

## Vitesse Modular™

Reinventing lighting connection systems



# Welcome to CP Electronics

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

## 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).





**The Vitesse Modular™ System 4–7**

An overview of the features and benefits Vitesse Modular brings you

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Quick list of key components

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Four pole connections for standard non-dimming luminaires

**2-Channel Switching Products 14–16**

2-channel is for use in applications that require two independently switched circuits.

**Dimming Products 17–19**

Six pole connections for luminaires fitted with a dimming ballast.

**Technology Guide**

Learn more about the innovative energy-saving features of our product ranges.

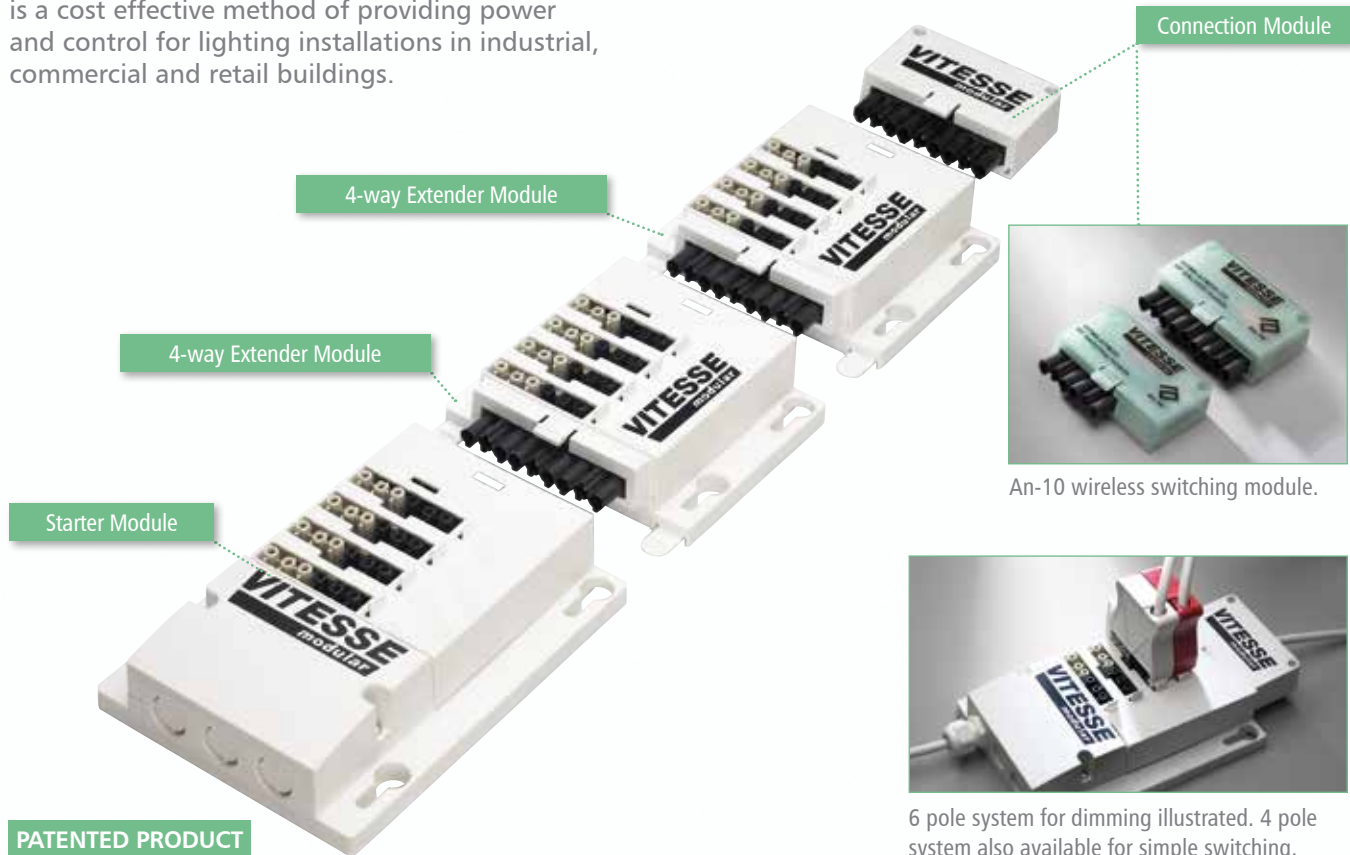
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## The Vitesse Modular™ System

**VITESSE**  
modular

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

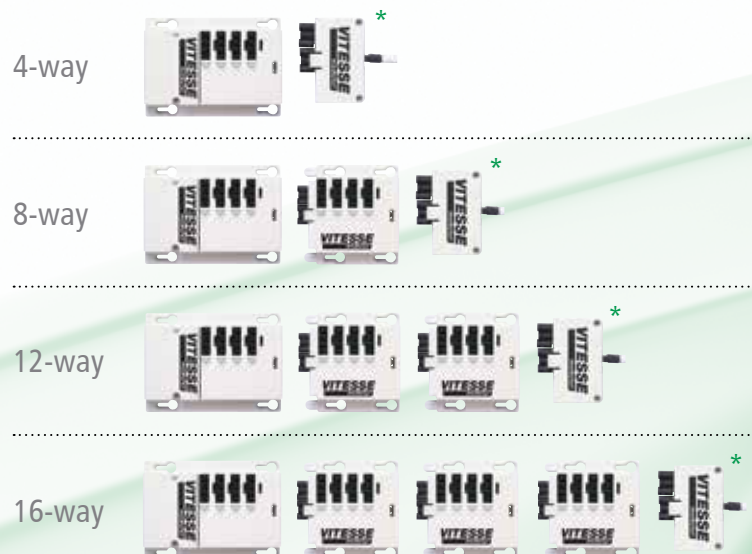
Packed with innovative features, Vitesse Modular is a cost effective method of providing power and control for lighting installations in industrial, commercial and retail buildings.



## 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.

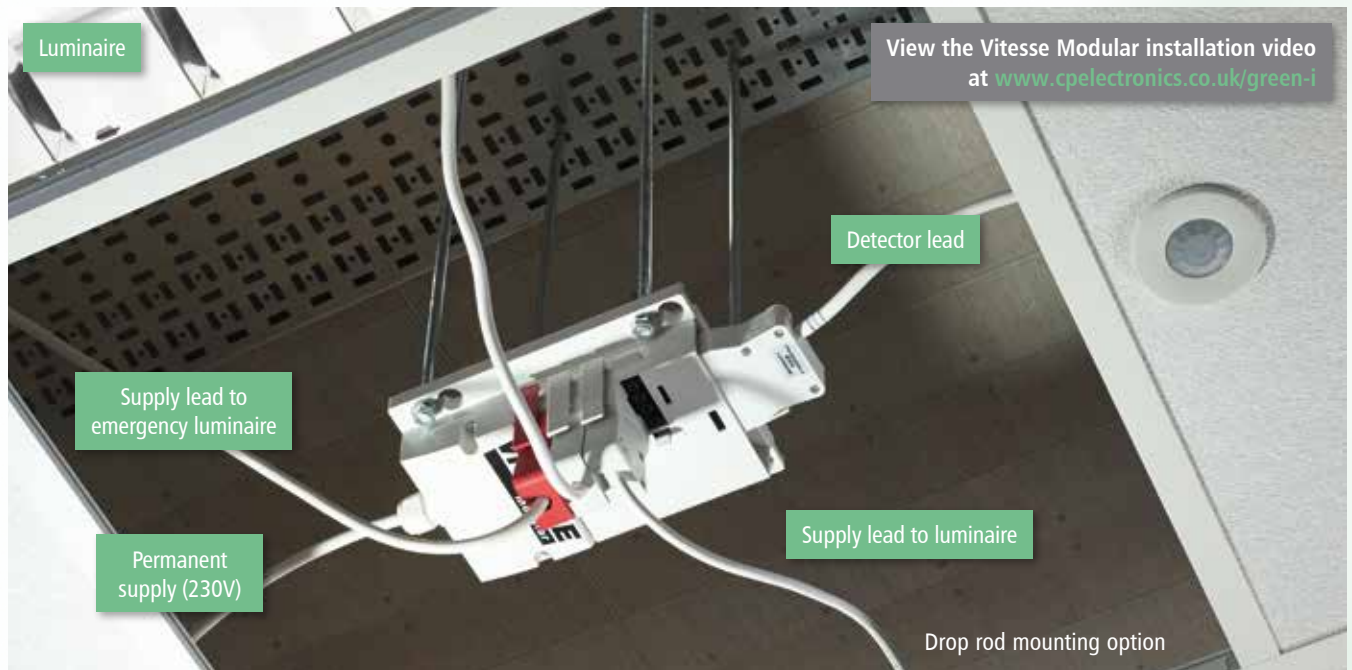
Once Vitesse Modular is installed, modules can be added (or removed) depending on future requirements. Also, as there are so few parts, you don't have to waste space in a warehouse or vehicle with a huge variety of different parts just in case you might need them.





## 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



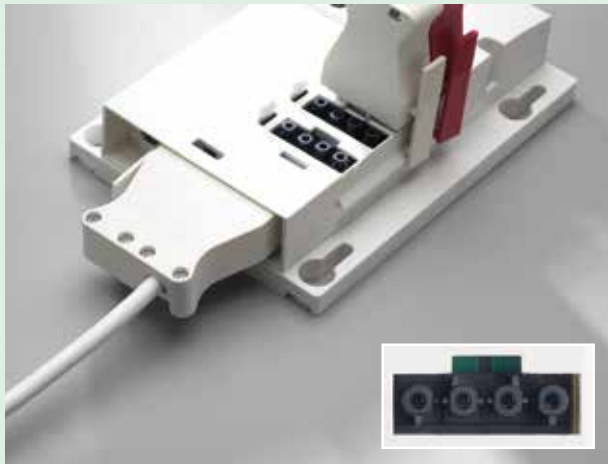
Can be mounted using Marco clips.

**marco**  
cablemanagement

## 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 9.

### 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 & 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



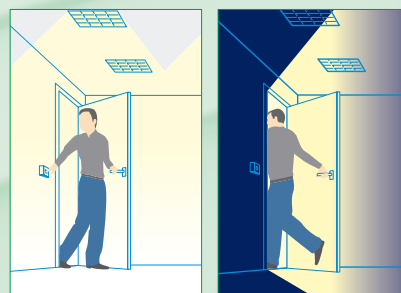
Separate pluggable connections for detectors and control devices so valuable channel outputs are not wasted.

### 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.

**i** see page 21 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.

### 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.

Visit our website for more details on An-10.

## 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 connections.  
Large terminals accept 4mm<sup>2</sup> 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



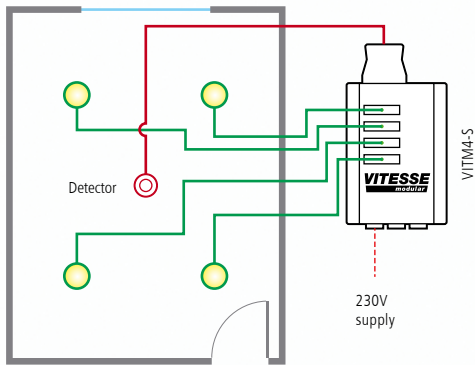
Series 166 format connectors – no need for proprietary connectors.

Connectors can be configured as rear or side entry.

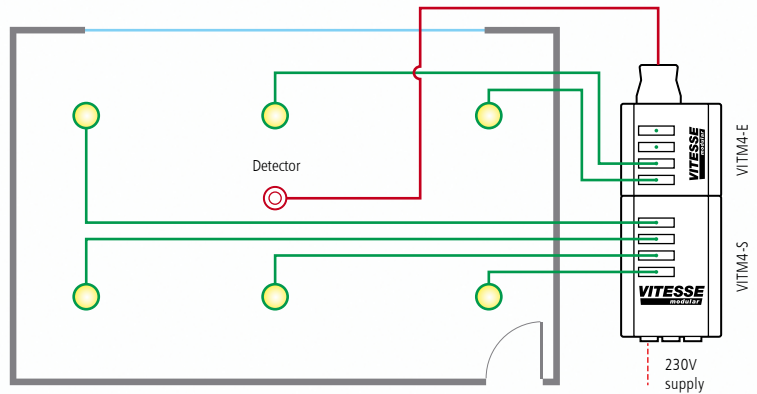
Easy to connect pluggable luminaires.

## Typical wiring layouts for switching and dimming detectors

### Switching

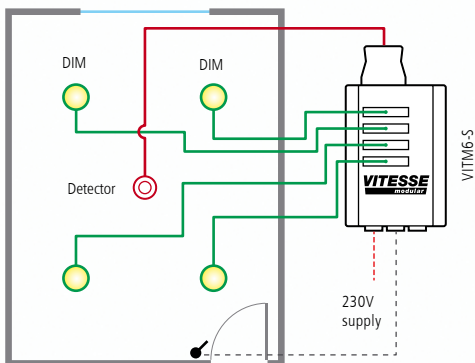


**Four luminaire room**  
Presence non-dimming room with detector.

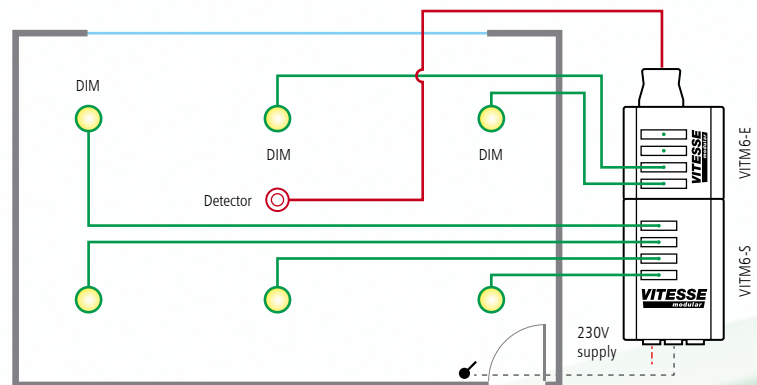


**Six luminaire room**  
Presence non-dimming room with detector.

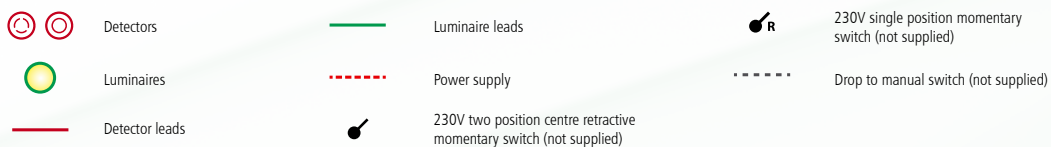
### Dimming



**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.



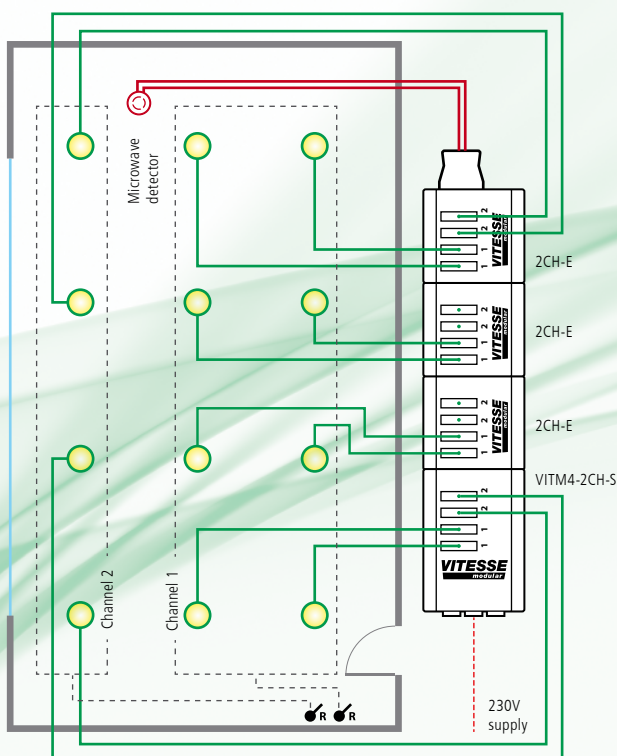
## 2-channel switching

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 page 14 for 2-channel products.



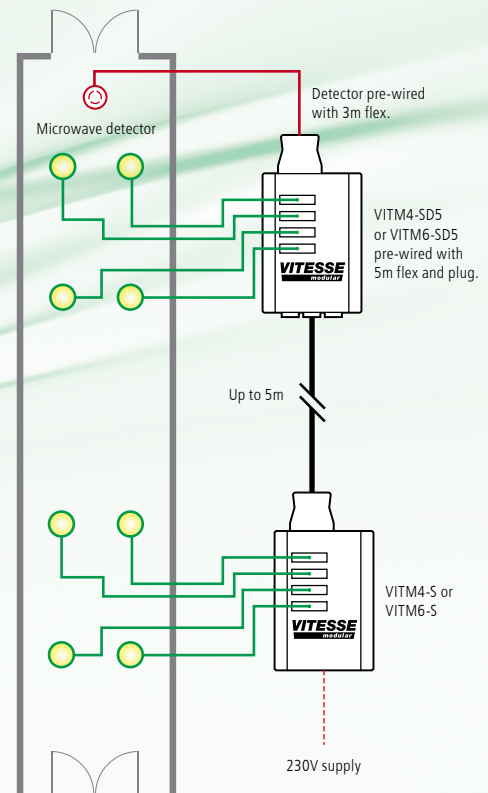
## Dedicated corridor solution



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 page 11 and 17 for corridor solution products.


















PLEASE NOTE: VITM 4 and 6 are not intercompatible




## Product overview

Switching Products			
	Code	Description	Pg
	<b>VITM4-S</b>	Starter module with 4 pole, 4 outputs	11
	<b>VITM4-E</b>	Extender module with 4 pole, 4 outputs	11
	<b>VITM4-SL1</b>	Pre-wired package	11
	<b>VITM4-SD5</b>	Pre-wired corridor module.	11
	<b>VITM4-EBDSPIR-PRM</b>	Compact PIR presence/absence detector	12
	<b>VITM4-EBMHS-PRM</b>	Miniature PIR presence detector	12
	<b>VITM4-MWS6-PRM</b>	Low profile microwave presence/absence detector	12
	<b>VITM4-MWS3A-PRM</b>	Adjustable head microwave presence/absence detector	12
	<b>VITM-MCFUSC</b>	VITM Marco basket fixing clip	13
	<b>VITM4-SELVMOD</b>	SELV switching module	13
	<b>VITM-ROSE</b>	Ceiling rose	13
		Luminaire Leads & Connectors	13

2-Channel Switching Products			
	Code	Description	Pg
	<b>VITM4-S-2CH</b>	Starter module with 4 pole, 4 outputs	14
	<b>VITM4-E-2CH</b>	Extender module with 4 pole, 4 outputs	14
	<b>VITM4-S-2CH-2S</b>	Starter module with 4 pole, 4 outputs. 2-channel, 2-supplies	14
	<b>VITM4-E-2CH-2S</b>	Extender module with 4 pole, 4 outputs. 2-channel, 2-supplies	14
	<b>EBDSPIR-PRM-2CH</b>	Compact PIR presence/absence detector	15
	<b>MWS6-PRM-2CH</b>	Low profile microwave presence/absence detector	15
	<b>MWS3A-PRM-2CH</b>	Adjustable head microwave presence/absence detector	15

		2-channel detector leads	15
		Luminaire Leads & Connectors	16
	<b>VITM-MCFUSC</b>	VITM Marco basket fixing clip	16

Dimming Products			
	Code	Description	Pg
	<b>VITM6-S</b>	Starter dimming module with 6 pole, 4 outputs	17
	<b>VITM6-E</b>	Extender dimming module with 6 pole, 4 outputs	17
	<b>VITM6-SL1</b>	Pre-wired dimming package	17
	<b>VITM6-SD5</b>	Pre-wired corridor module, 5 metres of cable	17
	<b>VITM6-EBDSPIR-DD</b>	Compact PIR presence/absence detector	18
	<b>VITM6-EBMHS-DD</b>	Miniature PIR presence detector	18
	<b>VITM6-MWS6-PRM</b>	Low profile microwave presence/absence detector	18
	<b>VITM6-MWS3A-PRM</b>	Adjustable head microwave presence/absence detector	18
	<b>VITM6-SELVMOD</b>	SELV switching and dimming module	19
	<b>VITM-ROSE</b>	Ceiling rose	19
		Luminaire Leads & Connectors	19
	<b>VITM-MCFUSC</b>	VITM Marco basket fixing clip	19

Programming Handsets			
	Code	Description	Pg
	<b>UNLCDHS</b>	Professional commissioning handset	12, 16, 18
	<b>UHS5</b>	Commissioning handset	12, 16, 18
	<b>UHS7</b>	User handset	12, 16, 18



## Vitesse Modular switching modules, detectors & accessories

Vitesse Modular provides easy installation options for all locations.

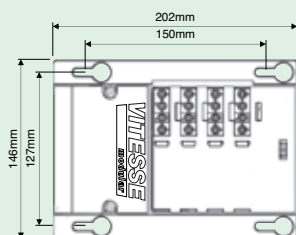
### VITM4-S



Starter Module

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

#### Dimensions



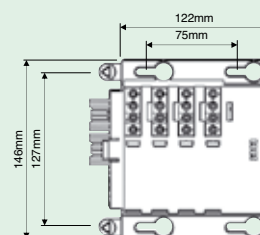
### VITM4-E



Extender Module

Order Code	Description
<b>VITM4-E</b>	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
<b>VITM4-SL1</b>	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
<b>VITM4-SD5</b>	Pre-wired corridor module. 5 metres of cable

**EBDSPIR**



Supplied with 3m lead and plug.

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

**EBMHS**




Supplied with 3m lead and plug (from PSU).

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

(Note: this detector does not support absence detection)

**MWS6**



Supplied with 3m lead and plug.

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

**MWS3A**






Supplied with 3m lead and plug.

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

### 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
	<b>UNLCDHS</b>	Professional commissioning handset
	<b>UHS5</b>	Commissioning handset
	<b>UHS7</b>	User handset

**Marco Basket Fixing Clip**



**marco**  
cablemanagement

Order Code	Description
<b>VITM-MCFUSC</b>	VITM Marco basket fixing clip



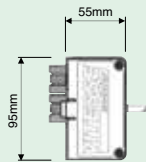
**VITM4-SELVMOD**

Refer to  
An-10 brochure  
for options



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

Order Code	Description
<b>VITM4-SELVMOD</b>	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

Order Code	Description
<b>VITM4L303100W</b>	3 core luminaire lead (white), 1.0mm <sup>2</sup> , (3 metres)
<b>VITM4L305100W</b>	3 core luminaire lead (white), 1.0mm <sup>2</sup> , (5 metres)
<b>VITM4L403100R</b>	4 core luminaire lead (red), 1.0mm <sup>2</sup> , (3 metres)
<b>VITM4L405100R</b>	4 core luminaire lead (red), 1.0mm <sup>2</sup> , (5 metres)
<b>VITM4-LPW</b>	4 pole luminaire connector (white)
<b>VITM4-LPR</b>	4 pole luminaire connector (red)

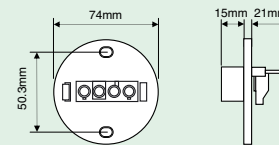
Other cable lengths are available upon request

**i Order Code Guidelines for Cables**

Prefix	Poles	Lead	Core	Length in Metres	Cable Area	Type	Plug Colour
<b>VITM</b>	4	L	3/4	03 or 05 (other lengths to order)	1.0mm <sup>2</sup> (1.5mm <sup>2</sup> to order)	0 = Isf	W (White) or R (Red) B (Black) to order

**Ceiling Rose**

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

**Dimensions****Dual Detector Leads**

Order Code	Description
<b>VITM4-LD3-PRM*</b>	Dual detector lead for two PRM detectors (3 metre)

\*Only for single channel detectors

## 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 9.

VITM4-S-2CH



Starter Module

Order Code	Description
<b>VITM4-S-2CH</b>	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
<b>VITM4-E-2CH</b>	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 9.

VITM4-S-2CH-2S



Starter Module

Order Code	Description
<b>VITM4-S-2CH-2S</b>	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
<b>VITM4-E-2CH-2S</b>	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
<b>EBDSPIR-PRM-2CH</b>	Compact ceiling mounted PIR presence/absence detector with lux level sensing, time delay function and infrared override. 2-channel
<b>EBDSPIR-PRM-2CH-NC</b>	Compact ceiling mounted PIR presence/absence detector with lux level sensing, time delay function and infrared override. Normally closed fail safe contacts. 2-channel

**MWS6**N.B Please order  
leads separately

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

**MWS3A**N.B Please order  
leads separately

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

**Detector Leads**

Order Code	Description
<b>VITM4-L3-2CH</b>	2-channel detector lead for single detector (3 metre)
<b>VITM4-LD3-2CH</b>	2-channel dual detector lead for two detectors (3 metre)
<b>VITM4-L3-2CH-2S</b>	2-channel, 2-supplies detector lead for single detector (3 metre)
<b>VITM4-LD3-2CH-2S</b>	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
<b>VITM</b>	4	L	3/4	03 or 05 (other lengths to order)	1.0mm <sup>2</sup> (1.5mm <sup>2</sup> to order)	0 = Isf	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



Connectors can be configured as rear or side entry

Order Code	Description
VITM4L303100W	3 core luminaire lead (white), 1.0mm <sup>2</sup> , (3 metres)
VITM4L305100W	3 core luminaire lead (white), 1.0mm <sup>2</sup> , (5 metres)
VITM4L403100R	4 core luminaire lead (red), 1.0mm <sup>2</sup> , (3 metres)
VITM4L405100R	4 core luminaire lead (red), 1.0mm <sup>2</sup> , (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 & accessories

Our VITM6 range is designed for use with dimming luminaires.

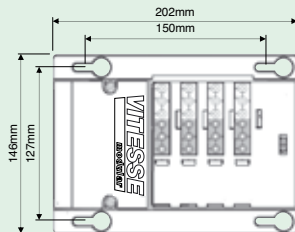
### VITM6-S



Starter Dimming Module

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

#### Dimensions



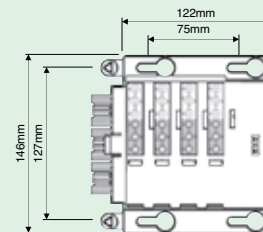
### VITM6-E



Extender Dimming Module

Order Code	Description
<b>VITM6-E</b>	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
<b>VITM6-SL1</b>	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
<b>VITM6-SD5</b>	Pre-wired corridor module. 5 metres of cable

**EBDSPIR**




Supplied with 3m lead and plug.

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



**EBMHS**




Supplied with 3m lead and plug (from PSU).

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

(Note: this detector does not support Absence detection)



**MWS6**



Supplied with 3m lead and plug.

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



**MWS3A**






Supplied with 3m lead and plug.

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



**i** Analogue dimming (AD) detectors available on request

	Order Code	Description
	<b>UNLCDHS</b>	Professional commissioning handset
	<b>UHS5</b>	Commissioning handset
	<b>UHS7</b>	User handset



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



## VITM6-SELVMOD

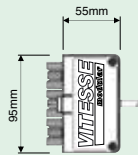
Refer to  
An-10 brochure  
for options



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

Order Code	Description
<b>VITM6-SELVMOD</b>	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



Connectors can  
be configured as  
rear or side entry

Order Code	Description
<b>VITM6L303100W</b>	3 core luminaire lead (white), 1.0mm <sup>2</sup> (3 metres)
<b>VITM6L305100W</b>	3 core luminaire lead (white), 1.0mm <sup>2</sup> (5 metres)
<b>VITM6L403100R</b>	4 core luminaire lead (red), 1.0mm <sup>2</sup> (5 metres)
<b>VITM6L405100R</b>	4 core luminaire lead (red), 1.0mm <sup>2</sup> (3 metres)
<b>VITM6L503100W</b>	5 core luminaire lead (white), 1.0mm <sup>2</sup> (3 metres)
<b>VITM6L505100W</b>	5 core luminaire lead (white), 1.0mm <sup>2</sup> (5 metres)
<b>VITM6L603100R</b>	6 core luminaire lead (red), 1.0mm <sup>2</sup> (3 metres)
<b>VITM6L605100R</b>	6 core luminaire lead (red), 1.0mm <sup>2</sup> (5 metres)
<b>VITM6-LPW</b>	6 pole luminaire connector (white)
<b>VITM6-LPR</b>	6 pole luminaire connector (red)

Other cable lengths are available upon request

### Order Code Guidelines for Cables

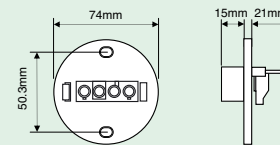
Prefix	Poles	Lead	Core	Length in Metres	Cable Area	Type	Plug Colour
<b>VITM</b>	6	L	3/4/5/6	03 or 05 (other lengths to order)	1.0mm <sup>2</sup> (1.5mm <sup>2</sup> to order)	0 = Isf	W (White) or R (Red) B (Black) to order

## Ceiling Rose



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

### Dimensions



## Marco Basket Fixing Clip

**marco**  
cablemanagement



Order Code	Description
<b>VITM-MCFUSC</b>	VITM Marco basket fixing clip

# Technology Guide

**Our Vitesse Modular Lighting Connection System works with our cutting edge products.**

Find out more about the technology behind our signature detector ranges through this comprehensive guide.

You can also download free BREEAM-compliant lighting specifications from [www.cpelectronics.co.uk/apps](http://www.cpelectronics.co.uk/apps)

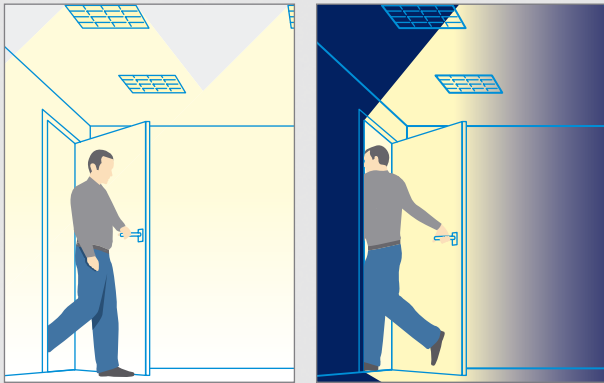
Presence and absence detection explained .....	21
PIRs and microwave detectors compared.....	21
Switching detectors with lux level sensing .....	22
Direct dimming detectors with lux level sensing .....	22-23



## Presence and absence detection explained

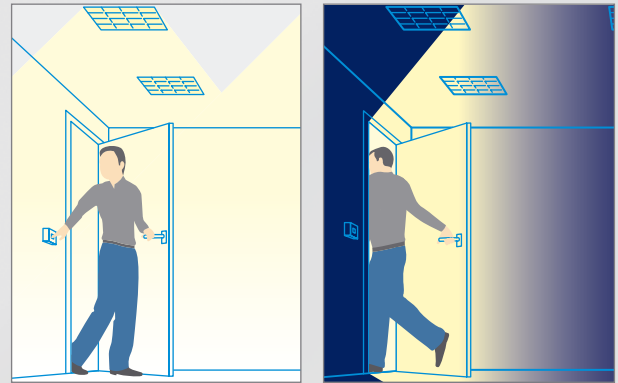
The choice between presence and absence detection for different spaces can make a big difference in user-friendliness and the amount of energy saved.

### 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

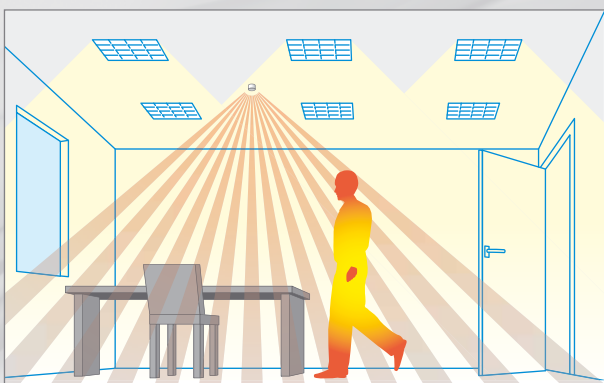
### PIR detectors

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

### Microwave detectors

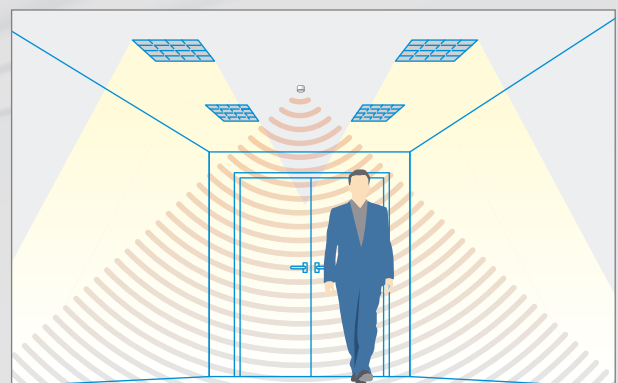
Microwave presence detectors are sensitive to movement and are ideal for large spaces and areas that have an awkward shape or where fine motion detection is required.

### 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 Detection

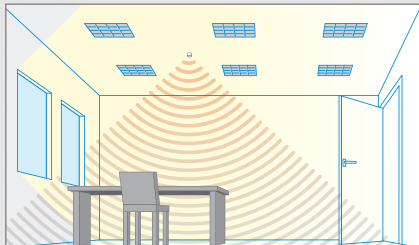


Microwave Detectors are sensitive to objects that move, with much greater coverage and sensitivity. They can detect through glass, therefore careful consideration on location is needed in certain applications.

## 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.

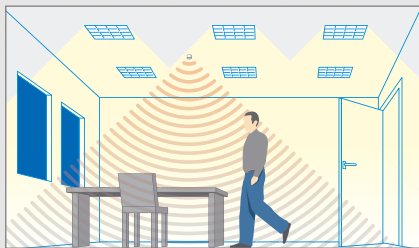
### Lux level sensing with absence or presence detection



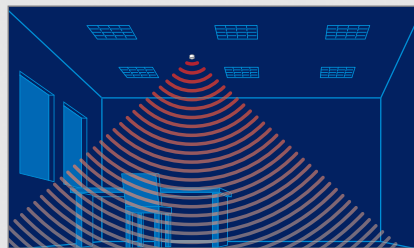
No presence detected, daylight, lights off.



Presence detected, sufficient daylight, lights off.



Presence detected, insufficient daylight, all lights on.



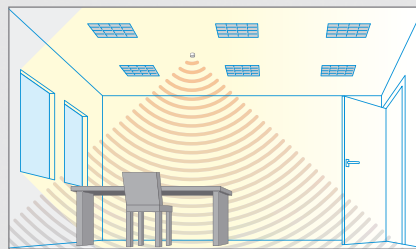
No presence detected, lights off.

## Direct Dimming detectors with lux level sensing

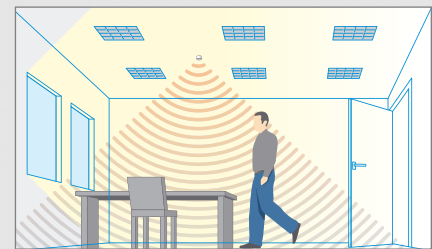
In addition to lux level sensing, dimming detectors are able to provide automatic control of lighting output.

### Maintained illuminance with absence or presence detection

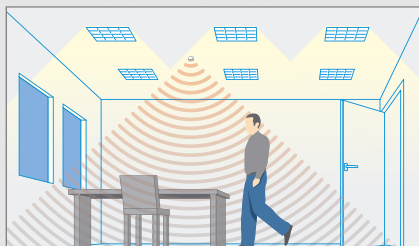
A dimming detector can be used to control the light output of luminaires that are fitted with dimming ballasts.



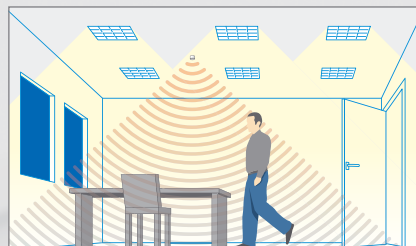
No presence detected, daylight, lights off.



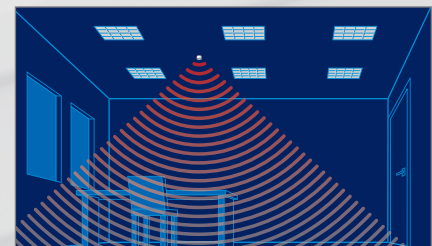
Presence detected, sufficient daylight, lights off.



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



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

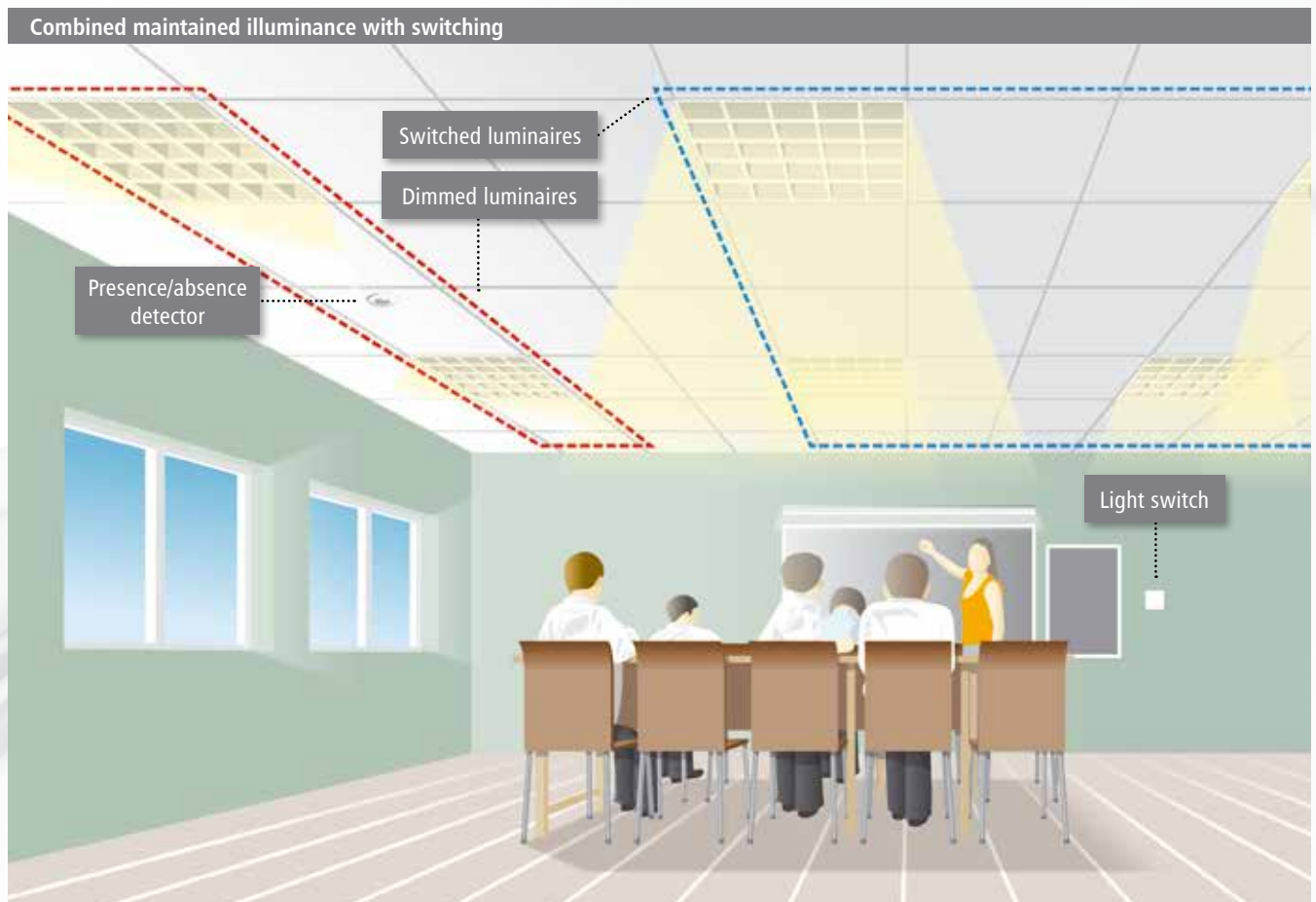


No presence detected, lights off.



**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 momentary 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 detector.
- 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.



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 family of energy saving controls and services:



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

[www.cpelectronics.co.uk](http://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 or ventilation.

[www.green-i.co.uk](http://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](http://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](http://www.cpelectronics.co.uk/training)

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

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

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