

# BEGA 24 172 Wall Luminaire With PIR Motion And Light Sensor Instruction Manual

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## Contents

### 1 24 172

#### 1.1 Wall luminaire with PIR motion and light sensor

##### 1.1.1 Instructions for use

###### 1.1.1.1 Installation

###### 1.1.1.2 Accessories

###### 1.1.1.3 Spares

### 2 Documents / Resources

#### 2.1 References

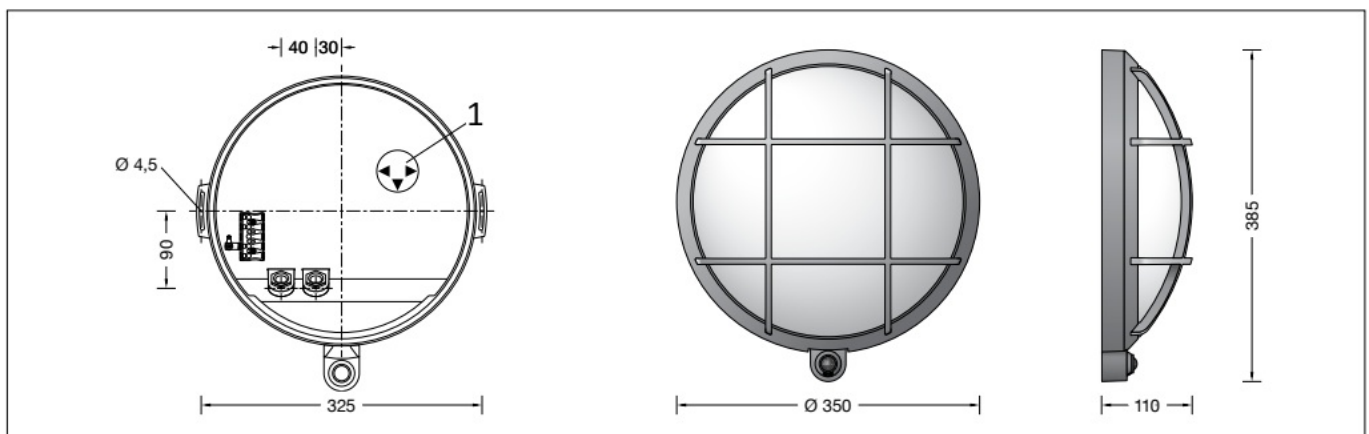
### 3 Related Posts

# BEGA

24 172

Wall luminaire with PIR motion and light sensor

UK  
CA CE IP 65



## Instructions for use

### Application

Unshielded wall luminaire with integral passive infrared motion and light sensor for use in an existing DALI system. A luminaire made of aluminium alloy and crystal glass.

## Lamp

Module connected wattage	23.9 W
Luminaire connected wattage	27.2 W
Rated temperature	$t_a = 25\text{ °C}$
Ambient temperature	$t_{a\text{ ma}} = 35\text{ °C}$

### 24 172 K3

Module designation	LED-0993/830
Colour temperature	3000 K
Colour rendering index	CRI > 80
Module luminous flux	3975 lm
Luminaire luminous flux	2131 lm
Luminaire luminous efficiency	78,3 lm / W

### 24 172 K4

Module designation	LED-0993/840
Colour temperature	4000 K
Colour rendering index	CRI > 80
Module luminous flux	4180 lm
Luminaire luminous flux	2241 lm
Luminaire luminous efficiency	82,4 lm / W

## Safety

The installation and operation of this luminaire are subject to national safety regulations.

Installation and commissioning may only be carried out by a qualified electrician.

The manufacturer accepts no liability for damage caused by improper use or installation. If subsequent modifications are made to the luminaire, the person responsible for these modifications shall be considered the manufacturer.

## Product description

Luminaire made of aluminium alloy, aluminium and stainless steel

BEGA Unidure® coating technology

Colour graphite or silver

Crystal glass, white inside

2 mounting holes  $\varnothing$  4.5 mm

Distance apart 325 mm

2 screw cable glands with strain relief for through-wiring power connecting cable  $\varnothing$  7-12 mm

1 screw cable gland closed at the factory with a dummy plug

Connection terminal 2.5<sup>□</sup>

Earth conductor connection

Passive infrared motion sensor (PIR)

Range up to 10 m

Horizontal opening angle 110°

Vertical opening angle 93°

Minimum temperature difference between moving object and environment 4 °C

Object speed 1 m/s

Light sensor

Measuring range adjustable using

DALI Cockpit 0-2500 lx, Resolution 1 lx

Power consumption on the DALI bus:


Sensor: 3.5 mA

Power supply unit: 2 mA

Time hysteresis for suppressing rapid fluctuations in brightness

Complies with flicker requirements in accordance with IEEE 1789, DIN IEC/TR 63158, DIN IEC/TR 61547-1

LED power supply unit

220-240 V  0/50-60 Hz

DC 170-280 V

DALI-controllable

Number of DALI addresses: 1

Basic insulation is provided between the mains and control cables

BEGA Thermal Switch®

Temporary thermal shutdown to protect temperature-sensitive components

Safety class I

Protection class IP 65

Dust-tight and protection against water jets

Impact strength IK05

Protection against mechanical

impacts < 0.7 joule

**CE** - Conformity mark

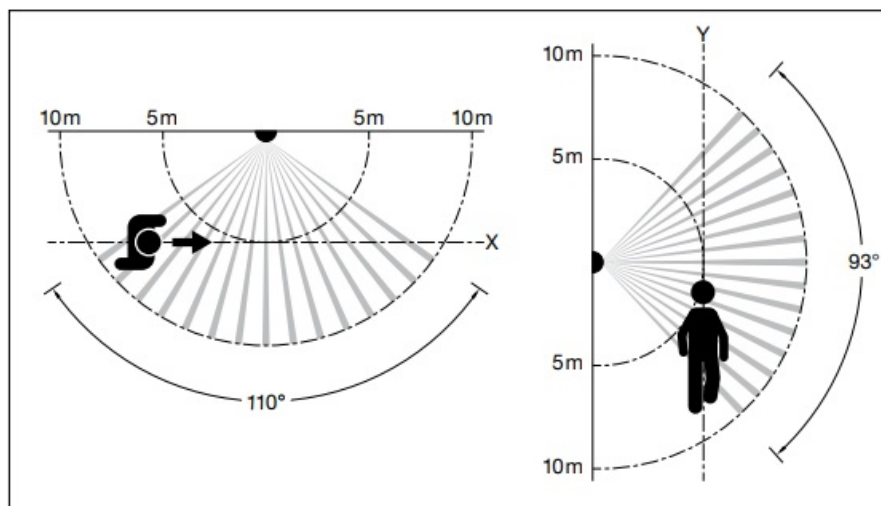
Weight: 4.7 kg

This product contains light sources of energy efficiency class(es) C, D

### Range / Detection area

The specifications for the range and detection area of the PIR motion sensor are reference values. The detection area is up to 110° horizontally and 93° vertically, with a depth of max. 10 m depending on the direction of motion (see sketch).

Too minor temperature difference between the moving object and the ambient temperature can influence the detection range. Local conditions and external heat sources may affect both the range and the detection area.



### Installation

#### Please note:

A separate DALI power supply is required to operate the luminaire.

If this is not provided by the customer, we recommend using DALI power supply **71 094** or **70 866** (see accessories).

Undo hexagon socket head screws (wrench size 3 mm) through the opening in the luminaire housing up to the stop and lift luminaire top.

Disconnect the earth conductor connection from the plug connection.

Disconnect plug-connection of the LED connecting cable.

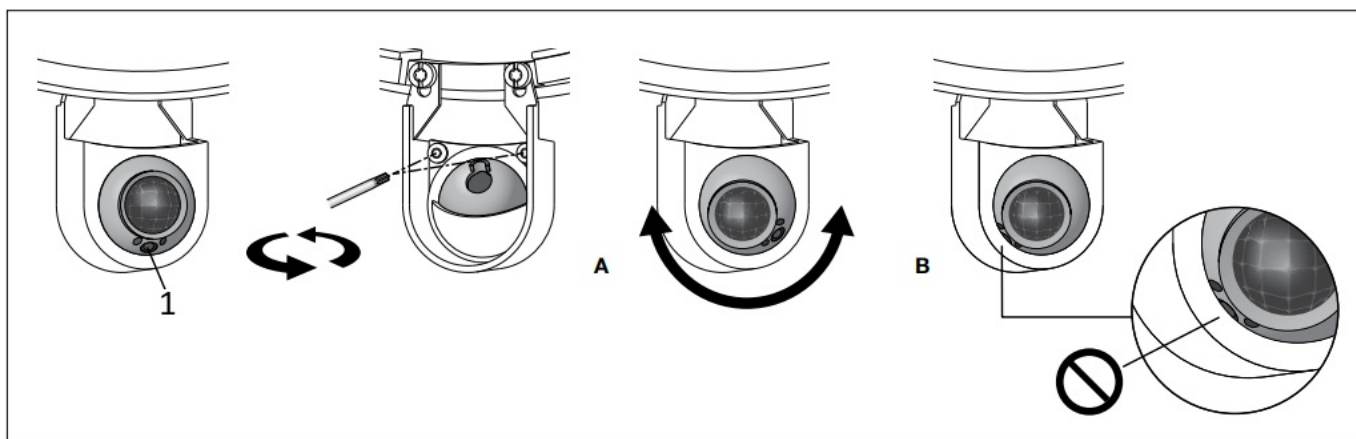
### Orientation of the sensor

The sensor is factory-configured for the maximum detection area.

In order to avoid the unintentional adjustment of the sensor in public areas, the alteration of the factory setting must be made before the luminaire base is mounted.

To do so, loosen the two rear screws (Torx driver T10) slightly and rotate the sensor ball to the desired position (see Fig. **A**). In the process, make sure that the light sensor embedded in the sensor ball is not directed upwards or covered by the edge of the surrounding housing! (see Fig. **B**)

Tighten the mounting screws evenly.



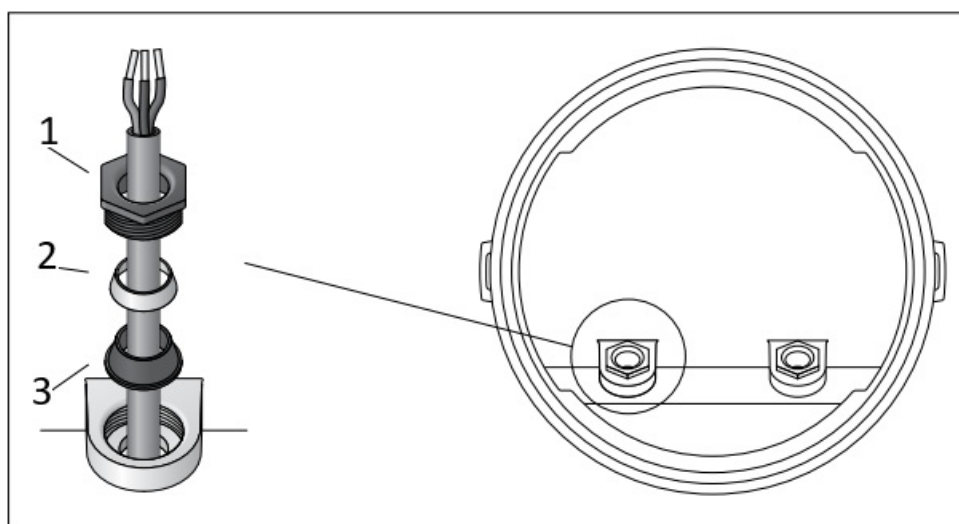
## 1. Light sensor with status LED

Lead the mains supply cable through the screw cable gland into the luminaire back housing. Notice position of use “arrow down” of the luminaire back plate.

The installed black gasket insert is intended for cables  $\varnothing < 10$  mm.

For cables  $\varnothing 10-12$  mm the enclosed grey gasket insert must be used.

In case of through-wiring replace the factory installed dummy plug with the enclosed corresponding gasket insert. At the same time, use the enclosed synthetic cone-thrust collar between gasket insert and thrust screw (wrench size 22 mm) (see sketch).



## 1. Thrust screw

## 2. Synthetic cone-thrust collar

## 3. Gasket insert

Notice position of use “arrow down” of the luminaire back plate.

Fix luminaire base with enclosed or any other suitable fixing material onto the mounting surface.

Tighten screw cable gland.

Make the earth conductor connection and the electrical connection.

For digital control please use the connecting terminal DA, DA.

In case this terminal is not used the luminaire will be operated at full light output.

In order to guarantee the maximum service life of the electrical components, the enclosed desiccant pouch must be placed in the luminaire.

Remove the desiccant pouch from the foil packaging and place it in the position marked by the red information label immediately before finally closing the luminaire.

Connect the LED connection cable by means of a plug connector.  
Make earth conductor connection between luminaire top and luminaire base.  
Push plug into coupler as far as it will go.  
Make sure that gasket is positioned correctly. Install luminaire top and tighten.

### **Functions and settings**

A combination of several DALI motion and light sensors in one DALI line is possible.  
Following installation, the PIR motion and light sensor can be immediately operated in its factory settings; configuration is not required in this case.

The factory settings are as follows:

Holding time: 5 min

Brightness threshold: almost dark /100 lx

Target address: broadcast

Constant light control: off

Status display: Green LED off (can be activated and deactivated using the DALI Cockpit software)

Time hysteresis: 1 min

Threshold hysteresis: 0 lx

### **Function testing:**

After the power supply and the DALI power supply have been switched on, the luminaire is switched on for the duration of hysteresis (factory setting 1 min).

After this period has expired, the lighting switches off automatically.

If the lighting does not switch on again automatically (after the end of hysteresis) during commissioning or on the return of power, the light sensor must be darkened for the duration of hysteresis.

If the brightness threshold is exceeded (factory setting "almost dark /100 lx"), a movement in the detection area does not cause the lighting to switch itself on.

For function testing, the light sensor must be darkened.

Brightness must be below the threshold for the duration of hysteresis; only then does a movement in the detection area cause the lighting to switch itself on.

The lighting now remains switched on for the duration of the holding time (factory setting 5 min).

If there are any more movements in the detection area, the holding time starts over again.

Movement in the detection area does not cause the lighting to switch itself on when the holding time has expired and the brightness threshold has been exceeded for the duration of hysteresis.

### **DALI configuration**

To adjust the settings and for additional functions such as basic brightness (luminaire switches to adjustable dimming value 1 if the brightness threshold is not reached and to adjustable dimming value 2 if movement is detected), a DALI USB interface (71 024 or 71 054) and the DALI Cockpit software are additionally required. DALI Cockpit is available as a free download from our website at [www.bega.com](http://www.bega.com).

Configuration is also possible via smartphone and tablet using the BEGA Tool app in conjunction with Bluetooth DALI gateway 71 075 or 71 151.

Resetting to factory settings is done via DALI reset in the DALI Cockpit software or in the BEGA Tool app.

### **Overvoltage protection**

The electronic components installed in the luminaire are protected against overvoltage in accordance with DIN EN 61547.

To achieve an additional protection against e. g. transients, etc. we recommend separate overvoltage protection components. You can find them on our website at [www.bega.com](http://www.bega.com).

The ideal protection of all electronic components installed in the luminaires is achieved by using bounce-free switching contacts such as an electronic relay (solid-state relay), e.g. BEGA 71 320.

## Cleaning · Maintenance

Clean luminaire regularly with solvent-free cleansers from dirt and deposits.  
Do not use high pressure cleaners.

## Replacing the LED module

The designation of the LED module is noted on a label in the luminaire.

The light colour and light output of BEGA replacement modules correspond to those of the modules originally fitted.

The module can be replaced by qualified persons using standard tools.

Disconnect the system and open the luminaire. Please follow the installation instructions for the LED module.

Inspect and, if necessary, replace the luminaire gaskets.

Defective glass must be replaced.

Close the luminaire.

## Accessories

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**71 094** DALI Power supply 30 mA in device boxes or installed cable connection box

**70 866** DALI Power supply 240 mA for DIN rail mounting

**71 024** DALI USB interface for installations in device boxes or preexisting connection boxes

**71 054** DALI USB interface for DIN rail mounting

**71 075** Bluetooth DALI gateway for DIN rail mounting

**71 151** Bluetooth DALI gateway for installation in device boxes

A separate instructions for use can be provided upon request.

## Spares

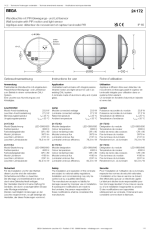
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Spare glass	11 003 519
PIR Light sensor	61 001 632
LED power supply unit	DEV-0365/700
LED module 3000 K	LED-0993/830
LED module 4000 K	LED-0993/840
Gasket glass	83 001 927
Gasket wall plate	83 002 166 B1

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## Documents / Resources



**[BEGA 24 172 Wall Luminaire With PIR Motion And Light Sensor](#)** [pdf] Instruction Manual  
24 172 Wall Luminaire With PIR Motion And Light Sensor, 24 172, Wall Luminaire With PIR Motion And Light Sensor, Luminaire With PIR Motion And Light Sensor, PIR Motion And Light Sensor, Motion And Light Sensor, Light Sensor, Sensor

## References

- BEGA **[BEGA · Das gute Licht.](#)**
- **[User Manual](#)**

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