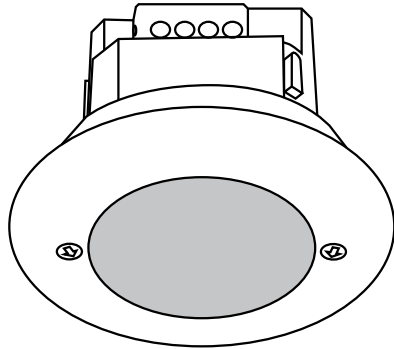# B.E.G. LUXOMAT® CdS-FC

Installation and Operating Instruction for B.E.G. - Photo electric switch CdS-FC
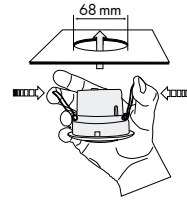
1. Mounting preparations

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.

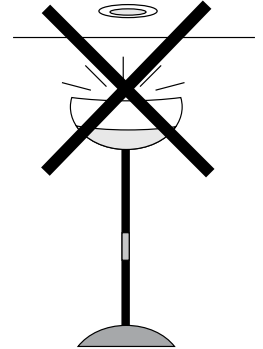### 2a. Installation of the LUXOMAT® CdS-FC

68 mm

The photo electric switch has been designed and developed specifically for installation in suspended ceilings.
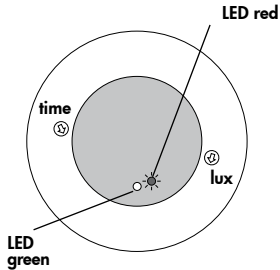
A circular opening of diameter 68 mm must be produced in the ceiling.

Having connected up the cables in accordance with regulations, the photo electric switch is inserted into the opening as shown in the drawing opposite and fixed into position with the assistance of the spring clips.

Attention: Please do not use indirect lighting directly on the photo electric switch!

2b. Self test cycle

LED red

time

lux

LED green

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

3. Putting into operation / Settings

TEST
30secs
1min
6
8
12
30mins

OFF-delay
The time can be set infinitely variably at between 5 seconds and 30 minutes.
Symbol ⊓: 30 min.
Symbol **TEST**: 5 sec.

2000
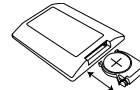1200
600
40 200

Twilight value
The twilight value can be set at between 10 and 2000 Lux. Using the rotary control, the luminance set points can be set as desired.
Symbol ☾: dark e.g. 10 Lux
Symbol ☼: bright e.g. 2000 Lux

4. Settings carried out using remote control (optional)
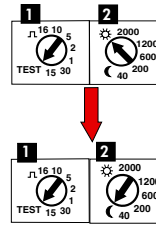
Remote control LUXOMAT® IR-CdS-FP

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

1 ⊓ 16 10 5 / 2 / 1 / TEST 15 30
2 ☼ 2000 1200 600 / ☾ 40 200

1 ⊓ 16 10 5 / 2 / 1 / TEST 15 30
2 ☼ 2000 1200 600 / ☾ 40 200

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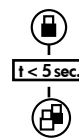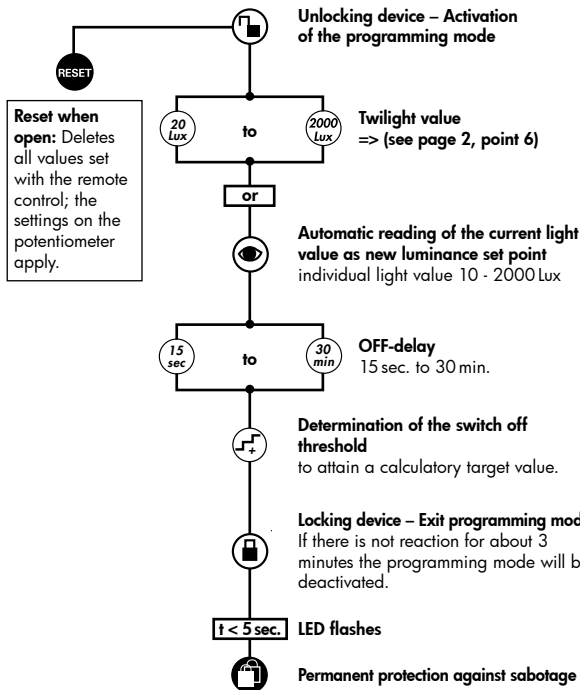Settings with remote control supersede the settings by courtesy of potentiometers.

Option:

IR-CdS-FP – Part nr. 92396

Wall bracket for remote control IR-CdS-FP

RESET

Reset when open: Deletes all values set with the remote control; the settings on the potentiometer apply.

Unlocking device – Activation of the programming mode

20 Lux — **to** — 2000 Lux
Twilight value
=> (see page 2, point 6)

or

Automatic reading of the current light value as new luminance set point
individual light value 10 - 2000 Lux

15 sec — **to** — 30 min
OFF-delay
15 sec. to 30 min.

Determination of the switch off threshold
to attain a calculatory target value.

Locking device – Exit programming mode
If there is not reaction for about 3 minutes the programming mode will be deactivated.

t < 5 sec. **LED flashes**

Permanent protection against sabotage

Permanent protection against sabotage
This function blocks the **LUXOMAT® CdS-FC** permanently. This operating mode can only be activated during the period of 5 seconds after pressing the "lock" button.
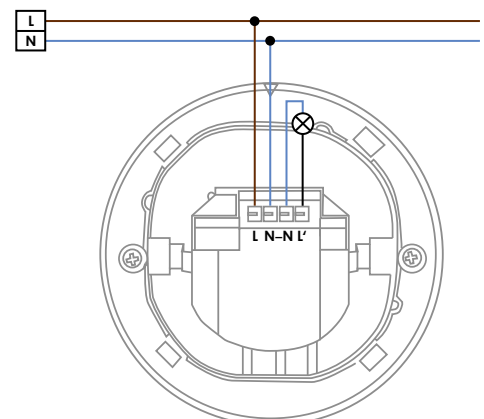
t < 5 sec.

The procedure for leaving this mode is as follows:

1. Disconnect the mains
2. Connect the mains for 7 sec.
3. Disconnect the mains again
4. Connect the mains

or

1. Switch the potentiometer over to "TEST" and "SUN"
2. 2 x Switch ON/OFF

5. CdS-FC Connections

L
N

L N–N L'

6. Function

6.1. Switch-on threshold
The switch-on threshold will be set by potentiometer or remote control. Settings with remote control overwrite the settings by courtesy of potentiometers.

6.2. Switch-off threshold (self-learning)
The switch-off threshold will be measured by the device independent of the lighting. **After switching on, the lighting has to be on for about a minimum of 4 min.** At the end of this time the lighting switches off shortly and the difference of light will be measured. Depending on this difference the OFF-delay will be measured.
As long as no value is measured the green LED flashes shortly and constantly in a period of 10 sec.
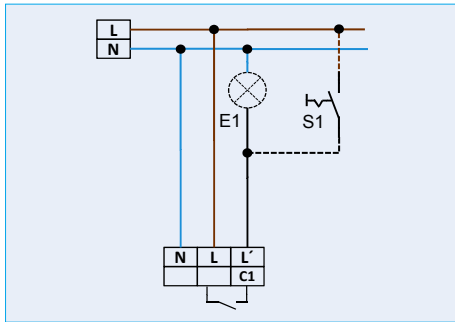During the measurement duration the red and green LED are flashing in turns.

6.3. ON-delay
The ON-delay time will be set in dependence on the changing of twilight value.

suddenly dark (p.ex. venetian blind)	➔ 0.5 sec.
slowly dark (p.ex. sunset)	➔ 64 sec.

7. Wiring diagrams

Standard mode with 1-channel photo electric switch

S1 = Switch for permanent light

8. Article / Part nr. / Accessory

Type	FC
CdS-FC	92249

LUXOMAT® Remote control:

IR-CdS-FP (incl. wall bracket)	92396

9. Technical data CdS-FC

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:	IP 20 / II
Settings:	locally and by remote control
Light values – IR-CdS-FP:	10 - 2000 Lux
Recommended height for mounting:	2 - 3 m
Light measurement:	mixed light, daylight + artificial light
Lux values – Potentiometer:	10 - 2000 Lux
Type of contact:	NOC/with pretravel tungsten contact
Contact load:	2000 W, 230 V~ cos φ=1 / 1000 VA cos φ=0.5, μ-contact
OFF-delay:	5 sec. - 30 min.
Dimensions H x Ø:	74 x 80 mm
Visible portion when built into ceiling:	6 x 80 mm

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

10. LED-functional indicators, trouble shooting

The functional indicators in the case of the **LUXOMAT®** CdS-FC (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 shortly every 10 seconds
Device starts to function

Illuminated
Detector identifies bright, light off

Not illuminated
Detector identifies dark, light on after variable ON-delay time 0.5 - 64 sec.

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

Green LED
Flashes shortly every 10 seconds
No switch-off threshold calculated yet

Green and red LED's
Both are flashing in succession
Light measurement active, 4 min.