

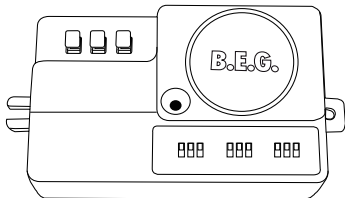
B.E.G. LUXOMAT® RADAR

Installation and Operating Instruction for B.E.G. - RADAR-detector HF-H-MD1-FM Standard

1. Mounting preparations

Work on the 230 V 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 supply before installing!



2a. Function

Contrary to motion detectors with passive infrared technology, high frequency motion detectors emit a 5.8 GHz signal.

The measuring principle is also different: the change in frequency of waves reflected by a moving object is measured and in this way a movement is detected (as is known by everyone from a passing car with its siren switched on, e.g. police car or fire engine).

This principle works better when the signal source is frontally approached, and for that reason radar motion detectors are **more sensitive to frontal approach** compared to lateral passing by.

Moreover, this process is almost temperature-independent, whereas temperature is the basis for the PIR motion detectors' temperature measuring process.

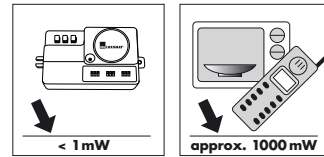
Infrared waves do not pass through walls, but high frequency waves do. As a consequence, a clearly sharp demarcation of a room is not possible with HF technique, as it is with e.g. PIR technique. Therefore, persons in neighbouring rooms may also be detected and lights may be switched on.

After detection of a motion, the detector switches on the lights during the predefined period of time (approx. 5 sec. - 25 min.).

Please note:
To optimise the service life of fluorescent compact lights, we recommend a minimum switch-on time of 5 min. for the HF detector.

2b. Transmitted power / delete

Almost the same range of frequency as in W-LAN is used. The high-frequency output of the HF sensor is approx. 1 mW - that's just 1/10th of the transmission power of a mobile phone or microwave oven.

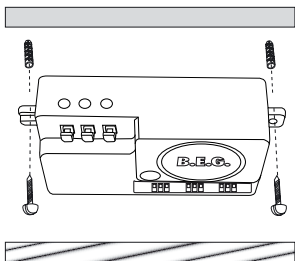


3. Article / Part nr.

Type	Part nr.
HF-H-MD1-FM Standard	94431

4. Installation

For installation of the device, the in-house fuse has to be turned off!



Mark drill holes, paying attention to any existing wiring in the wall/ceiling. Drill the holes, insert wall plugs. Screw enclosure into place.

Note: Since detection through walls is also possible, this detector is particularly suited for a concealed in-wall mounting or for mounting above a false ceiling.

5. Putting into operation / Settings (Fig. 1)

Twilight setting (DIP switch A)

Adjustments by DIP switch from 2 - 30 Lux.

- I = 2 Lux, Operation in darkness only
- II = 5 Lux, Operation in darkness only
- III = 20 Lux, Twilight operation
- IV = 30 Lux, Twilight operation
- V = Daylight, photo-electric switch off, light on

Time setting (DIP switch B)

The light can be set to stay ON for any period of time between approx. 5 sec. and a maximum of 25 min. Any movement detected before this time elapses will re-start the timer. There will be no twilight evaluation (daytime operation) for as long as the motion detector is switched on.

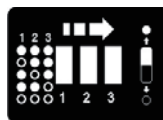
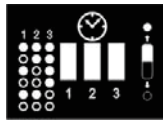
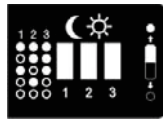
- I = 5 sec.
- II = 30 sec.
- III = 180 sec.
- IV = 300 sec.
- V = 15 min.
- VI = 25 min.

Range / Sensitivity (DIP switch C)

The detection range is directly set at the sensor. The higher the sensitivity, the tighter the detection range.

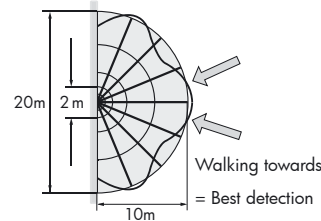
Note: We recommend to adjust the range starting at the maximum and then reducing it, if not time delay may occur while setting the range.

- I = max. range of 100% (10 m)
- II = Range up to 75%
- III = Range up to 50%
- IV = Range up to 30%
- V = Range up to 10%

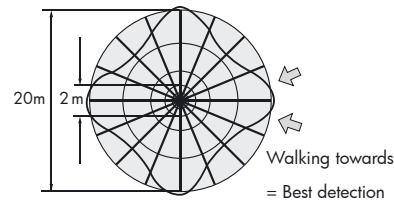


6. Range of Coverage max. (Mounting height = 2.50 m)

Wall mounting



Ceiling mounting

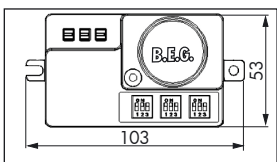
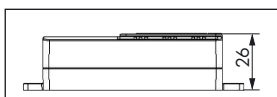


7. Technical data

- Power supply: 230 V~ +6%/-10%
- Switching power: 1000 W
- Time settings: approx. 5 sec. - 25 min.
- Photo electric switch: 2 - 30 Lux
- Range: r = 1 - 5.5 m
- Detection area: 360°
- Mounting: wall or ceiling installation
- HF-transmitter consumption: 5,8 GHz, <math>< 1\text{ mW}</math>, ISM band
- Power consumption: <math>< 1\text{ W}</math>
- Protection/class: IP20 (only for inside use) II/C E
- Dimensions: H 26 x L 103 x W 53 mm
- Ambient temperature: -35°C to +70°C

Note: When taking the detector into operation or after each power failure, the motion detector will switch on for a duration of the set time-value.

CE Declaration of conformity: The product complies with the low voltage recommendation 2006/95/EC and the EMV recommendation 2004/108/EC.



8. Connections (Fig. 2)

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.

Attention: To ensure a long lifespan, we advise the use of an external relay for lamps with a long starting current.

9. Fault-finding/ Troubleshooting

Light not illuminated

Twilight-value not reconcilable with the given situation

Adjust twilight-value with regulating screw

Light illuminated constantly during darkness

Constant movement activity in the area of coverage

If movements caused by sources of interference (animals, ceiling fans, curtains etc.), remove from area of coverage

Reduce range / sensitivity with "SENS" regulating screw

Light illuminated constantly, also during the day

Twilight-value not reconcilable with the given situation

Adjust twilight-value with regulating screw

Light will not switch

Mechanical

Check bulb, Check connection

Fig. 2

Connections:

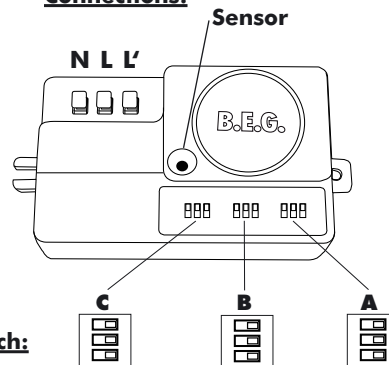


Fig. 1

DIP switch:

r = 1 - 10 m 5 sec. - 25 min. 2 - 30 Lux