

Decentralised universal dimmer actuator with sensor input



PL-SAMDU

Only skilled electricians may install this electrical equipment otherwise there is the risk of fire or electric shock!

Temperature at mounting location:

-20°C up to +50°C.

Storage temperature: -25°C up to +70°C.

Relative humidity:

annual average value <75%.

Powerline universal dimmer actuator.

53x43 mm, 40 mm deep for mounting in 58 mm switch boxes. Power MOSFET up to 300 W. Automatic lamp detection. Sensor input 230 V. Standby loss only 0,6 Watt. To control and dim at the same place.

Universal dimmer switch for lamps up to 300 W, dependent on ventilation conditions. Dimmable energy saving lamps ESL and dimmable 230 V-LED lamps, additionally dependent on the lamps electronics. No minimum load.

Zero passage switching with soft ON and soft OFF to protect lamps.

Short-time control commands switch on/off, permanent control varies the brightness to the maximum level. A interruption of control changes the direction of dimming.

The brightness level is stored on switch-off (memory).

In case of a power failure the switch position and the brightness stage are stored and may be switched on when the power supply is restored.

Automatic electronic overload protection and overtemperature switch-off.

Two rotary switches are located on the front for address assignment:

The left rotary switch defines the group address g with 16 alphabetical values from A to P.

The right rotary switch defines the

element address e with 16 numerical values from 0 to 15.

Above it is a slide switch which acts as a **configuration switch**:

The position AUTO1 allows the dimming of all types of lamps up to 300 watts.

The position LC1 is a comfort position for LED lamps up to 150 watts which are not being dimmed down enough when set to AUTO (trailing phase angle) dependent on the construction and must therefore be forced to leading phase angle.

The position AUTO2 allows the dimming of all types of lamps up to 300 watts. Increased minimum brightness compared to AUTO1.

In position LC1 no inductive (wound) transformers should be used. In addition, the maximum number of dimmable LED lamps can be lower than in the AUTO position dependent on the construction. Mixing of L loads (inductive loads, e.g. wound transformers) and C loads (capacitive loads, e.g. electronic transformers) is not permitted. R loads (ohmic loads, e.g. 230 V incandescent lamps and halogen lamps) may be added anytime.

To the left of the rotary switches is a red LED which indicates all activities. Next to it is a reset pushbutton and to the right of that is a service pin.

The terminals located above are plug-in terminals for conductor cross-sections of 0.2 mm² to 1.5 mm².

Address assignment:

The left rotary switch defines the group address **g** with 16 alphabetical values from A to P.

The right rotary switch defines the element address **e** with 16 numerical values from 0 to 15.

Any number of devices (actuators/sensor inputs) can have the same **g** and **e**. All actuators with the same **g** and **e** are switched together.

The group address **g** identifies a main group, e.g. all Venetian blind actuators have the same **g** but different **e**.

Elementary address **e**

Sensor inputs with **e = 0** act on all actuators with the same **g** irrespective of **e** (e.g. central control for Venetian blinds).

Addresses can be changed at any time (when power is applied or not applied).

Start-up:

First installation:

Powerline devices are unconfigured in as-delivered state.

1. Switch off the main fuse.
2. Assign the device addresses (actuators/sensor inputs) by using the rotary switches and fitting all the devices.
3. Switch on the main fuse. **The LEDs of the unconfigured devices flicker.**
4. Press the pushbutton (switch) of an unconfigured device (actuator/sensor input) 5 times (10 times) within 5 seconds to generate a new domain (home address). After 5 seconds, all the existing devices in the new domain (home address) are integrated and functioning. **The LEDs of the configured devices are off.**

Extending the installation:

1. Switch off the appropriate fuse.
2. Assign the addresses of the new devices (actuators/sensor inputs) by using the rotary switches and fitting all the new devices.
3. Switch on the main fuse. **The LEDs of the unconfigured devices flicker.**
4. Press the pushbutton (switch) of a **previously installed and configured** device 5 times (10 times) within 5 seconds. The actuator/sensor input transfers its domains (home address) to the new devices. **The LEDs of the configured devices are off.**

Reset to as-delivered state:

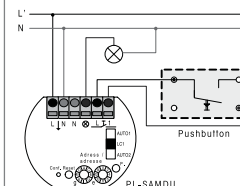
With the mains voltage applied, use a small insulated screwdriver to hold down the **Reset** pushbutton for at least 5 seconds. The LED first lights up and flickers after 5 seconds. The as-delivered state is restored.

Send node ID:

Use a small insulated screwdriver to

briefly press Service Pin **P**. The Powerline node ID is sent.

Typical connection



Must be kept for later use!

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