

B.E.G. LUXOMAT® RADAR



Installation and Operating Instruction for B.E.G. - RADAR-motion detectors HF-MD1

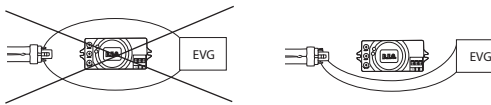
1. Product information

- High frequency motion detector, designed for surface mount and installation in lamps
- Temperature-independent detection
- Detection can be made through various materials
- Range, twilight setting and light-on time set via dials

2. Function

B.E.G. high-frequency motion detectors transmit and receive waves with a frequency of 5.8 GHz. Based on the Doppler effect, the change in frequency of the waves reflected by a moving object are measured and the result is used to detect movement. The detection area depends on the size and speed of the moving object. Since high-frequency waves can pass through walls, when HF technology is used it is not always possible to clearly limit the detection area to one room. As a result, people in adjacent rooms may also be detected and activate the light. Metal surfaces close to the installation location of the detector can lead to extremely strong reflections of the signal, which may prevent the HF detector from switching reliably and/or change the detection area.

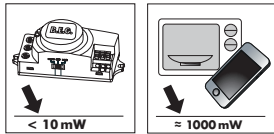
When installing the detector in lamps, observe a distance of at least 80 mm from electronic ballasts. When internally wiring the lamps, ensure that the HF detector is not installed between the individual wires.



Note: Since this functional principle can affect the detection quality, always check the suitability of this technology for your application.

Transmitter output

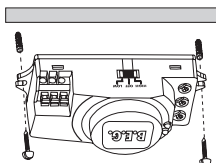
This is used in roughly the same frequency range as for WLAN. The high-frequency output of the HF sensor is approx. 10 mW – that's just 1.00th of the transmission power of a mobile phone or microwave oven.



3. Safety information

- ⚠ **Work on the 230V mains supply may only be carried out by qualified professionals or by instructed persons under the direction and supervision of qualified skilled electrical personnel in accordance with electrotechnical regulations.**
- ⚠ **Disconnect the power supply before attempting any work on the unit!**
- ⚠ **This device is not suitable for disconnection.**
- ⚠ **The total number of switchable loads is limited due to high inrush currents of electronic ballasts and LED drivers. In case of a large number of connected loads please use an external contactor.**

4. Installation

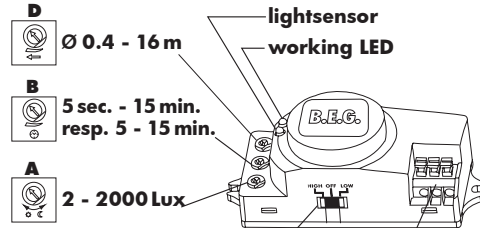


Note: Since movement may also be detected through walls, the detector is ideally suited to flush-mount installation or installation above suspended ceilings.

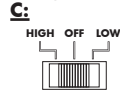
Application: Installation in light fittings with sufficient light detection for the light sensor, especially for rooms with poor line of sight contact, detection also possible through lightweight partitions.

5. Putting into operation / Settings

Potentiometers



Range switch



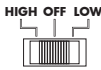
N L' L Connections:



Switch-on threshold (Potentiometer A)
The chosen light response threshold can be infinitely varied from approx. 2 - 2000 Lux.
Symbol "MOON" = dusk-to-dawn operation
Symbol "SUN" = daylight operation



Follow-up time (Potentiometer B)
The follow-up time can be set for a duration of 5 seconds - 15 minutes or 5 - 15 minutes. Any movement detected before this time elapses will re-start the timer. There will be no light measurement (daytime operation) for as long as the motion detector is switched on.
Note: After the light switches OFF, it takes approx. 1 sec. before it is able to start detecting movement again.



Range / Sensitivity (Switch C, Potentiometer D)
Range / sensitivity of the sensor can be reduced over switch C and potentiometer D.
Switch C = "LOW": Range can be adjusted between approx. 0.4 - 8 m Ø.
Switch C = "HIGH": Range can be adjusted between approx. 6 - 16 m Ø.
Switch C = "OFF": Detector is switched off.
Note: We recommend to adjust the range starting at the maximum and then reducing it, if not time delay may occur while setting the range.

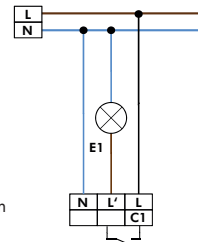
Test setting

In order to adjust the detection range during the day, the switch-on threshold must be set to day ("sun" symbol) and follow-up time should be set to the minimum (approx. 5 sec.).

6. Connections

Schematic diagram - when connecting the detector, please respect the labelling of the terminal connections at the detector!

Standard mode with 1-channel motion detector



Connect power supply as indicated in the terminal connection:

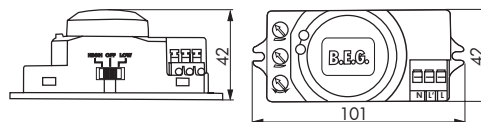
Phase = L

Connected phase = L'

Neutral conductor = N

Note: This appliance is made out of synthetic material and of class II, it does not need a protective conductor.

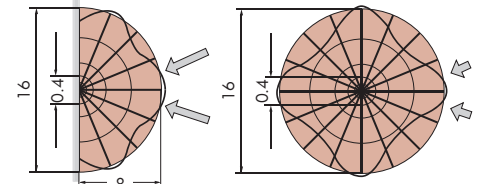
7. Dimensions



8. Range of Coverage max. (Mounting height = 2.50 m / Switch C = "HIGH")

Wall mounting

Ceiling mounting



Walking towards = Best detection

9. Technical data

Power supply:	230VAC ±10%
Switching power:	1200W, cos φ = 1 600VA, cos φ = 0,5 μ-Contact
Follow-up time:	HF-MD1 approx. 5 sec. - 15 min. HF-MD1 ESL approx. 5 - 15 min.
Switch-on threshold:	2 - 2000 Lux
HF-transmitter consumption:	5.8 GHz, < 10mW
Power consumption:	< 1W
Protection:	IP20 (only for inside use)
Class:	II
Ambient temperature:	-15°C to +50°C

Note: When taking the detector into operation or after each power failure, the motion detector will switch on for a duration of 3 seconds.

EU Declaration of Conformity:



This product respects the directives concerning

1. electromagnetic compatibility (2014/30/EU)
2. low voltage (2014/35/EU)
3. restriction of the use of certain hazardous substances in electrical and electronic equipment (2011/65/EU)
4. radio equipment (Radio Equipment Directive-RED) (2014/53/EU)

10. Article / Part nr.

Type	Part nr.
HF-MD1	94401
HF-MD1 ESL	94417

11. Fault-finding / Troubleshooting

Light not illuminated

Switch-on threshold not reconcilable with the given situation
Adjust switch-on threshold with potentiometer A.

Light illuminated constantly during darkness

Constant movement activity in the area of coverage
If movements caused by sources of interference (animals, ventilation, etc.), remove from area of coverage
Reduce range / sensitivity with "SENS" potentiometer D.

Light illuminated constantly, also during the day

Switch-on threshold not reconcilable with the given situation
Adjust switch-on threshold with potentiometer.
Check the installation location

Light will not switch

Mechanical
Check bulb
Check connection
Check the installation location

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