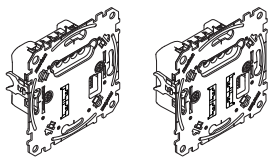


Universal dimmer insert

Operating instructions



Universal dimmer insert

Art. no. MEG5171-0000

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

Risk of serious damage to property and personal injury, e.g. from fire or electric shock, due to incorrect electrical installation.

Safe electrical installation can only be ensured if the person in question can prove basic knowledge in the following areas:

- Connecting to installation networks
- Connecting several electrical devices
- Laying electric cables

These skills and experience are normally only possessed by skilled professionals who are trained in the field of electrical installation technology. If these minimum requirements are not met or are disregarded in any way, you will be solely liable for any damage to property or personal injury.



DANGER

Risk of death from electric shock.

The outputs may carry an electrical current even when the device is switched off. Always disconnect the fuse in the incoming circuit from the supply before working on connected loads.



DANGER

Risk of death from electric shock.

The PlusLink carries an electrical current even when the device is switched off. Before working on the device, always disconnect it from the supply by means of the fuse in the incoming circuit. 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.



CAUTION

The device can become damaged.

The voltage difference between different phases can damage the device. Connect all connected devices of one or several PlusLink lines to the same phase or use a PlusLink terminal for cross-phase installation.

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:



LED

Dimmable LED lamps



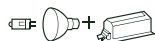
Incandescent lamps (ohmic load)



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.

Combination with push-button module Basic (from version 0B), push-button module Comfort (from version 0B), push-button module Comfort Plus (from version 0B), rotary module (from version 0B) and Wiser push-button module

Only for universal dimmer insert 1-gang (MEG5171-0000 from version 0B).

In some cases, the connected lamps may not work correctly with the automatic load detection. In this case you can switch the operating mode to RL LED (from trailing edge phase to leading edge phase).



In the operating mode "leading edge phase for LED lamps" (RL LED mode), LED lamps can only be connected up to a lower dimmer load. (See chapter "Technical data".)

Combination with the Wiser push-button module

If the insert is completed with the Wiser push-button module, you can operate the insert with a Bluetooth-enabled smart device (tablet or smartphone) via the Wiser Room App. You can also make settings via the app and use other additional app functions (see the module manual for instructions on operation), e.g.:

- Timer (staircase lighting with prewarning)
- Time switch
- Switch-on brightness/memory function: If the freely selectable switch-on brightness is not active, the memory function is executed.

Only in combination with the universal dimmer insert 1-gang (MEG5171-0000 from version 0B):

- Setting the minimum/maximum brightness



Depending on the dimming range of the lamp, malfunctions may occur for values near the maximum and minimum brightness. (See chapter "What should I do if there is a problem?".)



CAUTION

The insert can become damaged.

- Always operate the insert in compliance with the specified technical data.
- Connected devices can be damaged if you connect mixed loads (inductive and capacitive) on one channel at the same time.
- 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.

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

Module:	Function:
Push-button module Basic, 1-gang	- switching on/off - Dimming
Push-button module Basic, 2-gang	- switching on/off - Dimming - Calling up and saving lightscenes
Push-button module Comfort, 1-gang	- switching on/off - Dimming - Staircase lighting function
Push-button module Comfort, 2-gang	- switching on/off - Dimming - Calling up and saving lightscenes - Staircase lighting function
Push-button module Comfort Plus with IR, 1-gang	- switching on/off - Dimming - Staircase lighting function 24-hour time switch - Week time switch - Random function - IR function - Light control
Push-button module Comfort Plus, 2-gang	- switching on/off - Dimming - Calling up and saving lightscenes - Staircase lighting function 24-hour time switch - Week time switch - Random function - Light control
Wiser push-button module, 1-gang	- switching on/off - dimming Additional app functions: - Timer (e.g. staircase lighting) - Time switch - freely selectable switch-on brightness - Setting the minimum/maximum brightness - Changing operating mode
Wiser push-button module, 2-gang	- switching on/off - Dimming - Calling up and saving lightscenes Additional app functions: - Timer (e.g. staircase lighting) - Time switch - freely selectable switch-on brightness - Setting the minimum/maximum brightness - Changing operating mode
Rotary module	- switching on/off - Dimming - Calling up and saving lightscenes
ARGUS 180 flush-mounted sensor module	Brightness dependent staircase lighting function

ARGUS 180 flush-mounted sensor module with switch	- Brightness dependent staircase lighting function - Permanently switching staircase lighting on/off
ARGUS Presence 180/ 2.20 m flush-mounted sensor module	Brightness dependent staircase lighting function
ARGUS Presence sensor module with IR	- Brightness dependent staircase lighting function - IR function - Light control
Standard display timer module	- Switching and dimming manually - Time-controlled switching
Display timer module	- Switching and dimming manually - Time-controlled switching - Evaluating DCF timer

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

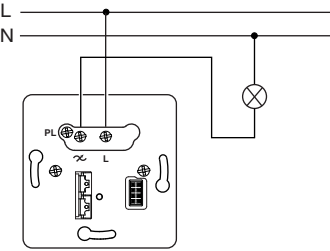
Module:	Function:
Push-button module Basic, 1-gang	- Switching both channels on/off together - Dimming both channels together
Push-button module Basic, 2-gang	- Switching both channels on/off separately - Dimming both channels separately
Push-button module Comfort, 1-gang	- Switching both channels on/off together - Dimming both channels together - Staircase lighting function
Push-button module Comfort, 2-gang	- Switching both channels on/off separately - Dimming both channels separately - Staircase lighting function (both channels together)
Push-button module Comfort Plus with IR, 1-gang	- Switching both channels on/off together - Dimming both channels together - Staircase lighting function 24-hour time switch - Week time switch - Random function - IR function - Light control
Push-button module Comfort Plus, 2-gang	- Switching both channels on/off separately - Dimming both channels separately - Light control both channels together: - Staircase lighting function 24-hour time switch - Week time switch - Random function

Wiser push-button module, 1-gang	- Switching both channels on/off together - Dimming both channels together Additional app functions: - Timer (e.g. staircase lighting) - Time switch
Wiser push-button module, 2-gang	- Switching both channels on/off separately - Dimming both channels separately Additional app functions (both channels together): - Timer (e.g. staircase lighting) - Time switch
Rotary module	- switching on/off - Dimming
ARGUS 180 flush-mounted sensor module	- Brightness dependent staircase lighting function - Brightness independent staircase lighting function
ARGUS 180 flush-mounted sensor module with switch	- 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	- Brightness dependent staircase lighting function - Brightness independent staircase lighting function
ARGUS Presence sensor module with IR	- Brightness dependent staircase lighting function - Brightness independent staircase lighting function - IR function - Light control
Standard display timer module	- Manually switching and dimming both channels together - Time-controlled switching of both channels separately or together
Display timer module	- Manually switching and dimming both channels together - Time-controlled switching of both channels separately or together - Evaluating DCF timer

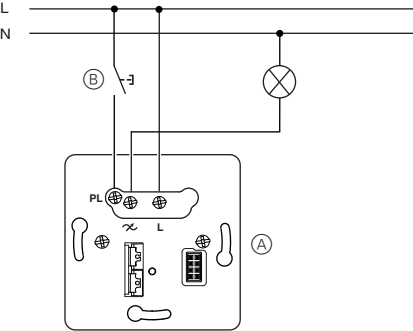
Installing the insert

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

Insert as stand-alone device

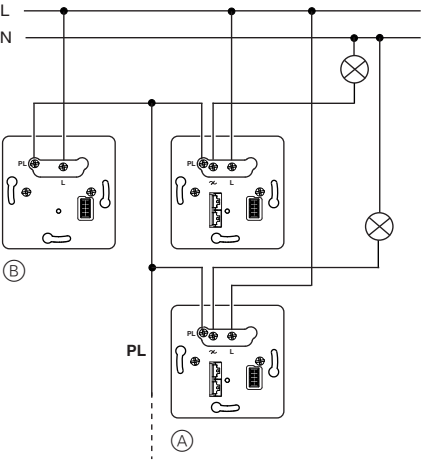


Insert with mechanical push-button via PlusLink



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

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

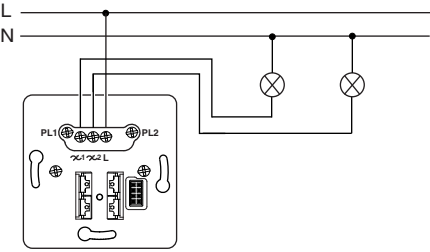


- (A) Universal dimmer insert
- (B) Plus side controller, 1-gang / 2-gang (transmitting device)

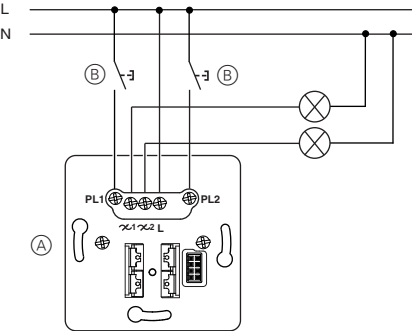
Wiring the insert (2-gang) for the application required

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

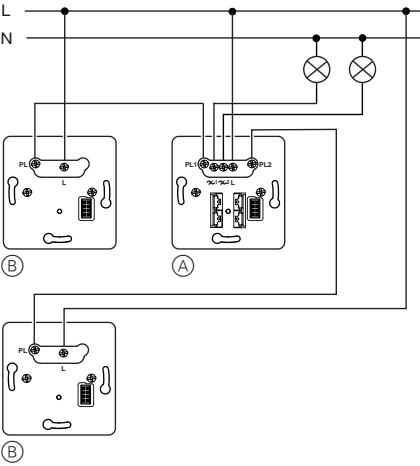


Insert with mechanical push-buttons via PlusLink



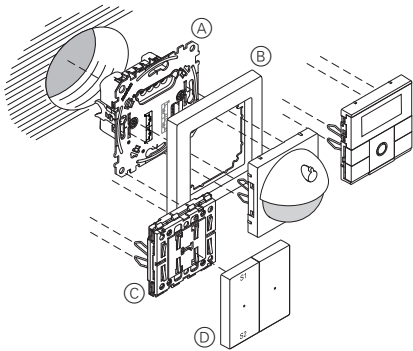
- (A) Universal dimmer insert, 2-gang
- (B) Mechanical push-buttons (toggle mode)

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:

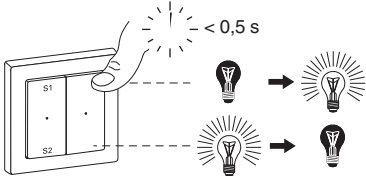
Load reduced by	when installed
25 %	in hollow walls * Several installed together in combination *
30 %	in 1-gang or 2-gang surface-mounted housing
50 %	in 3-gang surface-mounted housing

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

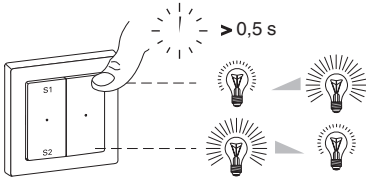
Operating the insert

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)

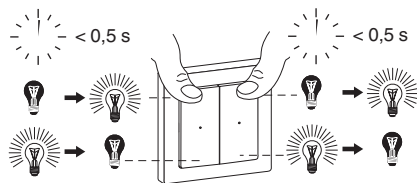


Dimming loads (1-gang insert)



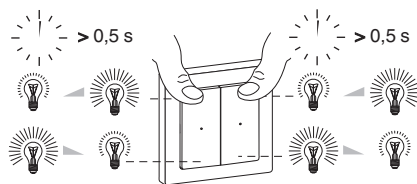
Switching loads on/off (2-gang insert)

- 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

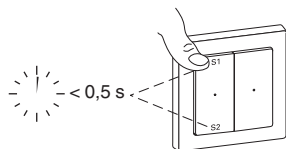


Calling up lightscenes (1-gang insert)

(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.

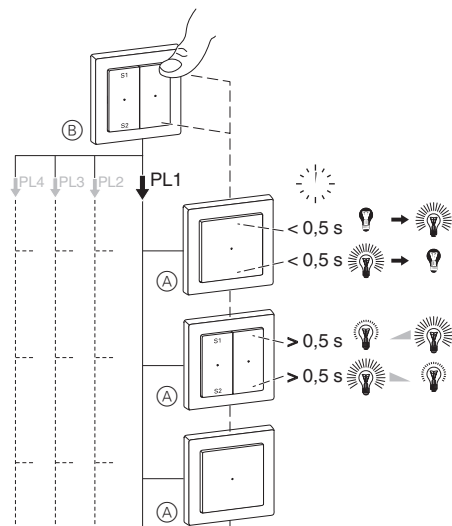
For example:

- 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.

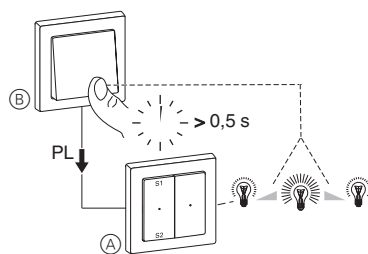
- Short push-button action (< 0.5 s): turn on/off
- Long push-button action (> 0.5 s): dimming



- (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), Wiser 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 Wiser 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 in combination with: - Push-button module Basic - push-button module Comfort

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 in combination with:

- Wiser 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:	1 make contacts
MEG5172-0000:	2 make contacts

Neutral conductor: not required

Connecting terminals: Screw terminals for max. 2x 2.5 mm² or 2x 1.5 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. For more information on compatible lamps, use the dimmer tool.

Dimmer tool

Merten has tested numerous dimmable LED and energy saving lamps. The dimmer tool provides information on dimmable lamps and the minimum and maximum number of individual lamp models.



<http://merten.de/Dimmer-Test.dimmertest.0.html>



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

Schneider Electric GmbH c/o Merten

Gothaer Straße 29, 40880 Ratingen

www.merten.com

www.merten-austria.at

Customer care centre:

Phone: +49 2102 - 404 6000