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

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

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 adjoining 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.

2b. Transmitter output

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

4. Installation

For device installation, the in-house mains fuse must be disconnected.

Example applications: Installation in lamps, light-switch sockets or behind wall-cladding or ceiling lining. If no light falls on the light sensor due to covered installation, the detector operates without light sensitivity.

5. Putting into operation / Settings (Fig. 1 and 2)

Twilight setting (Rotary control dial A): The chosen light response threshold can be infinitely varied from approx. 2-2000Lux
Symbol: 'MOON' = dusk-to-dawn operation
Symbol: 'SUN' = daylight operation

Time setting (Rotary control dial B): The light 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 twilight evaluation (day-time 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, Rotary control dial D): Range/sensitivity of the sensor can be reduced over switch C and potentiometer D.

Switch C = "LOW": Range can be adjusted between approx. 0.2 - 4m Ø.
Switch C = "HIGH": Range can be adjusted between approx. 3 - 8m 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 twilight value must be set to day ("sun" symbol) and time should be set to the minimum (approx. 5sec.).

6. Typical detection area [in m]

(Mounting height = 2.50m / Switch C = "HIGH")

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

The range depends on the size and speed of the object.

7. Technical data

Power supply: 230VAC
Switching power: 1200W
Time settings:
HF-MD1 approx. 5sec. - 15 min.
HF-MD1 ESL approx. 5 sec. - 15 min.
Dämmerungspegel: 2 - 2000Lux
Range/detection area: Ø = 0.4 - 8m
Detection angle: 360°, resp. 160°
Mounting: wall or ceiling installation
HF-transmitter consumption: < 10mW
Power consumption: < 1W
HF-MD1 ESL
Power supply: 230VAC
Switching power: 1200W
Time settings:
HF-MD1 approx. 5sec. - 15 min.
HF-MD1 ESL approx. 5 sec. - 15 min.
Dämmerungspegel: 2 - 2000Lux
Range/detection area: Ø = 0.4 - 8m
Detection angle: 360°, resp. 160°
Mounting: wall or ceiling installation
HF-transmitter consumption: < 10mW
Power consumption: < 1W

8. Connections (Fig. 3)

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 materials and class II. It does not need a protective conductor.

Attention: To ensure a long service life for the motion detector, control lamps with high starting currents via an external relay.

5. Fault-finding / Troubleshooting

Twilight-value not reconcilable with the given situation:
Adjust twilight-value with regulating screw
Light illuminated constantly, also during the day
Constant movement activity in the area of coverage
Adjust twilight-value with regulating screw
Check the installation location (see Section 2)

Light not illuminated
Test setting
Light illuminated constantly also during the day
Twilight-value not reconcilable with the given situation:
Adjust twilight-value with regulating screw
Check the installation location (see Section 2)
Check bulb
Check connection
Check the installation location (see Section 2)

Eaton

Wheatley Hall Road, Doncaster, South Yorkshire, DN2 4NB

Sales
T: +44 (0)1302 303103
F: +44 (0)1302 303155
E: sales@cooper-ls.com

General
T: +44 (0)1302 321541
F: +44 (0)1302 321520
E: technical@cooper-ls.com

International Sales
T: +44 (0)1302 303250
F: +44 (0)1302 303251
E: export@cooper-ls.com

K1065V