

## Installation and Operating Instruction for B.E.G. - Occupancy detectors PD4-M-DIM and PD4-M-DUO-DIM

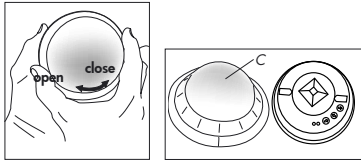
### 1. Mounting preparations

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 supply before installing!

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

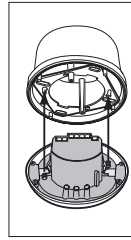
### 2a. Installation of the LUXOMAT® PD4-DIM-SM



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) anticlockwise 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.

### 2b. Installation of the LUXOMAT® PD4-DUO-DIM-FM with socket for Surface Mounting

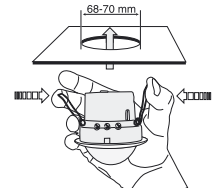


Before mounting the base, the enclosed mounting plate must be mounted true to side, i.e. the writing must be legible. Now fix the base on ceiling or wall, but first put the cable through one of the cable openings provided.

The detector must be mounted on a flat, solid surface.

Next prepare the sensor part by screwing in both fixing screws according, then connect the cable. Now insert the sensor part. Press beyond the spring housing pressure so that the sensor part firmly locks in place.

### 2c. Installation of the LUXOMAT® PD4-DIM and PD4-DUO-DIM-FC



A circular opening of diameter 68 – 70 mm must be produced in the ceiling. Having connected up the cables in accordance with regulations, the detector is inserted into the opening as shown in the drawing opposite and fixed into position with the assistance of the spring clips.

### 2d. Installation of the LUXOMAT® PD4-DIM and PD4-DUO-DIM-FM

The detector can be installed in conventional inlet-sockets mounted on the ceiling.

The assembly plate enclosed must be stripped off prior to installation and secured to the ceiling using 4 screws and ensuring that it flat. Having connected up the cables in accordance with regulations, the detector can be placed in position as shown in the drawing opposite and, applying a little pressure, can then be locked into position with the assistance of the spring clips.

(Please refer to the connection diagrams)

### 3. Putting into operation / Settings

#### Self test cycle

After an initial 60-second self-test cycle, the LUXOMAT® PD4-DIM/-DUO-DIM is ready for operation.



#### Follow-up time for light control

The time can be set infinitely variably at between 1 and 30 minutes. The time-setting is valid for both DIM-Out-puts of the PD4-DUO-DIM.

Symbol **TEST**: Test mode (Every movement switches on the light for a period of 1 second, switching it off for a period of 2 seconds after that regardless of the level of brightness)

#### Twilight-switch for light control (relay 1)

The switch-on value for the light can be set at between 40 and 2000 Lux. Using the rotary control, the luminance set points can be set as desired.

Symbol ☾: Night-time operation

Symbol ☀: Daytime/Night-time operation

#### Orientation lighting (only PD4-M-DIM)

This rotary controller serves to determine the working time of the orientation lighting (fixed to 20%).

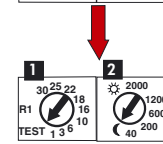
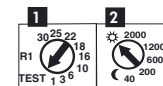
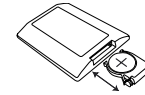
“ON” for permanent orientation lighting.

“OFF” for deactivation of orientation lighting.



### 4. Settings carried out using remote control (optional)

#### Remote control LUXOMAT® IR-PDim



#### 1. Check Battery:

open battery compartment by pressing the plastic springs together and removing the battery-holder.

#### 2. IMPORTANT

Please pay attention, that the setting is Potentiometer 1 at “TEST” and Potentiometer 2 **not** at “SUN”. All values which have been programmed using the remote control will be deleted in the event of power failure in the position “TEST/SUN”. Please switch Potentiometer 2 over to “MOON” or any other value.

#### Caution:

Settings with remote control supersede the settings by courtesy of potentiometers.

### Option:



Wall bracket for remote control IR-PDim

#### Unlocking device



#### Luminance set point for constant light regulation



#### Dimming

The following approach will prove useful when setting a command value (example workplace): Place a luxmeter flat on the desk, then, using the remote control IR-PDim, adjust the light up or down by pressing the keys max or min until the desired command value which best suits your requirements has been reached.

#### Automatic reading in the current light value as new luminance set point

Individual light value 2 - 2500 Lux

#### Follow-up time

1 upto 30 min.

#### Orientation lighting and its follow-up time

OFF button: No orientation light

Grey button: Programming the switch-off delay time

On button: Orientation light is permanently activated.

Note: During the orientation light phase, the constant light regulation is also active: if there is sufficient brightness, dimming occurs < 2 V and, if applicable, the lighting is switched off.

#### Preset / user mode => (see page 2, point 6)

Fully automatic / semi automatic mode => (see page 2, point 5)  
Semi automatic: green LED,  
Fully automatic: red LED on for ca. 3 sec.

#### Resetting when open

All values which have been programmed using the remote control IR-PDim are deleted, and those values which have been set by potentiometer are activated.

#### Lock device

#### Lock device



#### Test mode

Reset to deactivate



#### Resetting when closed

The lighting relay is switched off, i.e. opened and the follow-up times reset.



#### Permanent protection against sabotage

This function blocks the unit permanently (green LED is illuminated). This operating mode can only be activated during the period of 5 seconds after pressing the “lock” button. This status will only permit actuating the function “Light on / Light off”.

The procedure for leaving this mode is as follows:

1. Switch off the current
2. Apply current for 31 - 59 seconds
3. Switch of the current again
4. Apply current
5. Open detector



#### Light on / off

The light will remain switched on/off for as long as movements are detected in the areas of coverage. Once the last movement has been detected, the light will remain on for the duration of the follow-up time as per setting.

The appliance will then return independently to the mode selected (Fully or Semi-automatic).

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## 5. Fully / Semi automatic mode

(for IR-PDim functions see page 1)



### Fully automatic operation

In this operating mode, the lighting switches automatically on and off for increased comfort, depending on presence and brightness.

### Semiautomatic operation

(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!

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

## 6. Manual Dimming - Preset / User

(for IR-PDim functions see page 1)



You can dim manually by pressing the pushbutton for a long time (> 2 sec). When the button is released, the current dimming value is retained. Upon renewed dimming, the dimming direction is reversed.

**PRESET** – the luminance set point is set during start-up operation by the installer and remains unchanged. The luminance set-point configured through manual dimming is only applied for the time being.

#### Caution:

The constant light regulation is now deactivated! The currently set artificial light is retained independent of the ambient/daylight brightness! After switching off and then back on, the originally set luminance set-point is reset = constant light regulation is activated.

### USER - can only be activated via the remote control!

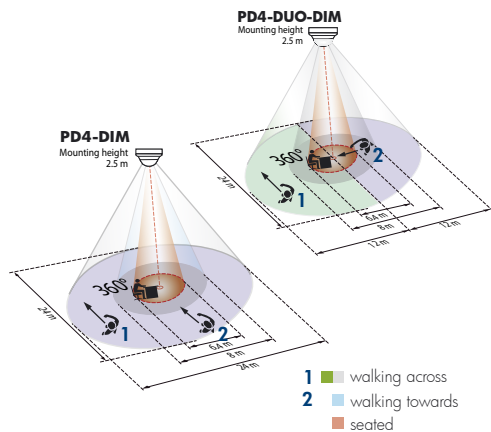
The luminance set-point is changed upon each manual dimming and re-adjusted by the user (Conformation through relay clicking!)  
The constant light regulation remains activated!

## 7. Manual Switching

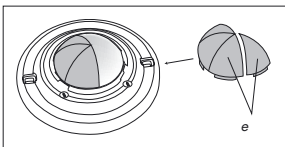


You can switch the lighting on and off manually by pressing the pushbutton for a short time. It will stay on or off as long as people are detected plus the configured follow up time.

## 8. Range of Coverage



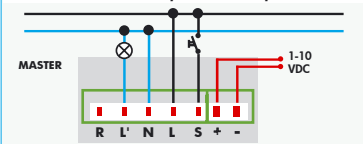
## 9. Exclude sources of interference



In case the sensing area of the LUXOMAT® PD4-DIM/ DUO-DIM is too large or areas are being covered that should not be monitored, the range can be reduced or limited through use of the enclosed masking clips (e).

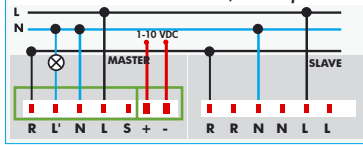
## 10. Wiring diagrams

### Terminal connection for push button operation



**Push button operation** For manual switching push the button only a short time (0.2 - 0.5 sec.)! To dim push the button until the wished light level is arrived.

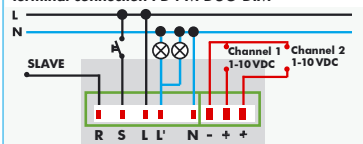
### Terminal connection for master-/ slave-operation



**Master-/ slave-operation.** The master is the only one to read the light level and to switch the connected loads. Independent of the light level the slave units react to movements only by sending impulses via the dry contact.

**No load can be connected to the dry contact. The master-dim-occupancy detectors can not be switched into parallel. For that application please prefer the master-/ slave-installation. It is recommended to put the master the furthest possible position away from the natural light source.**

### Terminal connection PD4-M-DUO-DIM

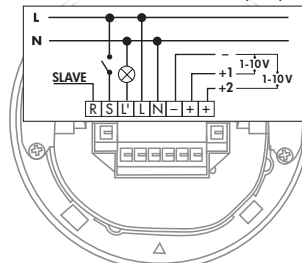


**Separate reading of the lux levels for both channels, but only one switching channel!**

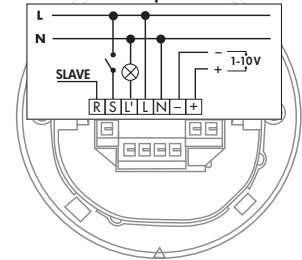
For manual switching push the button only a short time (0.2 - 0.5 sec.)! To dim push the button until the desired light level is arrived.

## 11. PD4-DIM/-DUO-DIM - Connections

### Connection PD4-DUO-DIM-FM/-FC/-SM



### Connection example PD4-DIM-FM



## 12. Article / Part-Nr. / Accessory

Type	SM	FC	FM
PD4-DIM (Master)	92147	92247	92248
PD4-DUO-DIM (Master)	92271	92272	92273
PD4-S (Slave)	92142	92254	92163

**LUXOMAT® Remote control:**  
IR-PDim (incl. wall bracket) 92200

**Accessory:**  
BSK Ball basket guard 92199  
Wall bracket for remote control as replacement 92100  
Occupancy detectors - Covering IP23 92206

## 13. Technical data PD4-M-DIM/-DUO-DIM

Sensor and power supply in one case for onwall-, ceiling- and flushmounting

**Power supply:** 230 V~ +6 %/-10 %

**Power consumption:** < 1 W

**Ambient temperature:** -25°C – +40°C

**Degree of protection/class:** SM IP54, FC and FM IP20 / II

**Settings:** locally and by remote control

**Light values:** 10 - 2000 Lux

**Parallel operation:** Master/Slave

**Area of coverage:** circular 360°

**Range of coverage Ø H 2.5 m / T=18°C:**

seated 6.4 m / tangential 24 m / radial 8 m

**Recommended height for mounting:** 2 - 3 m

**Light measurement:** Mixed light, daylight + artificial light

**Lux values:** 5 - 2000 Lux

**Relay/Channel 1 for light-connection**

**Type of contact:** NOC/with pretravel tungsten contact

**Contact load:** 2300 W, 230 V~, 10 A cos(φ)=1 /

1150 VA cos(φ)=0.5

**Max. no. of series-connected electronic ballasts:**

depending on type and make, total connectable 140 µF.

**DIM-Outputs:** PD4-DIM 1 x (1-10 V)

PD4-DUO-DIM 2 x (1-10 V)

**Max. no. of series-connected electronic ballasts:**

max. 50 electronic ballasts by one single supply with max. 100 m cable run and a conductor cross-section of 0.75 mm²

**Time-settings:** 1 - 30 min. / test

**Dimensions HxØ [mm]** SM FC FM

PD4-M-DIM 76 x 101 103 x 97 74 x 97

PD4-M-DUO-DIM 95 x 106 103 x 106 74 x 106

**Visible portion when built into ceiling:** 30 x 97 mm

## Technical data PD4-Slave

Electrical data same as above, but just one channel for signaling motion detection.

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

## 14. LED-functional indicators, fault-finding

The functional indicators in the case of the LUXOMAT® PD4-DIM/DUO-DIM-MASTER (red and green LED's)

**Red LED indicating self-checking mode (over a period of 60 seconds following mains-supply lock-on)**

Flashing at intervals of 1 second

EEPROM/ memory empty

Flashing rapidly

EEPROM/ memory contains information

**Red LED as an indicator of status**

Flashing irregularly

Movements are detected within the area of coverage

Flashing regularly

Detector identifies bright, light off

(dependent upon operating mode)

Not illuminated

Detector identifies dark, light on

(dependent upon operating mode)

Flashing extremely rapidly

Too bright / Too dark / Undefined

**Red LED as an acknowledgement of receipt for commands from the remote control**

Illuminated for 2 seconds

Signal validly received

Illuminated for 0.5 seconds

Not-accepted command, detector blocked

Flashing extremely rapidly

Not-accepted command, occurs, for example, when an attempt is made to input twilight-value are too bright or too dark

**Green LED as an acknowledgement of receipt for commands from the remote control**

Lights up for 3 seconds

Semi automatic or user signal correctly received

**Green LED as an indicator of status (only for status "Permanent protection against sabotage")**

Flashing irregularly

Movement are detected within the area of coverage

Flashing regularly

Detector identifies bright, light off

(dependent upon operating mode)

Not illuminated

Detector identifies dark, light on

(dependent upon operating mode)

Illuminated for 2 seconds

Signal validly received

(dependent upon operating mode)