

# LIGHT

## WHERE YOU NEED IT, WHEN YOU NEED IT

with a lighting system for areas with limited occupancy, resulting in low running costs.

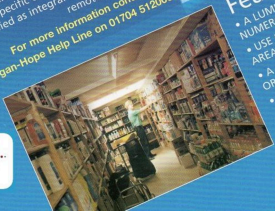
## Movement Controlled Dimmable Lighting

MORGAN-HOPE manufactures and supplies a wide range of luminaires and lighting control systems. The luminaires include all types of office lighting, general commercial lighting, industrial fittings, decorative luminaires, downlighters, uplighters and security lighting. All the luminaires can be adapted to function with the wide range of Lighting Controls produced by Morgan-Hope. The Control Systems range from standard movement controls to other sophisticated controls that switch and control lighting based on movement and ambient light levels, with the ability to communicate to other controlled luminaires within designated zones. Dependent on the specific control type, such systems can be supplied as integral to the luminaire or remote, as required.

For more information contact the  
Morgan-Hope Help Line on 01704 512000

### Features

- A LUMINAIRE AND CONTROL SYSTEM FOR NUMEROUS APPLICATIONS
- USE IN STOCK ROOMS, CORRIDORS, TOILETS, BACK AREAS, WAREHOUSES AND ALL AREAS USED INFREQUENTLY
- A CHOICE OF CONTROL EITHER INTEGRAL TO THE LUMINAIRE OR AS A STAND ALONE REMOTE UNIT
- TWO STAGE DIMMING
- RUNS AT 10% OF TOTAL WATTAGE WHEN AREAS ARE UNOCCUPIED
- UP TO 85% SAVING ON POWER CONSUMED
- CONTINUOUS LOW LEVEL BACKGROUND LIGHT FOR HEALTH AND SAFETY
- DESIGNED FOR SIMPLICITY OF INSTALLATION



# Movement Controlled Dimmable Lighting

**WITH THE EMPHASIS ON ENERGY EFFICIENT LIGHTING** and the success of the MCDB Movement Controlled Dimmable Batten, Morgan-Hope Industries Limited has expanded on the technology to enable the MCD Control to be incorporated into a wider field of use. The principle of the Movement Controlled Dimmable Lighting is to provide a lighting system for areas with limited occupancy, resulting in low running costs. Whilst energy efficiency is a major criteria, the design technology also ensures that health and safety issues are satisfied by maintaining a low level of continuous light output, when occupancy is not detected.

The Control System functions on pre-set parameters, based on 100% output during occupancy, approximately 50% reduction in output after 5 minutes of non detection of movement and in the region of an additional 40% reduction in output after a further 2.5 minutes of non-detection of movement. This will leave an approximate 10% of constant low level background lighting, in the event an occupant is out of the range of the Controller. At any time during it's dimmed stage, should a movement be detected, then the light output will return to 100%. The pre-set timed switching is based on experience of standard requirements, however this can be adjusted by the factory if alternative settings

are required. The system is suitable for use in areas such as stock rooms, corridors, toilets, plant rooms and any other areas which are used infrequently. Savings on electricity consumed have been shown to average 75% although this naturally depends on the activity within the designated areas.

Unlike centralised movement detection controllers that pick up zoned areas of lighting, the introduction of the Control into a broader range of the Morgan-Hope Luminaires, where each light fitting has its own dedicated controller, means movement is only detected within the locality of the individual fitting. This ensures lighting is switched only where required but still providing an overall minimum light output for comfort, in those areas not occupied or remote corners of the room. It also provides the means of low cost security lighting in terms of a background light to indicate occupancy, thus deterring intruders, but with a fraction of the consumption of full output lighting.

The Luminaire/s incorporating the integral Control unit is/are wired to on/off main light switch, as per normal practice. When initially switched on, the lights will run at 100%, after which they will follow the dimming procedure as detailed.

## Caprice MCD Range

### Slimline Circular Decorative Surface Mount Movement Controlled Dimmable Luminaire

The Caprice is a decorative circular luminaire adapted to incorporate the MCD Control unit, providing an energy efficient, yet aesthetically pleasing fitting. Constructed with a steel spun base it can be supplied with either a polycarbonate prismatic or opal diffuser fixed via steel spring clips. The trim comes in white as standard but can also be supplied in a brass or chrome finish. The high frequency regulating control gear and MCD Detector unit are fixed to a removable gear tray and the diffuser is formed to accommodate the sensor dome of the detector

The Caprice MHA420-PR/OP\*-140-HFD-MCD uses the 40w circular T5 lamp and operates as noted in the introduction of this brochure. The luminaire can also be supplied with the 22w circular T5 lamp under product code MHA420-PR/OP\*-122-HFD-MCD

As a decorative luminaire the Caprice has a varied range of uses. Where there is a requirement for light facility the

Caprice MCD Range not only offers the advantages of energy efficiency but also in its dimmed stage acts as a perfect alternative to a dedicated night light. As an option the luminaire can be supplied with the dimming facility fixed to dim to a pre-set 50% for areas such as staircases. If this option is required suffix MCD in the product code with 50%. Applications cover areas such as corridors within Retirement Homes, Care Homes, Offices, Schools, Entrance Lobbies, Toilets and all areas used infrequently but requiring a Decorative style of Luminaire. The Caprice can also be supplied with non-dimming fixed output High Frequency Control Gear for those areas not suited to the dimmable system..

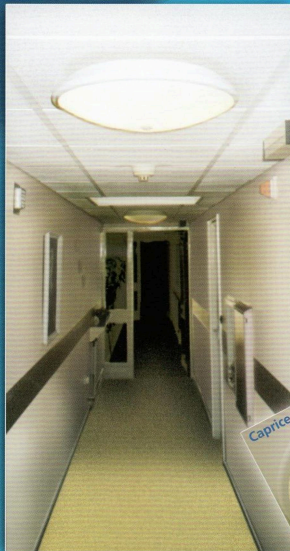
Caprice MHA420-PR/OP\*-140-HFD-MCD Decorative Luminaire 420mm diameter, with single 40w T5 circular lamp, high frequency dimmable control gear, integral detector and prismatic or opal diffuser\* (\*delete PR prismatic or OP - opal from the product code as required) Suffix with BS for brass trim or CH for chrome trim. The above specification can also be supplied with a single 22w T5 Circular Lamp under product reference MHA420-PR/OP\*-122-HFD-MCD

The Caprice is available with the following integral emergency options:

3 hour self contained emergency pack  
-Suffix with EM3

Inverter to function with a central battery system suffix with either EMI-24V or EMI-50V or EMI-110V

In all cases the emergency pack uses a dedicated 7w PL 5 lamp and not the main luminaire lamp.



Caprice - MHA 420-PR-140-HFD-MCD



## MCD8

### – Movement Controlled Dimmable Batten

The Batten is designed for simplicity of installation, which is facilitated by a housing that is supplied in two sections. The back box is simply an empty shell that is fitted to the ceiling with a number of cable entry holes to suit existing wiring layouts. The front tray holds the gear and lamp holders and clips onto the back box without the need of screw fixings. To further enhance ease of installation there is a plug connector, for connection to the mains cable, that plugs into the fused socket on the gear tray. For routine maintenance it is only a matter of unclipping and unplugging the gear tray from the back box, to carry out the required work at ground level.

The MCD8 performs as noted in the introduction and is ideal for installation in stock rooms, back areas, plant rooms, warehouses and all areas used infrequently. The range and model references are as detailed:

MCD8136 = single 36w batten  
MCD8236 = twin 36w batten  
MCD8158 = single 58w batten  
MCD8258 = twin 58w batten

Other sizes and styles can be produced to special order requirements.

## The Gauntlet 2000 IP-MCD

### – A non corrosive surface mount Movement Controlled Dimmable Luminaire

Manufactured with a polycarbonate body and the option of either an acrylic or polycarbonate diffuser, this luminaire is designed for applications where an IP rated non-corrosive fitting is required. The fitting is rated at IP65 – IP67 and is designed with an integrated clip system for diffuser and gear tray. In order to ensure the MCD Control unit, as noted in the introduction of this brochure, maintains maximum movement detection, it is fitted to the main body through a conduit connection and is positioned just below the diffuser. Whilst the Control Box itself is not IP rated, this does not break the IP integrity of the Luminaire.

The Gauntlet 2000 IP-MCD is ideal for installation in areas where a more robust luminaire is required such as food storage rooms, plant rooms, warehouses, food manufacture and all areas used infrequently, needing an IP rated fitting. The range and model references are as detailed:

Gauntlet 2000 IP-MCD118 = single 18w model  
Gauntlet 2000 IP-MCD218 = twin 18w model  
Gauntlet 2000 IP-MCD136 = single 36w model  
Gauntlet 2000 IP-MCD236 = twin 36w model  
Gauntlet 2000 IP-MCD158 = single 58w model  
Gauntlet 2000 IP-MCD258 = twin 58w model

## MoviDim

### Movement Controlled Dimmable Sensor Unit

The MoviDim is a Sensor unit that provides all the facilities of the Controller fitted integrally to the MCD lighting range of Morgan-Hope but is supplied in a remote housing for recessing in suspended ceilings. Designed for Flush Mounting, the MoviDim will regulate light output based on occupancy and has the additional advantage that it can be linked to up to 25 x HFR Ballasts, to a maximum of 10mA. This option will allow for a number of luminaires to be controlled by a single MoviDim or if required up to a maximum of 5 Sensors to simultaneously switch multiples of light fittings. For example, where there is an entrance at each end of a corridor consisting of say 6 fittings, then a MoviDim Sensor located by each door will switch all the lighting when the corridor is entered from either end.

Important: The MoviDim Sensor will only function with High Frequency Regulating/Dimmable Ballasts and no other form of control gear.

The MoviDim Sensor is ideal for installation in areas where there is limited movement and requiring the control of multiple luminaires such as corridors, stock rooms, storage areas, toilets, staff rooms, offices and areas used infrequently.

Model reference: MoviDim – For flush mounting into recessed ceilings to control light remotely.



# Technical Data for Movement Controlled Dimmable Lighting

## CONNECTION DETAILS REFERENCE LUMINAIRES INCORPORATING THE MOVEMENT CONTROLLED DIMMABLE CONTROL

### Ballast Type:

All Morgan-Hope Luminaires incorporating the Movement Controlled Dimmable Sensor unit are fitted with "HFR" – High Frequency Regulating/Dimmable Ballasts.

### Control to Ballast:

Red: Permanent or switched Live Supply  
Blue: Neutral Supply  
Green: Ballast Control Signal -0V  
Yellow: Ballast Control Signal + 10V

### Ballast to Mains:

Although the Ballast is connected to the in-line connector there is a wiring diagram on the Ballast for information details. The connector indicates Live, Earth and Neutral for connecting to the mains lead.

### Time Delays

Full output for 5 minutes after last detected movement.

Output reduced to 6.2v for the next 2.5 minutes if not re-triggered by movement.

Output reduced to 0v after a total of 7.5 minutes if not re-triggered by movement.

### Output Rating

Recommended maximum load current 10mA. The output can only sink current, so it needs to be connected to a load in order to observe the output with a voltmeter.

Electricity supply: 230/240v - 50Hz

**CAUTION: INCORRECT CONNECTIONS WILL  
CAUSE PERMANENT DAMAGE**

## TECHNICAL DATA REFERENCE THE MOVIDIM SENSOR UNIT

### Ballast Type:

The MoviDim Sensor will only function with High Frequency Regulating/Dimmable Ballasts and no other form of Control gear.

### Ballast and Sensor unit Connection Details:

The MoviDim Sensor is supplied with two Flying Leads identified as below.

WHITE CABLE – MAINS SUPPLY AND LINKING  
MOVIDIM SENSOR UNITS

Brown: Live Supply  
Blue: Neutral Supply  
Green/Yellow: Earth  
Black: One wire bus to link controls for simultaneous triggering

BLACK CABLE – 1-10V BALLAST CONTROL

Green: Ballast Control Negative (Signal -0V)  
Yellow: Ballast Control Positive (Signal +10V)

### Time Delays

Full output for 5 minutes after last detected movement.

Output reduced to 6.2v for the next 2.5 minutes if not re-triggered by movement.

Output reduced to 0v after a total of 7.5 minutes if not re-triggered by movement.

### Output Rating

The maximum number of Ballasts controlled by each Sensor = 25, up to a maximum load current of 10mA. The output can only sink current, so it needs to be connected to a load in order to observe the output with a voltmeter.

Electricity supply: 230/240v - 50Hz

A maximum of 5 x MoviDim Sensor units to be used for the simultaneous control of the same Luminaires.

The above information provides background technical data. Full installation details and wiring diagrams are supplied within the MoviDim Control Package.

**CAUTION: INCORRECT CONNECTIONS WILL  
CAUSE PERMANENT DAMAGE**

## Conformity Specification

### Ballast:

Type HFR – High Frequency Regulator RFI = EN 55015, EN 55022A Harmonics = EN 61000-3-2 Immunity = EN 61547  
Safety = EN 60928 Performance = EN 60929-IE Approval Marks = ENEC

### Control:

EN 50081 1:1992-EMC EN 50082-1:1997-EMC BSEN 603352-1:1995



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