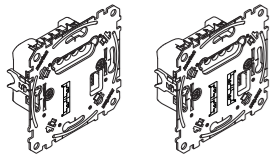


Universal dimmer insert

User guide



Universal dimmer insert

Art. no. MEG5171-0000, MTN5171-0000

Universal dimmer insert, 2-gang

Art. no. MEG5172-0000

Necessary accessories

- To be completed with:
- corresponding modules (see function overview).

Accessories

- PlusLink Expander (Art. no. MEG5130-0000)
- PlusLink distributor (3 cycles) (Art. no. MEG5130-0001)

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 fuse.

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

- Connect all connected devices of one or several PlusLink lines to the same phase or use a PlusLink terminal for cross-phase installation
- Ensure that the device is disconnected from its circuit during the insulation resistance test..

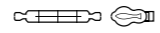
Failure to follow these instructions can damage the device.

Getting to know the universal dimmer

You can use the universal dimmer insert (referred to below as the **insert**) to switch and dim ohmic, inductive or capacitive loads per channel:



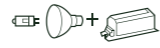
Dimmable LED lamps
Incandescent lamps
(ohmic load)



230 V halogen lamps
(ohmic load)



Low-voltage halogen lamps with dimmable wound transformer
(inductive load)



Low-voltage halogen lamps with electronic transformer
(capacitive load)

The dimmer automatically recognises the connected load. It is overload-proof and short-circuit-proof.

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, completed with a module (see the function overview), is the receiving device and is controlled via **PlusLink (PL)** by the transmitting device.

Transmitting devices are, for instance:

- Central unit inserts (completed with relevant modules)
- Side controller Plus, 1-gang/2-gang
- Mechanical push-buttons
- External sensors

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



The total length of cable sections in a PL line is not allowed to exceed 100 m (when a 3-core cable is used).

The memory function with on/off function (see the module manual for instructions on operation) allows the insert to memorise the most recently set brightness value and call it up again.

Notice

HAZARD OF EQUIPMENT DAMAGE

- If you connect mixed loads (inductive and capacitive) to one channel at the same time, connected devices may be damaged.
- Operate the insert only on a sinusoidal mains voltage.
- If transformers are used, only connect dimmable transformers to the insert.
- Dimming socket outlets is prohibited. The risk of overload and connecting unsuitable devices is too high.
- If a terminal is used for looping, the insert must be protected with a 6 A circuit breaker.

Failure to follow these instructions can damage the device.

Function overview of the 1-gang insert completed with corresponding modules

Module:	Function:
Push-button module Basic, 1-gang	<ul style="list-style-type: none"> • switching on/off • Dimming
Push-button module Basic, 2-gang	<ul style="list-style-type: none"> • switching on/off • Dimming • Calling up and saving lightscenes
Connected push-button module, 1-gang	<ul style="list-style-type: none"> • switching on/off • dimming Additional app functions ¹
Connected push-button module, 2-gang	<ul style="list-style-type: none"> • switching on/off • Dimming Additional app functions ¹
Rotary module	<ul style="list-style-type: none"> • switching on/off • Dimming • Calling up and saving lightscenes
ARGUS 180 flush-mounted sensor module	<ul style="list-style-type: none"> • Brightness dependent staircase lighting function
ARGUS 180 flush-mounted sensor module with switch	<ul style="list-style-type: none"> • Brightness dependent staircase lighting function • Permanently switching staircase lighting on/off
ARGUS Presence 180/2.20 m flush-mounted sensor module	<ul style="list-style-type: none"> • Brightness dependent staircase lighting function
ARGUS Presence sensor module with IR	<ul style="list-style-type: none"> • Brightness dependent staircase lighting function • IR function • Light control
Standard display timer module	<ul style="list-style-type: none"> • Switching and dimming manually • Time-controlled switching
Display timer module	<ul style="list-style-type: none"> • Switching and dimming manually • Time-controlled switching • Evaluating DCF timer

¹ For more information about the app and the app functions, please read the instructions for the corresponding module.

Function overview of the 2-gang insert complete with corresponding modules

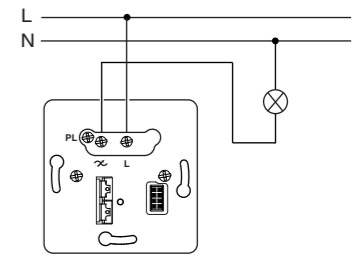
Module:	Function:
Push-button module Basic, 1-gang	<ul style="list-style-type: none"> • Switching both channels on/off together • Dimming both channels together
Push-button module Basic, 2-gang	<ul style="list-style-type: none"> • Switching both channels on/off separately • Dimming both channels separately
Connected push-button module, 1-gang	<ul style="list-style-type: none"> • Switching both channels on/off together • Dimming both channels together Additional app functions ¹
Connected push-button module, 2-gang	<ul style="list-style-type: none"> • Switching both channels on/off separately • Dimming both channels separately Additional app functions (both channels together) ¹
Rotary module	<ul style="list-style-type: none"> • switching on/off • Dimming
ARGUS 180 flush-mounted sensor module	<ul style="list-style-type: none"> • Brightness dependent staircase lighting function • Brightness independent staircase lighting function
ARGUS 180 flush-mounted sensor module with switch	<ul style="list-style-type: none"> • Brightness dependent staircase lighting function • Brightness independent staircase lighting function • Permanently switching staircase lighting on/off
ARGUS Presence 180/2.20 m flush-mounted sensor module	<ul style="list-style-type: none"> • Brightness dependent staircase lighting function • Brightness independent staircase lighting function
ARGUS Presence sensor module with IR	<ul style="list-style-type: none"> • Brightness dependent staircase lighting function • Brightness independent staircase lighting function • IR function • Light control
Standard display timer module	<ul style="list-style-type: none"> • Manually switching and dimming both channels together • Time-controlled switching of both channels separately or together
Display timer module	<ul style="list-style-type: none"> • Manually switching and dimming both channels together • Time-controlled switching of both channels separately or together • Evaluating DCF timer

¹ For more information about the app and the app functions, please read the instructions for the corresponding module.

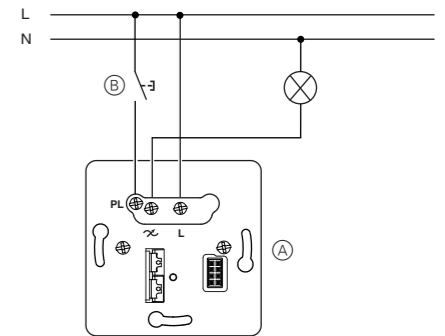
Installing the insert

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

Insert as stand-alone device

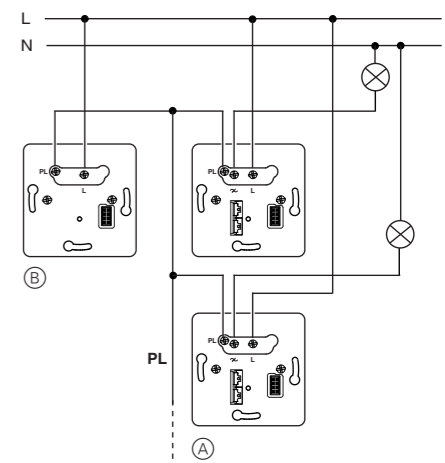


Insert with mechanical push-button via PlusLink



- (A) Universal dimmer insert
- (B) Mechanical push-button (toggle mode)

Insert in combination with transmitting device via PlusLink (here shown with Plus side controller)

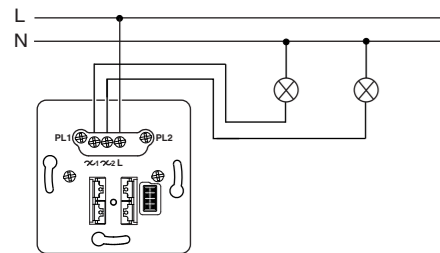


- (A) Universal dimmer insert
- (B) Plus side controller, 1-gang / 2-gang (transmitting device)

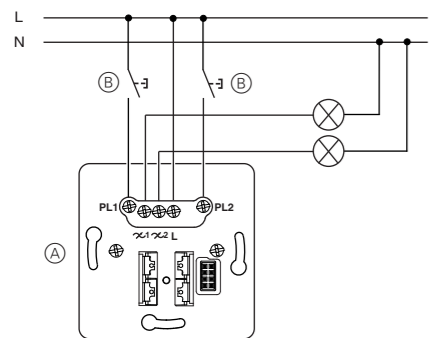
Wiring the insert (2-gang) for the application required

i If you connect loads on only one channel on a 2-gang insert, then it must be channel 1.

Insert as stand-alone device

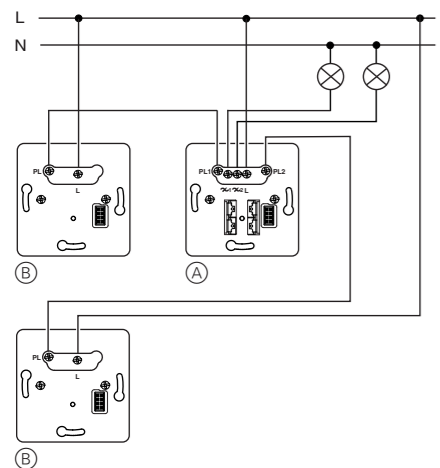


Insert with mechanical push-buttons via PlusLink



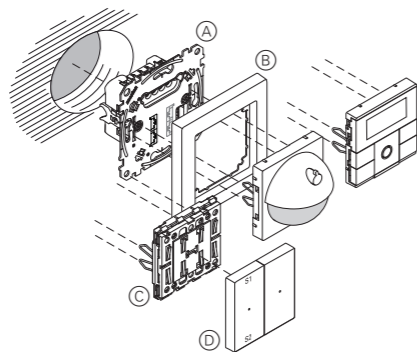
- (A) Universal dimmer insert, 2-gang
- (B) Mechanical push-buttons (toggle mode)

Insert in combination with transmitting device via PlusLink (here shown with Plus side controller)



- (A) Universal dimmer insert, 2-gang
- (B) Plus side controller, 1-gang / 2-gang (transmitting device)

Installing the device



- (A) Universal dimmer insert, 1-gang/2-gang
- (B) Frame
- (C) Module (see function overview)
- (D) Rockers for module

i If you do not install the device in a single, standard flush mounting box, the maximum permissible load is reduced due to the restricted heat dissipation:

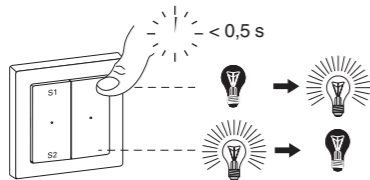
Load reduced by	when installed
25 %	in hollow walls * Several installed together in combination *
30 %	in 1-gang or 2-gang surface-mounted housing
50 %	in 3-gang surface-mounted housing

* If several factors apply, add the load reductions together.

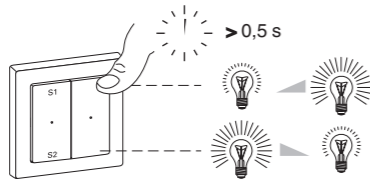
Operating the insert

i The insert is shown here in operation in combination with a push-button module. More details on how to operate the various modules can be found in the relevant operating instructions.

Switching loads on/off (1-gang insert)

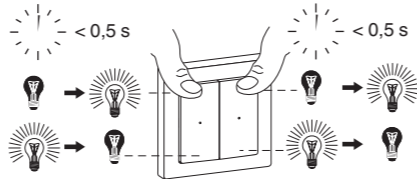


Dimming loads (1-gang insert)



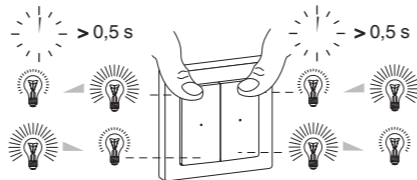
Switching loads on/off (2-gang insert)

- Right push-button: Channel 1
- Left push-button: Channel 2



Dimming loads (2-gang insert)

- Right push-button: Channel 1
- Left push-button: Channel 2

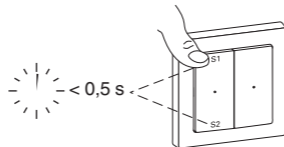


Calling up lightscenes (1-gang insert)

(only for push-button module, 2-gang)

Standard scenes

All devices are delivered from the factory with presettings for a lightscene.



- S1: Light on (100%)
- S2: Light off

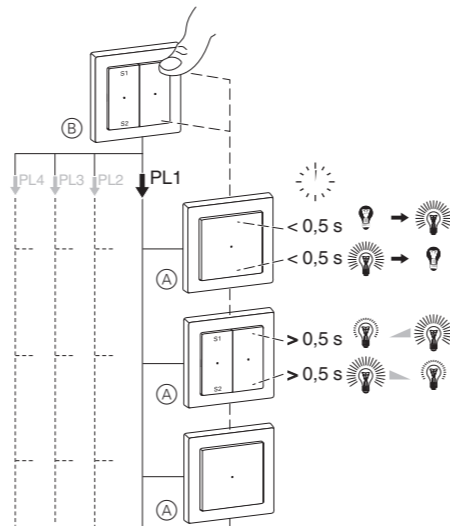
Controlling loads from another location with transmitting devices via PlusLink. For example:

- Central unit insert with module
- Side controller Plus, 1-gang/2-gang
- Mechanical push-button
- External sensor

Example operation 1:

When the push-button module on the central unit insert is pressed, all loads in the PL line are controlled together.

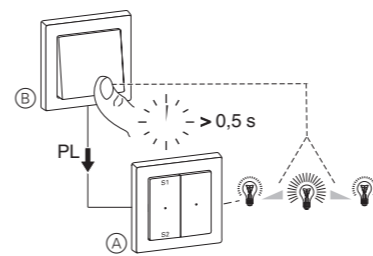
- Short push-button action (< 0.5 s): turn on/off
- Long push-button action (> 0.5 s): dimming



- (A) Universal dimmer insert in PL line 1
- (B) Central unit insert with module

Example operation 2:

i When a mechanical push-button is used, we recommend connecting only one insert. With two or more inserts, simultaneous dimming of the loads is no longer guaranteed.



- (A) Universal dimmer insert
- (B) Mechanical push-button

What should I do if there is a problem?

The device regularly dims down during operation.

- Allow the device to cool down and reduce the connected load.

The load cannot be switched back on.

- Allow the device to cool down and reduce the connected load.

- Rectify any possible short circuits.

- Renew defective loads.

The load is dimmed to the minimum brightness.

- The circuit is overloaded. -> Reduce load.
- The circuit falls short of the minimum load. -> Increase load.

Only in connection with push-button module Basic (from version 0B), push-button module Comfort (from version 0B), push-button module Comfort Plus (from version 0B), Connected push-button module and rotary module (from version 0B)

The load flickers continuously.

- LED lamp set to incorrect operating mode.
- Switch operating mode to "leading edge phase for LED lamps" (RL LED mode).

The load can only be dimmed slightly.

- LED lamp set to incorrect operating mode.
- Switch operating mode to "leading edge phase for LED lamps" (RL LED mode).

Only in combination with the Connected push-button module

The load is dimmed to the minimum brightness.

- The dimming range is incorrect. -> Reduce the maximum brightness value.

The load flickers at minimum brightness.

The circuit is below the minimum possible brightness value.

- Increase the minimum brightness value (set the dimming range).

The load can only be dimmed slightly.

- Set the dimming range.

Technical data

Nominal voltage: AC 220/230 V ~, 50/60 Hz

Switching capacity

MEG5171-0000, MTN5171-0000 in combination with: - Push-button module Basic

LED lamps (RC mode)*: 7-210 W

LED lamps (RL LED mode)*: 7-50 W

Incandescent lamps: 10-420 W

230 V halogen lamps: 10-420 W

LV halogen lamps with dimmable wound transformer: 30-420 VA

LV halogen lamps with electronic transformer: 10-420 W

MEG5171-0000, MTN5171-0000 in combination with:

- Connected push-button module

- rotary module

- ARGUS module

- display timer module

LED lamps (RC mode)*: 14-210 W

LED lamps (RL LED mode)*: 14-50 W

Incandescent lamps: 20-420 W

230 V halogen lamps: 20-420 W

LV halogen lamps with dimmable wound transformer: 40-420 VA

LV halogen lamps with electronic transformer: 20-420 W

MEG5172-0000 (per channel)

Incandescent lamps: 50-200 W

230 V halogen lamps: 50-200 W

LV halogen lamps with dimmable wound transformer: 50-200 VA

LV halogen lamps with electronic transformer: 50-200 W

Outputs

MEG5171-0000, MTN5171-0000: 1 make contacts

MEG5172-0000: 2 make contacts

Neutral conductor: not required

Connecting terminals: Screw terminals for max. 2x 2.5 mm²

Protection: 16 A circuit breaker

Properties:

- Short-circuit-proof

- Overload-proof

- Soft start

- memory function

* Minimum and maximum value of LED lamps are heavily dependent on the manufacturer and lamp.

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

 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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Schneider
Electric