

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

## Gold Series LightSpot

The Gold Series LightSpot is part of a comprehensive range of presence detection systems designed to control modular luminaires with high frequency ballasts and other fixed-output lighting loads.

Gold LightSpot offers superior-performance, programmable presence detection for lighting control in offices including open-plan areas. It uses microwave presence detection technology which enables the range and sensitivity to be adjusted to ensure a tailored detection pattern to suit any application. It is a dual-circuit control and is available for flush and surface mounting.

Gold LightSpot offers the following features:



Active presence detection by microwave technology.



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



Off delay in minutes following the last observed movement after which the lights switch off.

\* From 1 min to 96 hours via the HP2000.



Detection pattern and range in metres under normal operating conditions.



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



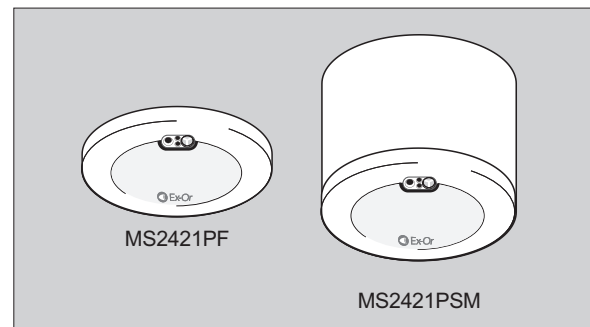
Hand-held Controllers provide local user override.



Remote programming ensures changes can be easily accommodated.



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. Can operate as a urinal control when used with an SV2 solenoid valve unit.



Programmable Parameters (via HP10)

**Note: Additional parameters are available 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 15 seconds.

**Pre-set - On**

### MOVEMENT DETECTOR OPERATION

**Options: Auto/Semi-auto**

*Note: Only affects switched-live output, R1 (R2 is always fully automatic).*

Auto - lights switch on and off automatically.

Semi-auto - lights are switched on by wall switch or hand-held controller and switch off automatically. **Pre-set - Auto**

### OFF DELAY

**Options: 5-35 minutes (HP10)**

**1 minute - 96 hours (HP2000)**

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**

### (SENSITIVITY) RANGE WHEN LIGHTS ON/LIGHTS OFF

**Options: 12 levels**

Occupied (i.e. Lights On): Max, High, Med, Low

Unoccupied: (i.e. Lights Off): can reduce to a percentage of the 'Occupied' Range, improving immunity to nuisance triggering.

**Pre-set - HIGH/75%**

### PHOTOCELL

**Options: Active/Passive/Disabled**

**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.

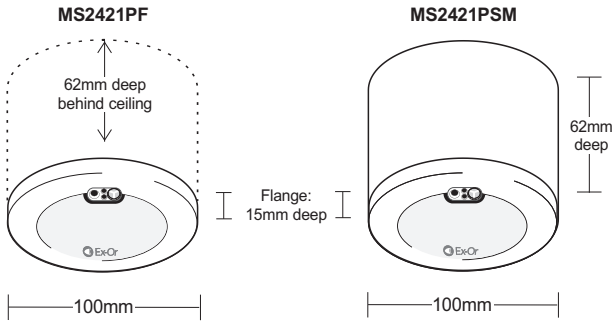
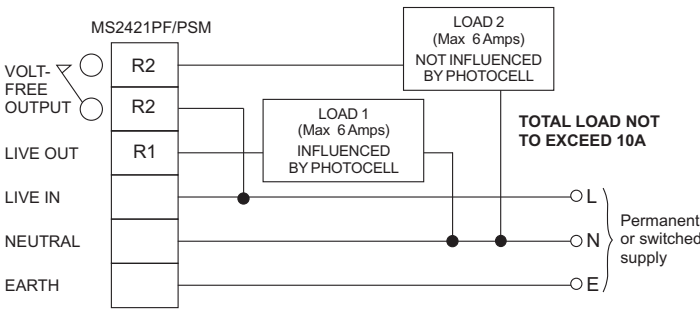



**Disabled** - the photocell has no effect. **Pre-set - Disabled**

### 24 HOUR CYCLE

**Options: Yes/No**

For use in 'Washroom Mode' only. Provides hygiene flush if area has been unoccupied for 24 hours. **Pre-set - No**

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Dimensions	Installation and Commissioning Notes
 <p><b>MS2421PF</b>      <b>MS2421PSM</b></p> <p>62mm deep behind ceiling</p> <p>Flange: 15mm deep</p> <p>62mm deep</p> <p>100mm</p> <p>100mm</p>	<p>Gold Series LightSpot detectors are extremely sensitive to movement; they must be mounted on a solid surface which has no movement whatsoever.</p> <p>As these detectors use microwave technology to detect movement they are not recommended for applications where there are large surface areas of metal, e.g. metal ceiling or floor tiles, as unpredictable sensitivity may result.</p> <p>Also, note that these detectors are capable of detecting large moving metal objects well beyond the normal range at which they are sensitive to human targets.</p> <p>The units are colour coded (blue, yellow, red or green) according to four variations in operating frequency. To ensure reliable operation, it is essential that units of the same colour code do not occupy adjacent positions in open-plan areas.</p> <p><b>Surface version</b> The housing may be secured to a hard surface or a BESA box. The unit fits into the sinking box with a simple bayonet action thus concealing the fixing screws.</p> <p><b>Flush version</b> Depth required behind ceiling: 62mm from front flange plus an allowance for the minimum bend radius of the cable. Sinking box fits into 89mm diameter hole in ceiling tile or plasterboard ceiling. To avoid damage to ceiling tile, do not overtighten. No access above the ceiling is necessary.</p> <p><b>Note:</b> Do not mount within 25cm of a luminaire. Do not position this product on a pitch narrower than 5m.</p>
Example Wiring Diagram	
 <p>MS2421PF/PSM</p> <p>VOLT-FREE OUTPUT</p> <p>LIVE OUT</p> <p>LIVE IN</p> <p>NEUTRAL</p> <p>EARTH</p> <p>R2</p> <p>R2</p> <p>R1</p> <p>LOAD 2 (Max 6 Amps) NOT INFLUENCED BY PHOTOCELL</p> <p>LOAD 1 (Max 6 Amps) INFLUENCED BY PHOTOCELL</p> <p>TOTAL LOAD NOT TO EXCEED 10A</p> <p>L</p> <p>N</p> <p>E</p> <p>Permanent or switched supply</p> <p>The MS2421PF/PSM has two outputs: Switched live is influenced by photocell and occupancy; the volt-free output by occupancy only. Always check the product label before connecting.</p>	
Technical Data	Ancillary Items
<p>OPERATING VOLTAGE: 230V 50Hz (UK &amp; Europe)</p> <p>PRODUCT RATING &amp; RECOMMENDED CIRCUIT PROTECTION: 10 Amps</p> <p>MAXIMUM RECOMMENDED LOAD: 6 Amps per output (not exceeding 10A in total)</p> <p>TERMINAL CAPACITY: 2 x 2.5mm<sup>2</sup></p> <p>PHOTOCELL: Adjustable 0-5000 lux (with a 20% reflective workplane)</p> <p>OFF DELAY: 1 minute - 96 hours using HP2000 (5 - 35 minutes using HP10)</p> <p>RANGE: Approx 7m dia at 2.4m ceiling height</p> <p>MAXIMUM RECOMMENDED MOUNTING HEIGHT: 3.0m</p> <p>COLOUR: White</p> <p>MATERIAL: Flame retardant ABS</p> <p>WEIGHT: 300g approx</p> <p>IP RATING: 2X</p>	 <p><b>HP2000</b>      <b>HP2000 MLS Programmer</b> Menu-driven LCD Programmer with automatic equipment recognition and parameter download facilities.</p>  <p><b>HP10</b>      <b>HP10 LightSpot Programmer</b> Infrared programming tool with 12 dil switches for the setting of individual parameters.</p>  <p><b>HC6</b>      <b>HC6 Two-button Hand-held Controller</b></p> <p><b>Note:</b> The HC5 Universal Hand-held Controller is also suitable for use with these detectors.</p>

### Part Numbers

<b>MS2421PF</b>	Dual-circuit Gold LightSpot with photocell - flush
<b>MS2421PSM</b>	Dual-circuit Gold LightSpot with photocell - surface mounted
<b>HP2000</b>	MLS Digital Programmer
<b>HP10</b>	LightSpot Programmer
<b>HC6</b>	Two-button Hand-held Controller c/w wall bracket
<b>HC5</b>	Universal Hand-held Controller c/w wall bracket
<b>SV2</b>	Solenoid valve with 15mm compression fittings
<b>SVB</b>	Housing for solenoid valve

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