B.E.G. LUXOMAT® PD4-M-1C/-S-GH-SM

Installation and Operating Instruction for B.E.G. - Occupancy detectors PD4-M-1C/-S-GH-SM
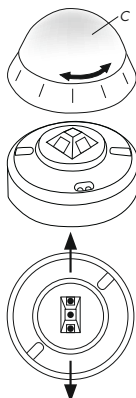
1. Mounting preparations

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 electrical regulations.

Disconnect supply before installing!

The device is not suited for safe disconnection of the mains supply.

When in Master / Slave mode of operation, the Master-appliance must always be installed at the location where there is least daylight.

2a. Installation of the LUXOMAT® PD4-M-1C-GH-SM

The detector must be installed on a solid and level surface. The circular cover ring must be removed prior to assembly. To do this, twist the lens (C) anti-clockwise through approximately 5° and lift off.

Having connected up the wires in accordance with regulations, secure the detector with 2 screws. After installation replace the lens and lock (turn clockwise). Mains to be connected.
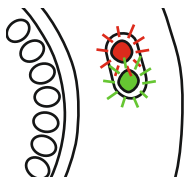
ATTENTION: Install the unit in such a manner that both markings on the housing are positioned in the longitudinal axis of the area to be monitored (e.g. high-bay corridors)

2b. Range in dependence from the mounting height

Mounting height	Range (circular detection) T=17°C	
	Walking across	
2.00 m	r = 7.50 m	Ø = 15.00 m
2.50 m	r = 9.00 m	Ø = 18.00 m
3.00 m	r = 11.00 m	Ø = 22.00 m
3.50 m	r = 13.00 m	Ø = 26.00 m
4.00 m	r = 15.00 m	Ø = 30.00 m
4.50 m	r = 17.00 m	Ø = 34.00 m
5.00 m	r = 18.50 m	Ø = 37.00 m
6.00 m	r = 18.50 m	Ø = 37.00 m
7.00 m	r = 18.50 m	Ø = 37.00 m
8.00 m	r = 22.00 m	Ø = 44.00 m
9.00 m	r = 22.00 m	Ø = 44.00 m
10.00 m	r = 22.00 m	Ø = 44.00 m

r=radius / Ø=diameter

2c. Self test cycle

The product enters an initial 60-second self-test cycle, when the supply is first connected. The occupancy detector is ready for operation.

During the selftest cycle, the following settings can be made:

⚙ Light stop active: **(A)**

RESET Light off active: **(B)**

(see point 7)

Option:

IR-PD4-GH

Wall bracket for remote control IR-PD4-GH

IR-PD-Mini

3. Putting into operation / Settings

Factory settings
The PD4-M-1C-GH is preset with time setting 5 min. and twilight switch 1000 Lux.
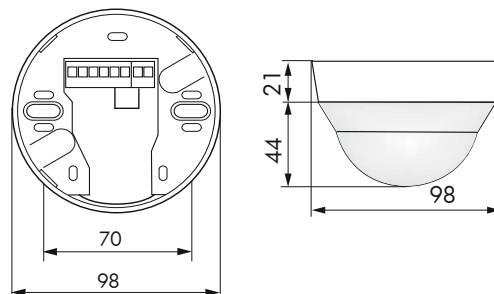
Attention:
Changes to the settings can only be made by remote control IR-PD4-GH.
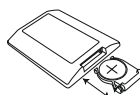
Pulse spacing PD-Slave

2 or 9 seconds can be set for the pause between 2 pulses sent to the master. The setting can be made with activated (✸) or deactivated (○) LED indicator. For devices with a separate slave input, 2 sec. can be set.

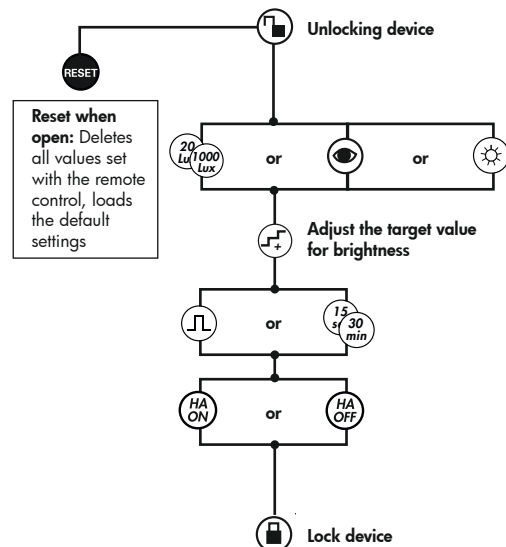### 4. PD4-M-1C-GH: Settings carried out using remote control (optional)

Remote control LUXOMAT® IR-PD4-GH

1. Check Battery:
Open battery compartment by pressing the plastic springs together and removing the battery-holder.

Settings for master with remote control

Settings for relay
Channel 1:

Reset when open: Deletes all values set with the remote control, loads the default settings

- Unlocking device
- 20Lux/1000Lux **or** 👁 **or** ☀
- Adjust the target value for brightness
- ⊓ **or** 15s/30min
- HA ON **or** HA OFF
- Lock device

5. PD4-M-1C-GH-SM - Dimensions

Explanation of button functions

Target value for brightness (20Lux/1000Lux)

Automatic reading in of the current light value as a new target light value (👁)

Sun button - specified twilight value (☀)
Daytime operation

Lag time (15sec/30min)

Pulse function, fully automatic mode active (⊓)

Switch between fully automatic/semi-automatic mode (HA ON / HA OFF)
Semi-automatic mode active: Red + green LEDs flash 3x every 5 seconds

Adjust the target value for brightness
to reach the calculated target value, increase the light value by approx. 50 lux each time the button is pressed

Test mode when closed:
exited automatically after 3 minutes
Test mode when open:
not exited automatically
To deactivate: press reset

Reset when closed
The lighting relay is switched off, i.e. opened and the lag times are reset.

Light on/off when closed
(A) The light remains on/off until movements are detected in the detection area. After the last detected movement, the light remains off for the duration of the set lag time. **(B)** If the "Light stop" function was activated in the selftest cycle, the light is switched off for 5 seconds (red and green LEDs flash). The device then returns automatically to the selected operating mode (fully or semi-automatic mode).

6. Fully / Semi automatic mode
(for IR-PD functions see page 1)

Fully automatic operation **HA OFF**
In this operating mode, the lighting switches automatically on and off for increased comfort, depending on presence and brightness.

Semiautomatic operation **HA ON**
(Semiautomatic can only be activated via the remote control!)
In this operating condition, in order to gain increased savings, the lighting is energized only after being manually switched on. Switch-off takes place automatically.

The semiautomatic mode basically behaves like the fully automatic one. However, the difference is that switching-on must always be carried out manually!

After automatic shutdown, motion detection is active for 15 seconds in semi-automatic mode.

As many (closer-contact) buttons as desired can be wired in parallel on the "S" button input (ON / OFF).
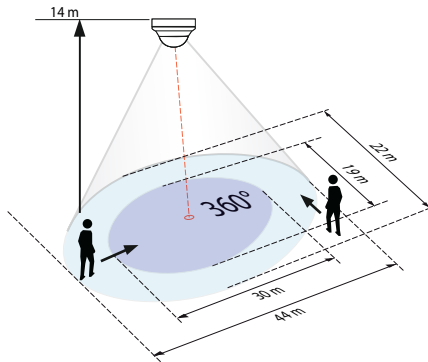
7. Manual Switching ☀

(A) To switch the light on and off, press the button briefly. The light remains switched on or off for as long as people are detected plus the set lag time.
(B) If the "Light stop" function was activated in the selftest cycle, the light remains off for 5 seconds after shutdown (red and green LEDs flash). Then the automatic function is active again.

8. Range of Coverage

9. Technical data PD4-Master-1C-GH

Sensor and power supply in one
Power supply:	230 V~ ±10 %
Power consumption:	< 1 W
Ambient temperature:	-25°C to +50°C
Degree of protection/class:	IP20 / II
Settings:	by remote control
Light values - IR-PD4-GH:	10 - 2000 Lux
Extension of the detection area:	with Slaves
Area of coverage:	circular 360°
Range of coverage Ø H 10 m / T=17°C:	44 m tangential, 30 m towards
Recommended height for mounting:	2 - 10 m
Light measurement:	daylight and artificial light
Lux values:	10 - 2000 Lux

• Relay/Channel 1 for light-connection
Type of contact:	NOC/with pretravel tungsten contact
Contact load:	2300 W cos φ =1 / 1150 VA cos φ = 0.5, μ-Contact
Time-settings:	15 sec. - 30 min. / Test / Impulse
Dimensions H x Ø [mm]:	98 x 65

Technical data PD4-Slave-GH
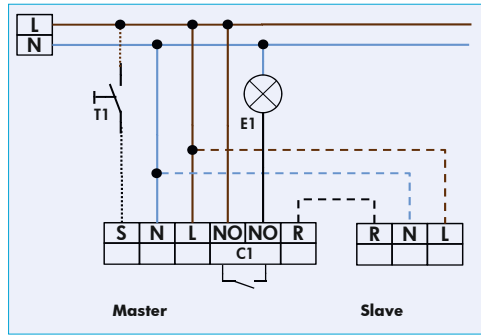|	
Power supply:	230 V~ ±10 %
Impulse output:	Optocoupler max. 2 W
Impulse duration:	2 sec. or 9 sec.
Dimensions:	see above

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

10. Wiring diagrams

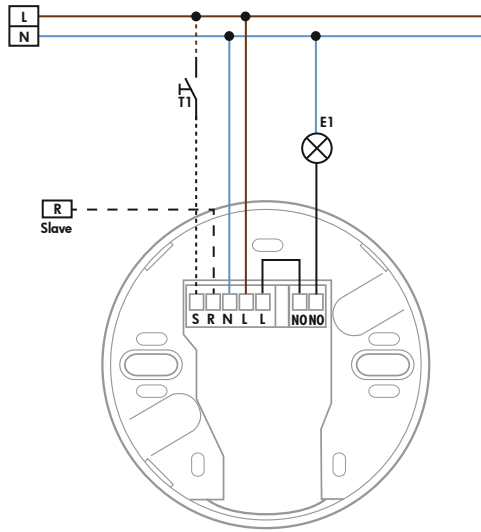**Standard mode with master 1-channel occupancy detectors (NO) with R and S terminal**

Master   **Slave**

Optional
T1 = NO-button for semi automatic mode;
Extension of the detection area with Slave-devices

11. PD4-M-1C-GH - Connections

12. Article / Part nr. / Accessory

Type	SM
PD4-M-1C-GH (Master)	92245
PD4-S-GH (Slave)	92265

LUXOMAT® Remote control:
IR-PD4-GH (incl. wall bracket)	92215
IR-PD-Mini	92159

Accessory:
BSK Ball basket guard	92199
Wall bracket for remote control as replacement	92100
IP54 Socket	92161

13. LED-functional indicators, fault-finding

The functional indicators in the case of the **LUXOMAT®** PD4-M-1C-GH (red and green LED's)

Red and green LEDs for display of the selftest cycle (For 60 seconds after the power is switched on)
Red and green LEDs flash 1x per second
EEPROM / memory empty

Red and green LEDs flash 2x per second
EEPROM / memory written

Red LED as status display
Red LED flashes irregularly
Movements are detected in the detection area

Red LED flashes 2x per second
Detector detects brightness, light off (depending on the operating mode)

Red LED does not light up
Detector detects darkness, light on (depending on the operating mode)

Red LED as acknowledgement for commands from the remote control
Red LED lights up for 1 second
Valid signal received

Red LED lights up for 0.25 seconds
Command not accepted, detector is locked

Red LED flashes extremely quickly
Command not accepted, for example if twilight value is too light or too dark

Red and green LED as acknowledgement for commands from the remote control
Red and green LEDs flash 3x briefly every 5 seconds
Indicates semi-automatic mode

Red and green LEDs light up alternately
Determining the light value for automatic shutdown with sufficient daylight. (This is only indicated with a set lag time of 30 minutes.)

B.E.G.