

ARGUS Presence master with IR, relay

User Guide

ARGUS Presence Master with IR, relay 1-gang
Art. no. MEG5510-1119ARGUS Presence Master with IR, relay 2-gang
Art. no. MEG5510-1219

Accessories

- Surface-mounted housing for ARGUS Presence (Art. no. 550619)
- IR universal remote control (Art. no. MEG5761-0000)
- PlusLink Expander (Art. no. MEG5130-0000)

For your safety

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Safe electrical installation must be carried out only by skilled professionals. Skilled professionals must prove profound knowledge in the following areas:

- Connecting to installation networks
- Connecting several electrical devices
- Laying electric cables
- Safety standards, local wiring rules and regulations

Failure to follow these instructions will result in death or serious injury.

DANGER

HAZARD OF ELECTRIC SHOCK

The PlusLink carries an electrical current and the outputs may carry an electrical current even when the device is switched off.

- Before working on the device or the loads, always disconnect the device from the supply via the upstream miniature circuit breaker.

If one or more PlusLink lines are separately fused in your installation then they are not electrically isolated from one another.

- In this case, you should use the PlusLink Expander.

Failure to follow these instructions will result in death or serious injury.

Notice

HAZARD OF EQUIPMENT DAMAGE

The voltage differential between different phases can damage the device. All devices connected to one or more PlusLink lines must be connected to the same phase.

Failure to follow these instructions can damage the device.

Notice

HAZARD OF EQUIPMENT DAMAGE

- Ensure that the device is disconnected from its circuit during the insulation resistance test.

Failure to follow these instructions can damage the device.

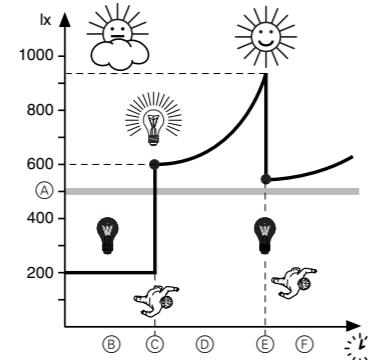
Getting to know ARGUS Presence Master

The ARGUS Presence master with IR, relay (referred to below as **ARGUS**) is a presence detector for interior ceiling mounting. The ARGUS comprises a sensor module and a relay switch insert (referred to below as **insert**). The ARGUS can be mounted either in a flush-mounted socket or in surface-mounted housing (available as an accessory). It detects moving heat sources (e.g. people) within an adjustable area of detection and starts a staircase lighting function.

The maximum detection radius is approx. 7 m. The angle of detection is 360°. As long as a movement is detected, the connected load remains switched on. The adjustable overshoot time only begins when no further movements are detected (trigger function).

The sensor module is equipped with a light sensor with an adjustable brightness threshold so that the lighting is only switched on below a specified brightness threshold (movement detector function). If there is sufficient natural light, the presence function allows the sensor module to switch off the lighting even when a person is present.

Example to illustrate the presence function:



- ① Brightness threshold is set to 500 lux.
- ② Lighting is switched off, brightness in the room is 200 lux.
- ③ Sensor module detects movement: lighting (400 lux) is switched on. Overall brightness in the room is now 600 lux.
- ④ Daylight and thus the overall brightness in the room increases.
- ⑤ Overall brightness exceeds 900 lux. Daylight on its own is now above the brightness threshold of 500 lux. The lighting is switched off (after the switching duration has elapsed).
- ⑥ Despite detecting movement, the sensor module does not switch on the lighting since there is still sufficient daylight.

i The specified detection radius and brightness threshold refer to average conditions and a recommended mounting height of approx. 2.50 m and should therefore be taken as guide values. The range can vary greatly when the temperature fluctuates.

You can switch between the "automatic mode", "24 h on" and "24 h off" functions via an IR remote control.

The insert makes it possible to switch a staircase lighting function.

- Relay switch insert, 1-gang

Sensor module: brightness-dependent staircase lighting function (automatic or semi-automatic mode)

- Relay switch insert, 2-gang

Sensor module: Channel 1: brightness-dependent staircase lighting function (automatic mode) Channel 2: staircase lighting function independent of brightness (automatic)

The insert enables you to switch ohmic, inductive and capacitive loads per channel.

The insert also comes with one (1-gang insert) or two (2-gang insert) **PlusLink** inserts, with which you can control the channels from another location. The insert, along with the sensor module, is the receiving device and is controlled via **PlusLink (PL)** by transmitting devices.

Transmitting devices are, for instance:

- ARGUS Presence slave
- Plus side controller, 2-gang
- mechanical push-buttons

You can use the PlusLink input to access various functions and operating modes with a mechanical push-button or the "Plus side controller, 2-gang".

- **Automatic mode:** The lighting control system starts and stops automatically. A push-button can also be actuated to manually switch on the functions and activate overshoot time.

- **Semi-automatic mode:** The lighting control system only starts manually when the push-button is actuated. The functions stop depending on movement and brightness levels or when the push-button is actuated. Semi-automatic mode can only be employed for operation with one channel.

- **Presentation mode:** e.g. when a video is shown the lighting remains switched off even if movement is detected. Functions are always activated manually (push-button actuated three times). Functions are always deactivated depending on movement or manually (push-button actuated once).

The "Plus side controller, 2-gang" can be used to switch between automatic mode, "24 h on" and "24 h off". When semi-automatic mode is activated it is also possible to switch to the "24 h staircase lighting circuit".

To be able to use the PlusLink, you require a separate core in your installation.

Recommended cables for PL installation	Maximum total cable sections in a PL line
NYM-J 4x1.5 mm ²	80 m
NYM-J 5x1.5 mm ²	65 m

Notice

HAZARD OF EQUIPMENT DAMAGE

- Operate the insert only on a sinusoidal mains voltage. It can be damaged if it is used with dimmers or capacitors.

Failure to follow these instructions can damage the device.

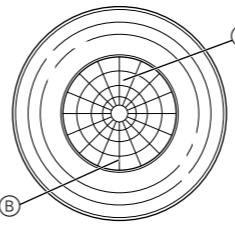
Using the sensor module with alarm systems

- i** Movement/presence detectors are not suitable for use as components of an alarm system.
- i** Movement/presence detectors can trigger false alarms if the installation site is unsuitable.

Movement/presence detectors switch on as soon as they detect a moving heat source. This can be a person, but also animals or differences in temperature through windows. In order to avoid false alarms, the chosen installation site should be such that undesired heat sources cannot be detected (see section "Selecting the installation site").

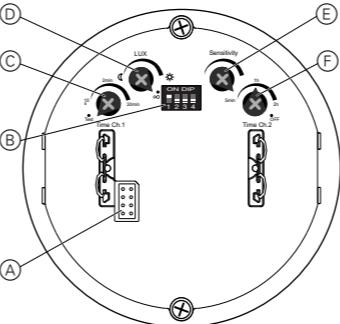
Connections, displays and operating elements

Front:



(A) red LED (in test mode)
(B) green LED (for 24-h staircase lighting circuit)

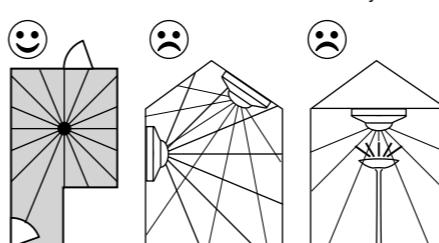
Rear:



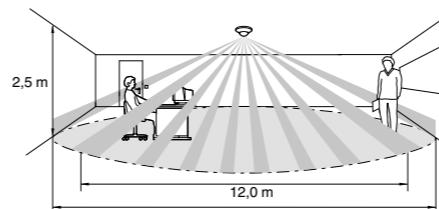
(A) Module interface
(B) DIP switches
1: Presence function/movement detector function
2: 24-h staircase lighting circuit
3: Prewarning for channel 1
4: no function
(C) Potentiometer for channel 1 overshoot time
(D) Potentiometer for brightness threshold
(E) Potentiometer for sensitivity
(F) Potentiometer for overshoot time channel 2 / activation of semi-automatic mode channel 1 ("OFF" position)

Selecting the installation site

- Only mount the sensor module in positions that allow the desired area to be monitored effectively.



- Install the sensor module on the ceiling, if at all possible in the centre of the room.
- Do not install the sensor module on inclines or walls.
- Install the sensor module at least 0.5 m away from lights.
- The recommended mounting height is 2.50 m. Any mounting height which deviates from this will affect the area of detection.
- Maximum area of detection of the sensor module: 360° angle of detection, approx. 7 m detection radius.



- Inner/outer area of detection

- inner area of detection (approx. 6 m radius): movement detection of a seated person due to less movement
- outer area of detection (approx. 7 m radius): movement detection of a person walking due to increased movement
- In order to ensure continuous monitoring, e.g. of a long hall, the areas of detection of the individual sensor modules have to intersect.

- Movement/presence detectors detect objects that radiate heat. You should select an installation site that will not result in undesired heat sources being detected, such as:
 - switched-on lamps in the area of detection
 - open fires (such as in fireplaces)
 - moving curtains, etc., that cause a different temperature in their surrounding environment due to strong sunlight
 - windows where the influence of alternating sunlight and clouds could cause rapid changes in temperature
 - larger heat sources (e.g. cars), that are detected through windows
 - sunlit rooms with reflecting objects (e.g. the floor), which can be the cause of rapid changes in temperature
 - windowpanes heated up by sunlight
 - dogs, cats, etc.
- To prevent faulty operation, the insert should be installed in a wind-resistant flush-mounted socket. With flush-mounted sockets and pipe cabling systems, a draught of air at the rear of the equipment can trigger the sensor module.
- Avoid direct sunlight. This can destroy the sensor in extreme cases.

Installation location for master/slave operation

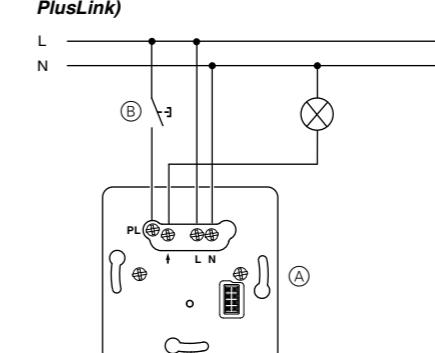
- In order to ensure the room is as well-lit as possible, put the master in the darkest area of the area used. This means the lighting will still turn on when there is already sufficient ambient brightness in some areas.
- When operating with several master devices in one room (multi master), the individual lighting areas have common borders. This poses the risk that these affect each other (optical feedback). Try to avoid multi-master operation. If this is not possible, place the master in an area that is at the maximum possible distance from the bordering lighting areas.

ARGUS installation

Wiring the insert (1-gang) for the application required

Insert as stand-alone device

(optionally with mechanical push-button via PlusLink)

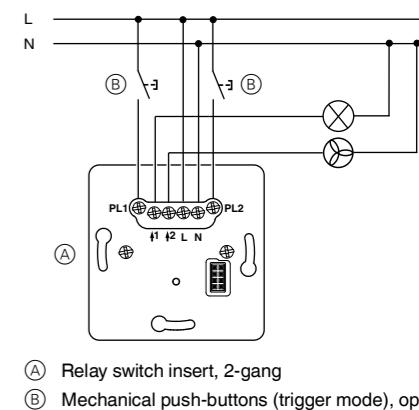


(A) Relay switch insert, 1-gang
(B) Mechanical push-button (trigger mode), optional

Wiring the insert (2-gang) for the application required

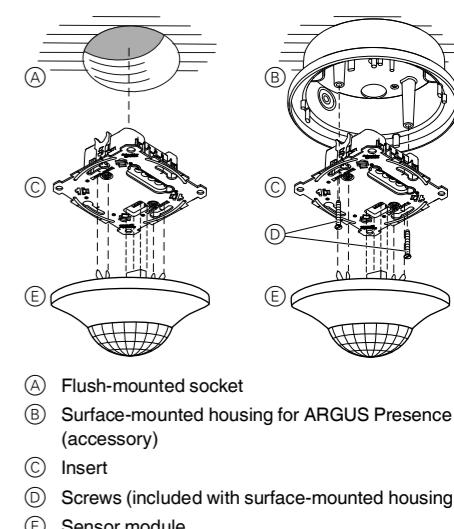
Insert as stand-alone device

(optionally with mechanical push-button via PlusLink)



(A) Relay switch insert, 2-gang
(B) Mechanical push-buttons (trigger mode), optional

Mounting the ARGUS



i When mains voltage is connected, the sensor module switches channel 1 on for 30 s and then back off. Channel 2 remains switched off. During the 2 s that ensue, the sensor module does not react to any movement. After this initialisation period has elapsed, the sensor module is ready for operation.

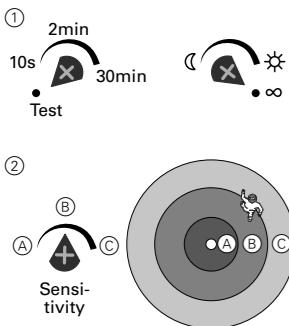
Setting the sensor module

On the rear side of the sensor module, the potentiometer can be used to set the sensor module's sensitivity, brightness threshold and overshoot time.

Additional possible settings using DIP switches:

	Pos. ON (upper)	Pos. OFF (lower)
DIP 1	Presence function	Active
DIP 2	24 h staircase lighting circuit via PlusLink	24 h "ON" or 24 h "OFF"
DIP 3	Prewarning for channel 1	Active
DIP 4	no function	Inactive

Setting the sensitivity



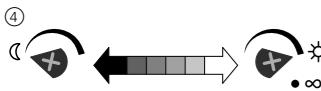
① Activate the test mode and set the brightness threshold to "infinite".

The red LED lights up when movement is detected.

② Infinitely adjust the sensitivity (max. 7 m detection radius).

③ Walk around the area of detection and check whether the sensor module is switching as desired. Adjust the sensitivity if required.

Setting the brightness threshold



④ Infinitely set the desired brightness threshold. The sensor module switches below the set brightness threshold.

⑤ Detects movement in the dark (approx. 10 lux)

⑥ Detects movement during daylight (approx. 1000 lux)

⑦ Detects movement independently of brightness

⑧ Check that the sensor module switches at the desired/set brightness. Adjust the brightness threshold if required.

⑨ In combination with a 2-gang insert, the brightness threshold only applies to channel 1. Channel 2 always switches independently of brightness.

Adjusting the staircase lighting function

You can set the type of staircase lighting function (without/with prewarning) and the overshoot time.

When setting the overshoot time, you specify how long the connected load remains switched on (continuously from 10 s to 30 min.). In the case of a 2-gang insert, the overshoot time for both channels can be adjusted separately.

The prewarning indicates the end of the overshoot time. The loads are switched off and on again briefly. The loads are switched off after the warning time has elapsed (30 s, not adjustable).

① Select the type of staircase lighting function and set the overshoot time

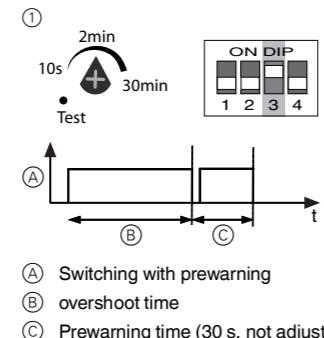
Staircase lighting function without prewarning



⑩ Switching without prewarning overshoot time

The potentiometer is also used to set the overshoot time of channel 2.

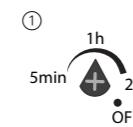
Staircase lighting function with prewarning



⑪ The prewarning only applies to channel 1.

Setting the overshoot time for channel 2

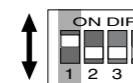
When using a 2-gang insert, the overshoot time for channel 2 can be adjusted using a separate potentiometer. The adjustable time period differs from that of channel 1. The default setting for channel 2 is 1 hour. The "OFF" position also activates semi-automatic mode in channel 1.



Activating/deactivating the presence function

In the case of brightness-dependent movement detection, the sensor module constantly monitors the brightness in the room and compares it to the set brightness threshold. If sufficient natural light is available, the sensor module will switch the lighting off even if a person is present.

The sensor module's presence function is activated as a factory default. You can deactivate the function ("OFF") and reactivate it ("ON") using DIP switch 1.



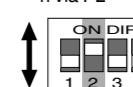
When the presence function has been deactivated, the sensor module continues to carry out the movement detector function.

Adjusting the 24 h staircase lighting circuit

DIP switch 2 can be used to set a 24 h staircase lighting circuit which you can retrieve from another location via PlusLink.

The following options are available for this:

- DIP 2 "ON": only switch on the staircase lighting for 24 h via PL
- DIP 2 "OFF": switch the staircase lighting on/off for 24 h via PL



Activating/deactivating semi-automatic mode

Semi-automatic mode for channel 1 is activated via the "OFF" position by the right-hand stop of the potentiometer. Automatic mode is activated if an overshoot time is selected. Automatic mode is activated as a factory default.

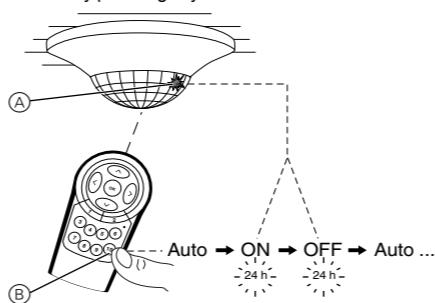


The potentiometer is also used to set the overshoot time of channel 2.

Operating sensor module by IR remote control

i The DIP switches do not affect the IR function.

You can toggle between three functions of the sensor module by pressing key 10 on the IR remote control (B).



- **Auto** function: The sensor module is in automatic mode and switches the loads on when movement is detected and then off again after the overshoot time has elapsed.
- **24 h "ON"**: Load is switched on permanently for 24 h (no movement detection). Green LED (A) lights up.
- **24 h "OFF"**: Load is switched off permanently for 24 h (no movement detection). Green LED (A) lights up.

Controlling the sensor module from another location

Controlling loads from another location via PlusLink with:

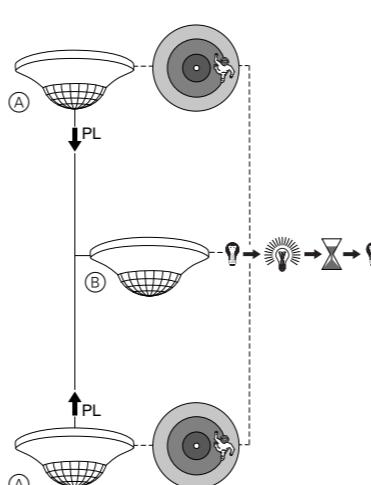
- ARGUS Presence slave
- Side controller Plus, 2-gang
- Mechanical push-button

Example of master/slave control via ARGUS Presence

i Master/slave control via PlusLink is possible in combination with the ARGUS Presence slave.

If the ARGUS Presence slave (A) detects a movement, it sends a trigger command to all local sensor modules in the connected PL lines. In this example, the command is sent to an ARGUS Presence master (B).

The local ARGUS Presence master (B) checks the brightness of the surroundings. The staircase lighting function only starts if the brightness is below the set detection brightness.



(A) ARGUS Presence slave on central unit insert
(B) ARGUS Presence master in PL line



Notes:

- On the central unit insert, the sensor module always sends independently of brightness.
- The sensor module's DIP switches and potentiometers (except for sensitivity) do not function on the central unit insert.

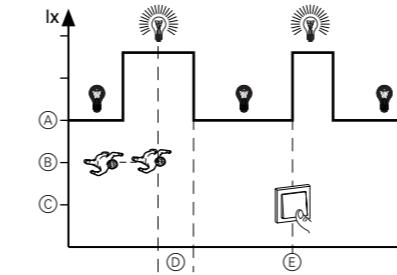
Operating modes and push-buttons

You can use the PlusLink input to access various operating modes with a mechanical push-button or the right push-button of the "Plus side controller, 2-gang".

Automatic mode

In automatic mode you can switch on the lighting and start an overshoot time independently of brightness by actuating a push-button – even beyond the detection range of the presence detector.

Example of automatic mode



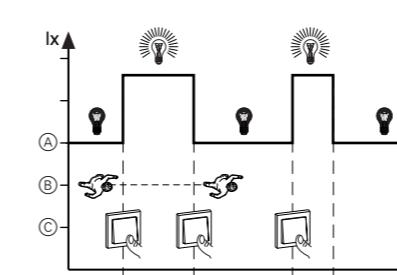
- **Lighting**
- **Movement**
- **Push-button actuation**
- **Overshoot time**
- **Manual activation**

Automatic activation is dependent on brightness. When the presence function is activated the lighting is also deactivated depending on brightness.

Semi-automatic mode

In semi-automatic mode it is necessary to press a push-button in order to start the staircase lighting function. The manual activation is independent of brightness and movement.

Example of semi-automatic mode



- **Lighting**
- **Movement**
- **Push-button actuation**
- **Manual activation**
- **Manual deactivation**
- **Overshoot time**

After automatically switching off, the lighting remains switched off and can only be switched back on manually. Only if a new movement is detected within a period of 5 s after switching off, a new overshoot time starts.

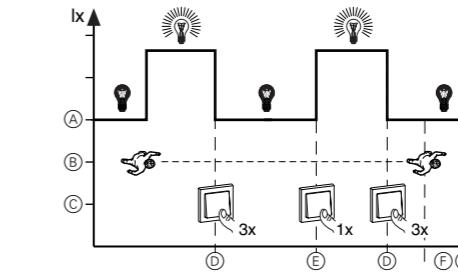
When the presence function is activated, the lighting is deactivated depending on brightness like in automatic mode.

In contrast to automatic mode, semi-automatic mode is activated via a potentiometer (see section "Setting the sensor module").

Presentation mode

In presentation mode the lighting remains switched off even if movement is detected.

Example of presentation mode



- **Lighting**
- **Movement**
- **Push-button actuation**
- **Start presentation mode**
- **End presentation mode**
- **Switching duration**

Activating presentation mode:

Press push-button quickly three times in the space of 3 s (< 0.5 s).

Manually deactivating presentation mode:

Quickly press push-button (< 0.5 s)

Sensor module

Recommended mounting height: 2.50 m

Range (can be adjusted under "Sensitivity"): max. approx. 7 m detection radius

Detection brightness: from approx. 10 lux to approx. 1000 lux (infinitely adjustable), independent of brightness

Channel 1 overtravel time: from approx. 10 s to approx. 30 min (infinitely adjustable), test mode (1 s)

Channel 2 overtravel time: from approx. 5 min. to approx. 2 hrs. (infinitely adjustable), OFF

Display elements: 1 red LED
1 green LED
DIP switch: 1: Presence function/movement detector function
2: 24-h staircase lighting circuit
3: Prewarning for channel 1
4: no function

Connection: Dispose of the device separately from household waste at an official collection point. Professional recycling protects people and the environment against potential negative effects.

Merten GmbH

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