

B.E.G. LUXOMAT® PD2-M-DIM

Installation and Operating Instruction for B.E.G.-Occupancy detectors PD2-M-DIM-SM/-FC/-FM

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 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® PD2-M-DIM-SM

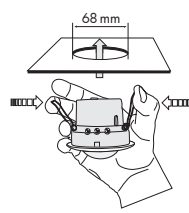


The detector must be installed on a solid and level surface. There is no need for frames.

For mounting remove lens (C) (turn anticlockwise). Fasten the mounting pod to the ceiling.

Having connected up the wires in accordance with regulations, secure the detector with 2 screws as per the illustration above. In order to assemble the detector outside, the PD2-IP54 base-plate, which is available as an accessory, must be mounted between the detector and the surface on which it is to be installed.

2b. Installation of the LUXOMAT® PD2-M-DIM-FC

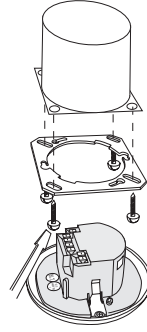


The detector has been designed and developed specifically for installation in suspended ceilings.

A circular opening of diameter 68 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.

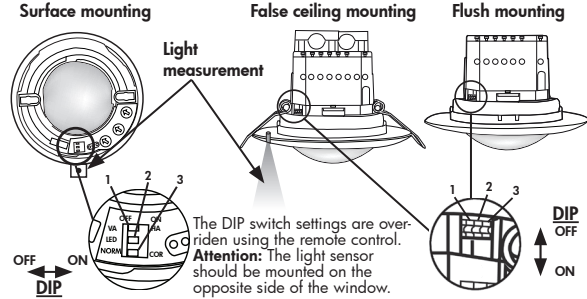
2c. Installation of the LUXOMAT® PD2-M-DIM-FM



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 is not laterally transposed.

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.

3. Position DIP-switches



The DIP switch settings are overridden using the remote control. **Attention:** The light sensor should be mounted on the opposite side of the window.

4. DIP switch functions

DIP-switch	ON	OFF
1	Semi automatic mode	Fully automatic mode
2	LED OFF	LED ON
3	Corridor mode	Standard mode

The DIP settings are enabled again by

- Adjusting the DIP switches when closed
- Reset with test sun setting at the potentiometers
- Reset when open

Corridor function: After deactivation by an external push-button, the detector switches off and returns to automatic mode after 5 sec.

Function LEDs OFF: In the open state and in test mode, the LEDs are always ON.

5. Putting into operation / Settings

Self test cycle

After an initial 60-second self-test cycle, the LUXOMAT® PD2-M-DIM is ready for operation.



Follow-up time for light control

The time can be set infinitely variably at between 1 and 30 minutes. 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 10 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 (fixed to 20%)

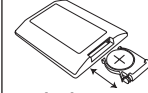
The orientation lighting can be set infinitely variably at between 5 and 60 minutes resp. "ON" for permanent orientation lighting or "OFF" for no orientation lighting.

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.

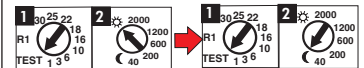
6. Settings carried out using remote control (optional)



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.

7. Option:

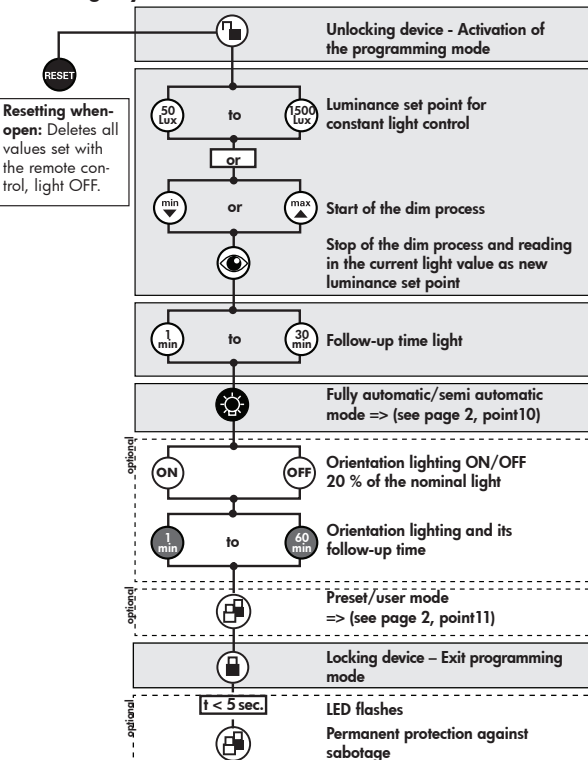


IR-PDIM



Wall bracket for remote control IR-PDIM

8. Settings by remote control



9. Explanation of the remote control button functions



Light on / off when closed => (see page 2, point 12)



Dimming in the closed state => (see page 2, point 11)



Test operation in the closed condition to enable



Disable the test mode: press reset



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:

- Switch off the current
- Apply current for 31 - 59 seconds
- Switch of the current again
- Apply current
- Open detector



Dim in the open state



To set a target value, proceed as follows (example workplace): Place one lux meter flat on the desk. Set the light with the help of remote control IR-PDIM by pressing the buttons "max" or "min" for starting the dim process. Wait until the desired light level is reached.



Confirmation by the preset value



Light during the initialization

The light is on by default in the initialization time. On / off with the "Light" button during Initialization. The final condition is then active.



Follow-up time orientation light ON / OFF when open

Note: Also during the orientation phase of the light constant light control is active: With sufficient brightness is <20% dimmed and turned off the lights if necessary.

10. Fully / Semi automatic mode

(for IR-PDim functions see page 1)



The system switches over when the "Light" push-button is open (see remote control functions, page 1). Each time a push-button is pressed, the current operating mode is indicated:

Red lights for 3 sec. = Fully automatic mode
Green lights for 3 sec. = Semi-automatic mode

Fully automatic operation

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

Semiautomatic operation

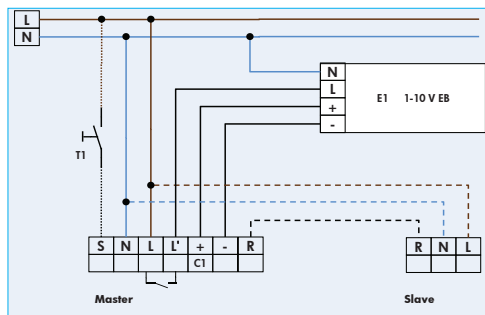
In this operating condition, in order to gain increased-savings, the lighting is energized only after being manually switched on. Switch-off takes place automatically.

The semiautomatic mode basically behaves like the fully automatic. 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).

15. Wiring diagrams

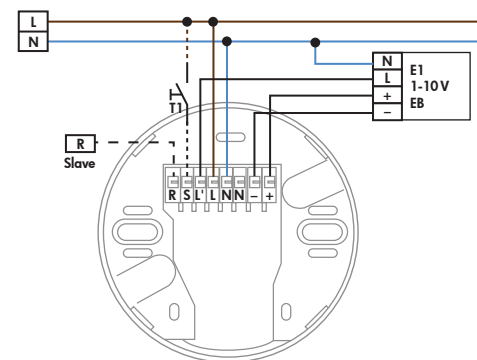
Standard mode with master DIM occupancy detectors



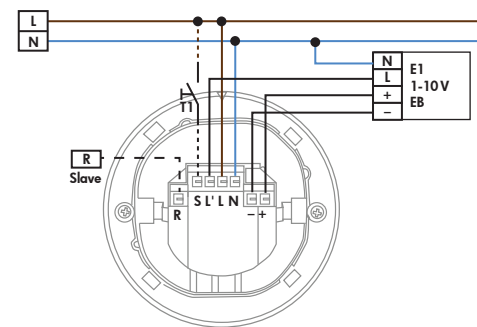
optional

T1 = NO button for semi-automatic mode
Slave for enlargement of detection area

16. Connections



PD2-M-DIM-SM



PD2-M-DIM-FC/-FM

17. Article / Part nr. / Accessory

Typ	SM	FC	FM
PD2-M-DIM (Master)	92153	92167	92157
PD2-S (Slave)	92152	92166	92156

LUXOMAT® Remote control:

IR-PDim (incl. wall bracket) 92200
IR-PD-DIM-Mini 92098

Accessory:

BSK Ball basket guard 92199
Socket IP54 92161

18. Technical data PD2-M-DIM

Sensor and power supply in one case

Power supply: 230 V~ ±10%
Power consumption: < 1 W
Ambient temperature: -25°C to +50°C
Degree of protection/class: SM IP20, with accessory IP54, FC and FM IP20 / II
Settings: locally and by remote control
Light values - IR-PDim: 50 - 1500 Lux
Extension of the detection area: with Slaves
Area of coverage: circular 360°
Range of coverage Ø H 2.50 m / T = 18°C: seated 4 m / tangential 10 m / radial 6 m

Recommended height for mounting: 2 - 3 m

Light measurement: Mixed light, daylight + artificial light
Lux values - Potentiometer: 10 - 2000 Lux

• 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: 1 - 30 min. / Test
DIM-Output: 1 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

Dimensions H x Ø [mm] SM FC FM
PD2-M-DIM 50 x 98 84,5 x 80 65 x 98

Visible portion when built into ceiling: 34 x 79 mm

Version: v.01

Technical data PD2-Slave

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.

WE RECOMMEND THAT BEFORE DIMMING OF THE CONNECTED LIGHTS A 100 h BURN IN (75 TUBES OR 80 HOURS FOR 18 TUBES) FUNCTION TAKES PLACE.

THE LIFESPAN OF THE LAMPS CAN BE REDUCED IF THE BURN IN DOES NOT TAKE PLACE.

11. Manual Dimming – Preset / User

(for IR-PDim functions see page 1)



Manual dimming – Start the dim process by pressing the push-button "min/max". Stop by pressing the push-button "eye".

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

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!

The system switches over when the "Doublelock" push-button is open (see remote control functions, page 1). Each time a push-button is pressed, the current operating mode is indicated:

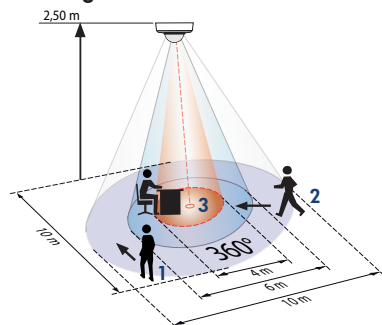
Red lights for 3 sec. = Preset
Green lights for 3 sec. = User

12. Manual Switching



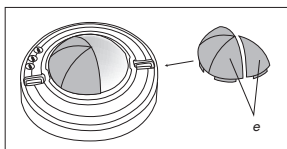
You can switch the lighting on and off manually by pressing the push-button for a short time. It will stay on or off as long as people are detected plus the configured follow up time.

13. Range



- Walking across
- Walking towards
- Seated

14. Exclude sources of interference



In case the sensing area of the LUXOMAT® PD2-M-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).

19. LED-functional indicators, fault-finding

The functional indicators in the case of the LUXOMAT® PD2-M-DIM (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)

White LED

Lights permanently

Semi-automatic active (shines)

Illuminates 4 seconds, then 1 sec. off

Semi-automatic and active corridor

Illuminates 1 seconds, then 4 sec. off

Only active corridor