

## INTRODUCTION

The MDO-I is an intelligent presence detector switch, intended to switch lighting on/off. To detect presence, the MDO uses a pyro-electric infrared (PIR) sensor and microphone.



Motion detection



Sound detection

When the MDO-I is switched off, it will switch on the lighting as soon as any motion is detected. Subsequently, sound detection will also become active. Together they determine whether there is still a presence in the room. As the MDO-I is not intended to switch off the moment presence is no longer detected, it uses a so-called turn-off delay. The motion sensor as well as the sound sensor has its own timer, which is always reset with a matching detection.

If the time for one of these timers expires, the lighting is switched off.

The MDO-I features a twilight sensor with which it is possible to stop the light from being switched on if the amount of daylight exceeds a certain value.

## CHOOSING THE LOCATION

The MD-O can be installed on a ceiling and is available in a build-in [MDO-I] and a surface mount [MDO-O] version. For both versions, the detection angle of the motion sensor is approximately 130°-140°. This means a diameter of 6 - 7 metres at a ceiling height of 2.5 metres. The optimal installation height is 2.5 - 3 metres. A higher installation position leads to reduced sensitivity of the motion sensor.

**Note:** At the limits of the detection range, the sensitivity of the motion sensor is always impaired. To get the best performance, the MDO-I should be placed in the middle of the room. The following factors have an adverse effect:



- The direct air flow of, for example, warm air heating or air conditioning.
- Direct radiation [lamps, reflected sunlight [for example by water].

For the horizontal distance from MDO-I to access to the room, allow at least 2.5 metres

## INSTALLATION ON CEILING

Rotate the sensor unit and remove it from its holder.

Make a round opening in the ceiling of 73mm.

Connect the provided connector kit above the ceiling.

Guide the cable/connector of the MDO-I through the opening in the ceiling.

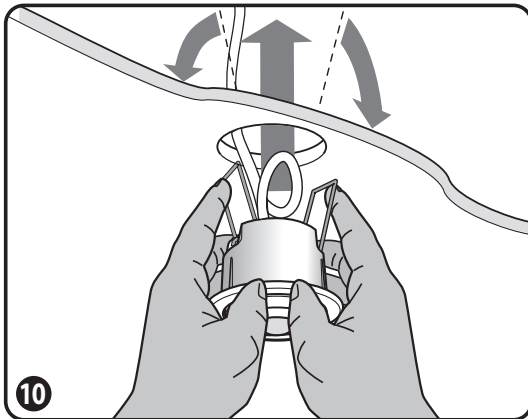
Connect it to the sensor unit again. Check whether the connector has been installed correctly [it 'clicks' into place when pushed].

Place the unit back in the holder: rotate it clockwise until the bayonet fitting is seated correctly.

Secure the cable to the holder with a cable tie.

Push the springs up with both hands and guide the holder through the opening in the ceiling.

Release the springs. With soft ceilings, you can choose to place a firm support under the springs.

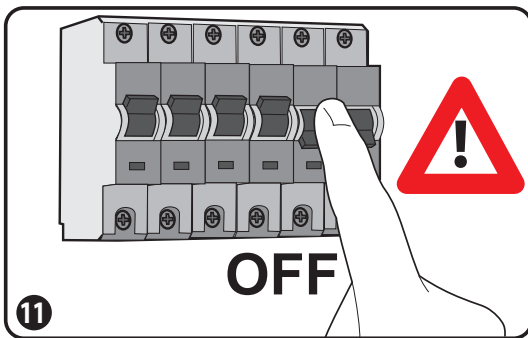


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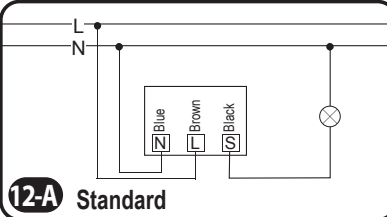
## SETTINGS

### Activation method

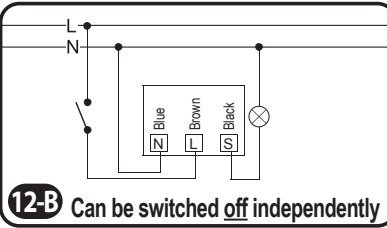
As a standard, the MDO-I is switched on when motion is detected. Motion and sound detection is then used to determine the moment it should be switched off again.



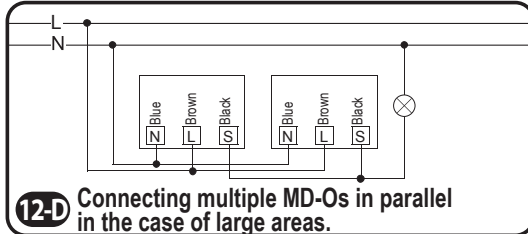
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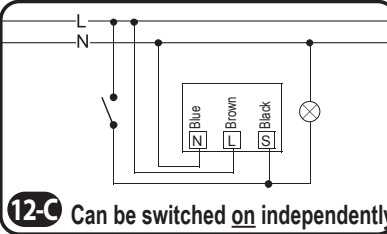
12-A Standard



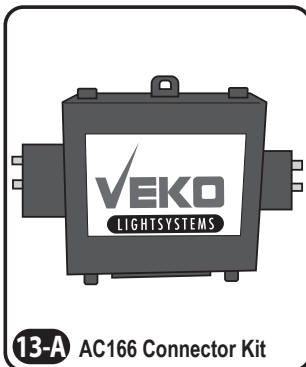
12-B Can be switched off independently



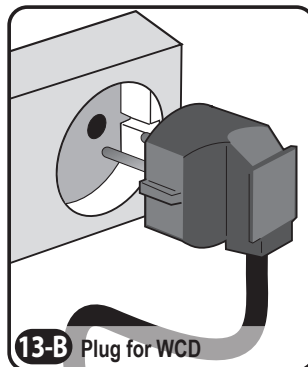
12-D Connecting multiple MD-Os in parallel in the case of large areas.



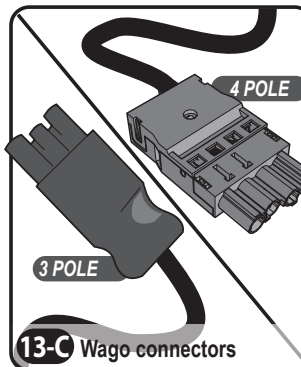
12-C Can be switched on independently



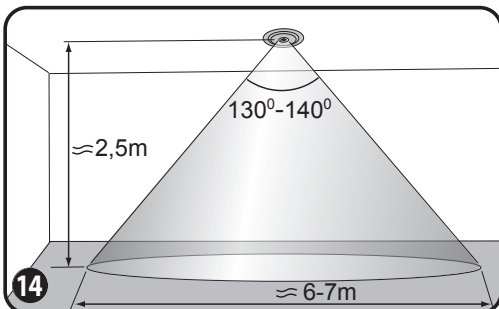
13-A AC166 Connector Kit



13-B Plug for WCD



13-C Wago connectors



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## CONNECTING

### Disconnect the mains before installation!

Standard connection: Connect the phase [L] to the brown wire, the switch wire [S] the black wire and neutral [N] to the blue wire.

In figure B and C, the order of connection is the same as that in figure A.

if power to the MDO-I is switched on, the lighting will consequently always be switched on.



Variant B is not allowed if lighting with an inductive nature is switched on [such as conventional ballasts].

Do not use 'cold start' ballasts if the MDO-I is expected to switch the lighting more than 2 times per day.

The MDO-I sensor can be connected to the connecting cable with the supplied VEKO connection kit [13-A].

Using this kit, you can connect the MDO-I to:

- plug for wall socket [13-B]
- a Wago connector [13-C]

## SAFETY

Disconnect the mains before installing the MDO-I.

Any work on the 230V mains must be carried out by qualified electricians only.

All installation instructions must be followed. If in any doubt, please contact the Veko lightsystems Technical Department

When connecting the wiring, always take special note of corresponding colours. Take all technical specifications of the appliance into consideration.

Do not use 'cold start' ballasts if the MDO-I is expected to switch the lighting more than 2 times per day.

The MDO-I is not certified for alarm purposes. For questions about installation send an e-mail to: [montage@veko.nl](mailto:montage@veko.nl) or call +31 (0)224- 273235.

## TECHN. SPECIFICATIONS

Nominal voltage:	230V ~ ± 10%, 50Hz
Maximum nominal current:	6A at cos = 1 [2A at cos = 0.4]
Own consumption [switched off/on]:	< 1W / < 4W
PIR detection angle:	Around 130° - 140°
Turn-off delays:	10 secs. - 45 mins. [motion] 2 mins. - 12 mins. [sound]
Ambient temperature:	0-40°C
Protection class:	IP20
Factory setting:	15 mins. [motion] 6 mins. [sound]

Subject to design changes.

