

### Troubleshooting

#### What if the load does NOT turn ON.

Check to see if the live supply to the circuit is good.

#### What if the load does NOT turn OFF

Ensure that the area is left unoccupied (no movement in the area) for a greater time period than the time out period set on the dip switches.

Ensure MWCEFL is not in close proximity to vibrating surfaces or objects (eg. ventilation equipment).

MWCEFL can detect movement through thin partitions or walls - reduce the sensitivity.

### Precautions and Warranty

This product conforms to BS EN 60669-2-1. Product complies to Class 2 insulation.

Please ensure the most recent edition of the appropriate local wiring regulations are observed and suitable protection is provided e.g. 6 amps over current, 1kV over voltage. Please ensure that this device is disconnected from the supply if an insulation test is made.

This product is covered by a warranty which extends to 5 years from the date of manufacture.

#### Products available from DANLERS

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### Ceiling flush mounted microwave presence detector switch

#### MWCEFL

MWCEFL microwave presence detector can be flush mounted into false or plasterboard ceilings and is designed for the automatic switching of lighting, heating and air conditioning loads.

The sensor detects movement within its range of detection by emitting low power microwave signals and measuring the reflections as the signal reflects off moving objects such as people moving through a room.

When movement is detected, the load switches on. If no more movement is detected within a certain time, the MWCEFL will switch the load off. The time can be set via the internal rotary dial (see diagram A).

Upon detecting movement, if the ambient light is dark enough, MWCEFL will turn the load on. The ambient threshold can also be set by setting the rotary dial to the appropriate preset (see diagram A).

If no more movement is detected within a pre-selected time, then MWCEFL will turn the load off.

MWCEFL sensor switches the load ON or OFF at the zero-cross point, to ensure the in-rush current is minimised, enabling the maximum lifetime of the relay.

#### MANUAL OVERRIDE

MWCEFL may be over-ridden with the help of a retractive (momentary) switch to switch on/off the lights manually (See diagram E).

**To turn load ON** (if sensor has already switched load OFF), Short press (<1 second) the retractive switch. The load will switch On and goes into sensor mode. Please note: Load will switch ON even if the lux level exceeds the daylight threshold setting.

**To turn load OFF** (if sensor has already switched load ON), Short press (<1 second) the retractive switch. Please note: Once switched OFF the sensor cannot switch the load ON until the preset hold time has elapsed.

#### Technical data

Operating voltage:	220-240V 50Hz.
Loading:	Switches up to 1200W resistive load. Switches up to 400W of most other types of load including LED.
Detection area:	50 / 75 / 100%.
Time lag range:	5sec, 30sec, 1min, 5min, 10min, 30min.
Photocell range:	2 lux - 50 lux (at the photocell) and inactive.
Sensor type:	Microwave motion detection.
Detection range:	12m x 6m maximum.
Detection angle:	30 - 150 degrees.
Mounting height:	Up to 6m maximum.
Operating Temperature:	t <sub>amb</sub> -20°C...+60°C
IP rating:	IP20.

## Installation procedure

- Please read these notes carefully before commencing work.  
In case of doubt please consult a qualified electrician.
- Make sure the power is isolated from the circuit.**
- TO ACCESS THE TERMINALS:** Remove the safety cap enclosure lid by pressing the two release clips under the spring coils with a small flat head screwdriver. Carefully remove the enclosure.
- Once wiring is securely connected to the terminals and the cable(s) secured to the cable clips replace the safety cap with the open face on the opposite side to the terminals for safety.
- For fully automatic mode the MWCEFL should be connected as shown in diagram D:  
L (Live in). N (Neutral in). SL(Switched Line out).
- If the override function is required the MWCEFL should be connected using the 'PUSH' terminal as shown in diagram E:  
L (Live in). N (Neutral in). SL(Switched Line out). PUSH (to retractive wall switch)

## Settings

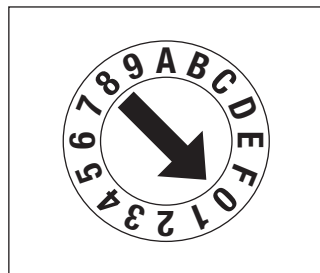
Detection range, Hold time (time lag) and Daylight sensor threshold can be set via the settings spindle (see diagram A) behind the lens cap on the front face of the MWCEFL (see diagram B).

To remove the lens cap: **Make sure the power is isolated from the circuit.**

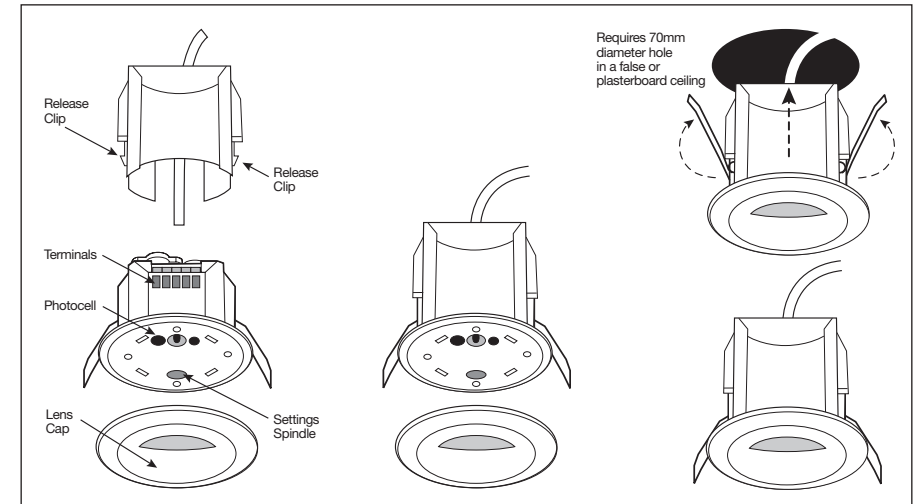
Place a fine pointed instrument in the small hole under the 'Open' icon. Gently push the cap away from the main body. The spindle can be rotated with a small flat head screwdriver.

Channel	Detection range	Hold time	Photocell
0	100%	5 seconds	Disable
1	100%	30 seconds	2 lux
2	100%	1 minute	10 lux
3	100%	5 minute	2 lux
4	100%	5 minute	10 lux
5	100%	5 minute	30 lux
6	100%	5 minute	50 lux
7	100%	5 minute	Disable
8	100%	10 minute	10 lux
9	100%	10 minute	30 lux
A	100%	10 minute	50 lux
B	75%	10 minute	30 lux
C	50%	10 minute	10 lux
D	100%	30 minute	10 lux
E	100%	30 minute	50 lux
F	100%	5 seconds	2 lux

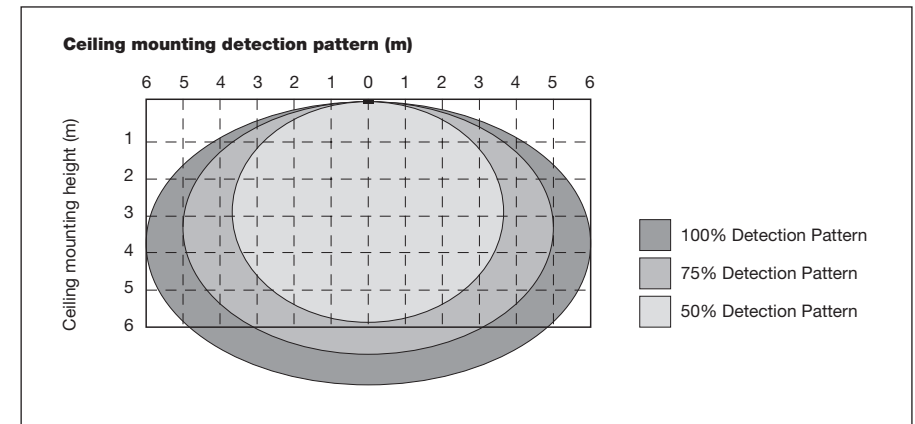
A: Settings Spindle



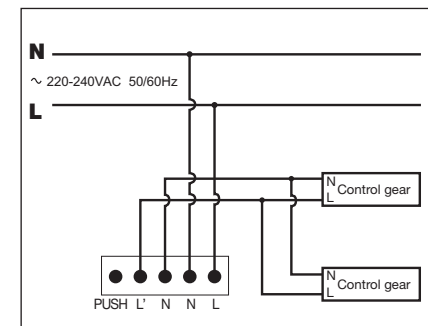
## B: Installation



## C: Detection diagram



## D: Wiring diagram



## E: Wiring diagram

