Ex-Or
by Honeywell

LightSpot - Stand-alone lighting control by presence detection and photocell

Hi-Bay Multi-Function LightSpot

The Multi-Function Hi-Bay LightSpot is a dual-output presence detector with photocell for use at heights up to 16m. Coverage is on a 1:1 ratio, i.e. at 9m height, the detector's footprint is a 9m diameter circle. It can be programmed (from ground level using an infrared programmer) to perform any one of the following combinations of functions:

- **Lighting Control + Emergency Test Control**

This mode allows the testing of an area of Emergency Lighting to be conveniently implemented without the expense of a special, single-function controller or any hard wiring. Convenient and easy to use, emergency test is initiated by infrared controller (HP2000 or the dedicated HC8) and a highly visible, blue LED shows that testing is underway. There is no need for manual timing: automatic test durations of 1 minute or 1, 2, 3 or 5 hours can be selected and a test can be terminated manually at any point. To ensure battery life is maintained, there is even a lock-out feature that limits testing if there has been more than 5 minutes' battery usage or mains outage in the previous 24 hours.

- **Lighting Control + Air Conditioning Control**

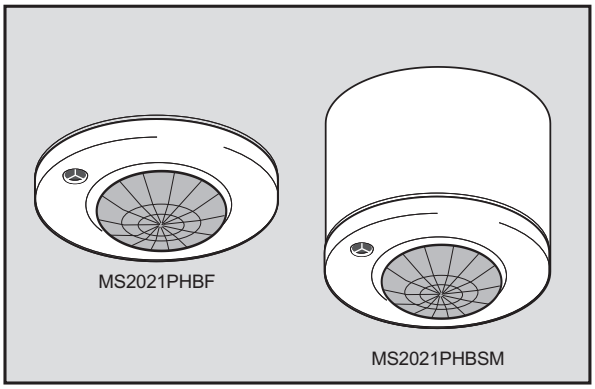
While lighting needs to be provided immediately that someone enters a room, this is not the case with air conditioning, so there are two independently programmable timers: a hold-off timer to avoid responding to momentary occupancy (1, 3 or 5 minutes delay) and a fully programmable run-on timer. Individual on/off control is provided via the dedicated HC7 hand-held infrared controller (or HC5 Universal Controller).

- **Lighting Control + Water/Fan Control**

Here the volt-free output is used to control a toilet-flush cistern-fill valve or extractor fan. The flush or fan control can be programmed independently from the lighting control. To ensure that fresh, hygienic conditions are maintained during holiday shutdowns, an automatic daily flush takes place.

- **Two-Channel Lighting Control**

The switched-live output is influenced by the photocell while the volt-free output is not. Each output has an independent off-delay timer. The volt-free output operates in AUTO mode while the switched-live output can be operated in AUTO or SEMI-AUTO (Absence Detection) modes. Relay 1's delay timer may be disabled so that the unit operates as an active photocell, uninfluenced by movement.




Presence detection is by passive infrared, effectively enhanced to improve sensitivity to small movements.

Passive photocell holds lights off in ambient conditions. Active photocell has the capability to switch lights off in occupied areas.

Off delay following the last observed movement after which the lights switch off. Each output is independently adjustable.

Detection pattern and range in metres at floor level (detection pattern is cone shaped). Range to mounting height ratio is 1:1, i.e. at 9m height, the cone's diameter is 9m at the floor.


Switched live influenced by photocell and occupancy; volt-free output by occupancy only. Independent time delays can be programmed via HP2000.


Hand controllers provide local user override/operation (HC5, HC7 & HC8 as appropriate to mode).


Remote programming by HP2000 ensures changes can be easily accommodated.


Air-conditioning control. Switched live for lighting control, volt-free output for air-conditioning control.


Emergency test control. Switched live for main lighting, volt-free output for emergency test procedures.


Washroom mode. If no movement is detected in a 24-hour period, detector can be programmed to switch the load on for the duration of the off delay.

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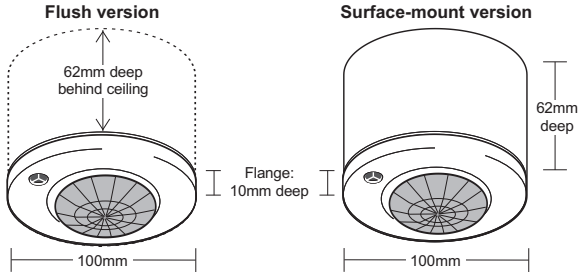
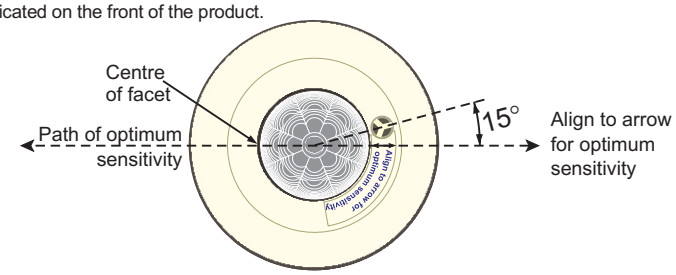
Dimensions and Installation Notes

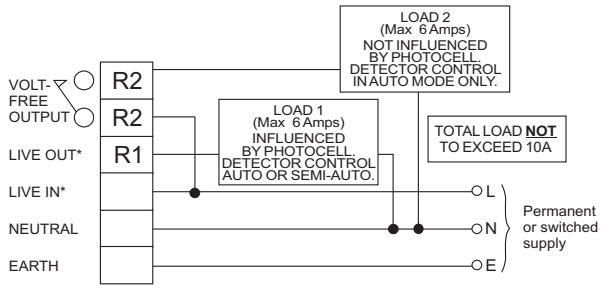


Flush version: Depth required behind ceiling: 62mm from front flange plus allowance for the minimum bend radius of the cable. Sinking box fits into 89mm diameter hole in ceiling tile or plasterboard ceiling. Note: If the sinking box is being fitted to a hard substrate such as metal, increase the hole size to 91mm. No access above the ceiling is necessary. The detector fits into sinking box with a simple bayonet action thus concealing the fixing screws.
Surface version: The housing may be secured to a hard surface or a BESA box. The detector fits into the housing with a simple bayonet action.

Note: Minimum mounting pitch (spacing) when in regulating mode = 0.5 x mounting height.
For aisle or corridor applications, there is an optimum orientation for approach, clearly indicated on the front of the product.



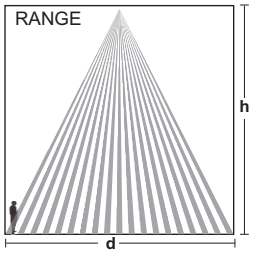
Example Wiring Diagram



* The Live terminals are internally linked

Technical Data

OPERATING VOLTAGE: 230V ~ 50Hz (UK & Europe)
RECOMMENDED CIRCUIT PROTECTION: 10 Amps
TERMINAL CAPACITY: 2 x 2.5mm^2
MAXIMUM LOAD: 6 Amps per output [not exceeding 10A in total]
MAXIMUM RECOMMENDED MOUNTING HEIGHT: 16 metres
RANGE: Cone-shaped detection
pattern, diameter (at floor level)
= 1 x mounting height
PHOTOCELL: Adjustable 50-5000 lux via the HP2000
OFF DELAY 1 & 2: 1 minute - 96 hours adjustable
and 10 second Walk Test Mode
[Each output independently adjustable]
MINIMUM MOUNTING PITCH (SPACING):
0.5 x mounting height (when utilising the photocell)
COLOUR: White (RAL9010)
MATERIAL: Flame retardant PC/ABS
WEIGHT: 200g approx
IP RATING: 3X
OPERATING TEMPERATURE: 0°C to 40°C



Programmable Parameters (via HP2000)

POWER UP **Options: On/Off**
Sets the status of luminaires when power is applied.
On - lights power-up on irrespective of occupancy.
Off - lights respond to occupancy after 30 seconds.
Pre-set - On

RESPONSE **Options: Auto/Semi-auto**
Auto - lights switch on and off automatically.
Semi-auto - lights are switched on by wall switch or hand-held controller and switch off automatically.
NOTE: If manual operation is via hand-held controller only, Power-up Off may be used in Semi-auto mode. If a wall-switch is to be used, Power-up On coupled with a means of interrupting the mains power to the MS2021P is required (e.g. push-to-break momentary switch capable of switching the load on both the switched-live and volt-free outputs if the latter is not supplied separately.)
Pre-set - Auto

R1 OFF DELAY **Options: 1 min - 96 hrs**
Sets the period after the last observed movement when the lights switch off. (In walk-test mode, the Off Delay is 10 seconds.) **Pre-set - 20 mins**

R2 OFF DELAY **Options: 1 min - 96 hrs/Disabled**
In Lighting mode this sets the period after the last observed movement until the secondary lights switch off. In other modes, setting this delay to longer than R1, allows for an extended filling time for flush cistern or for extractor fan/air conditioning run on. Not used in Emergency Test mode. **Pre-set - 20 mins**

R2 MODE **Options: Lighting/Washroom/Emergency A/C DLY: 1 Min/3 Min/5 Min**
Sets the mode of operation of the R2 load.
Pre-set - Lighting

PHOTOCELL **Options: Active/Passive/Disabled**
Affects the R1 Load only
Passive - holds lights off when sufficient natural light.
Active - lights turn on and off as required when natural light levels fluctuate and area is occupied.
Disabled - the photocell has no effect. **Pre-set - Disabled**

Ancillary Items

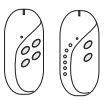
HP2000

HP2000 MLS Digital Programmer
Menu-driven LCD Programmer with automatic equipment recognition and parameter download facilities.

HBPIRLM
Lens mask to prevent end-of-aisle movement from being detected.

HC5

HC5 Universal Hand-held Controller



HC7 **HC8**

HC7 Air-conditioning Hand-held Controller

HC8 Emergency Test Hand-held Controller

Part Numbers

MS2021PHBF	Hi-Bay Multi-Function LightSpot - flush
MS2021PHBSM	Hi-Bay Multi-Function LightSpot - surface
HP2000	MLS Digital Programmer
HBPIRLM	Lens Mask
HC5	Universal Hand-held Controller c/w wall bracket
HC7	Air-conditioning Hand-held Controller c/w wall bracket
HC8	Emergency Test Hand-held Controller c/w wall bracket
SV2	Solenoid valve
SVB	Solenoid valve housing

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