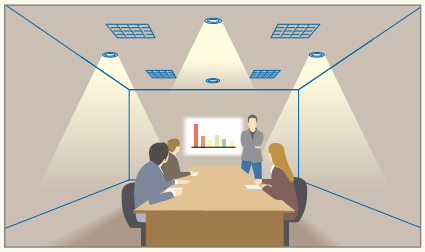
An-10 allows up to 20 local scenes and up to 120 area scenes that can be easily programmed via infrared handsets.



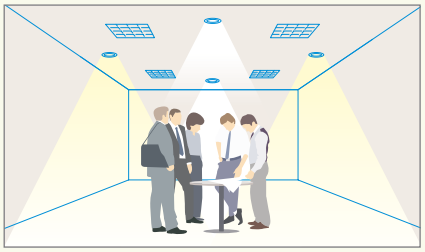
Scene 1: All modular luminaires on and left and right downlights dimmed for hot desk working.



Scene 2: Modular luminaires dimmed and downlights on for meeting.



Scene 3: Modular luminaires off and downlights dimmed for presentation. One by screen is off.



Scene 4: Downlights on for informal gathering.

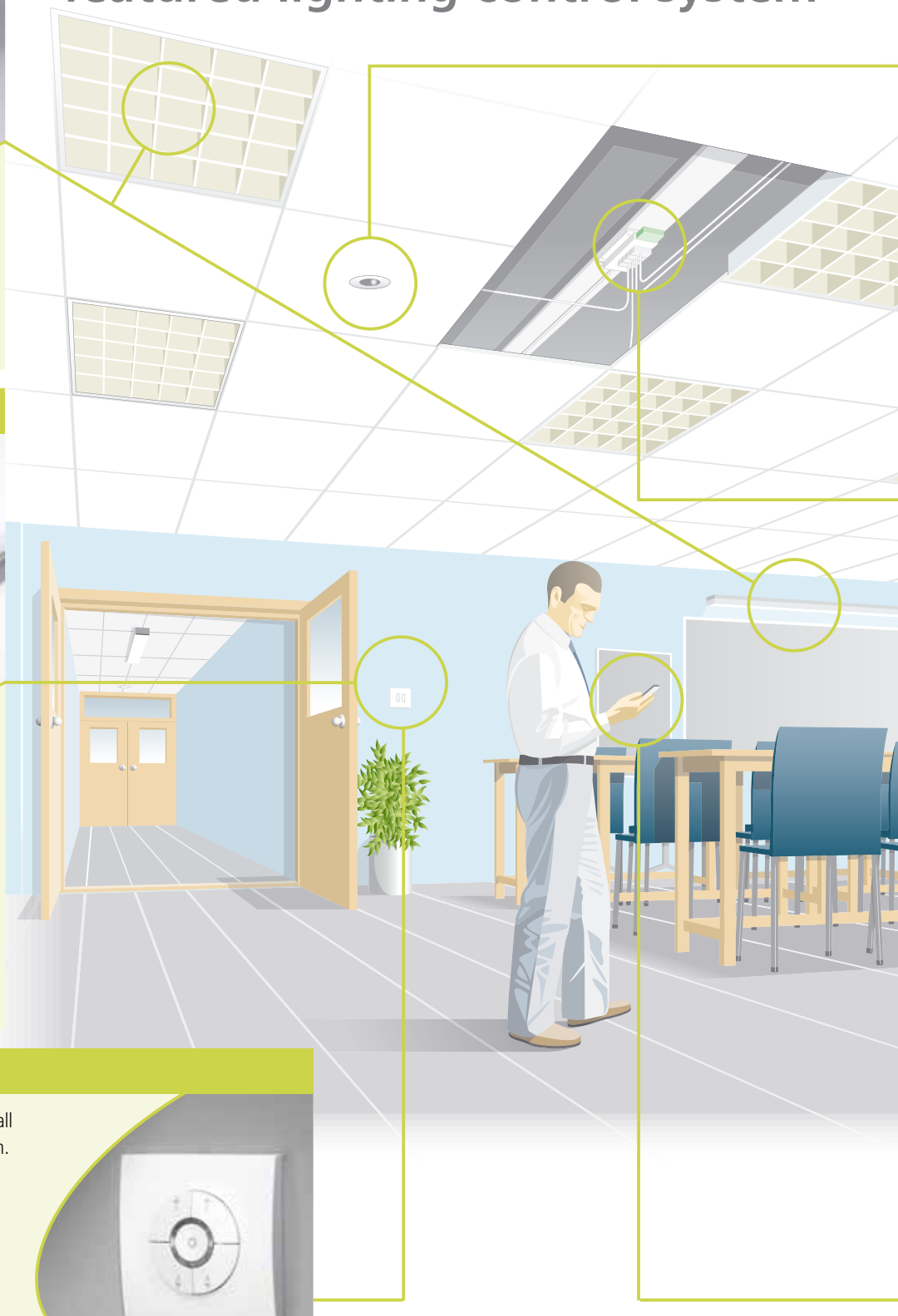
An-10 wireless technology allows you to install a fully featured lighting control system

Slim-line Ballast Controllers

- Switched or dimmable control of DALI/DSI or 1–10V ballasts.
- Available as a stand-alone unit or built-in unit for integration into third party luminaires.

Switch Input Unit

- Up to 7 volt-free inputs for use with standard or custom-made switch/button plates.
- Simple configuration presets for typical scene selection and raise/lower operation. Advanced set up features for master override selection, etc.
- Powered by internal long life battery or optional external 12V supply.



Scene Plate

The AR-SG-4SM-W is a stylish push-button wall plate that provides control of an An-10 system.

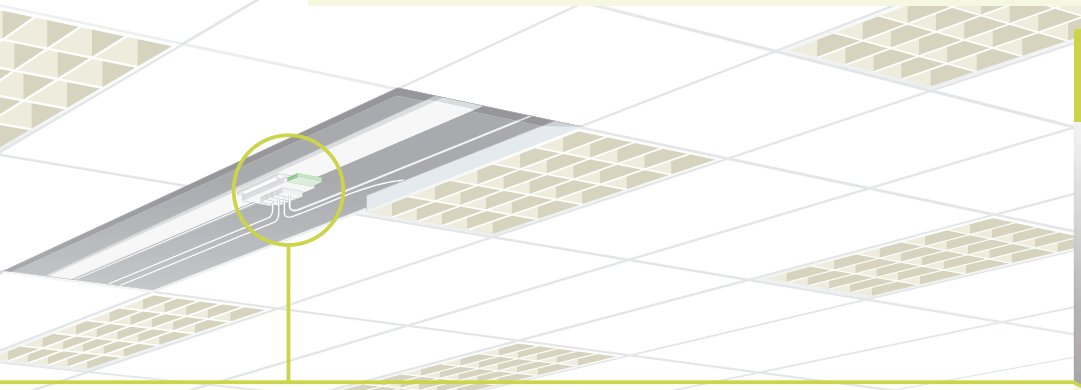
Functions include:

- Lights On/Off
- Raise/Lower Light Levels
- Scene Selection
- Scene Programming

Please see pages 98–99 for sample configurations

PIR and Microwave Presence Detectors

- The occupancy sensor and the lux level sensor in an An-10 detector can also be used to control multiple outputs in other detectors, An-10 slim-line ballast controllers and Vitesse Modular modules via the wireless system.



Vitesse Modular™ Switching Modules

- Allows An-10 to work with the Vitesse Modular lighting connection system. See page 96.
- Simple plug-in design, available in both switched and dimming versions.
- System can be easily adapted for layout changes and expansion.

RAPID – An-10 Gateway

- Allows integration between An-10 and RAPID fully addressable control system. See page 97.

Professional Commissioning Handset (UNLCDHS)

- Easy programming; record, save and recall settings using macros.

Slim-line Ballast Controllers

1) Luminaire Mounted
2) Stand-alone

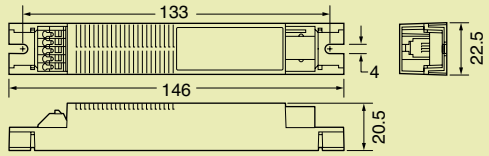
Available as stand-alone (SA) units for general use or built-in units for integration into third party luminaires.

Order Code	Description
AT-SL-R	Wireless (RF) slim-line relay controller (luminaire mounted)
AT-SL-R-SA	Wireless (RF) slim-line relay controller (stand-alone)
AT-SL-DDR	Wireless (RF) slim-line relay controller with DALI/DSI dimming (luminaire mounted) (up to 20 ballasts)
AT-SL-DDR-SA	Wireless (RF) slim-line relay controller with DALI/DSI dimming (stand-alone) (up to 20 ballasts)
AT-SL-ADR	Wireless (RF) slim-line relay controller with 1–10V analogue dimming (luminaire mounted) (up to 10 ballasts)
AT-SL-ADR-SA	Wireless (RF) slim-line relay controller with 1–10V analogue dimming (stand-alone) (up to 10 ballasts)

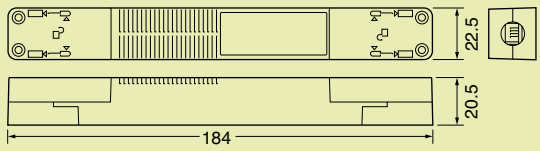
Supply Voltage	230VAC +/- 10%
Frequency	50Hz
Relay Rating	2A
Terminal Capacity	1.5mm² (luminaire mounted) 2.5mm² (stand-alone)

Dimensions

In-line



Stand-alone



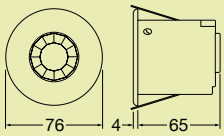
All dimensions in mm

EBDSPIR-AT

Order Code	Description
EBDSPIR-AT-PRM	Wireless (RF) ceiling PIR presence/absence detector with lux level sensing
EBDSPIR-AT-DD	Wireless (RF) ceiling PIR presence/absence detector with DALI/DSI dimming (up to 20 ballasts)
EBDSPIR-AT-AD	Wireless (RF) ceiling PIR presence/absence detector with 1–10V analogue dimming (up to 10 ballasts)
DBB	Surface mount back box
DBB-EXT	Surface mount back box extender

Supply Voltage	230VAC +/- 10%
Frequency	50Hz
Relay Rating	10A
Terminal Capacity	2.5mm²

Dimensions



All dimensions in mm

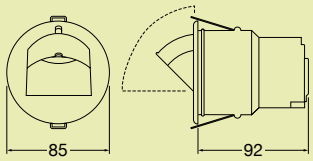
For detection pattern please see page 19.

MWS3A-AT

Order Code	Description
MWS3A-AT-PRM	Wireless (RF) ceiling microwave presence/absence detector with lux level sensing
MWS3A-AT-DD	Wireless (RF) ceiling microwave presence/absence detector with Direct Dim DALI/DSI (up to 20 ballasts)
MWS3A-AT-AD	Wireless (RF) ceiling microwave presence/absence detector with 1–10V analogue dimming (up to 10 ballasts)
MWS3A-DBB	Surface mount back box
MWS3A-DBB-WBRKT	Wall mounting bracket for MWS3A series
MWS3A-DBB-EXT	Surface mount back box extender

Supply Voltage	230VAC +/- 10%
Frequency	50Hz
Relay Rating	10A
Terminal Capacity	2.5mm²

Dimensions



Adjustment 0°-90°

All dimensions in mm

For detection pattern please see page 33.

Detector Leads

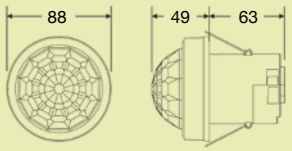
Order Code	Description
VITM4-L3-AT-PRM	Vitesse Modular 4 pole 3m detector lead for PRM An-10 detector
VITM6-L3-AT-DD	Vitesse Modular 6 pole 3m detector lead for DD/AD An-10 detector
VITM4-LD3-AT-PRM	Vitesse Modular 4 pole 3m dual detector lead for PRM An-10 detectors
VITM6-LD3-AT-DD	Vitesse Modular 6 pole 3m dual detector lead for DD/AD An-10 detectors

EBDHS-AT

Order Code	Description
EBDHS-AT-PRM	Wireless (RF) high sensitivity PIR presence/absence detector with lux level sensing
EBDHS-AT-DD	Wireless (RF) high sensitivity PIR presence/absence detector with Direct Dim DALI/DSI (up to 20 ballasts)
EBDHS-AT-AD	Wireless (RF) high sensitivity PIR presence/absence detector with 1-10V analogue dimming (up to 10 ballasts)

Supply Voltage	230VAC +/- 10%
Frequency	50Hz
Relay Rating	10A
Terminal Capacity	2.5mm²

Dimensions



All dimensions in mm

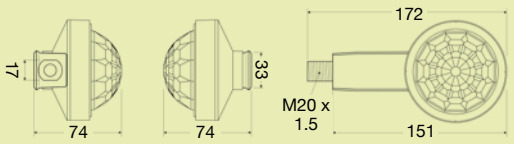
For detection pattern please see page 29.

EBDHS-MB-AT

Order Code	Description
EBDHS-MB-AT-PRM	Wireless (RF) Luminaire mount high bay PIR presence detector – switched
EBDHS-MB-AT-DD	Wireless (RF) Luminaire mount high bay PIR presence detector with Direct Dim DALI/DSI
EBDHS-MB-AT-AD	Wireless (RF) Luminaire mount high bay PIR presence detector for 1-10V analogue dimming output

Supply Voltage	230VAC +/- 10%
Frequency	50Hz
Relay Rating	10A
Terminal Capacity	2.5mm²

Dimensions



All dimensions in mm

For detection pattern please see page 29.

Vitesse Modular™ RF Modules

1) Vitesse Modular 4 Adapter
2) Vitesse Modular 6 Adapter

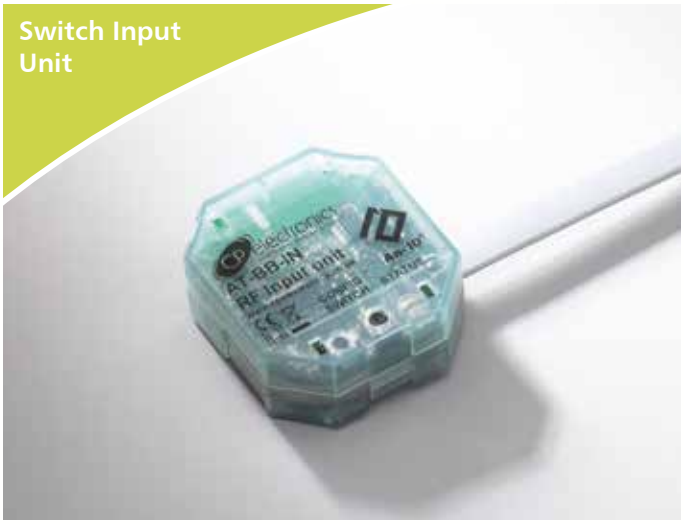
Order Code	Description
VITM4-ATMOD	Wireless (RF) interface module for Vitesse Modular switching
VITM6-ATMOD-DD	Wireless (RF) interface module for Vitesse Modular DALI/DSI dimming (up to 20 ballasts)
VITM6-ATMOD-AD	Wireless (RF) interface module for Vitesse Modular 1–10V analogue dimming (up to 10 ballasts)

Supply Voltage	230VAC +/- 10%
Relay Rating	10A
Frequency	50Hz

Handsets

Order Code	Description
UNLCDHS	Professional commissioning LCD programming handset. See page 16
UHS7	User handset. See page 15

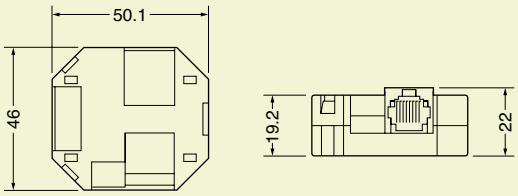
Switch Input Unit



Order Code	Description
AT-BB-IN	Wireless (RF) switch input unit
EBR-DIN-PSU	DIN rail mounted power supply
DM-SL-PSU	Slim in-line power supply

Battery	3V, type CR2477
Battery Life	> 7 years (typical)
Optional Supply	12VDC regulated, 50mA

Dimensions

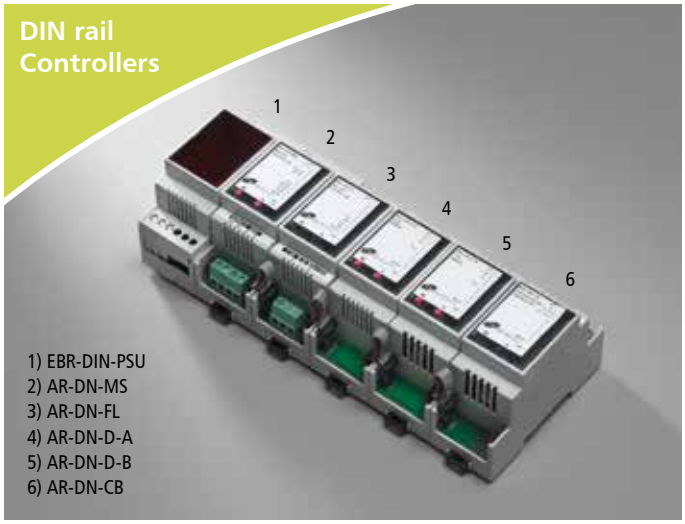


All dimensions in mm

Common Specifications

Range	The maximum RF range between An-10 devices is 100m in free air and up to 30m indoors. However the materials used within a building will vary and this will impact upon the RF range. In reality the nature of how the An-10's hybrid-mesh works means that in most scenarios the individual range of an An-10 product will not be important.
Radio Frequency	868MHz
Receiver Class	2
Transmitter Duty	<10% on g3 band (default band) <0.1% on g2 band <1% on g1 band
Temperature	0°C to 35°C
Humidity	5 to 95% non-condensing
Compliance	EN 300 220-2 V2.1.2 EN 301 489-1 V1.8.1 EN 301 489-3 V1.2.1 LVD-2006/95/EC

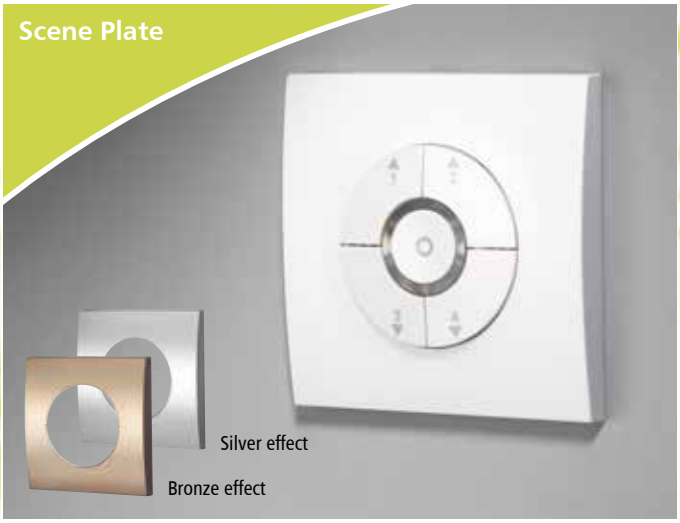
DIN rail Controllers



Order Code	Description
AR-DN-MS	Wireless master controller for 12 slave outputs
AR-DN-D-A	500W trailing edge dimmer
AR-DN-D-B	750W trailing edge dimmer
AR-DN-D-C	200W trailing edge dimmer
AR-DN-FL	Ballast controller unit with selectable DSI, DALI or 1–10V output
AR-DN-CB	Curtain and blind controller unit
EBR-DIN-PSU	DIN rail mounted power supply

Supply Voltage	230VAC +/- 10%
Relay Rating	10A
Frequency	50Hz

Scene Plate



Order Code	Description
AR-SG-4SM-W	Wireless (RF) scene plate
GIFP-ST	Silver effect fascia
GIFP-BZ	Bronze effect fascia

Supply Voltage	16VDC (via D-Mate bus)
Backbox compatibility	UK and EU (minimum depth 25mm)
Dimensions	86 x 86 x 36.5mm

RS232 Controller

Order Code	Description
AR-DN-RS232	RS232 Interface

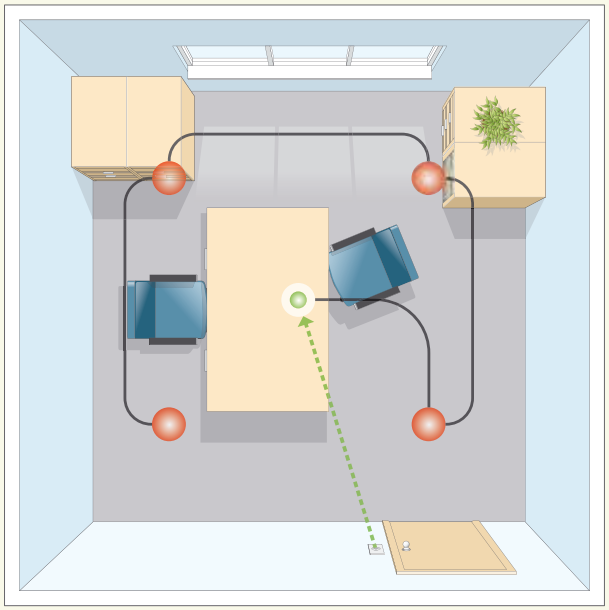
Supply Voltage	230VAC +/- 10%
Frequency	50Hz

RAPID An-10 Gateway

Order Code	Description
AR-DN-GW	RAPID – An-10 Gateway

Supply Voltage	230VAC +/- 10%
Relay Rating	10A
Frequency	50Hz

Small Office



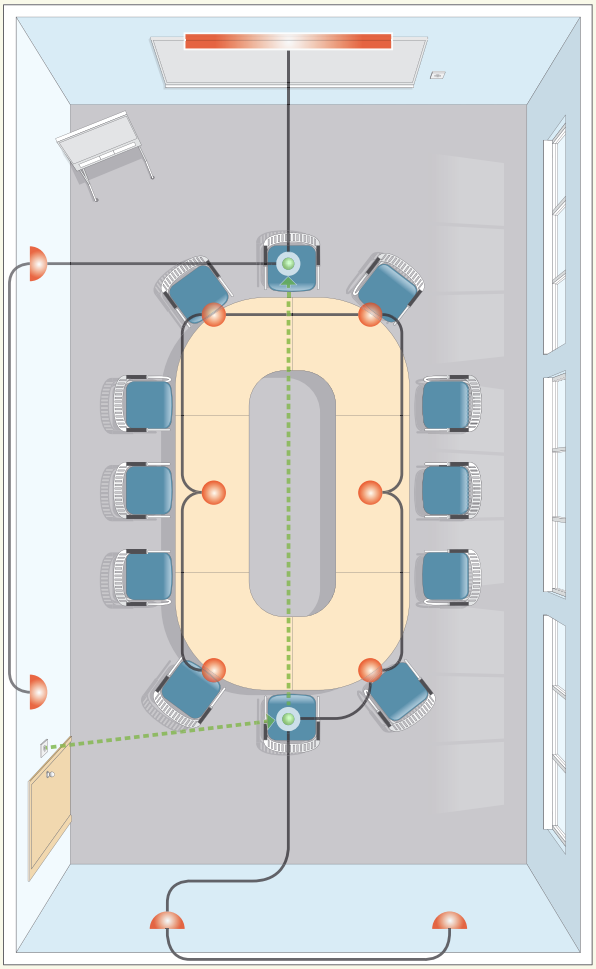
Set-up

- Four ceiling lights are controlled by the dimmable output of a PIR detector.
- The PIR detector is configured for absence detection.
- A push-button wall plate is connected to a concealed switch module.
- All An-10 devices are set to the same Local Code.

Operation

- Pressing a button on the wall plate sends a wireless message to the PIR detector which either turns the lights on, sets them to a preset level, or turns them off.
- The lights are automatically turned off when the room is unoccupied.

Meeting Room



Set-up

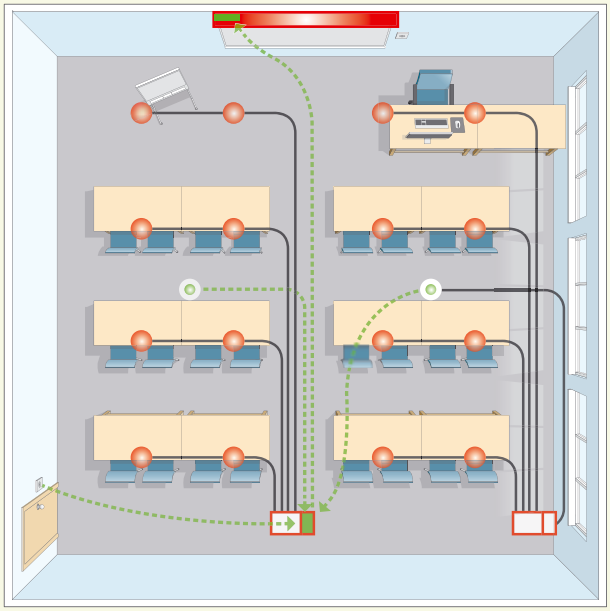
- Two PIR detectors are used, with their switched and dimmed outputs controlling separate lighting circuits. This provides independent dimmable control of the wall lights, and switched control of the ceiling lights and wipe board strip light.
- Both PIR detectors are configured for presence detection.
- Two push-button wall plates are connected to concealed switch modules, providing convenient lighting control from either the entry door or projection screen positions.
- All An-10 devices are set to the same Local Code.

Operation

- The lights turn on automatically when someone first enters the room.
- Pressing a button on either wall plate sends a wireless message to the PIR detector, changing the lighting mood (scene) to suit a meeting or presentation.
- All lights are automatically turned off when the room is unoccupied.

Luminaires — Switching and/or dimming of lighting load
Detectors — Wireless communication between devices

Classroom



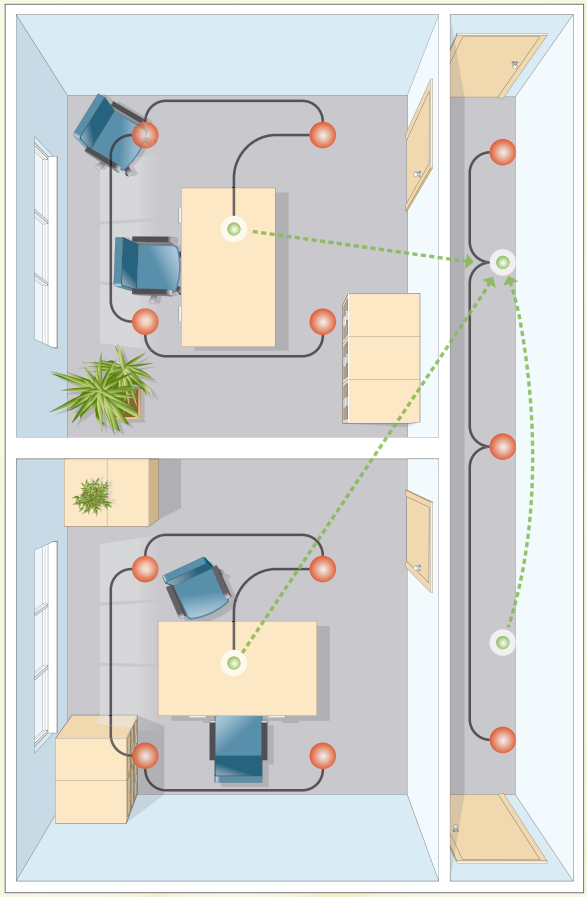
Set-up

- In this example the ceiling lights were previously wired using the Vitesse Modular lighting distribution system. The addition of an An-10 modular adaptor adds wireless control capability.
- The white board strip light is controlled by a slim-line ballast controller.
- Two PIR detectors are configured for absence detection and maintained illuminance operation.
- Two push-button wall plates are connected to concealed switch modules, providing convenient lighting control from either the entry door or projection screen positions.
- All An-10 devices are set to the same Local Code.

Operation

- Pressing a button on either wall plate sends a wireless message to the modular adaptors and slim-line ballast controller, which either turns the lights on, sets them to a preset level, or turns them off.
- The PIR detectors provide feedback of the overall light level and enable the system to dim the ceiling lights according to the amount of natural daylight.
- All lights are automatically turned off when the room is unoccupied.

Offices and Corridor



Set-up

- In each office the ceiling lights are controlled by a PIR detector.
- Two PIR detectors are used in the corridor, but note that only one detector is physically connected to the lights. The other detector communicates wirelessly with the first. Corridor lights are turned on as soon as one of the detectors picks up movement.
- All PIR detectors are configured for presence detection.
- An-10 devices are set to different Local Codes in each office and in the corridor, allowing each to function independently.
- Area Codes are set to allow common control between each office and the corridor.

Operation

- On entering the corridor, its lights are turned on automatically. Similarly, entering either of the offices will turn their lights on.
- All office lights are automatically turned off when the corresponding office or corridor is unoccupied.
- However, while either office is occupied, the An-10 system uses the Area Code to hold the corridor lights on for safety and convenience.

Luminaires
Detectors
Switching and/or dimming of lighting load
Wireless communication between devices
Vitesse Modular with plug-in An-10 adapter
Vitesse Modular
Ballast Controller

RAPiD Fully Addressable Lighting Control System

Our most advanced system just became better. RAPID is fully addressable and networkable, combining state-of-the-art technology and modular mechanics, with an easy to use graphical interface. It meets the most demanding lighting control and energy management applications, without the cost and complexity of other systems. Together with our new patented Energy Measurement Technology, RAPID is the complete lighting control solution.

With the help of our system partners, we can provide a full turnkey design and commissioning service.

Features and Benefits:

Networking

RAPID can be configured to control rooms, floors or an entire multi-floor building. RAPID control modules are networked together on each floor, whilst multi-floor systems are linked together using RAPID Area Controllers.

Where a building operates an open BMS system such as BACnet, we can interface using our gateway.

Adaptable

RAPID provides a fully addressable scalable system, which can be re-configured to changing requirements.

Remote Monitoring and Configuration

RAPID can be interfaced with a PC and propitiatory software, which allows you to monitor and reconfigure any part of the lighting system. Event calendar functionality provides the ability to schedule lighting control events for specific events, cleaning, re-lamping and emergency testing of lights.

Our propitiatory software, in conjunction with DALI EMPRO ballasts, allows remote monitoring and testing of emergency light fittings (optional).

Notional Corridors

RAPID enables the system administrator to create notional corridors of light, keeping working staff safe and secure whilst providing significant energy savings.

Scene Setting and Recall

RAPID allows the user to create and recall desired room lighting levels. Switching between scenes (e.g. meeting room) is easy and convenient with the stylish scene control panel.

Graduated Daylight Linking

In conjunction with RAPID dimming detectors, the system is capable of reducing the light output of luminaires gradually from lighter areas of a room (adjacent to the windows) to darker areas (away from windows).

RAPID saves the maximum amount of energy in a room, whilst retaining comfort levels.

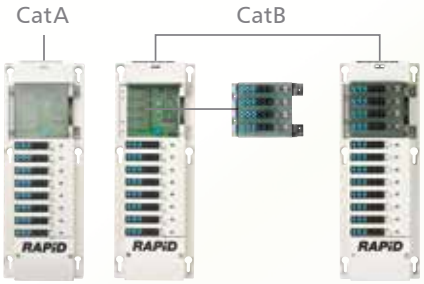
Energy Measurement

Our patented Energy Measurement Technology provides actual energy usage data for all luminaires connected to the system. Energy Measurement allows for comprehensive metering of building wide lighting energy costs. Using a web based reporting suite reportable information is accessible via the front end PC or remotely.

For a full list of features and benefits, available customised wiring options and structured wiring solutions, please call our sales department for more details on +44 (0)333 900 0671.

Modular Mechanics

RAPID series 3's modular design adapts easily to the demands of an installation and can be fine tuned to suit specific client needs.



RAPID series 3 System Highlights

NEW

RAPID Lighting Control Module (LCM)

The latest RAPID LCM has new and innovative features to benefit the specifier, installer and client alike.

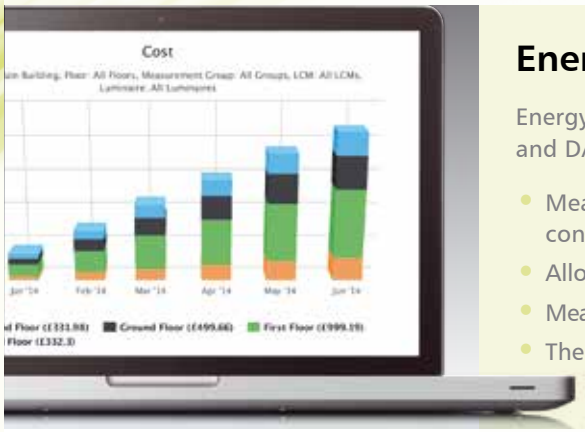
- Modular design – specify for CatA; expandable for CatB: standard 8 outputs can be extended to provide an extra 4 outputs with a plug in module
- Reduced installation cost for CatA
- Reduced expansion cost for CatB stage
- Mixed dimming and volt-free output options
- Works with our patented Energy Measurement Technology.

NEW

Area Controller

The Area Controller allows all RAPID lighting control modules on a floor to communicate with one another, as well as allowing communication between floors and/or a computer front end package.

- 3 RAPID Bus networks
- Ethernet port – TCP/IP connectivity
- Time scheduled events
- Numerical keypad, with pass lock and 3 access levels
- Modular enclosure options available.



NEW

Energy Measurement

Energy Measurement is available exclusively on the new RAPID LCM and DALI gateway (pluggable and DIN rail variants).

- Measures the energy consumption of all luminaires connected to an LCM on a RAPID system
- Allows for real-time, web-based and offline reporting
- Measurement grouping – luminaire, LCM, area, floor, building
- The raw data is also available in XML format so that the user can utilise a third party tool for analysis.

ENERGY MEASUREMENT TECHNOLOGY

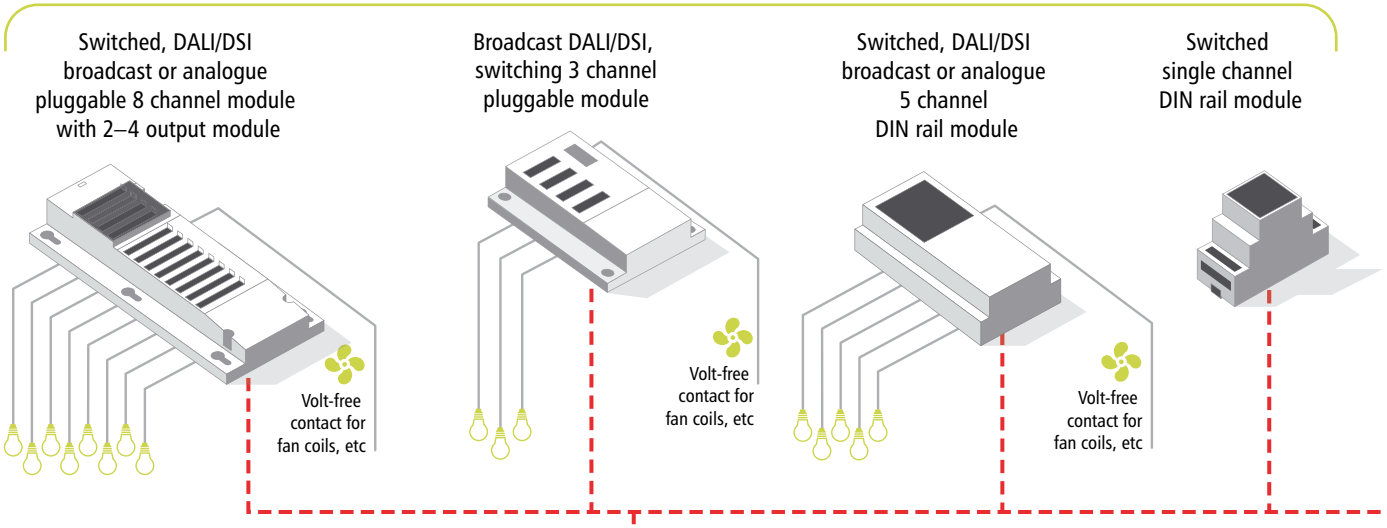
PATENTED DESIGN

RAPID

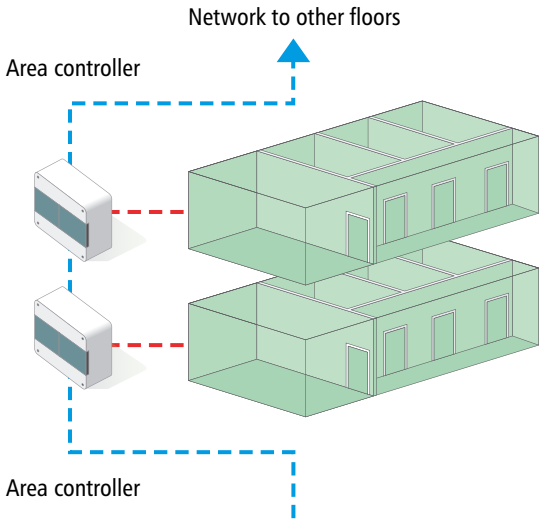
The RAPID system of fully networkable devices can now interconnect with all levels of energy management in building spaces, measuring and reducing energy consumption.

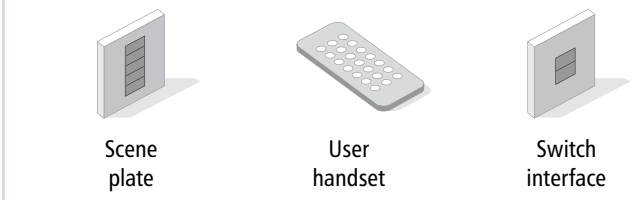
Switching/Dimming Devices

Switched, DSI/DALI Broadcast or Analogue

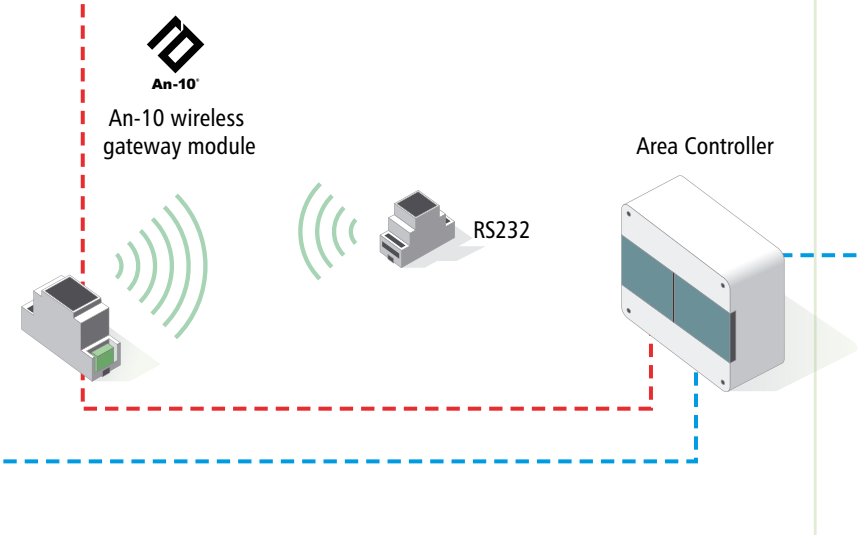


Area Controller Modules



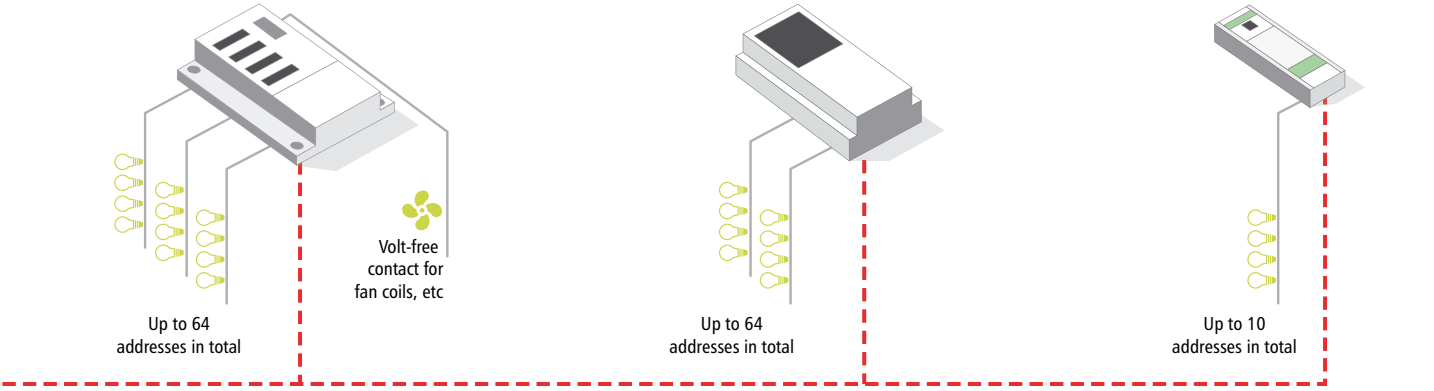


User Interfaces

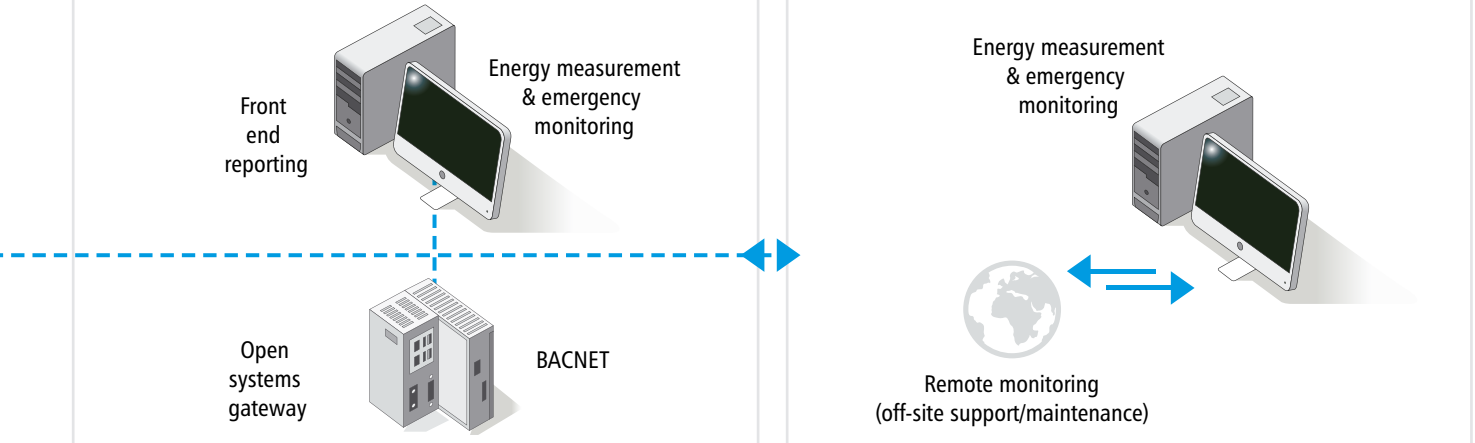


Feature packed, from front end monitoring to testing of emergency luminaires, it is also implemented by our in-house team of engineers or through our accredited CP system partners.

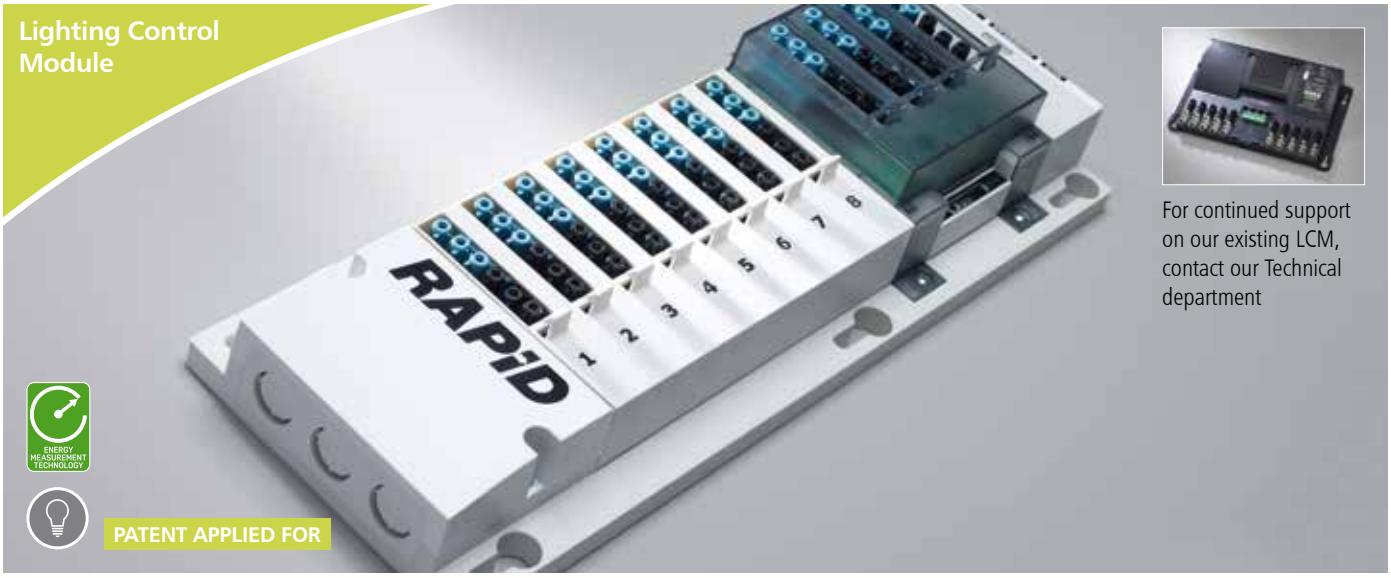
DALI Addressable



Presence Detectors



Reporting and Monitoring Options



For continued support on our existing LCM, contact our Technical department

The latest generation of RAPID Lighting Control Module (LCM) has new and innovative features to benefit the specifier, installer and client alike.

The standard RAPID LCM has 8 individually addressable outputs to allow for fully independent control of DALI/DSI or switching only fittings. Its modular design allows you to specify for CatA, and is expandable for CatB by using a 4 output plug in module, providing an extra 4 outputs. In turn this reduces the cost to fit out stage.

Installation and Connectivity

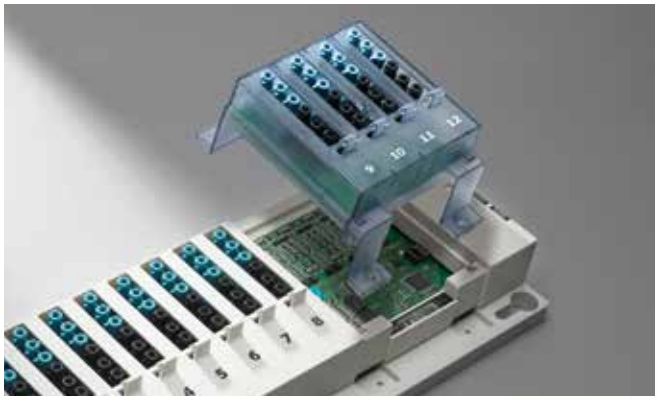
The system is designed for ease of installation with mains and field bus wiring being connected using the spacious wiring compartment. There are 4 M6 keyways for fixing to the slab in the ceiling void or channel nut fixings for rod suspension or fixing to cable basket. Control inputs are via 6 hardwired ELV connections in the wiring compartment or via 2 RJ45 inputs and 1 RJ45 input offering 7 inputs and 1 common that are hardwired. An excellent application for the single RJ45 input would be for several groups of fittings to be switched from a multi-gang switch connected to either 1 or several LCMs or for connection of a scene setting plate.

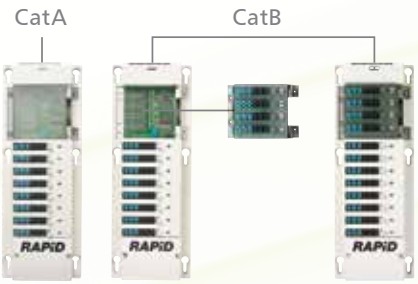
Protocol Flexibility

The plug in module is available in a number of formats and allows the designer and installer to mitigate the cost of allowing for future expansion on the fit out stage. The module can incorporate a different dimming protocol from the main LCM and also volt free contacts for switching fixed output loads like fan coil units. This is ideal for fit out scenarios where cellular offices are added creating the requirement for additional outputs for luminaires. The ability to have a different dimming protocol from the main LCM is also useful where, during the fit out, LED lighting may have been installed which is 1-10V and where an existing LCM is either DALI or DSI. The 4 outputs are also individually addressable allowing for maximum flexibility.

Patented Energy Measurement Technology

Exclusive to the next generation of RAPID products, our patented Energy Measurement technology allows for actual energy usage data to be obtained for any device on the system, from individual luminaires, to building wide. All the reportable information is logged in a database and available for viewing via a web based reporting suite. The raw data is also available in XML format so that the user can utilise a third party tool for analysis.



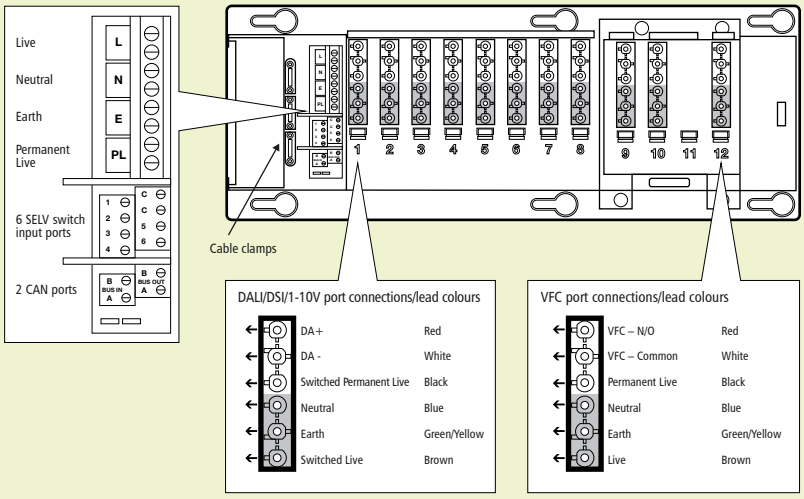


Modular Mechanics

RAPID series 3's modular design adapts easily to the demands of an installation and can be fine tuned to suit specific client needs.

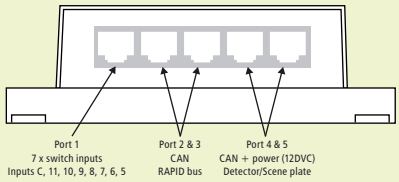
Lighting Control Module Connections

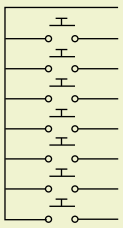
Wiring



Note: All phase condutors should be identified with appropriate sleeving.

RJ45 ports





Switch	RJ45 pin	Colour
C	1	White/Orange
11	2	Orange
10	3	White/Green
9	4	Blue
8	5	White/Blue
7	6	Green
6	7	White/brown
5	8	Brown

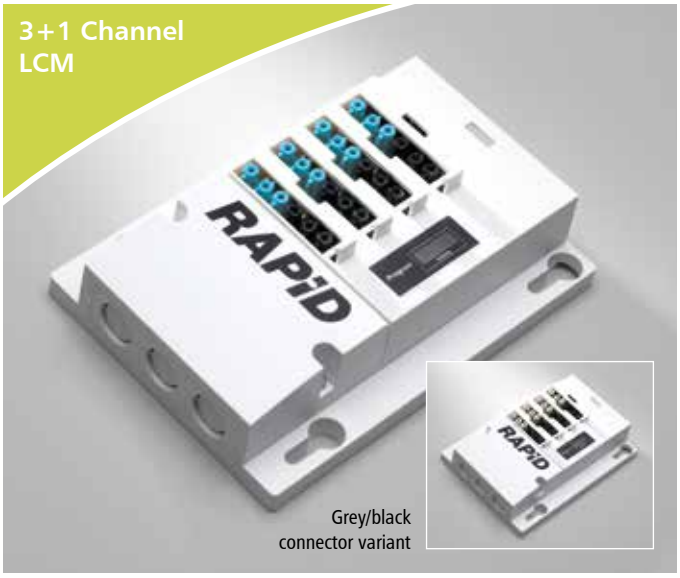
Order Code	Description	Input Voltage	Load Rating at 230VAC			
			I	F	CF	LED
EBR-LCM8-8DD	RAPID 8 channel LCM DALI/DSI dimming	220-240VAC	6A	6A	3A	3A
EBR-LCM8-8AD	RAPID 8 channel LCM 1-10V dimming	220-240VAC	6A	6A	3A	3A
EBR-LCM8-8DD-EG	RAPID 8 channel LCM DALI/DSI dimming + energy measurement	220-240VAC	6A	6A	3A	3A
EBR-LCM8-8AD-EG	RAPID 8 channel LCM 1-10V dimming + energy measurement	220-240VAC	6A	6A	3A	3A
EBR-LCM10-10DD	RAPID 10 channel LCM DALI/DSI dimming + 1 x VFC output	220-240VAC	6A	6A	3A	3A
EBR-LCM10-10AD	RAPID 10 channel LCM 1-10V dimming + 1 x VFC output	220-240VAC	6A	6A	3A	3A
EBR-LCM10-10DD-EG	RAPID 10 channel LCM DALI/DSI dimming + 1 x VFC output + energy measurement	220-240VAC	6A	6A	3A	3A
EBR-LCM10-10AD-EG	RAPID 10 channel LCM 1-10V dimming + 1 x VFC output + energy measurement	220-240VAC	6A	6A	3A	3A
EBR-LCM12-12DD	RAPID 12 channel LCM DALI/DSI dimming	220-240VAC	6A	6A	3A	3A
EBR-LCM 12-12AD	RAPID 12 channel LCM 1-10V dimming	220-240VAC	6A	6A	3A	3A
EBR-LCM12-12DD-EG	RAPID 12 channel LCM DALI/DSI dimming + energy measurement	220-240VAC	6A	6A	3A	3A
EBR-LCM12-12AD-EG	RAPID 12 channel LCM 1-10V dimming + energy measurement	220-240VAC	6A	6A	3A	3A
EBR-MOD2-2DD	2 channel DALI/DSI + 1 x VFC output plug-in module	220-240VAC	6A	6A	3A	3A
EBR-MOD4-4DD	4 channel DALI/DSI plug-in module	220-240VAC	6A	6A	3A	3A
EBR-MOD2-2AD	2 channel 1-10V + 1 x VFC output plug-in module	220-240VAC	6A	6A	3A	3A
EBR-MOD4-4AD	4 channel 1-10V plug-in module	220-240VAC	6A	6A	3A	3A

I = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

Please note: Maximum switching per box 10A.

Works with Energy Measurement Technology, please see page 114.

3+1 Channel LCM



Grey/black connector variant

Pluggable DALI Lighting Control Module

Black/blue connector variant

The EBR-LCM3-1DD is a Lighting Control Module that forms an excellent option where three individually addressable output channels are required with a non-dimming Channel.

The EBR-LCM3-1DD forms part of CP Electronics Rapid lighting control system and provides three individually addressable output channels that independently dim rows of DALI/DSI fluorescent or LED luminaires. An additional switched output is provided for the control of non-dimming devices such as ventilation or lighting equipment.

Key features include:
Switching relay, emergency test relay and voltage free output
Pluggable output connections
Multiple mounting methods for ease of installation
11 switch inputs
Infrared handset and PC programmable
Boot loadable software for easy upgrades
Reduced commissioning via presets

Order Code	Description
EBR-LCM3-1DD	Pluggable 3+1 channel LCM DALI/DSI dimming – grey connectors
EBR-LCM3-1DD-B	Pluggable 3+1 channel LCM DALI/DSI dimming – blue connectors

Load Rating at 230VAC (per channel)				Input Voltage
I	**F**	**CF**	**LED**	
6A	6A	3A	3A	230VAC

I = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

The EBR-LCM-DALIG64 is a RAPID lighting control module designed for controlling addressable DALI devices such as fluorescent or LED lighting ballasts.

A full range of 64 DALI addresses can be achieved using this controller. Three output ports provide wiring convenience and share a relay providing a switched live output and a second relay for emergency test. The 4th output is a volt free contact to control external devices.

This LCM also has a total of 11 switch inputs. 4 in the wiring compartment with screw terminals and 7 via an RJ45 port.

Used in conjunction with our range of DALI presence detectors a single wire bus 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.

Key features include:
Up to 64 DALI addresses
Switching relay, emergency test relay and voltage free output
Pluggable DALI connections
Multiple mounting methods for ease of installation
11 switch inputs
Compatible with DALI emergency monitoring
Infrared handset and PC programmable
Boot loadable software for easy upgrades

Order Code	Description
EBR-LCM-DALIG64	Pluggable DALI lighting control module – grey connectors
EBR-LCM-DALIG64-B	Pluggable DALI lighting control module – blue connectors

Works with Energy Measurement Technology, please see page 114.

Single In-line LCM

DIN Rail Modules

The compact dimensions of the single channel lighting control module allow unparalleled flexibility, as it is small enough for installation in suspended trunking systems or inside light fittings, where space is at a premium.

For use as part of the lighting control system, the module has a single addressable output port for switching, whilst the DIM model provides DSI and DALI dimming signals for dimmable luminaires as well as support for DALI EMPRO emergency test and monitoring.

Incorporated in the unit is a two channel interface for connection to external devices such as light switches, emergency test switches and time clocks. A port on the front enables the LMS to be connected to peripherals such as presence detectors.

For emergency test applications which require centralised testing or ELV switch connections, the EM model provides a switched permanent live output.

Order Code	Description
LMS-MIN-LCM	Single In-line LCM
LMS-MIN-LCM-DIM	Single In-line LCM DALI/DSI/EMPRO
LMS-MIN-LCM-EM	Single In-line LCM EM version

Load Rating at 230VAC (per channel)				Input Voltage
I	**F**	**CF**	**LED**	
10A	10A	10A	10A	230VAC
I = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent				

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

There are two sizes of module available:

The single channel module is available as a switched output only, and is especially suited to the switching of corridor lighting. The unit also has a separate relay which provides the facility for emergency light testing.

The 5 channel module provides 5 individually addressable outputs for switching, in addition the dimming models provide control for luminaires fitted with dimming ballasts. Each device has an eight channel switch interface for connection to external devices such as light switches, emergency test switches and time clocks.

Order Code	Description
EBR-DIN-LCM	Single channel switching LCM module
EBR-DIN-LCM5-5	5 channel switching DIN module
EBR-DIN-LCM5-5D	5 channel 1–10V or dimming DIN module
EBR-DIN-LCM5-5DSI	5 channel DSI dimming DIN module
EBR-DIN-LCM5-5DALI	5 channel DALI dimming DIN module

Load Rating at 230VAC (per channel)				Input Voltage
I	**F**	**CF**	**LED**	
10A	10A	10A	10A	230VAC
I = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent				

DIN rail DALI Lighting Control Module

The EBR-DIN-DALIG64 is a RAPID lighting control module designed for controlling 64 addressable DALI devices such as fluorescent or LED lighting ballasts.

The unit incorporates three voltage free relay outputs plus an emergency test relay.

This LCM has a total of 8 switch inputs.

Used in conjunction with our range of DALI presence detectors a single DALI bus 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.

Key features include:
Up to 64 DALI addresses
Three voltage free relay outputs plus an emergency test relay
8 switch inputs
Compatible with DALI emergency monitoring
Infrared handset and PC programmable
Boot loadable software for easy upgrades

Order Code	Description
EBR-DIN-DALIG64	DIN rail DALI lighting control module

Works with Energy Measurement Technology, please see page 114.

In-Line DALI Gateway Module

The RAPID In-Line DALI Gateway Module provides an interface between a RAPID lighting control system and a set of DALI ballasts wired together on a single DALI bus.

The module acts as a full function LCM with 10 individually programmable output channels; each channel can have up to 2 standard and 1 EMPRO ballast connected. Two interface inputs are provided for connection to external devices such as light switches, emergency test switches and time clocks.

A port on the front enables the module to be connected to peripherals such as presence detectors and bus repeaters, whilst two terminals allow connection to the RAPID bus.

For digital emergency test and monitoring the unit supports DALI EMPRO ballasts; for switched emergency test applications the unit provides a switched, permanent live output.

Key features include:
10 individually addressable output channels
Supports luminaires with multiple ballasts
Control and fault feedback indication per channel
Allows ballasts to be grouped for faster control
Auto re-addressing of failed ballasts with no user intervention
Power for up to 4 peripherals
2 interface input
DALI EMPRO compatible
Switched permanent live for emergency test

Order Code	Description
EBR-MOD-DALIG	In-Line DALI Gateway Module

Area Controller

The Area Controller allows all RAPID lighting control modules on a floor to communicate with one another, as well as allowing communication between floors and/or a computer front end package. It also allows the system to be sub-divided into discreet areas, or zones.

Outputs and Addressability

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 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.

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.

Timed Events

An Infra-red programming port is also included to allow for uploading commands via the UNLCDHS with a status LED to confirm receipt of command. The Infra-Red (IR) port has an activation button to allow 30 second upload intervals. This ensures that when programming other components contained in the Area Controller enclosure no erroneous commands are received. The software is also boot loadable allowing for remote upload of updates.

Key features include:
3 switchable Field Bus outputs
Ethernet connection
8 ELV switch inputs
Numerical keypad with 3 access level PIN lock
Time scheduled events
Manufactured in flame retardant material
5 year warranty
DALI EMPRO compatible
Manufactured in the UK

Order Code	Description
EBR-DIN-AC	DIN rail area controller module
EBR-DIN-AC-ET	DIN rail area controller module with Ethernet

Area Control Devices

When used in conjunction with the area controller they provide a customisable solution to a system. All devices are delivered pre-wired and mounted in a DIN rail mounting enclosure.

Order Code	Description
EBR-DIN-PSU	Power supply
EBR-DIN-CTRL	Bus control and interfacing module
EBR-DIN-ISOL	Isolated back bone module
EBR-DIN-TSCH	Time scheduler and emergency test module

RAPID – An-10 Gateway

AR-DN-GW provides a gateway between the RAPID lighting control system and the An-10 wireless system.

The unit comprises of a radio transceiver for two way communication with an An-10 system and a CAN port for communication with a RAPID system.

Application example:

- RF based An-10 detectors required on a RAPID system.
- Office block with large open plan offices having predominantly RAPID LCM/DALI gateway control where the conference rooms and atrium require more sophisticated architectural scene control.
- An An-10 system which requires front end display of statuses and mimic control.

The device is configured using the UNLCDHS and the settings uploaded via simple PC program via an Excel spreadsheet.

Key features include:
Interfaces RAPID and An-10 systems
Allows wireless installation of switches and detectors

Order Code	Description
AR-DN-GW	RAPID – An-10 Gateway

EBR-CPIR

Order Code	Description
EBR-CPIR	RAPID ceiling mounted PIR presence/absence detector
EBR-CPIR-DALI	RAPID DALI ceiling mounted PIR presence/absence detector

For detection pattern please see page 19.

EBR-MINPIR

Supplied with 300mm lead and connector.

Order Code	Description
EBR-MINPIR	RAPID miniature ceiling mounted PIR presence/absence detector
EBR-MINPIR-DALI	RAPID DALI miniature ceiling mounted PIR presence/absence detector
RJ45-COUPLER	RJ45 coupler

For detection pattern please see page 23.

EBR-MWS3A

PATENTED DESIGN

Order Code	Description
EBR-MWS3A	RAPID adjustable head microwave presence/absence detector

For detection pattern please see page 33.

See pages 10–14 for our **Presence Detector technology guide**

Handsets

Order Code	Description
UHS	User handset override on/off; lux up/lux down
UHS3	User handset override on/off
UHS3 (2)	User handset override: off only

Scene Control

The Scene select plate provides advanced scene setting functions for the RAPID lighting control system.

When used in conjunction with dimming lighting control modules and suitable dimming luminaires, complex lighting scenes can be set for applications such as conference rooms and office suites.

Key features include:
Up to 8 scenes selectable using 4 buttons, plus a separate off scene
Raise/lower
Adjustable fade rates up to 99 minutes, individually selectable for each scene
Room divide input suitable for multiple interconnecting rooms
Support for up to 99 individual circuits

Order Code	Description
EBR-4SC	Scene select plate
EBR-DIN-3SC	DIN rail mounted scene controller without separate raise and lower
EBR-DIN-3SCA	DIN rail mounted scene controller with separate raise and lower

Handsets

Order Code	Description
UNLCDHS	Professional commissioning LCD programming handset. See page 16
UHS5	Commissioning handset. See page 15

Front End Monitoring

The RAPID graphical interface is designed to provide the user flexible control and monitoring of the lighting from a PC. Bitmaps of the building floors can be illustrated for all control devices, which are graphically depicted as icons on the floor layout or in a drop down window within Microsoft Windows.

The graphical interface gives the user the ability to re-configure control devices or monitor their status, changing of lighting groups can be achieved quickly and simply thus negating the need for physical changes within the ceiling void.

Time settings for presence detectors, corridor and group hold delays can be adjusted to the client's requirements. An event calendar provides the client with the ability to schedule lighting control events for special occasions, cleaning, re-lamping and emergency testing of lights. Lamp error feedback is reported for any luminaire which is controlled by a DALI ballast.

Order Code	Description
EBR-CFE-PC	Software and front end software package

Emergency Monitoring

The effective monitoring of emergency luminaires is achieved when the DALI EMPRO inverter is fitted into the emergency light fitting along with the ballast and battery pack.

The monitoring is carried out using a 2 wire DALI control cable which is connected via the luminaire lead to the lighting control module and in turn monitored by the RAPID graphical interface.

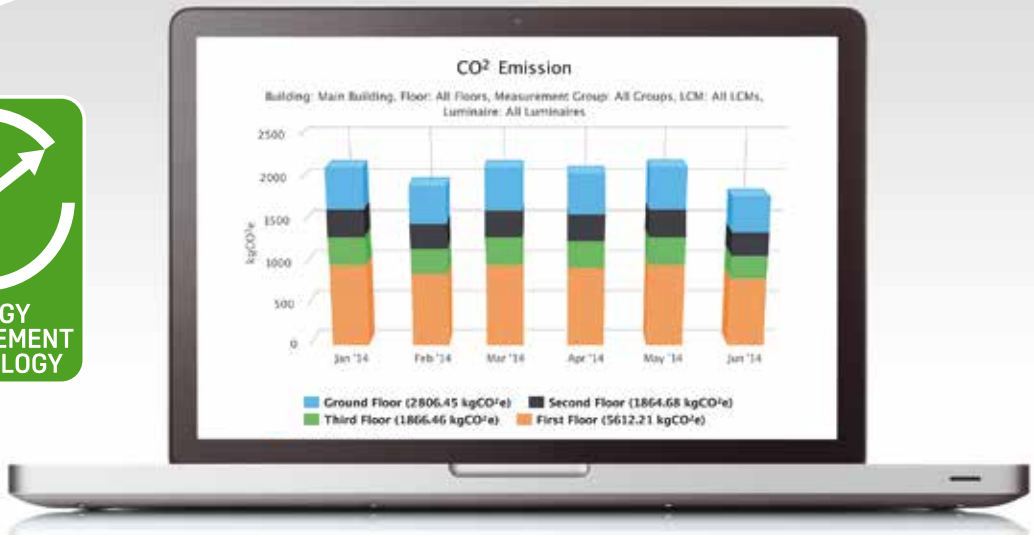
The RAPID monitoring software allows flexible test scheduling such as test duration and 'least time of risk'. Additionally the software can show pass/fail status of emergency luminaires which includes:

- Lamp failure
- Ballast failure
- DALI short circuit
- Communication failure
- Battery pack open circuit
- Battery pack no longer fully chargeable

The system ensures that duration tests will only commence when the battery is fully charged. No DALI addressing routine required, all addressing carried out using the normal easy to use RAPID programming format. Key switch method of testing emergency luminaires is still available.

Order Code	Description
EBR-EMLTU	Emergency monitoring upgrade for EBR-CFE

Energy Measurement



ENERGY MEASUREMENT TECHNOLOGY

PATENTED

Our patented Energy Measurement technology is available exclusively on the latest generation of RAPID Lighting Control Module (LCM) and DALI gateway (pluggable and DIN rail variants)

Using patented technology, it measures the energy consumption of all luminaires connected to an LCM on a RAPID system. In a database, it then logs the associated reports for access via a web based reporting suite at the front end PC. The raw data is also available in XML format so that the user can utilise a third party tool for analysis.

Flexible Energy Measurement

The system will provide actual energy usage data for individual luminaires connected to an LCM output channel or DALI gateway output.
This is referenced using the output channel number and device address. The system also allows for the measurement of groups of fittings connected to a device (for example the energy usage data of an LCM with up to 12 luminaires connected to it). This information is obtained by referencing the device address. The system will also measure energy usage of individual electrical circuits which have several LCMs connected. This is achieved by a new field assigned within the LCM properties on the front end PC. There is also the provision for Energy Measurement for a floor. This data is acquired by an area code allocated to the area controller.

Logging and Reporting

The system then logs the information available for reporting that is fed back along the field bus network to the area controller. This data is collected at the area controller and that information is then fed back to the front end PC through the CAN or Ethernet backbone, at timed intervals.

Building Wide Measurement

The system can also provide Energy Measurement of all devices connected to the system building wide. This is achieved by referencing all the area codes and the reportable information is then fed via the CAN or Ethernet backbone to the front end PC.

There are also status LED's for each RAPID field BUS network and the backbone network between area controllers.

The information is available for reporting as follows.

1. Output channel (e.g. LCM channel, DALI Gateway channel) – Meter reading (kWh), Peak power kW, total on time (The total on time is already recorded and is also shown on the front end)
2. Output device (e.g. LCM, DIN rail controller) Meter reading accumulated for each channel (kWh), instantaneous power (kW), and Peak power.
3. Electrical circuit – Meter reading accumulated for each device (kWh), Instantaneous power (kW), Peak power (kW)
4. Floor – Meter reading accumulated for each device (kWh) Instantaneous power (kW)
5. Building – Meter reading accumulated for each area (kWh), Instantaneous power (kW) and Peak power (kW)

Reporting periods:
Yearly
Monthly
Weekly
Daily
Hourly
Yearly comparison
Periodic comparison (quarterly)
Segmented reporting

Reports also available on:
Total Apparent Energy
Cost
Current Meter Active Power
Current Active Power.

Key features include:
Actual energy usage data – not a monitored average
Per luminaire measurement
Measurement grouping – luminaire, LCM, areas, floor, buildings
Multi-time and date reports available
Real-time, web based and offline reporting
Raw data is available in XML format
Patented technology
5 year warranty*
Manufactured in the UK

*Hardware only, subject to terms and conditions.

Open Systems Gateway

The EBR-OSC1 Open Systems Gateway allows the powerful RAPID lighting control system to be interfaced to a variety of Open Systems in order to enhance the lighting and building management.

At CP Electronics we believe that the lighting control system must provide a fully functional method for providing energy control and usability of the lighting infrastructure. But we also realise that there are occasions where this lighting infrastructure must be integrated with the other Building Management Systems. To enable this integration, we are able to offer an Open Systems gateway. This gateway sits between the RAPID communications bus and whatever Building Management System is in use, and converts the RAPID protocol to another open systems protocol such as BACnet or KNX. The gateway comprises a simple DIN rail mountable controller which can be programmed by the systems integrators to provide a variety of information about the status of the lighting control system, as well as accepting commands from the building management system to control the lighting.

The RAPID Open Systems Gateway uses an industry standard Beckhoff controller to translate the CAN based protocol to many other Open Systems Standards, including but not limited to:

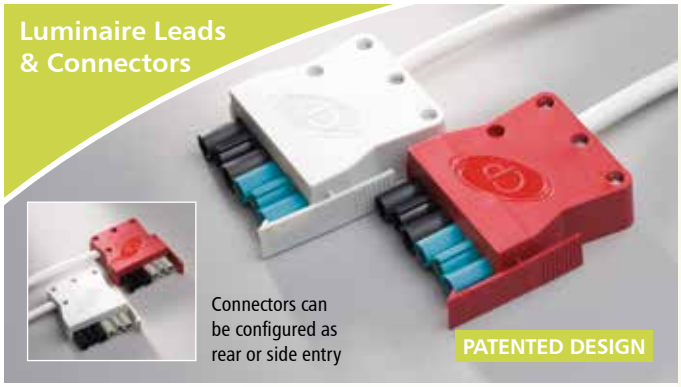
- BACnet
- Modbus*
- KNX*
- LON*

Please contact our Technical Services Department on +44 (0)333 900 0671 for further details.

Order Code	Description
EBR-OSC1	Open systems gateway
EBR-OSBACNET	BACnet server with software

*Please note, these would need to be built and tested upon order.

Luminaire Leads & Connectors

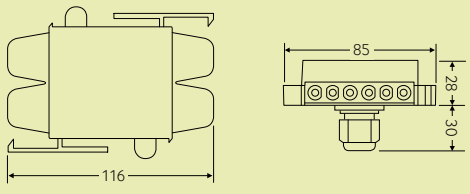


Order Code	Description
The following are grey/black connector variants:	
VITM6L303100W	3 core luminaire lead (white), 1.0mm² (3 metres)
VITM6L305100W	3 core luminaire lead (white), 1.0mm² (5 metres)
VITM6L403100R	4 core luminaire lead (red), 1.0mm² (3 metres)
VITM6L405100R	4 core luminaire lead (red), 1.0mm² (5 metres)
VITM6L503100W	5 core luminaire lead (white), 1.0mm², (3 metres)
VITM6L505100W	5 core luminaire lead (white), 1.0mm², (5 metres)
VITM6L603100R	6 core luminaire lead (red), 1.0mm², (3 metres)
VITM6L605100R	6 core luminaire lead (red), 1.0mm², (5 metres)
VITM6-LPW	6 pole luminaire connector (white)
VITM6-LPR	6 pole luminaire connector (red)
Other cable lengths are available upon request	

Please add 'B' prefix for blue/black connectors.

Tee Modules

Order Code	Description
BVITM6-L3T500	6 pole, 3 core, 0.5m lead, 1mm², tee module, white housing, black/blue coding
BVITM6-L4T500	6 pole, 4 core, 0.5m lead, 1mm², tee module, white housing, black/blue coding
BVITM6-L5T500	6 pole, 5 core, 0.5m lead, 1mm², tee module, white housing, black/blue coding
BVITM6-L6T500	6 pole, 6 core, 0.5m lead, 1mm², tee module, white housing, black/blue coding
Dimensions (mm)	



DALI Accessories

CP Electronics have developed a range of DALI accessories for either broadcast or addressable DALI networks.

The range consists of a passive infrared (PIR) detector designed to be part of a DALI network. There are also DALI addressers which are devices for simplifying DALI addressing and integrating broadcast DALI with DALI addressing. A selection of power supplies for DALI systems and a single channel broadcast controller offering four lighting level presets/scenes complete the range.

The EBDSPIR-DNET1 is a combined passive infrared (PIR) motion sensor and photocell designed to be part of a DALI network.

Functioning as a presence detector, the unit returns occupancy data to the DALI network.

The photocell provides a lux level measurement value to the DALI network.

For a copy of the DALI 'Command set', contact CP Electronics' Technical Services Department.

Order Code	Description
EBDSPIR-DNET1	DALI network PIR detector

For detection pattern please see page 19.

The EBDHS-DNET1 is a high bay PIR presence designed to be part of a DALI network and provides exceptionally sensitive and long range detection.

Functioning as a presence detector, the unit returns occupancy data to the DALI network.

The photocell provides a lux level measurement value to the DALI network.

For a copy of the DALI 'Command set', contact CP Electronics' Technical Services Department.

Order Code	Description
EBDHS-DNET1	DALI network High sensitivity PIR detector

For detection pattern please see page 29.

There are two DALI lighting control system power supplies; one for in-line mounting and the other for DIN rail mounting in a DIN rail enclosure.

DA-SL-PSU is an in-line 200mA DALI power supply.

EBR-DIN-PSU-DALIG is a DIN rail mounting 180mA DALI power supply.

Order Code	Description
DA-SL-PSU	DALI PSU
EBR-DIN-PSU-DALIG	DALI DIN rail power supply

DALI Addressers

An addresser takes in a message from an addressable DALI system and translates it into a broadcast message so that the luminaire ballast(s) does not have to be addressed using a PC or other methods. There are two ranges of addressers.

The DA-SL-AD series is a range of addressers that can be setup using simple to use DIL switches for addressing a DALI group.

The DA-SL-AP series are a range of addressers that can be setup using the UNLCDHS programming handset and the DM-ADP-PRG programming adaptor. The UNLCDHS is then used for addressing a DALI group, DALI short address and other parameters (see product guide).

These addressers can be used in the DALI control system.

The addressers also have the following standard features:

- Simple means of addressing a DALI group.
- No power needed to addresser whilst setting the addresses.

Available with the following options:

- Digital output version that can drive DALI or DSI ballasts.
- Relay option for supplying switched mains to loads.
- 1-10V version for analogue ballasts.

Order Code	Description
DA-SL-ADD	DALI addresser DIL DALI/DSI
DA-SL-ADAR	DALI addresser DIL 1–10V relay
DA-SL-ADDR	DALI addresser DIL DALI/DSI relay
DA-SL-APD	DALI addresser programmable DALI/DSI
DA-SL-APAR	DALI addresser programmable 1–10V relay
DM-ADP-PRG*	Programming adaptor

* For use with DA-SL-APD, DA-SL-APAR and DA-SL-APDR programmable addressers.

DALI/DSI dimmer switch

The DAL-SG-4PM-W is a single channel broadcast controller for DALI or DSI devices. The product has the following controls.

Scene buttons

Four buttons that offer 4 lighting levels. The default levels are:

- 100% brightness
- 75% brightness
- 50% brightness
- 25% brightness

These levels can be easily changed, see below.

Raise and lower function

- Use either buttons 1 and 2 to raise the light level.
- Use either buttons 3 and 4 to lower the light level.
- Off button.
- Toggle between lights off and last selected Scene.

Note: The data sent from the DALI output is in broadcast mode and is not suitable for addressed systems, it is also not compatible with D-Mate addressers. For D-Mate addressers use DM-SG-4SM-W.

Key features include:
Compatible with both DALI and DSI devices
4 button operation enables 4 lighting levels or scenes to be set up
Intuitive push button interface
Visual feedback via LED lit bezel
Designed to fit both UK and EU style backboxes
Low profile fascia with concealed screw fasteners

Order Code	Description
DA-SG-4PM-W	DALI/DSI dimmer switch white

See pages 10–14 for our **Presence Detector technology guide**

Emergency Lighting Test Switches

Emergency lighting test switches provide a cost effective solution for the testing of emergency luminaires.

It is a legal requirement that all emergency luminaires are tested on a regular basis to ensure they provide adequate escape illumination.

Load Capacity Key

Suitable for the control of:

Lighting

This automatic key operated emergency lighting test switch is permanently wired to the emergency luminaire supply.

The key switch is used to interrupt the supply for pre-programmed periods. At the end of the time period, the supply to the luminaires is automatically reinstated. The result is that there is no risk of depleting the batteries in the emergency fitting by leaving them connected for prolonged periods. The key switch ensures secure access.

Test Periods: 10 minutes, 1 hour and 3 hours.

Order Code	Description
ELT10	Automatic emergency test switch

Load Rating at 230VAC				
R	**I**	**F**	**CF**	**LED**
N/A	N/A	6A	3A	3A

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

Please note: A single ELT10 is suitable for switching one circuit, for multiple circuit applications see ELT-REL.

ELTD1

This automatic DIN rail mounting emergency lighting test switch is permanently wired to the emergency fitting supply.

The automatic control is used to interrupt the supply for a pre-programmed period. At the end of the time period, the supply to the luminaires is automatically reinstated. The result is that there is no risk of depleting the batteries in the emergency fitting by leaving them connected for prolonged periods. This single DIN rail module device can be conveniently located at the distribution board or in a control panel.

Test Periods: 10 minutes, 30 minutes, 1 hour and 3 hours.

Order Code	Description
ELTD1	Automatic DIN rail mounted emergency lighting test switch

Load Rating at 230VAC				
R	**I**	**F**	**CF**	**LED**
N/A	N/A	6A	3A	3A

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

Please note: A single ELTD1 is suitable for switching one circuit, for multiple circuit applications see ELT-REL.

ELT-REL

The ELT-REL emergency lighting control box can be used in conjunction with a single emergency lighting test point to provide emergency lighting tests for multiple circuits.

This unit can be connected directly to the ELT10 emergency lighting test switch to provide timed control of tests.

Four products are available, each able to switch a different number of circuits. When a live signal is received on the Live Switch Input terminal the output supply is interrupted.

The unit is suitable for single phase only. Loading is per channel.

Order Code	Description
ELT-REL-5	5 channel emergency lighting control box
ELT-REL-10	10 channel emergency lighting control box
ELT-REL-15	15 channel emergency lighting control box
ELT-REL-20	20 channel emergency lighting control box

Load Rating at 230VAC				
R	**I**	**F**	**CF**	**LED**
N/A	N/A	6A	3A	3A

R = Resistive **I** = Incandescent **F** = Fluorescent **CF** = Compact Fluorescent

Our range of plate mounted

green-i has been developed to save you energy on your lighting, heating and ventilation. This stylish and subtle range – made up of movement sensors, control systems, switches and timers – allows you to easily take control of your energy usage by providing simple and effective control solutions.

Ceiling PIR Sensors

Ceiling mounted passive infrared (PIR) movement sensors for the automatic control of lighting, heating and ventilation.

Vitesse Modular™

Simple and adaptable lighting connection system with scalable modular design.

Visit **www.green-i.co.uk** for more information

For sales support please call **+44 (0)333 900 0671**

and easy to fit products.

Wall Mounted PIR Sensors & Dimmers

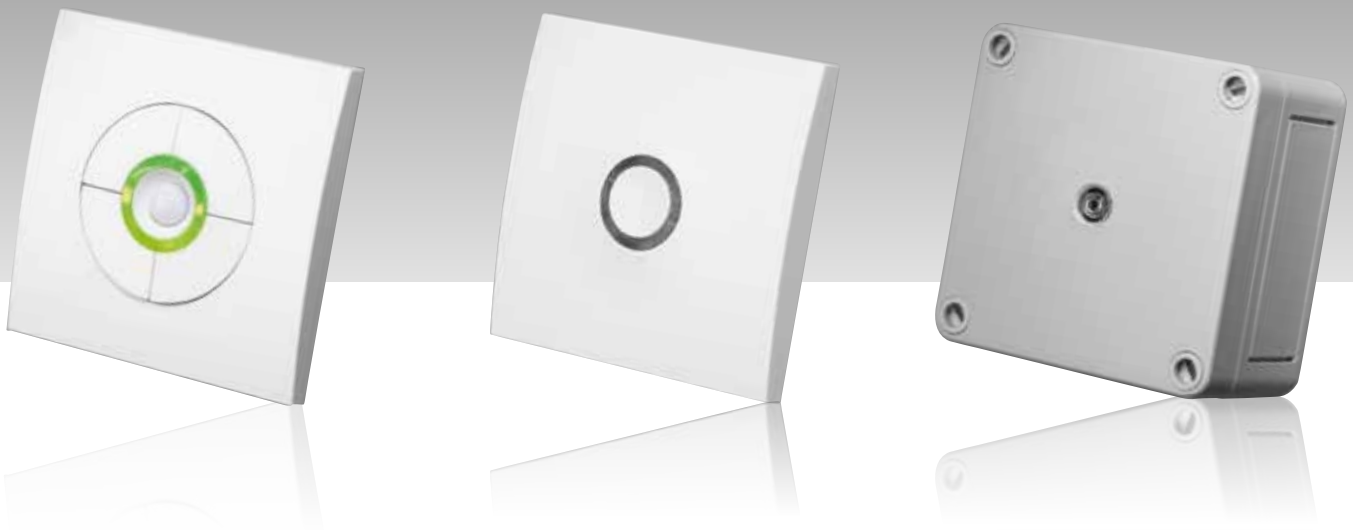
Wall mounted passive infrared (PIR) movement sensors for the automatic control of lighting, heating and ventilation.

Timers

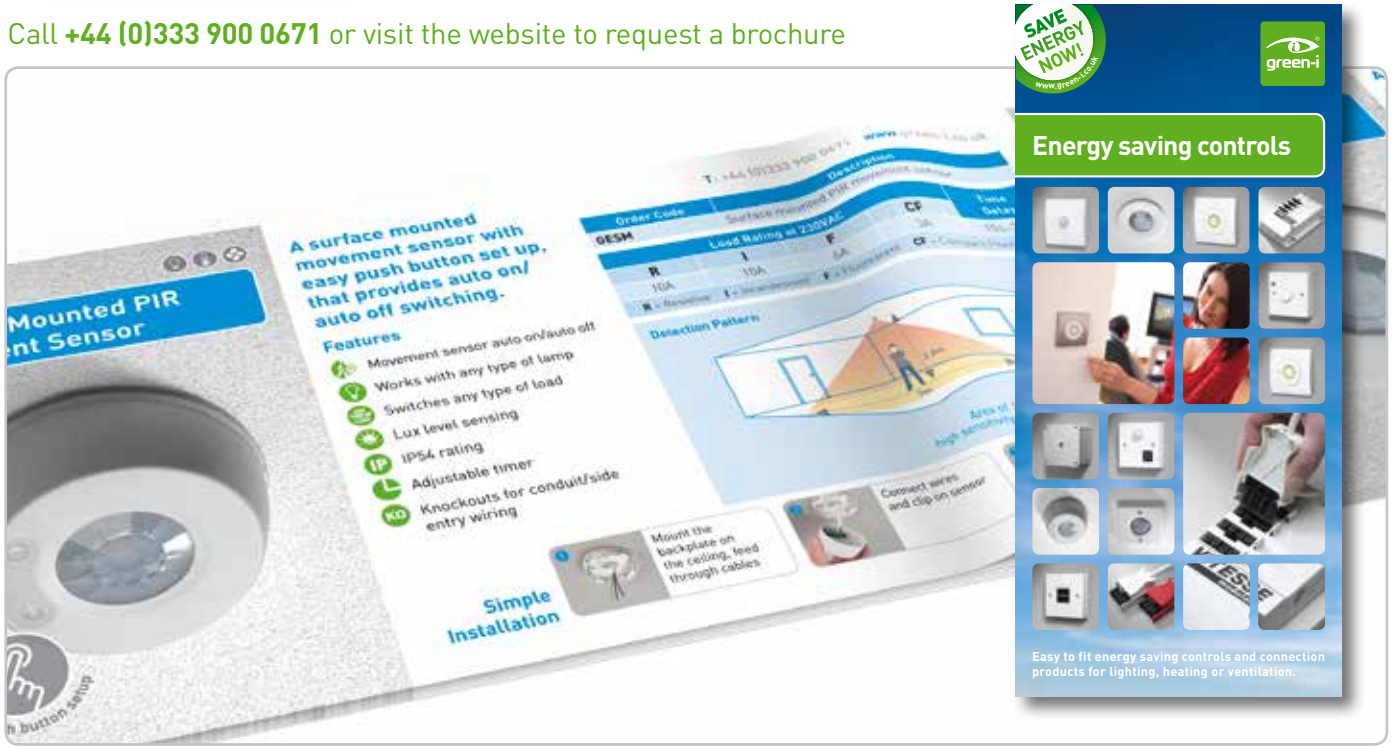
Time delay and time lag switches suitable for the control of lighting, heating and ventilation.

Light Level Controls

Photocells for the automatic control of lighting, suitable for use in internal and external applications.



Call **+44 (0)333 900 0671** or visit the website to request a brochure



For sales support please call **+44 (0)333 900 0671**

Ceiling Mounted PIR Ranges

	Order Code	Description
	GESM	Surface mounted PIR movement sensor
	GEFL	Flush mounted PIR movement sensor
	GEFL-PB	Flush mounted PIR movement sensor with push button control
	SPIR-F/C	Square PIR ceiling mounted movement sensor
	SPIR-F/C/IP	Square PIR ceiling mounted movement sensor plus suitable for damp environments (IP55)

Batten Mount PIR

	Order Code	Description
	GIMB	Batten mount PIR movement sensor with preset 10 min time delay – no lux level sensing

Vitesse Modular™ Lighting Connection Systems

	Order Code	Description
	VITM4-S	4 pole, 4 output starter box
	VITM4-E	4 pole, 4 output extender
	VITM-ROSE	Ceiling rose with connector plug
	VITM4-EBDSPIR-B	Basic PIR movement sensor. Supplied with 3m lead and plug
	VITMR-EBDSPIR-B	Basic PIR movement sensor. Supplied with 3m lead, plug and ceiling rose connection
	VITM4-SELVMOD	SELV switching module
	VITM4-SL1	Pre-wired starter module package
	VITM4-L3-B	3m single sensor lead for basic sensors
	VITM4-L5-B	5m single sensor lead for basic sensors
	VITM4-LD3-B	3m, 4 pole dual sensor lead for basic sensors
	VITM4L303100W	3m, 3 core luminaire lead (white), 1.0mm²
	VITM4L305100W	5m, 3 core luminaire lead (white), 1.0mm²
	VITM4L403100R	3m, 4 core luminaire lead (red), 1.0mm²
	VITM4L405100R	5m, 4 core luminaire lead (red), 1.0mm²
	VITM4-LPW	4 pole luminaire connector (white)
	VITM4-LPR	4 pole luminaire connector (red)

Wall Mounted PIR Switches and Dimmers

	Order Code	Description
	GI1DPC	Single dimmer with PIR movement sensor
	GI2DPC	Double dimmer with PIR movement sensor
	GI1DC	Single dimmer
	GI2DC	Double dimmer
	GIRC	Multi-function remote control
	GIFP-ST	Silver effect cover plate
	GIFP-BZ	Bronze effect cover plate
	GIPDC	No neutral PIR movement sensor switch
	PDS-PRM	Contemporary no neutral PIR movement sensor
	PDS-PRM/S	Contemporary no neutral PIR movement sensor with faceplate fixing screws
	PDS	No neutral PIR movement sensor
	PDS/OV	No neutral PIR movement sensors with override switch
	PDS-ABS/OV	No neutral PIR movement sensors with override switch and absence mode
	SPIR-PRM	Contemporary PIR movement sensor
	SPIR-F	PIR movement sensor
	SPIR-LSF	PIR movement sensor complete with light level sensor
	SPIR-FVF	PIR movement sensor with voltage free contact

Light Level Control

	Order Code	Description
	ALC15	Twilight switch

Emergency Test Switch

	Order Code	Description
	ELT10	Automatic emergency test switch

Time Lag Switches

	Order Code	Description
	GITLC	Time delay switch
	ELLIPSE	Push button time lag switch
	ELLIPSE-TN	Push button time lag switch complete with neon
	KH1	Push button time lag switch
	SLV1	Slave push button for KH1 & KH1N
	KH1N	Push button time lag switch complete with neon
	KH2	Touch activated time lag switch
	KH2N	Touch activated time lag switch complete with neon
	KH3	Weatherproof touch activated time lag switch
	KH3N	Weatherproof touch activated time lag switch complete with neon

Multi Range Timers

	Order Code	Description
	MRT-PRM	New style push button timer with temporary neon
	MRT16-PB	Push button timer
	MRT16-PB/TN	Push button timer with temporary neon
	SLV1	Push button slave actuator
	MRT16-PB/VF	Push button timer with voltage free contact
	MRT-REM-PRM	New style remote activated timer
	MRT16-REM	Remote activated timer
	MRT16-TA	Touch activated timer
	MRT16-TA/TN	Touch activated timer with temporary neon
	MRT16-TA/PN	Touch activated timer with permanent neon
	MRT16-WP	Touch activated timer with IP66 rating
	MRT16-WP/TN	Touch activated timer with IP66 rating with temporary neon
	RBT1	High output run back timer
	RBT2	Plate mounted adjustable boost timer

TERMS & CONDITIONS OF SALE

These Terms & Conditions of Sale shall apply to and form part of every contract of sale entered into by the Company. All orders are accepted and executed on the understanding that the Customer is bound by these Terms & Conditions of Sale which shall govern the contract to the exclusion of any other terms and conditions subject to which any such order is accepted or purported to be accepted, or any such order is made or purported to be made, by the Purchaser.

No contract of sale shall come into being unless and until the Customer has accepted these Terms & Conditions of Sale either expressly or by implication.

1. Definitions

Agreement	means any agreement which incorporates the Conditions.
Company	means CP Electronics division of Legrand Electric Limited.
Conditions	means the terms and conditions set out herein and includes any special terms and conditions agreed in writing between the Company and the Customer.
Customer	means any person, company, firm or organisation who enters into an Agreement.
Goods	means those items which are the subject of an Order.
Invoice	means the document sent to the Customer whether verbally or in writing by the Company in demand of payment for the Goods.
Order	means an order placed by a Customer and accepted by the Company.
Premises	means Brent Crescent, London NW10 7XR.
Specification	means any specification whether written or oral, drawings, designs or instructions furnished by the Customer to the Company.

2. Orders and Specifications

2.1. Each Order shall constitute a separate Agreement between the Company and the Customer.

2.2. The Customer shall be responsible for ensuring the accuracy of the terms of any Order or Specification.

2.3. The Company's employees or agents are not authorised to make any representations concerning the Goods unless confirmed in writing by the Company.

2.4. The quantity and description of the Goods shall be as set out either in the Order or in the case where a quotation is given by the Company in the quotation. No other descriptive material, written or oral including promotional or sales literature, shall be incorporated into the Order or quotation.

2.5. The Company reserves the right to make any changes to the Goods which are required to conform with any applicable statutory or E.U requirements.

2.6. Any typographical or other error in any document issued by the Company shall be subject to correction without any liability on the part of the Company.

3. Price and Payment

3.1. The price of the Goods shall be the Company's quoted price or where no price has been quoted (or the quoted price is no longer valid), the price listed in the Company's price list current at the date of the Order and in any case as shown on the Invoice.

3.2. All prices are quoted ex-warehouse and exclude charges for transport, packaging and insurance which shall be paid by the Customer.

3.3. The Company reserves the right by giving written notice to the Customer at any time before delivery to alter the price of the Goods where such alteration is due to any factor beyond the control of the Company (such as, without limitation, any foreign exchange fluctuation, alteration of duties), any changes in delivery dates or quantities requested by the Customer or any delay caused by any instructions of the Customer.

3.4. All prices and charges are exclusive of VAT and any other applicable taxes,rates, governmental levies or duty.

3.5. All prices and charges shall be due within 30 days of the date of the Invoice. Time shall be of the essence in respect of payment of all prices and charges.

3.6. If the Customer fails to make any payment on the due date then, without limiting any other right or remedy available to the Company, the Company may:

3.6.1. cancel the Order or suspend any further deliveries to the Customer;

3.6.2. appropriate any payment made by the Customer to such of the Goods as the Company may deem fit (notwithstanding any purported appropriation by the Customer); and

3.6.3. charge interest on sums more than 7 days overdue on a daily basis (as well as before and after judgement) at a rate of 5% per annum compounded quarterly and payable on demand.

4. Delivery and Acceptance

4.1. Delivery shall be made either by the Customer collecting the Goods at the Premises at any time after the Company has notified the Customer that the Goods are ready for collection or by the Company delivering the Goods to the delivery address set out in the delivery note.

4.2. Any dates quoted for delivery are approximate only and the Company shall not be liable for any delay howsoever caused. The Company may by written notice given to the Customer reschedule its delivery dates without liability.

4.3. If the Customer fails to take delivery or fails to give the Company adequate delivery instructions, without prejudice to any other right or remedy available to it, the Company may store the Goods until actual delivery and charge the Customer for any reasonable costs (including insurance) of storage in such circumstances delivery is deemed to have taken place in the case of Goods delivered at the Premises on the date upon which the Company notified the Customer that the Goods were ready for collection and in the case of Goods delivered otherwise than at the Premises on the date upon which delivery was tendered by the Company.

4.4. Any claim by the Customer for short delivery must be notified to the Company in writing within seven days of delivery.

4.5. Failure by the Company to deliver one or more instalment of an Order in accordance with the Conditions shall not entitle the Customer to treat the Agreement as a whole as repudiated.

4.6. If the Company fails to deliver the Goods for any reason other than any cause beyond the Company's reasonable control or the Customers fault, the Company's liability shall be limited to the excess (if any) of the cost to the Customer (in the cheapest available market) of similar Goods.

4.7. The Customer shall be deemed to have accepted the Goods upon delivery.

5. Returns

5.1. Goods may not be returned unless a Returned Material Authorisation 'RMA" number has been issued by the company.
Goods accepted for return are subject to a handling charge of 50% of the price of the Goods (exclusive of VAT), such charge to be paid on demand.

5.2. All costs of returning the Goods to the Company shall be borne by the Customer. Goods are returned at the risk of the Customer and any repairs undertaken by the Company in respect of damage caused in transit during their return will be charged to the Customer. All returned Goods must be accompanied by the original packing note together with details of the reason for return.

5.3. Any Goods in which title has passed to the Customer and which are returned to the Company shall become the property of the Company.

5.4. 'Luminaire' and patch cords are not returnable under any circumstances.

5.5. All goods returned must be the current version of the product and must be in good saleable condition. Old versions of the product will be returned to the customer.

5.6. Any non-standard labelled or packaged product cannot be returned.

6. Title and Risk

6.1. Title shall pass to the Customer on payment in full of the price of the Goods and of any other sums due and payable by the Customer at any time.

6.2. The Company shall be entitled to recover the price and any other sums due notwithstanding that title in the Goods has not passed to the Customer.

6.3. The Customer shall hold the Goods as the Company's fiduciary agent and bailee, and shall keep the Goods separate from those of the Customer and third parties and properly stored, protected and insured and identified as the Company's property until such time as title passes to the Customer and shall deliver up the Goods to the Company upon demand.

6.4. The Customer grants to the Company a full irrevocable licence to enter upon any premises in which the Goods are stored or installed (or are reasonably believed by the Company to be), to detach the Goods from any equipment to which they may be attached, and to repossess, sell or deal with any of the Goods in which title remains vested in the Company and the Customer will indemnify the Company in respect of any loss or damage or deterioration to the Goods resulting from any such action.

6.5. The Customer shall not pledge or in any way charge any of the Goods which remain the property of the Company, but if the Customer does so all money owing by the Customer to the Company shall (without prejudice to any other rights or remedy of the Company) forthwith become due and payable.

6.6. The Company may at any time by written notice to the Customer revoke the Customer's right to re-sell the Goods where title thereto has not passed to the Customer. Upon such revocation all such amounts payable in respect of the Goods which have been re-sold shall immediately become due notwithstanding that any period of credit permitted may not have expired.

6.7. In the event that the Customer has sold or otherwise parted with possession of any part of the Goods before payment has been received in full by the Company, the Customer shall hold the proceeds of such sale (or in the case of payment not having been made the debt owed to the Customer by the sub-purchaser) up to the amount or value of the Customer's indebtedness as agent and trustee for the Company and shall account to the Company on demand.

6.8. Risk of damage or loss shall pass to the Customer, in the case of Goods delivered at the Premises at the time when the Company notifies the Customer that the Goods are available for collection or, in the case of Goods to be delivered otherwise than at the Premises at the time of delivery.

7. Warranty

7.1. Subject to clause 7.2 the Company warrants that the Goods will correspond with their Specification (if any) at the time of delivery and will be free from defects in material and workmanship for a period of five years from the date of delivery.

7.2. The Company shall have no liability for defects in the Goods arising or resulting from:-

7.2.1. parts, materials, or equipment not manufactured by the Company in respect of which the Customer shall only be entitled to the benefit of any such warranty or guarantee as is given by the manufacturer to the Company;

7.2.2. fair wear and tear, improper or inadequate installation, use or maintenance, accidental or wilful damage, negligence, abnormal working conditions, failure to follow the Company's instructions (whether oral or in writing), misuse or modification or alteration or repair of the Goods by unauthorised third parties or the Customer; and

7.2.3. any incorrect Specification.

7.3. Notwithstanding clause 7.1 the Company shall be under no liability for any warranty, condition or guarantee if the price has not been paid by the due date for payment.

7.4. Except where the Goods are sold to a person dealing as a consumer (within the meaning of the Unfair Contract Terms Act 1977), the warranty contained in 7.1 is given in place of all warranties, conditions, terms, undertakings and obligations express or implied by statute, common law, custom, usage, trade course of dealing or otherwise (including but not limited to fitness for a particular purpose), all of which are excluded to the fullest extent permitted by law.

7.5. The Company shall within the warranty period repair or at its option replace any defective Goods where such defects appear under proper use provided that the Company receives written notice from the Customer of any alleged defects and the Goods are returned by the Customer to the Premises before the expiry of the warranty period.

7.6. Repaired or replaced Goods shall be redelivered by the Company free of charge to the original point of delivery. Repaired or replaced Goods are subject to these Conditions except that in the case of repaired goods, the five year period referred to in Clause 7.1 shall be replaced by the unexpired period of the warranty.

7.7. The Company shall at its sole discretion be entitled to supply an advance replacement of the defective Goods. For the avoidance of doubt it is confirmed that the Company has no obligation to supply an advance replacement of the defective Goods. In the event that an advance replacement is supplied and the Goods are not defective the Customer shall be liable to pay the price of both the advance replacement and the Goods.

8. Intellectual Property Rights

8.1. Subject to clause 8.2 in the event that any claim is made against the Customer for infringement of intellectual property rights arising directly from the use or sale by the Customer of the Goods, the Company at its own expense shall conduct any ensuing litigation and all negotiations for settlement of the claim. The Company will bear the cost of any payment made in settlement of or as a result of an award in a judgement against the Customer.

8.2. The Customer shall give to the Company at the earliest possible opportunity notice in writing of any claim being made or action threatened or bought against it, shall make no admission of liability or take any other action in connection therewith, shall permit the Company to have conduct of the claim pursuant to clause 8.1 and shall (at the Company's expense) give all reasonable information, co-operation and assistance to the Company (including without limitation lending its name to proceedings) in relation to the conduct of the claim. If it is made a condition of any settlement made by the Company of any judgement awarded against the Customer pursuant to clause 8.1, the Customer shall return or destroy as applicable all infringing Goods still under its control subject to a refund by the Company of any payment for such Goods already made less a reasonable allowance of a depreciation of the Goods by reason of their use (if any) by the Customer prior to their return or destruction aforesaid.

8.3. The provisions of clause 8.1 shall not apply to any infringement caused by the Company having followed a Specification nor to any use of the Goods in a manner or for a purpose which shall have been specifically prohibited in writing by the Company nor to any infringement which is due to the use of the Goods in association or combination with any other product.

8.4. If the Goods are to be manufactured or any process is to be applied to the Goods by the Company in accordance with a Specification the Customer shall indemnify the Company against all loss, damages, costs and expenses awarded against or incurred by the Company in connection with, or paid or agreed to be paid by the Company in settlement of any claim for infringement of any intellectual property rights whatsoever which results from the Company's use of the Specification.

8.5. With respect to the goods, the Customer agrees and acknowledges:

8.5.1. that all copyright and other intellectual property rights (including but without limitation, patent, copyright trademark, registered design or other industrial property right) in and relating to the products supplied by the Company is the property of the Company (or its supplier as applicable) and the Customer agrees that it will not carry out or authorise or procure the carrying out of any act that might infringe such copyright or other intellectual property (including reproducing or authorising or procuring the reproduction of howsoever any item supplied by the Company under or by virtue of any order or contract); and

8.5.2. that it is authorised to use and install the goods owned by it only for the purpose defined in the order or contract and for no other purpose whatsoever; and

8.5.3. it will take all reasonable precautions to ensure that no unauthorised person may take or copy from the products any intellectual property rights or technical specifications or copy thereof and that all persons who have access to the products are made aware of the provision of this paragraph.

9. Liability

9.1. Except in respect of death or personal injury caused by the Company's negligence, the Company shall not be liable to the Customer by reason of any representation (unless fraudulent), or any implied warranty, condition or other term, or duty at common law, or under the express terms of the Agreement, or for any economic loss, loss of profit or loss of revenue, loss of business or otherwise whether arising from negligence, breach of contract or otherwise, costs, expenses or other claims for compensation whatsoever which arise out of or in connection with the supply of the Goods or their use or resale by the Customer, and the entire liability of the Company hereunder shall not exceed the price of the Goods except as otherwise expressly provided.

9.2. The Company shall not be liable for any loss, damage or reduction in performance of the Goods which in the reasonable opinion of the Company is attributable to any equipment, products or services not supplied by the Company.

10. Force Majeure

Neither party shall be deemed to be in breach of these Conditions or otherwise liable to the other for any delay in performance or any non-performance of any obligations hereunder (and the time for performance shall be extended accordingly) if and to the extent that the delay or non-performance is due to an event or circumstance beyond the reasonable control of that party.

11. Notice

Any notice required to be given or served hereunder shall be given or served by sending the same by first class prepaid letter, telex or facsimile transmission addressed to the parties at their respective addresses set forth on the delivery note or such other address as may be notified from time to time by either party to the other. Any notice so sent shall be deemed to have been given on the second day after posting if it is sent by first class post, on the date of transmission in the case of a facsimile or telex, or on the date of delivery if it is delivered by hand.

12. Assignment

The Agreement is personal to the Customer and may not be assigned or otherwise transferred without the written consent of the Company.

13. Waiver

No forbearance, delay or indulgence by the Company in enforcing the provisions herein shall prejudice or restrict its rights nor shall any waiver of its rights operate as a waiver of any subsequent breach and no right or remedy herein conferred upon or reserved for the Company is exclusive of any other right, power or remedy available to it and each such right, power or remedy shall be cumulative.

14. Compliance

Both parties shall:

14.1. comply with all applicable laws, statutes and regulations on anti- corruption, anti-bribery, compliance with embargoes, and on economic, financial and trade sanctions;

14.2. adhere to the Legrand sustainable development and business ethics requirements as set out in the Charter of Fundamental Principles, the guide to Good Business Practices and the Charter for Fair Competition available at www.legrand.co.uk

15. Confidentiality

Both the Company and the Customer shall keep confidential and shall not disclose without the prior written consent of the other any technical and commercial information acquired as a result of any communications between them relating to the Contract or the Goods.

16. Communications

16.1. All communications between the parties in respect of the Contract must be in writing and delivered by hand or sent by pre-paid first class post or sent by facsimile transmission (with a hard copy by post).

16.2. In case of communications to the Company to its registered office unless otherwise notified to the Customer by the Company; and in the case of communications to the Customer to its registered office (if a Company) or to its address as set out in the Contract unless otherwise notified to the Company by the Customer.

16.3. Communications shall be deemed to have been received if sent by pre- paid first class post, two working days (i.e. excluding Saturdays, Sundays and bank and other UK public holidays) after posting; if delivered by hand, on the day of delivery; or if sent by facsimile transmission on a working day prior to 4.00 p.m., at the time of transmission and otherwise on the next working day.

17. Entire Agreement

17.1. These Conditions constitute the entire and only agreement between the parties and supersede any and all prior proposals, agreements negotiations and discussions between the parties.

17.2. The Customer acknowledges that in entering into the Agreement it does not do so on the basis of and does not rely on any representation, warranty or other provision except as expressly herein provided and all conditions, warranties or other terms implied by statute or common law are hereby excluded to the fullest extent permitted by law.

18. Partial Invalidity

If any provision herein proves to be legally invalid this shall not affect the validity of the remaining provisions hereof which shall continue in full force and effect.

19. Variation

These Conditions may not be varied or amended unless such variations or amendments are agreed in writing by both parties.

20. General

20.1. Any reference to any statute or statutory provision includes a reference to that statute or statutory provision as from time to time amended, extended or re-enacted.

20.2. Any reference to a party includes a reference to its successors in title and permitted assigns.

21. Law

These Conditions shall be governed by the laws of England and the parties hereby irrevocably agree to submit to the exclusive jurisdiction of the English Courts.

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