



B.E.G. LUXOMAT® Indoor 140-L

Installation and Operating Instruction for B.E.G. - Wall Occupancy detectors Indoor 140-L

1. Product information

- Wall-mounted occupancy detector with integrated switch
- Integrated downlight with orientation and night light function
- One channel for lighting control (choice of main or night light)
- Manual operation available with integrated switch
- Detection area can be extended with max. 5 additional Indoor 140-L units
- Usable as Master/Slave

2. Operation

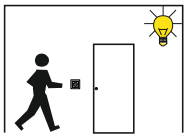
The occupancy detector automatically switches on the light according to whether people are present (movement) and ambient light. The building's lights are therefore activated on demand, saving electricity.

The light sensor integrated into the detector continuously monitors ambient light and compares it with the target brightness value set in the detector. If the ambient light is sufficient, the lighting is not switched on. If the ambient light is below the set target brightness, movement in the room triggers the light on automatically in Automatic mode.

In Semi-Automatic mode, the light must still be manually switched on by operating the integrated switch. The Indoor 140-L then switches the light off automatically once people are no longer present, or, when people are present, if daylight has reached a minimum brightness value (threshold value).

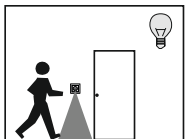
This minimum light level can be set individually. The light can be switched off manually at the unit at any time. In addition, the Indoor 140-L has an integrated LED downlight. This serves as an orientation light when it is dark, making the following types of lighting possible:

Main light



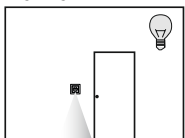
The Indoor 140-L controls only the main light.

Orientation light



The Indoor 140-L controls the orientation light (LED downlight) instead of the main light. Using the integrated switch, the main light can be switched on manually as required.

Night light



When ambient light goes below the chosen threshold value, the night light can be switched on (photoelectric switch). When movement is detected, the Indoor 140-L switches on the main light or orientation light, depending on the setting.

The Indoor 140-L can be used either as a single unit to control a single lighting group, or in more sophisticated installations, connected to slave units.

3. Safety information

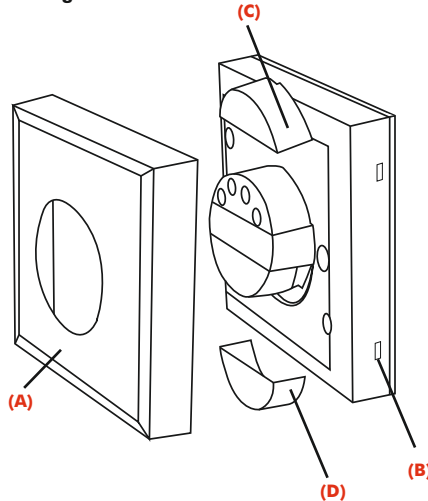
Work on the 110-240V mains supply may only be carried out by qualified professionals or by instructed persons under the direction and supervision of qualified skilled electrical personnel in accordance with electrotechnical regulations.



Disconnect supply before installing!

This device is not suitable for disconnection.

4. Mounting

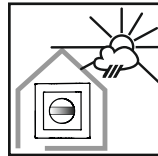


Disconnect mains supply.

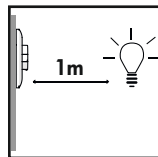
- (A) Front cover
- (B) Indoor 140-L
- (C) Upper cover
- (D) Lower cover



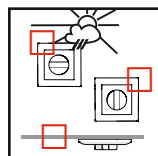
In Master-/Slave-operation the master device must always be installed at location with least daylight.



Install the unit in a protected position, for wall mounting at a height of 1 m to 1.4 m.

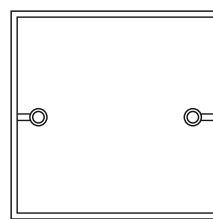
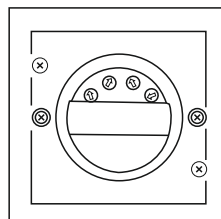


Minimum distance to lighting being controlled, to the front or to the side of the unit: 1 m



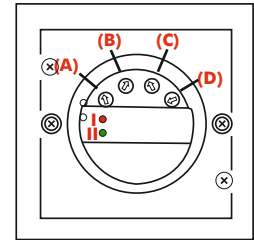
Inappropriate installation or use will interfere with trouble-free operation or lead to damage to the unit.

Suitable for installation in a 86 x 86 x 40 mm flush-mount box. The cable inlet should be vertical.



5. Hardware configuration

Position DIP-Switches, LEDs and Potentiometer



Potentiometer (A): Follow-up time "TIME"

Potentiometer (B): Orientation light brightness "LED"

Potentiometer (C): Operating mode "MODE"

Potentiometer (D): Brightness threshold "LUX"

LED I: red

LED II: green

The settings can be set with a screwdriver via the unit's adjustment screws. In order to do this, the upper blind must be removed.

A factory setting is set on the unit for speedy installation. The pre-installed factory settings for the unit are as follows:

Mode:	Semi-Automatic
Brightness threshold:	dark (moon symbol)
Follow-up time:	30 min
Brightness	
LED-orientation light:	100 %
Brightness	
LED night light:	10 %
Follow-up time	
LED night light:	on continuously

6. Self test cycle / Startup behavior

The product enters an initial 60-second self-test cycle, when the supply is first connected. During this time the device does not respond to movement and stays on.

7. Functions in detail / Installation / Settings

7.1 Follow-up time

When the lighting is switched on, the follow-up time begins; the countdown is reset every time there is another movement. When the follow-up time runs out, the lighting switches off automatically. In test mode, the lighting briefly switches on/off when movement is detected in the detection area. Follow-up time can be set in steps from 15 sec to 30 min.

In "TE" (TEST) mode, the Indoor 140-L switches on the lighting for 1 sec for every movement detected. This function means that the range and size of the detection area can be determined.

Potentiometer (A): "TIME"



Follow-up time can be set in steps. When the adjustment screw is turned, a change from one step to the next is indicated by the white LED blinking.

TE: Test mode

Follow-up time: 15 sec to 30 min

7.2 Orientation light

The orientation light serves as an aid to orientation all the while the lighting is turned off, while light levels are below the threshold value, and while movement is detected. It marks the position of the switch and illuminates its immediate surroundings. Orientation light brightness adjustment is step-free. The follow-up time set for lighting also applies as the follow-up time for the orientation light.



In a Master/Slave setup, orientation light functions (brightness and follow-up time) are set up on each slave unit separately.

Potentiometer (B): "LED"



Orientation light brightness can be set individually from 0 to 100%. At the same time, the status LEDs can be switched on and off.

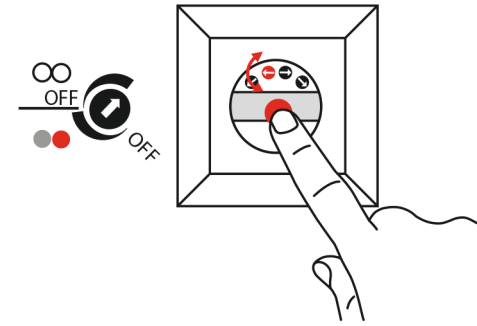
Orientation light 0 to 100% (green/red status LED OFF)
Orientation light 0 to 100% (green/red status LED ON)

7.3 Night light

The night light is switched on continuously if the lighting and orientation light is turned off, and if light levels are below the selected brightness threshold. Night light brightness adjustment is step-free. By setting up a separate follow-up time, the duration of the night light can, if required, be restricted after switching off the main lighting or after switching off the orientation light.

! In a Master/Slave setup, the night light functions (brightness and follow-up time) are set up on each slave unit separately.

Potentiometer (B): Brightness and night light button

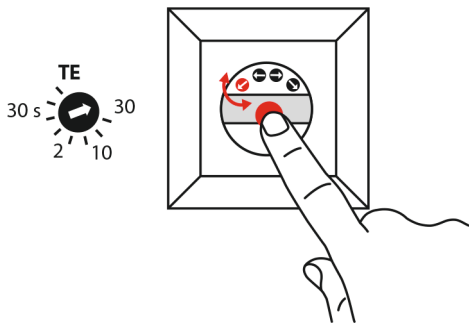


Brightness of the night light can be set by simultaneously pressing the switch and turning the "LED" adjustment screw, at a level from 0 to 100%.

0% (left end stop) to 100% (right end stop)

! After changing the brightness for the night light, brightness for the orientation light must be reset using the "LED" adjustment screw.

Potentiometer (A): Follow-up time night light



Simultaneously pressing the switch and turning the "MODE" adjustment screw allows the follow-up time for the night light to be set. Follow-up time can be adjusted in steps. When the adjustment screw is turned, changing from one step to the next is indicated by the white LED blinking.

TE: Test (on continuously)
Follow-up time: 15 sec to 30 min

! After changing the follow-up time for the night light, follow-up time for the main lighting may have to be set again using the "TIME" adjustment screw.

7.4 Operating Mode

Semi-Automatic (HA) / Automatic (VA)

The Indoor 140-L is set to Semi-Automatic as its factory setting. In Semi-Automatic mode, the light must always be turned on via the switch. The light automatically turns off when ambient light is sufficient or when there is no movement, and only switches on again automatically if movement is detected during a 10-second period after switching off automatically due to a lack of movement. After this 10-second period, the light can only be switched on again manually via the switch.

Optionally, the Indoor 140-L can also be set up in Automatic mode. In Automatic mode, the light is always switched on when movement is detected and it is dark, without requiring operation of the switch. The light switches off automatically when there is sufficient ambient light or a lack of movement.

Automatic with Corridor function (VAc)

In corridor mode, temporary switching the lighting off by pressing the switch is disabled, i.e. in contrast to normal operation, the unit immediately returns to automatic operation after manual

switching off, and will switch the lighting on again automatically if there is movement and when brightness levels are below the threshold.

Slave mode (SLA)

Slave mode is for extending the area covered by a master unit. In slave mode, the intelligent light switch transmits just movement and switch signals to the master unit. However, the slave does not switch on the lighting itself.

In a Master/Slave setup, orientation light and night light functions (brightness and follow-up time) are set up separately on each slave unit.

! Extension of the detection area is possible by using additional Indoor 140-L, part no 94327.

Potentiometer (C): "MODE"

HA VA The different modes can be selected via Potentiometer C "MODE". Turning the adjustment screw results in the change from one mode to the next being indicated by the white LED blinking.

HA: Semi-Automatic

VA: Automatic

VAc: Automatic with Corridor function

SLA: Slave

7.5 Brightness threshold

If the lighting is on, and daylight levels are above the previously set room brightness level for 15 min, then the lighting will be turned off, even if people are present in the room.

Learning phase:

When the unit is first used, and after every subsequent change to the room brightness on the adjustment screw, the artificial light level of the connected lighting will be determined automatically by the unit during a 5-minute learning phase. For this purpose, the lighting will be switched off after the first 5 minutes have elapsed. During the learning phase, the green LED lights up for 1 sec every 10 sec.

Potentiometer (D): "LUX"

! The values marked on the adjustment screw represent the target room brightness for the current application. Room brightness adjustment is step-free. Turning the adjustment screw is indicated by the white LED blinking.

☾ Moon: Night mode (approx. 10 Lux)

☀ Sun: Day mode (brightness sensor inactive, switching at any brightness approx. 2000 Lux).

! The current brightness can be determined in test mode. For this, choose "Test" and then turn the adjustment screw for the switch-on level from "black moon" in the "sun" direction. The current brightness is reached as soon as the green LED goes out.

7.6 Party function

The party function allows the lighting to be continuously on or off for 12 hours. A long (3 sec) press of the switch allows the lighting to be switched on or off for a period of 12 hours. This mode is indicated by alternate blinking of the red and green LEDs, and can be cancelled early by a short press of the switch.

The long press is acknowledged by blinking of the red and green LEDs after 3 sec.

! If the corridor function is activated, the "Party Off" function is disabled.

8. Switching lights on/off with switch

8.1 Manual control of lights

The light can be temporarily switched on or off with a short press of the integrated switch, while a long press (3 sec) will switch it on or off permanently for 12 hours (Party function).

8.2 Switching on with the switch in dark conditions

The light is switched on immediately with a short press of the switch. The unit is in the selected mode (Automatic/Semi-Automatic).

8.3 Switching on with the switch in bright conditions

The light is switched on immediately with a short press of the switch. The light remains on all the while movement is detected. After the last movement is detected, the selected follow-up time then takes effect. The detector then changes automatically to the selected mode (Automatic/Semi-Automatic).

8.4 Switching off with switch

With a short press of the switch, the light will immediately turn off and remain off as long as movement is detected. After the last movement is detected, the selected follow-up time will then take effect. The detector then changes automatically to the

selected mode (Automatic/Semi-Automatic).

If manual, temporary switch-off of the lighting is to be prevented in special situations, the unit can be switched to corridor mode.

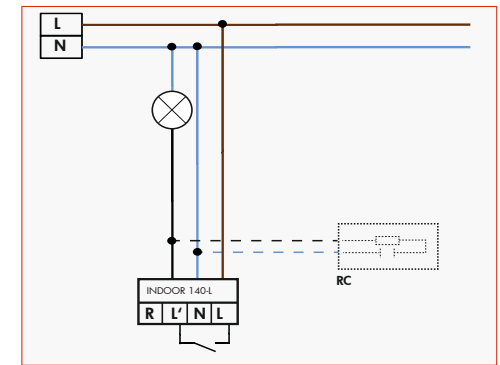
9. Status display

The following conditions can be indicated by the red and green LEDs behind the sensor lens:

Red LED	Green LED	Mode
Irregular blinking		Movement indication
	Regular blinking once per second	Room brightness setting exceeded
	Lights up for 1 sec every 10 sec	Learning phase active
Blinks alternately once per second		Party function
Fast alternating blinking 3 times/sec		Detector is temporarily disabled from switching on again if movement is detected

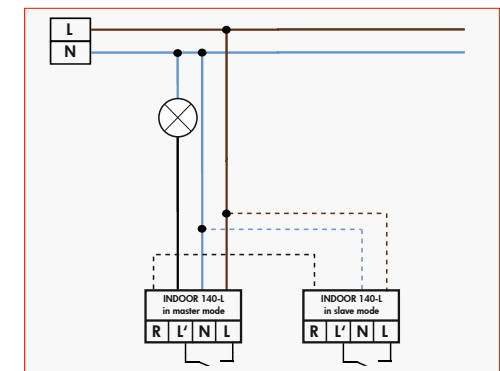
10. Wiring diagram

10.1 Normal mode



! When controlling network-connected inductors (fluorescent lamps, contactors etc.), an RC suppressor may be necessary.

10.2 Master/Slave mode



Extending the area covered with one or max. 5 slave units.

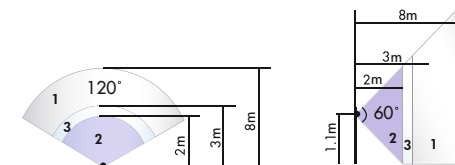
If several Indoor 140-L units control one lighting group, one unit must be defined and configured as a master. All other units are then set up for slave operation and connected to the master via the R contact.

The switch function of a slave Indoor 140-L corresponds to the master switch function, i.e. if additional Indoor 140-L units are used as slaves, the slave unit switches also affect the lighting group (e.g. switching on/off the main light).

! Extension of the detection area is possible by using additional Indoor 140-L, part no 94327.

! The master must always be mounted in the darkest location.

11. Range



- 1 Walking across
- 2 Seated
- 3 Walking towards

Values apply to recommended mounting height of approx. 1 m to 1.4 m. If mounting height is outside the recommended limits, sensitivity and range may be reduced.

The unit measures the heat radiated by people or other heat sources (e.g. animals, vehicles, etc.) moving in the detection area. The range achieved largely depends on the heat source's direction of motion and the mounting height of the unit.

12. Technical data

Power supply:	110 – 240 VAC, 50/60Hz
Power consumption:	ca. 0.4 W ca. 0.8 W at max. night light
Ambient temperature:	-25°C to +50°C
Degree of protection/class:	IP20 / II
Switching power / contact:	2000 W, $\cos \varphi = 1$ 1000VA, $\cos \varphi = 0,5$ μ -contact
Brightness threshold:	ca. 10 – 2000 Lux
Follow-up time:	15 sec – 30 min.
Dimensions:	H 88 x B 88 x T 51

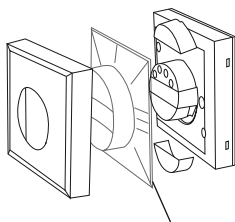
CE Declaration of Conformity:

This product respects the directives concerning

1. electromagnetic compatibility (2004/108/EU)
2. low voltage (2006/95/EU)
3. restriction of the use of certain hazardous substances in electrical and electronic equipment (2011/65/EU)

13. Available accessory

In order to fulfill higher hygiene requirements a washable cover is available as accessory. It offers the possibility to wash the Indoor 140-L in order to remove viruses and bacteria, for example.



Accessory: washable cover

14. Article / Part nr. / Accessory

Typ	FC
Indoor 140-L	94327

Washable cover, transparent 94329