

# MLS Digital - Networked Managed Lighting System

# **Remote Detectors for Fixed-output Ballasts**

MLS Digital offers a flexible, user-responsive, building-wide control solution via a network of communicating detectors. Constant monitoring of occupancy and ambient light levels enables the system to automatically deliver optimum lighting conditions while effecting energy and cost savings. MLS Digital is available for use with all fixed-output and digital dimming HF ballasts.

This data sheet covers ceiling-mounted MLS Digital Detectors for use with fixed-output ballasts. These remote detectors are used to control groups of luminaires. They provide switching where there is no need for regulating light levels and incorporate a passive photocell to maximise energy savings.



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



Passive photocell holds lights off in bright ambient conditions.



Off delay: Period following the last observed movement after which the lights switch off.



Detection pattern and approximate range in metres at floor level for 2.5m mounting height (detection pattern is cone shaped).



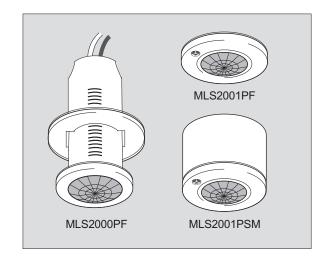
Incorporates simple scene-setting - up to six scenes can be set via user remote.



Hand Controller provides local user override.



Remote programming via HP2000 ensures changes can be easily accommodated.



#### **Commissioning the Programmable Parameters**

Operation of the system is determined by its commissioning. This is carried out using a menu-driven infrared remote programmer (HP2000) with virtually no disturbance to the building's occupants. Settings can be changed whenever required in the same way. The programmable parameters are shown overleaf in the order they are presented on the programmer. Options are selected from alternatives.

## **Commissioning of Lighting Scenes**

Lighting scenes are set up using the infrared HC5 Hand-held Controller. The scene is set manually then stored by a long press on the selected scene button. New scenes can be set in this way without the need for separate programming devices.

# **Ancillary Items**

# **HP2000 MLS Digital Programmer**

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





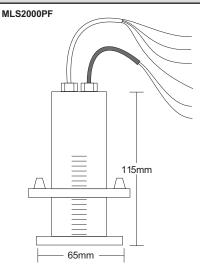
HC5 Universal Hand-held Controller

#### **RB2000 Bus Power Supply**

A single Bus Power Supply synchronises and powers the bus for up to 200 MLS Controllers. It also provides a test facility. Units may be linked for larger installations and to provide a building-wide common zone. (RB2000LT Bus Power Supply Lite may also be used.)

Please check www.ex-or.com to ensure this is the most recent issue - Ref: D4030K

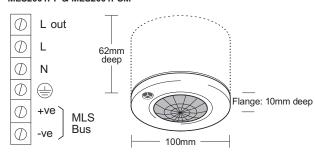
#### **Electrical Connections & Dimensions**



Brown - Live
Blue - Neutral
Green/Yellow - Earth
(no internal connection)
Black - Live out

Red + ve Blue - ve Bus

#### MLS2001PF & MLS2001PSM



These remote presence detectors are available in three different versions: slimline flush, flush and surface.

The slimline flush detector (MLS2000PF) is suitable for mounting into a suspended ceiling (or plasterboard when used with the PB64 Plasterboard Fixing Kit). The flush version (MLS2001PF) is recommended for either suspended or plasterboard mounting where depth behind the ceiling is limited.

Programmable	Selectable Options
Parameters	(Factory pre-set shown in bold)
Power up	On / Off
Response	Auto / Semi-Auto
Off Delay	1 min to 96 hours plus 10 seconds for walk test. 20 mins
Bus Connect	Yes / No
1st Zone	1-100 addresses / Common Zones 1-3. Pre-set to (no zone)
2nd Zone	1-100 addresses / Common Zones 1-3. Pre-set to (no zone)
3rd Zone	1-100 addresses / Common Zones 1-3. Pre-set to (no zone)
4th Zone	1-100 addresses / Common Zones 1-3. Pre-set to (no zone)
Corridor 1 Begin/End	00-100 / Building. Pre-set to (no zone)
Corridor 2 Begin/End	00-100 / Building. Pre-set to (no zone)
Global 1 Rx	Yes / No
Global 2 Rx	Yes / No
Entry Scene	Select Scenes 1 - 6. Scene 1
When Vacant	Switch Off after Off Delay
	Go to Scene 6 do not switch off
	Go to Scene 6 for three hours then switch off
	Go to Scene 6 until building is vacated then switch off
Threshold	0-254 (Level below which photocell triggers lights when occupancy

# Scene-setting

While scene-setting is aimed primarily at dimming applications, fixed-output luminaires controlled by these detectors can be included in any of the six scenes in an 'ON' or 'OFF' state. Scenes can be recalled with a single press of a button.

#### **Entry and Exit Scenes**

The Entry Scene is automatically selected when the area becomes occupied. Similarly, there is an option to select an Exit Scene for when an area is vacated.

#### **Technical Data**

MAXIMUM RECOMMENDED MOUNTING HEIGHT: 3.0m

is detected.) 254

RANGE: Cone-shaped detection pattern, diameter (at floor level) = 2.4 x mounting height

OPERATING VOLTAGE: 230V 50Hz (UK & Europe)

PRODUCT RATING & RECOMMENDED CIRCUIT PROTECTION: 10 Amps

CAPACITY: Maximum load 6 Amps

OUTPUT: Switching PHOTOCELL: Passive

OFF DELAY: 1 minute - 96 hours plus 10 second walk-test DEPTH REQUIRED BEHIND CEILING: MLS2000PF - 125mm

MLS2001PF - 62mm from front flange plus allowance for minimum bend radius of cable

WEIGHT: MLS2000PF - 70g excluding cable MLS2001PF/MLS2001PSM - 210g approx

COLOUR: White

MATERIAL: Flame retardant PC/ABS IP RATING: MLS2000PF - 4X

MLS2001PF/MLS2001PSM - 3X OPERATING TEMPERATURE: 0°C to 40°C

#### Note

The photocell is active in Scene 1 only. When the ambient light level reaches the pre-set level, the photocell will hold off the lights as an area becomes occupied. The photocell allows the lights to come on as the ambient light level drops but will not turn lights off in an occupied area.

Ex-Or operates a genuine policy of continuous improvement. You may expect the specification to be regularly enhanced. For latest technical information, please visit www.ex-or.com

## **Part Numbers**

MLS2000PFMLS Digital Detector for fixed output HF ballasts - slimline flushMLS2001PFMLS Digital Detector for fixed output HF ballasts - flushMLS2001PSMMLS Digital Detector for fixed output HF ballasts - surface

RB2000 MLS Digital Bus Power Supply
RB2000LT MLS Digital Bus Power Supply 'Lite'

HP2000 MLS Digital Programmer

HC5 Universal Hand-held Controller c/w wall bracket