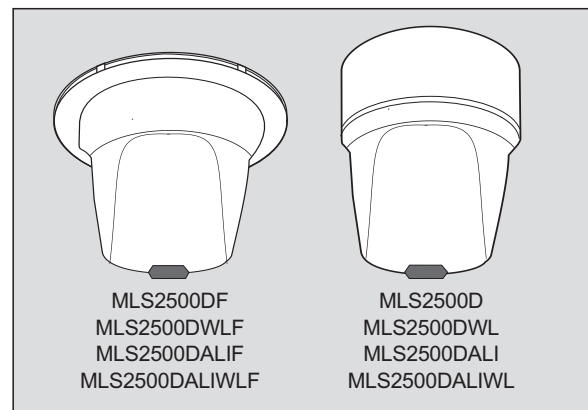MLS Digital - Networked Managed Lighting System

Digital Mid Range Detector

Digital Mid Range offers high performance directional presence detection for the control of luminaires with DSI or DALI high frequency ballasts and other lighting loads.

With a range of up to 20m which can be adjusted to suit any application, it is ideal for larger classrooms, conference rooms, storage aisles etc. Digital Mid Range incorporates relay and digital dimming outputs and is available for semi-flush or surface mounting.

Versions enabled for EnOcean wireless switching are available for those applications requiring manual control options.

Active presence detection by microwave technology.

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

Regulating photocell actively monitors ambient light levels and adjusts the light output accordingly (dimmable control gear only).

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

Off delay - period following the last observed movement after which the lights switch off.

Detection pattern and range in metres under normal operating conditions.

Dual circuit control. Digital output always influenced by photocell, relay output can be influenced by photocell if configured.

Hand-held Controllers provide local user override.

Remote programming with the HP2000 (operates at 5m range) ensures changes can be easily accommodated.

OneSwitch Dimming (WL suffix part numbers only). Manual input to adjust light level or turn luminaires on or off via MK EnOcean wireless switches which should be ordered separately.

MLS2500DF
MLS2500DWLF
MLS2500DALIF
MLS2500DALIWLF

MLS2500D
MLS2500DWL
MLS2500DALI
MLS2500DALIWL

Scene-setting

Users can set up to six lighting scenes by infrared remote control (HC5) and recall them with the 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.

Ballast Compatibility

Digital Mid Range is available for fixed-output high-frequency ballasts and dimmable DSI and DALI ballasts.

Dual Output

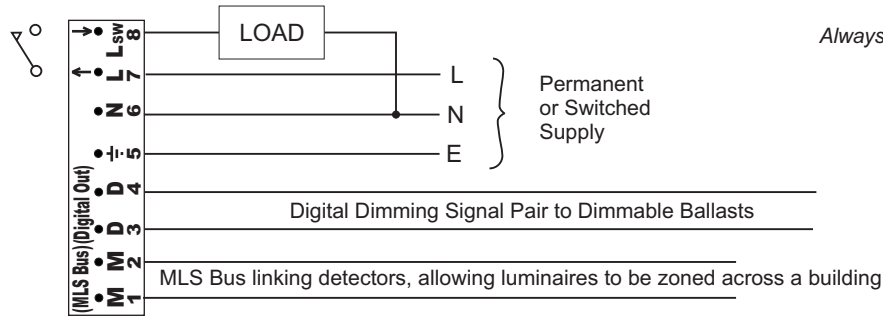Manual control of digital and relay outputs with OneSwitch dimming or hand-held controller.

Commissioning and Programmable Parameters

Operation is determined by how the unit is commissioned. Commissioning and re-commissioning are carried out using a menu-driven, infrared remote programmer (HP2000) with virtually no disturbance to the building's occupants. As the programmer has a range of 5 metres, ladders or platforms are seldom required.

The association of wireless switches with the OneSwitch function should be carried out at installation time; this requires access to the unit.

Please check www.ex-or.com to ensure this is the most recent issue - Ref: D4078D

Wiring Diagram

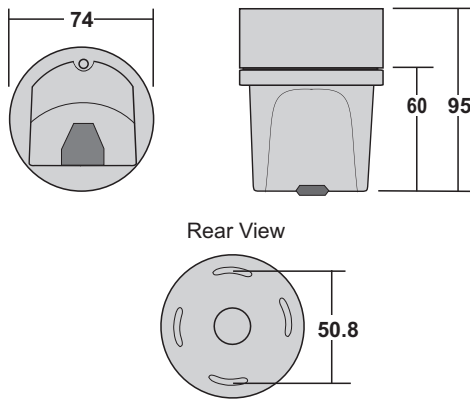*Always check the product label before connecting.*

Relay outputs may be connected in parallel to cover larger areas with multiple detectors but the total load switched by the parallel combination should not exceed 10 Amps.

Digital Dimming Signal Outputs MUST NOT be connected, in parallel or in series, to those of another detector.

The diagram above shows a fully utilised unit, controlling both dimmable and non-dimmable luminaires. In the simplest installation, controlling only non-dimmable loads, just the mains supply and the switched live output would be required.

Note: Do not mount within 25cm of a luminaire.

Dimensions

Rear View

Installation

Surface version
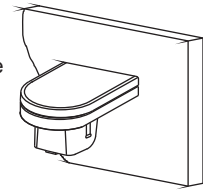**(MLS2500D/MLS2500DWL/MLS2500DALI/MLS2500DALIWL)**
The back-box can be secured directly to a hard surface or to a conduit stop end box.

Semi-flush version
(MLS2500DF/MLS2500DWLF/MLS2500DALIF/MLS2500DALIWLF)
Use a hole saw to drill a 76mm hole into the ceiling tile. The flush ring is designed to clamp the tile between its two halves.

Note: For wall mounting, use the WMK wall-mounting kit.

Ancillary Items

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

HC6 Two-button Hand-held Controller
Note: The HC5 Universal Hand-held Controller is also suitable for use with these detectors.

MLS CABLE: 1.5mm^2 unscreened twisted-pair (applicable when detector used as part of a full MLS Digital Managed Lighting System): see Application Note AN4001
OPERATING VOLTAGE: 230V ~ 50Hz (UK & Europe)
SWITCH CAPACITY: 10 Amps max any lighting load except incandescent lamps: 1500W max (at 230V~)
MAXIMUM RECOMMENDED LOAD (DSI/DALI): 25 Ballasts
MAXIMUM RECOMMENDED MOUNTING HEIGHT: 3.5m
RANGE: Adjustable up to 20m
OFF DELAY: 1 min - 96 hours plus 10-second walk-test mode
PHOTOCELL: Passive/Active/Regulating adjustable 50-5000 lux
MATERIAL: Flame retardant PC/ABS
COLOUR: White
WEIGHT: 160g
IP RATING: 4X
OPERATING TEMPERATURE: 0°C to 40°C

Part Numbers

Digital Mid Range with photocell:

Part	Description
MLS2500D	for DSI ballasts - surface mounted
MLS2500DWL	for DSI ballasts with wireless OneSwitch capability - surface mounted
MLS2500DF	for DSI ballasts - semi-flush mounted
MLS2500DWLF	for DSI ballasts, with wireless OneSwitch capability - semi-flush mounted
MLS2500DALI	for DALI ballasts - surface mounted
MLS2500DALIWL	for DALI ballasts with wireless OneSwitch capability - surface mounted
MLS2500DALIF	for DALI ballasts - semi-flush mounted
MLS2500DALIWLF	for DALI ballasts with wireless OneSwitch capability - semi-flush mounted

NOTE: Wireless switches are not included - contact Ex-Or for details.

Ancillary Items

Part	Description
HP2000	MLS Digital Programmer
HC6	Two-button Hand-held Controller c/w wall bracket
HC5	Universal Hand-held Controller c/w wall bracket
WMK	Wall-mounting Kit
MRFK	Semi-flush Mounting Kit

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

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