B.E.G. LUXOMAT® PD4-M-TRIO-DIM

GB

Installation and Operating Instruction for B.E.G.-Occupancy detectors PD4-M-TRIO-DIM-SM/-FC

1. Mounting preparations

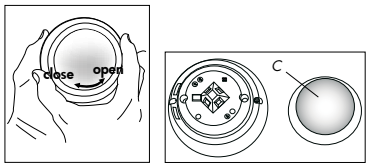
Work on the 230 V mains supply may only be carried out by qualified professionals or by instructed persons under the direction and supervision of qualified skilled electrical personnel in accordance with electrotechnical regulations.

Disconnect supply before installing!

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.

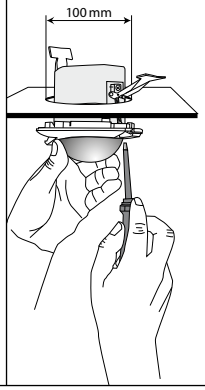
2a. Installation of the LUXOMAT® PD4-M-TRIO-DIM-SM



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-M-TRIO-DIM-FC

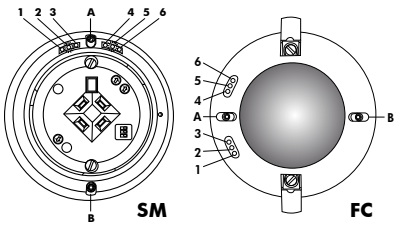


A circular opening of diameter 100 mm must be produced in the ceiling.

Having connected up the cables in accordance with regulations, the detector is inserted into the opening as shown and fixed into position with the retaining bracket using screws.

3. Hardware configuration

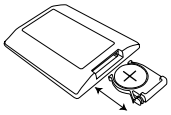
Position of light sensors and LEDs



A	Light sensor 1	B	Light sensor 2
1	LED red OFF function		
2	LED green too light/too dark channel 1		
3	LED white semi-automatic channel 1		
4	LED white semi-automatic channel 2		
5	LED green too light/too dark channel 2		
6	LED red motion indicator/walking test		

4. Putting into operation of the remote control (optional)

Remote control LUXOMAT® IR-PD4-TRIO



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

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

5. Putting into operation / Settings

Self test cycle
After an initial 60-second self-test cycle, the **LUXOMAT®** PD4-M-TRIO-DIM is ready for operation.

Follow-up time for light control 3
The time can be set infinitely variably at between 1 and 60 minutes. The time-setting is valid for both DIM-Outputs of the PD4-M-TRIO-DIM.
Symbol **TEST**: Test mode (Every movement switches on the light for a period of 2 second, switching it off for a period of 2 seconds after that regardless of the level of brightness.)

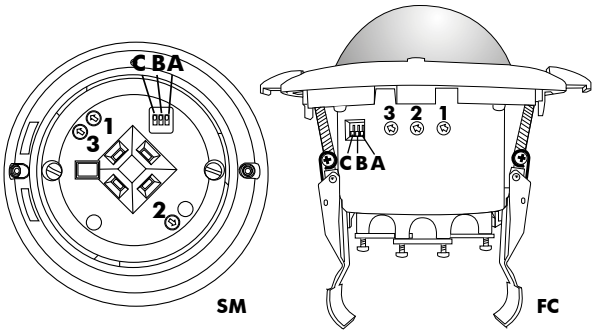
Twilight-switch for light control (relay 1)
The switch-on value for the light can be set at between 40 and 1200 Lux. Using the rotary control, the luminance set points can be set as desired.
Symbol : Night-time operation
Symbol : Daytime/Night-time operation

Orientation lighting
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.

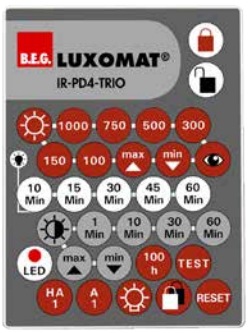
Pulse spacing PD-Slave
2 or 9 seconds can be set for the pause between 2 pulses sent to the master. The setting can be made with activated (✸) or deactivated (○) LED indicator.
For devices with a separate slave input, 2 sec. can be set.

6. Position of potentiometer and DIP switch

- **A** **DIP 1** HA / A
- **B** **DIP 2** Ini OFF/ON
  Lamps at start-up OFF/ON
- **C** **DIP 3** RESET



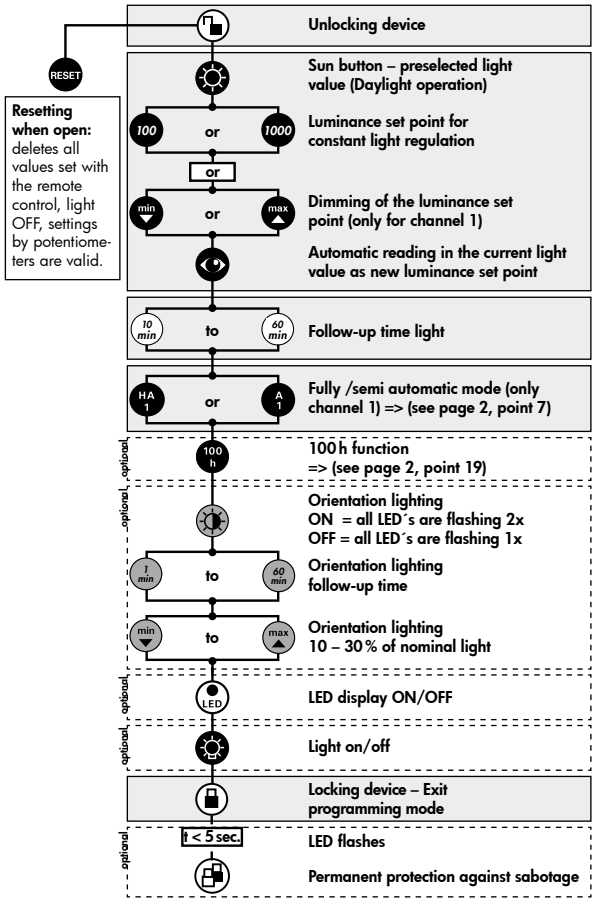
7. Option:



IR-PD4-TRIO

Wall bracket for remote control IR-PD4-TRIO

8. Settings by remote control



9. Explanation of the key functions

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

Dimming when locked
=> (see page 2, point 11)

Activate test mode - when locked
Deactivate 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:
Hardwarereset with DIP-switch 3

Dimming when opened
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-PD4-TRIO, 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.

Saving of the through min max adjusted luminance set point

100 h function when opened
to extend the life span – sums up automatically the burning time of 100 % luminosity at the beginning up to 100 hours – only then can lights dim

Orientation lighting and its follow-up time ON/OFF when opened
Note: During the orientation light phase, the constant light regulation is also active: if there is sufficient brightness, dimming occurs < 20 % and, if applicable, the lighting is switched off.

Orientation lighting – Adjustment ot the light intensity
The orientation lighting is adjustable in a span from 10 to 30 % of the nominal light. Standard adjustment is 20 %.

10. Fully / Semi automatic mode

(see DIP switch functions and IR-PD4-TRIO on 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
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).

11. Manual Dimming

(for IR-PD4-TRIO functions see page 1)

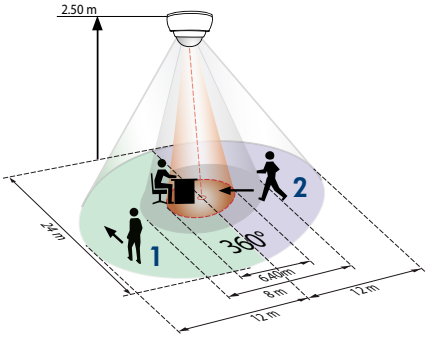
You can dim manually by pressing the pushbutton for a long time (> 2 sec.). When the button is released, the current dimming value is retained. Upon renewed dimming, the dimming direction is reversed.

12. Manual Switching

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).

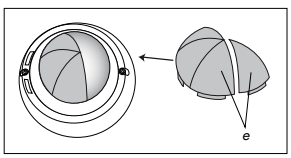
13. Range of Coverage

PD4-M-TRIO-DIM



1 Walking across
2 Walking towards
Seated

14. Exclude sources of interference



In case the sensing area of the **LUXOMAT®** PD4-M-TRIO-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).

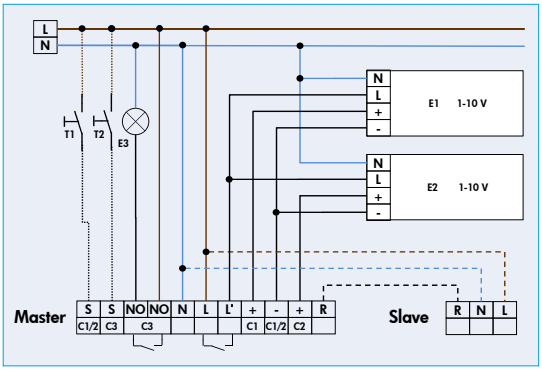
15. Article / Part nr. / Accessory

Type	SM	FC	FM
PD4-M-TRIO-DIM (Master)	92730	92735	–
PD4-S (Slave)	92142	92254	92163

LUXOMAT® Remote control:
IR-PD4-TRIO (incl. wall bracket) 92097

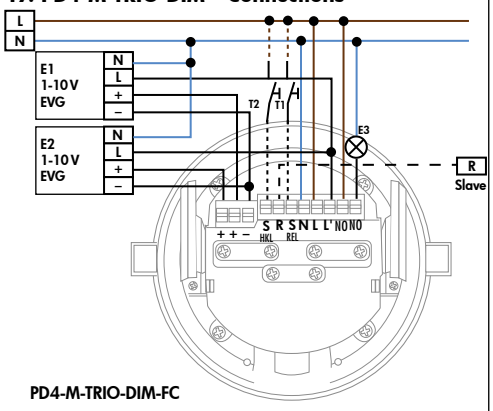
Accessory:
Wire basket BSK 92199
Wall bracket for remote control as replacement 92100
SM-Socket IP44 for 92730 92386

16. Wiring diagram – Standard mode with master TRIO-DIM occupancy detectors

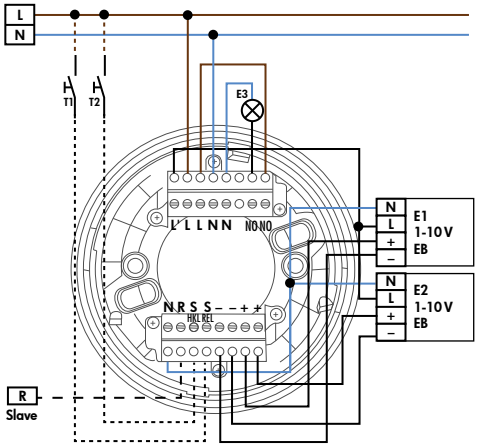


Optional
T1&2 = NO button for semi-automatic mode
Slave for enlargement of detection area

17. PD4-M-TRIO-DIM – Connections



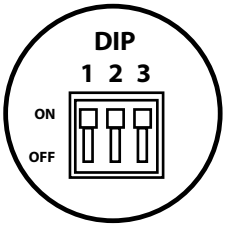
PD4-M-TRIO-DIM-FC



PD4-M-TRIO-DIM-SM

18. DIP switch functions

DIP switch	OFF	ON
1 (**A**)	Fully automatic channel 1 - 3	Semi-automatic channel 1 - 3
2 (**B**)	For mains ON / light ON	For mains ON / light OFF
3 (**C**)		RESET



19.

WE RECOMMEND THAT BEFORE DIMMING OF THE CONNECTED LIGHTS A 100 h BURN IN (T5 TUBES OR 80 HOURS FOR T8 TUBES) FUNCTION TAKES PLACE. THIS CAN BE IGNORED BY USING THE REMOTE CONTROL TO DEACTIVATE.

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

20. LED function displays

LED	Colour	flashing	Permanently ON
1	red	–	For mains ON / light OFF
2	green	DIM channel 1 light / dark	–
3	white	–	Semi-automatic switching channel 1
4	white	–	Semi-automatic switching channel 2
5	green	DIM channel 2 light / dark	–
6	red	Walking test	–

21. Technical data PD4-M-TRIO-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: IP20 / II
Settings: control dial, DIP switch and remote control
Light values - Remote control: 100 - 1000 Lux
Extension of the detection area: with Slaves
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 - Potentiometer: 10 - 2000 Lux
• Channel 1 and 2 for light switching, light-controlled
Type of contact: NOC/with pretravel tungsten contact
Contact load: 3000 W, cos φ = 1 / 1500 VA cos φ = 0.5, µ-Contact
2 DIM-Outputs: 1-10 V
Max. no. of series-connected electronic ballasts per channel: max. 50 electronic ballasts by one single supply with max. 100 m cable run and a conductur cross-section of 0.75 mm²
Time-settings channels 1 - 3: 1 - 60 min. / Test
• Channel 3 (potential-free) for light switching (panel lighting), light-controlled
Type of contact: NOC/with pretravel tungsten contact
Contact load: 3000 W, cos φ = 1 / 1500 VA cos φ = 0,5, µ-Contact

Dimensions H x Ø [mm]	SM	FC
PD4-M-TRIO-DIM	124 x 85	100 x 117

Visible portion when built into ceiling: H 37 x Ø 117 mm

Technical data PD4-Slave

Power supply: 230 V~ ±10 %
Impulse output: Optocoupler max. 2 W
Impulse duration: 2 sec. or 9 sec.
Dimensions: see above

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

22. Fault-finding

Permanently flashing
Check whether DIP3 switch (RESET) is set to "ON"
Reset to "OFF" if necessary

MAN 6365 – 060813–8