## 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.

MLS2001PF

MLS2000PF   MLS2001PSM
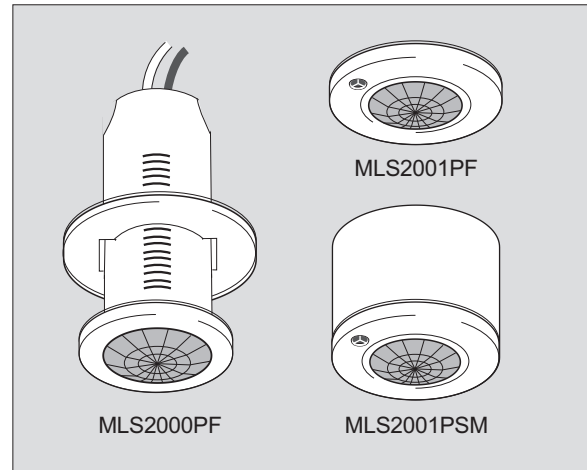
Presence detection is by passive infrared, effectively enhanced to improve sensitivity to small movements.

Passive photocell holds lights off in bright ambient conditions.

1 min- 96 hrs Off delay: Period following the last observed movement after which the lights switch off.

6m Detection pattern and approximate range in metres at floor level for 2.5m mounting height (detection pattern is cone shaped).

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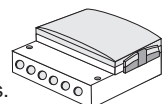Menu-driven LCD Programmer with automatic equipment recognition and parameter download facilities.

HC5 Universal Hand-held Controller

RB2000 Bus Power Supply
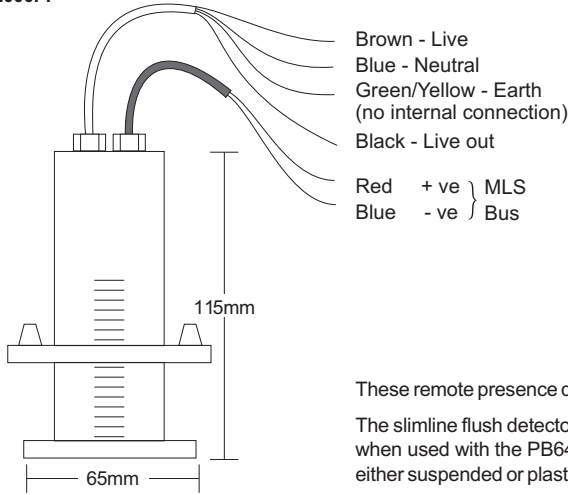A single Bus Power Supply synchronises and powers the bus for up to 200 MLS Controllers. It also provides a test facility. Units may be linked for larger installations and to provide a building-wide common zone. (RB2000LT Bus Power Supply Lite may also be used.)
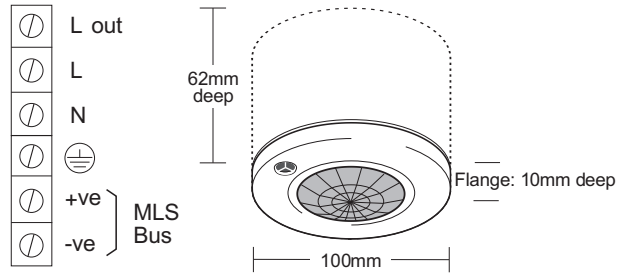
Please check www.ex-or.com to ensure this is the most recent issue - Ref: D4030K

MLS2000PF

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

Red   + ve ⎫ MLS
Blue - ve ⎭ Bus

115mm

65mm

MLS2001PF & MLS2001PSM

L out
L
N
⏚
+ve ⎫ MLS
-ve ⎭ Bus

62mm deep

Flange: 10mm deep

100mm

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 Parameters	Selectable Options (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 is detected.) **254**	

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
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

MLS2000PF	MLS Digital Detector for fixed output HF ballasts - slimline flush
MLS2001PF	MLS Digital Detector for fixed output HF ballasts - flush
MLS2001PSM	MLS 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