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› Maclean MCE18 Infrared Motion Detector User Manual

Maclean MCE18

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Model: MCE18

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Maclean MCE18 Infrared Motion Detector. This device is designed for automatic lighting control in various indoor environments such as homes, hotels, offices, stairwells, corridors, basements, and restrooms. It combines passive infrared (PIR) motion detection with sound activation for enhanced functionality and energy saving.

2. SAFETY INFORMATION

- Installation must be performed by a qualified electrician in accordance with local electrical codes.
- Ensure power is disconnected at the main circuit breaker before installation or maintenance.
- Do not exceed the maximum load capacity of 500W for connected lighting.
- This device is designed for indoor use only (IP20 rating). Avoid exposure to moisture or extreme temperatures outside the specified operating range.
- Do not disassemble or modify the device. This may void the warranty and pose a safety risk.

3. PRODUCT OVERVIEW

The Maclean MCE18 is a wall-mounted infrared motion detector featuring a 160° detection angle and adjustable settings for ambient light and illumination time. It also includes a sound sensor for additional activation capabilities.



Figure 3.1: Front view of the Maclean MCE18 Infrared Motion Detector. The device is white, square, and features a translucent PIR sensor lens at the top with a small green indicator light. Below the sensor is a toggle switch labeled 'ON OFF PIR +MIC'.



Figure 3.2: Close-up view of the Maclean MCE18's front panel, highlighting the PIR sensor and the 'ON OFF PIR +MIC' toggle switch. This switch allows selection between different operating modes.

4. SPECIFICATIONS

Feature	Specification
Power Supply	220-240V AC
Power Frequency	50/60 Hz
Ambient Light Adjustment	3-2000 LUX
Adjustable Illumination Time	10 seconds $\pm$ 3 seconds to 7 minutes $\pm$ 2 minutes
Detection Range	160°, 4-9 meters (at 24°C)
Mounting Height	1-1.8 meters
Sound Sensitivity	30 ~ 90 dB
Operating Temperature	-20°C to +40°C
Humidity	<93% RH

Feature	Specification
Power Consumption	0.45W (operating) / 0.1W (standby)
Maximum Load	500W
Motion Detection Speed	0.6 ~ 1.5 m/s
Material	Plastic
Color	White
Mounting Type	Wall Mount (suitable for 60mm flush-mounted box)
Protection Rating	IP20

5. INSTALLATION

The Maclean MCE18 is designed for wall mounting, typically within a standard 60mm flush-mounted electrical box. Ensure all power is off before proceeding with installation.

5.1 Wiring Diagram



Figure 5.1: Rear view of the Maclean MCE18, illustrating the electrical connection terminals. Proper wiring is crucial for safe and correct operation.

5.2 Installation Steps

1. **Power Disconnection:** Turn off the main power supply at the circuit breaker to prevent electrical shock.
2. **Prepare Wiring:** Identify the live (L), neutral (N), and switched live (L') wires from your electrical installation.
3. **Connect Wires:** Connect the wires to the corresponding terminals on the back of the MCE18 detector. Refer to the wiring diagram (Figure 5.1) for correct connections. Typically:
 - Live (L) to the 'L' terminal.
 - Neutral (N) to the 'N' terminal.
 - Switched Live (L') to the 'L' terminal (this connects to your light fixture).
4. **Mounting:** Carefully place the detector into the 60mm flush-mounted box and secure it with screws. Ensure it is flush with the wall surface.
5. **Restore Power:** Once securely installed and wired, restore power at the circuit breaker.
6. **Test Functionality:** Test the detector's operation as described in the 'Operation' section.

6. OPERATION

The Maclean MCE18 offers flexible operation modes and adjustable settings.

6.1 Operating Modes

Use the toggle switch on the front panel to select the desired operating mode:

- **ON:** The connected light will remain continuously on, bypassing the sensor.
- **OFF:** The connected light will remain continuously off.
- **PIR:** The light will activate based solely on motion detection (PIR sensor).
- **PIR + MIC:** The light will activate based on both motion detection (PIR sensor) and sound detection (microphone). This mode provides enhanced sensitivity in certain environments.

6.2 Adjusting Settings

The detector features two adjustable knobs (usually located under a cover or on the side) for fine-tuning its behavior:

- **LUX (Ambient Light Sensitivity):** This knob controls the ambient light level at which the sensor will become active. Turn it towards the 'sun' symbol for activation in brighter conditions (daylight) or towards the 'moon' symbol for activation only in darker conditions (night).
- **TIME (Illumination Duration):** This knob sets how long the connected light remains on after motion or sound is detected. Adjust it to your preferred duration, typically ranging from 10 seconds to 7 minutes.

7. MAINTENANCE

The Maclean MCE18 requires minimal maintenance to ensure optimal performance.

- **Cleaning:** Periodically wipe the sensor lens with a soft, dry cloth to remove dust or dirt that may obstruct detection. Do not use abrasive cleaners or solvents.
- **Inspection:** Regularly check for any visible damage to the casing or wiring. If damage is found, disconnect power and consult a qualified technician.
- **Environment:** Ensure the operating environment remains within the specified temperature and humidity ranges to prevent malfunction.

8. TROUBLESHOOTING

If you encounter issues with your Maclean MCE18, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Light does not turn on.	No power, incorrect wiring, LUX setting too high, no motion/sound detected, faulty bulb.	Check power supply. Verify wiring connections. Adjust LUX setting. Ensure motion/sound is within range. Replace bulb.
Light stays on continuously.	Switch set to 'ON', continuous motion/sound in detection area, faulty sensor.	Set switch to 'PIR' or 'PIR + MIC'. Clear detection area of constant activity. If problem persists, sensor may be faulty.
Light turns on too frequently or not frequently enough.	LUX or TIME settings incorrect, sensor obstructed, environmental factors.	Adjust LUX and TIME settings. Ensure sensor lens is clean and unobstructed. Consider placement if environmental factors (e.g., drafts, heat sources) are causing false triggers.
Sound detection not working.	Switch not set to 'PIR + MIC', sound sensitivity too low, microphone obstructed.	Ensure switch is in 'PIR + MIC' mode. Check for sound sensitivity adjustment (if available, not explicitly listed but common). Ensure microphone is not covered.

If the problem persists after trying these solutions, please contact customer support or a qualified electrician.

9. WARRANTY AND SUPPORT

Warranty information for the Maclean MCE18 Infrared Motion Detector was not provided in the product data. Please refer to your purchase documentation or contact your retailer for details regarding warranty coverage and support services.

For technical assistance or further inquiries, please contact Maclean customer support through their official channels or the retailer from whom you purchased the product.

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