

# Operating Instructions

## Busch-Wächter®

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6855 AGM-...  
110 MasterLINE



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## 1 Safety



### Warning

#### Electric voltage!

Risk of death and fire due to electrical voltage of 230 V.

- Work on the 230V supply system may only be performed by authorised electricians!
- Disconnect the mains power supply prior to installation and/or disassembly!

## 2 Intended use

The device is to be used exclusively with the components that are supplied and licensed as described in chapter "Setup and function".

## 3 Environment



### Consider the protection of the environment!

Used electric and electronic devices must not be disposed of with domestic waste.

- The device contains valuable raw materials which can be recycled. Therefore, dispose of the device at the appropriate collecting depot.

All packaging materials and devices bear the markings and test seals for proper disposal. Always dispose of the packaging material and electric devices and their components via the authorized collecting depots and disposal companies.

The products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.

(EU Directive 2002/96/EC WEEE and 2002/95/EC RoHS)

(EU REACH ordinance and law for the implementation of the ordinance (EC) No.1907/2006)

## 4 Setup and function

The Busch-Watchdog 110 MasterLINE is a movement detector with a reduced detection range and is suitable for use in small terraced houses.

Due to the small distance between the pavement and the house, it prevents the light from being constantly switched on when persons pass the house or when there is movement on the neighboring property.

The Busch-Watchdogs are passive infrared movement detectors which switch loads via the KNX bus when sources of heat move within its detection range.

Busch Watchdog is not an intrusion or attack alarm.

### 4.1 Features of function and equipment

- 12 meters coverage toward the front and 4 meters toward each side.
- 4 Detection levels
- Status display
- Switch-off delay and brightness switching threshold can be adjusted separately
- Reduced detection range
- Operation with IR remote control

### 4.2 Detection ranges

#### 4.2.1 Overview of the detection ranges

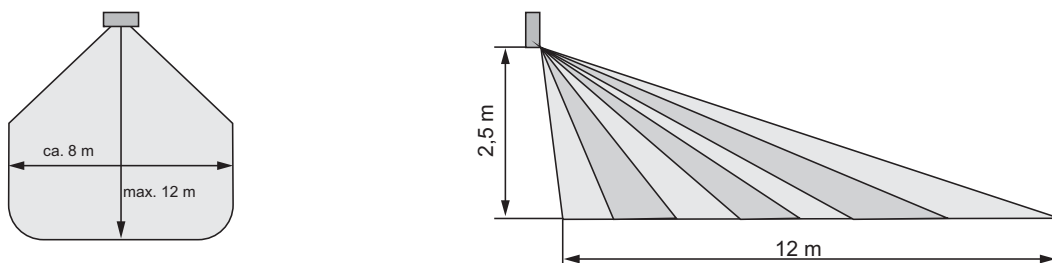


Fig. 1: Coverage

#### Detection range

- The detection range is 110° and the coverage is 12 m to the front and four meters to each side.

#### Wall mounting

- The movement detector offers optimum surveillance if mounted to the wall at a maximum height of 2.5 m.

## 5 Technical data

Designation	Value
Nominal voltage	230 V AC ± 10%, 50/60 Hz
Switching capacity	2300 W/VA
Maximum switching current:	10 AX
Maximum power loss	< 1 W
Twilight sensor	3 ... ∞ lux
Switch-off delay	10 sec ... 30 min
Short-time pulse	
• Pulse duration	1 second
• Pause time	9 seconds
• Pause time with continuous light / presence simulation:	55 seconds
Coverage (if mounted 2.5 m high)	Maximum of 12 m
Operating temperature	-25°C ... 55°C
Protection type	IP 55



### Information for the connection of ballasts

Please observe the following points regarding high inrush currents for ballasts:

- The ballast manufacturer's specification determines the possible number of ballasts.

## 6 Installation and electrical connection

### 6.1 Requirements for the electrician



#### Warning

##### **Electric voltage!**

Install the device only if you have the necessary electrical engineering knowledge and experience.

- Incorrect installation endangers your life and that of the user of the electrical system.
- Incorrect installation can cause serious damage to property, e.g. due to fire.

The minimum necessary expert knowledge and requirements for the installation are as follows:

- Apply the "five safety rules" (DIN VDE 0105, EN 50110):
  1. Disconnect from power;
  2. Secure against being re-connected;
  3. Ensure there is no voltage;
  4. Connect to earth and short-circuit;
  5. Cover or barricade adjacent live parts.
- Use suitable personal protective clothing.
- Use only suitable tools and measuring devices.
- Check the supply network type (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective earthing, necessary additional measures, etc.).

## 6.2 Mounting



### Warning

#### Electric voltage!

Risk of death and fire due to electrical voltage of 230 V.

- Work on the 230V supply system may only be performed by authorised electricians!
- Disconnect the mains power supply prior to installation and/or disassembly!



### Warning

#### Electric voltage!

Danger from touching current-carrying parts when opening the device.

- Always disconnect the mains voltage before opening the device!

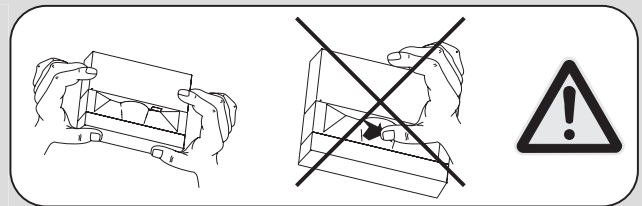


### Caution

#### Risk of damaging the device!

The lens of the device is sensitive and can easily sustain damage.

- Do not press on the lens when setting the device!



### 6.2.1 Installation sites

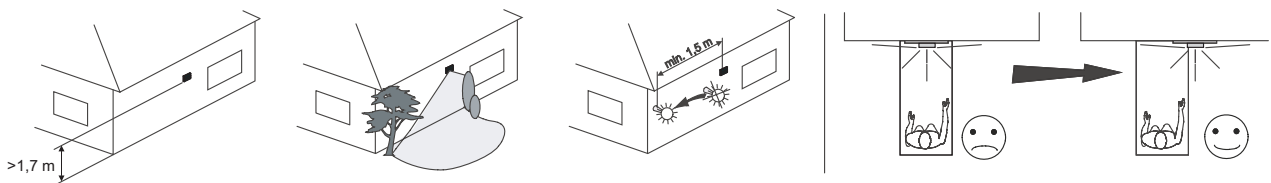


Fig. 2: Installation sites

- The mounting height of the device should be between 1.7 m and 2.5. m.
- The distance between light and movement detector should be at least 1.5 m.
- For optimum detection of persons the approach into the detection range should always be offset and never frontal.

### 6.2.2 Preparing the installation

To prepare the installation of the device, perform the following steps:

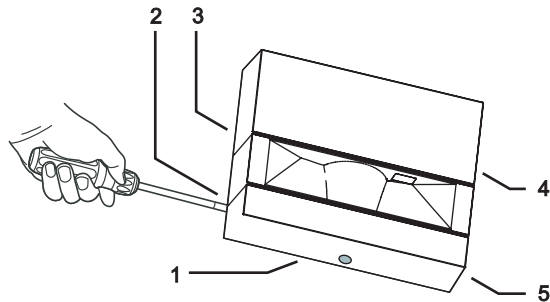


Fig. 3: Preparing the installation

1. Remove the locking screw (1) (if installed).
2. Press in the clamps (2 ... 5) on the sides of the housing with a suitable tool.
3. Carefully remove the front of the device.

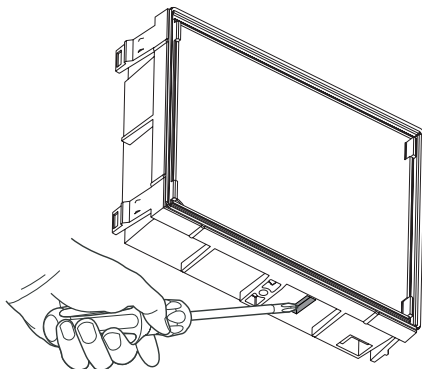


Fig. 4: Opening the water drain

Depending on where the device is installed, the water drain may have to be opened.

- To do this, pierce the plastic membrane on the bottom of the device.

The installation is prepared.



### 6.2.3 Mounting steps

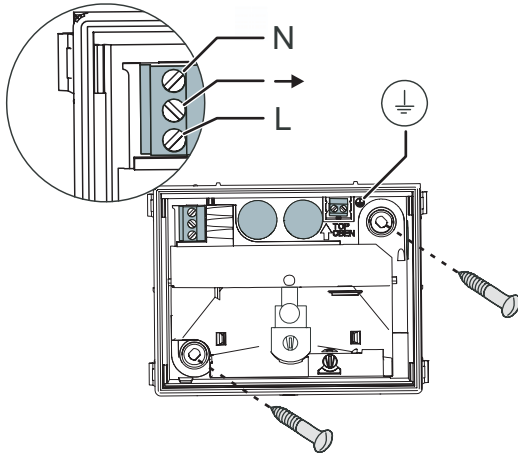
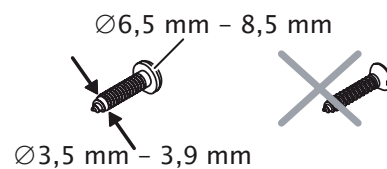


Fig. 5: Fixing to the wall

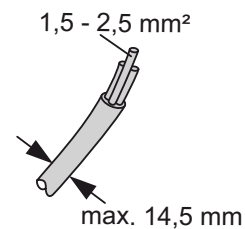
### Connecting terminals

Connection	Function
N	Neutral conductor
→	switched phase?
L	Phase (230 V AC, 50 / 60 Hz)
⏚	Grounding conductor connection

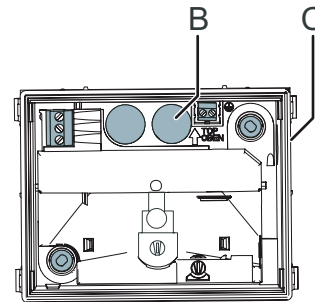
- Mount the device to the wall.
  - Do not use countersunk head screws for mounting to the wall.
  - Use screws with a head diameter of 6.5 mm - 8.5 mm.



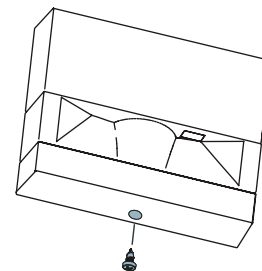
- Connect the power to the device, see section 6.3.
  - Observe the maximum admissible cable cross sections



- The bolting dimensions of the base may be compatible with existing bores on older versions of the Busch-Watchdog.
- For cable cross sections larger than 1.5 mm<sup>2</sup> use only cable entry (B) or (C).



3. To protect the device against unauthorized opening, the enclosed screw can be used on the bottom of the device.
- To protect the device against unauthorized opening, screw the enclosed screw into the bottom of the device.



**6.3 Electrical connection**

**6.3.1 Standard connection**

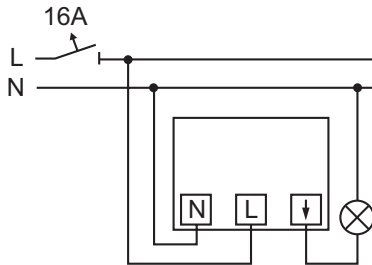


Fig. 6: Universal relay insert

**6.3.2 Standard connection with extension unit push-button**

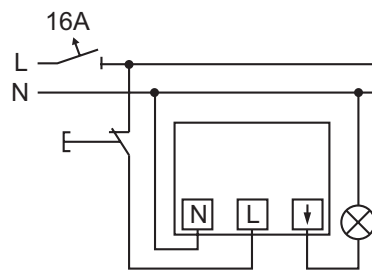


Fig. 7: Universal relay insert with extension unit push-button



**Note**

For more information see chapter "Extension unit operation" 8.3 on page 14.

**6.3.3 Standard connection with RC suppressor 6899 and relay**

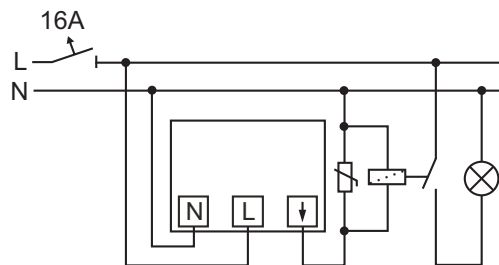


Fig. 8: Universal relay insert with RC suppressor 6899 and relay

## 7 Commissioning

### 7.1 Setting the coverage

Use the following steps to set the coverage:

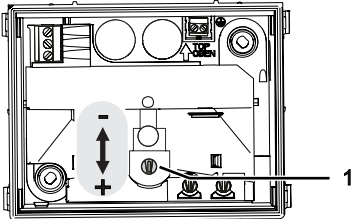


Fig. 9: Setting the coverage

1. Set the coverage of the device by turning the controller (1).
  - The sensor shifts when the controller is turned. The higher the setting of the sensor the smaller is the coverage.
  - The adjustment range of the sensor ranges from 6 m (sensor position at the top) to a maximum of 12 m (sensor position at the bottom).

### 7.2 Activation test

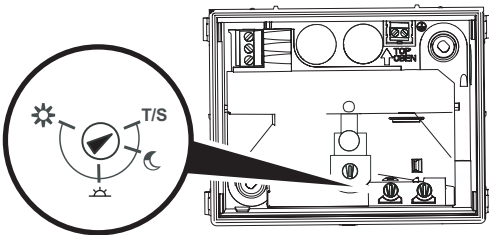


Fig. 10: Control element

To carry out the activation test, perform the following steps:

1. Set selector switch to T/S.
  - The device is now in test mode for 10 minutes (daytime operation, switch-off delay 2 sec.). In addition, each detection is indicated by the status LED flashing quickly.
  - After this, the device switches back to standard operating mode.
2. To carry out an additional activation test, set the selector switch back to position T/S or interrupt the operating voltage supply for more than 15 seconds.
  - The device is now in test mode for another 10 minutes. Test mode is exited automatically after 10 minutes or by adjusting the brightness.

The activation test has been carried out.

## 8 Operation

### 8.1 Standard operation

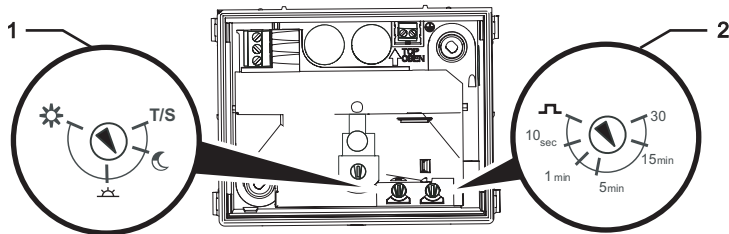


Fig. 11: Control elements

No.	Function
1	Rotary switch (switch-on brightness)
2	Rotary switch (ON period)

Set the ON period and the switch-on brightness on the rotary switch.

- Set the switch-on brightness on the rotary switch (1).
  - The switch-on brightness is continuously variable between 3 lux (darkness) and daytime operation.
- Set the ON period on the rotary switch (2).
  - The switch-on brightness is continuously variable between 10 seconds and 30 minutes.

The short-time pulse can be used to activate the staircase light timer switch or the door chimes.

### 8.2 Function status LED

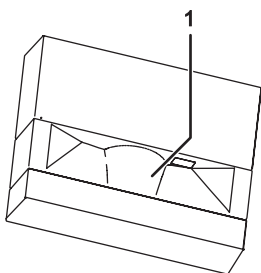


Fig. 12: Status LED

#### Status LED (1)

LED	Status
On	Continuous light set (only possible with remote control)
Flashes fast	Detection in test mode
Flashes 3 times	Detection in standard mode
Flickers	Incoming IR signals (remote control)

### 8.3 Auxiliary post operation

#### 8.3.1 Operation with extension unit push-button

Aside from the movement detector being triggered by the infrared radiation in the detection range, manual operation is possible via an extension unit push-button.

For example, when an exit is not within the detection range of the movement detector, the extension unit push-button can be used. The lighting can there be switched on or off manually with the push-button.

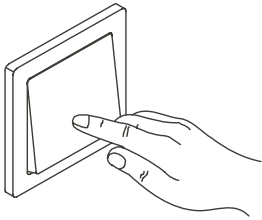


Fig. 13: Operation with extension unit push-button

- When operating with an extension unit push-button, the lighting for the set operating mode is switched on.

## 9 Remote control

### 9.1 Control elements of the remote control

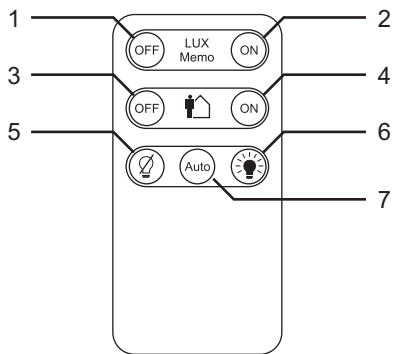


Fig. 14: Control elements

No.	Function
1	Resetting the switch-on brightness to the settings of the potentiometers on the Busch-Watchdog. - Press the button for at least 1 second.
2	The current brightness is set as switch-on brightness. - Press the button for at least 1 second.
3	Deactivation of presence simulation.
4	Presence simulation activation. - Continuous light between twilight and 22:30 p.m. CET or 23:30 CEST. Followed by movement detection.
5	Light deactivation for 4 hours. - No detection of movement.
6	Light activation for 4 hours. - No detection of movement.
7	Resetting to automatic movement detection.



The sensitivity of the movement sensors can be adjusted to surroundings which are particularly restless or free of movement.

### 9.2 Technical data of the remote control

Designation	Value
Operating voltage:	3 V DC
Battery type:	CR 2025
Battery life:	Approximately 2 years
Coverage:	Maximum of 6 m
Protection type:	IP 40
Operating temperature:	0°C ... 45°C

### 9.3 Commissioning of remote control

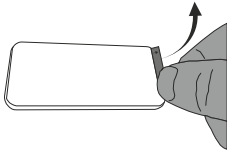


Fig. 15: Removing the protective foil from the battery

Remove the protective foil from the battery before commissioning.

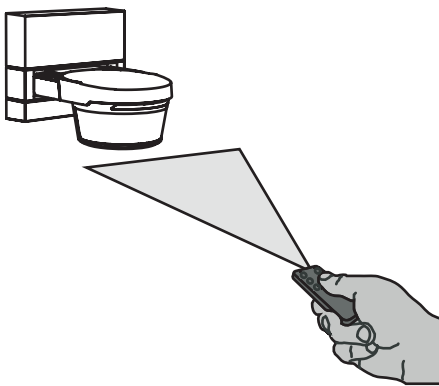


Fig. 16: Programming the remote control

- Press the "AUTO" button on the remote control for at least 3 seconds within the period of 10 minutes after activating the power on the Busch-Watchdog.
  - The Busch-Watchdog must be de-energized beforehand for at least 30 seconds.
  - The remote control will then automatically connect itself to the Busch-Watchdog, and the Busch-Watchdog will flash if the reception is correct.
  - Repeat these steps to program a maximum of 9 additional remote controls.

### 9.4 Battery change of remote control

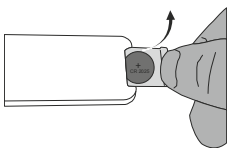


Fig. 17: Changing the battery

1. Pull the battery holder out of the remote control.
2. Insert a new battery of type 2025.
  - The plus pole of the battery (+) must be on top.
3. Push the battery holder back into the device.





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**Busch-Jaeger Elektro GmbH**

PO box  
58505 Lüdenscheid

Freisenbergstraße 2  
58513 Lüdenscheid  
Germany

**www.BUSCH-JAEGER.com**

info.bje@de.abb.com

**Central sales service:**

Phone: +49 (0) 2351 956-1600

Fax: +49 (0) 2351 956-1700

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