

# USER MANUAL – LIGHTNING CONTROLLER

## Characteristics of the dimmer

The dimmer is designed to control lightning level of lamps fitted with traditional or halogen lamps for the 230V voltage or low-voltage 12V (24V) throughout a conventional or electronic transformer compatible with lightning dimmers.

'Switching on' or 'switching of' the lightning occurs by short press of the top part of the button of the dimmer (switch on '+') or bottom part of the button of the dimmer (switch of '-'). By proceeding this way an idea of a conventional light switch is preserved. Control of lightning level occurs by press and hold down of the top part of the button of the dimmer (brightening) or bottom part of the button of the dimmer (darkening).

Control with use of remote transmitter is available depending on the type of the dimmer. With control from the remote transmitter in RC-5 system (now used with most of audio-video appliances) and a suitable type of the dimmer it is possible to programme two selected buttons so as they realize switch on/brighten and switch off/darken functions (so called **Double Action Control**). With use of remote transmitter working in different than RC-5 system and a suitable type of the dimmer control is realized with any button on the transmitter. With such a type of control each successive press of a button on the transmitter causes realization of a reverse function (so called **Inverted Control**).

Every type of the dimmer is fitted with a memory of the previously set lightning level and so called **'Soft Start'** function while switching on (smooth switching on the light and bulbs durability growth).

## Technical data

Power supply	230V 50Hz
Load range	40 – 400W
Type of load	conventional and halogen bulbs 230V, 12V (24V) bulbs throughout a conventional or electronic transformer compatible with lightning dimmers
Fuse	T 2,5A / 250V
Type of work	continuous
Type of regulation	smooth
Cross-section of the power supply wires	1,5...2,5mm <sup>2</sup>
Dimensions	88x80x43
Protection index	IP 20

## Provided functions

Switch on and switch off the light
Lightning control
Manual Double Action Control
Remote control with any transmitter (Inverted Control)
Remote control with transmitter in RC-5 system (Double Action Control)
Programming of control functions (for transmitter in RC-5 system only)
Memory of the previously set lightning
Optical signalling (LED)

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## Warranty terms

The guarantee is provided for a term of twelve months from the date of purchase. The defective controller must be delivered to the producer or to the seller with a purchase document. The guarantee does not cover mechanical damage, damages raised by self-repair or improper use. The warranty period shall be extended by the duration of the repair.

## Note!

Assembly shall be held by a suitably qualified person with deactivated voltage and shall meet the national safety standards. To maintain compliance with Protection Class II, user access to the rear of the device must be prevented.

# INSTALLATION MANUAL

## Installation

1. Deactivate main fuses of the electric home installation.
2. Prise and remove the keypad of the controller with use of a screwdriver, proceed similarly with the frame.
3. Strip 7 mm of the insulation of the power supply cords and with use of the schema connect them under the clamping pads (the phase cord under the clamp 'L', the output cord for regulated load under the clamp 'N').
4. Use fastening screws or resilient clips and assemble the dimmer in the installation box (with the clamping pad to the bottom which shall enable proper mode of action).
5. Assemble the frame and next the button of the dimmer (with the window to the top). Press carefully the button on the sides, in a place where latches are, until characteristic 'click' can be heard.
6. Activate the main fuses of the electric home installation (if the load is properly assembled to the dimmer, the diode LED shall optically indicate presence of the supply voltage.)

## Fuse exchange

1. Deactivate main fuses of the electric home installation.
2. Prise and remove the button of the dimmer with use of a screwdriver.
3. Use of a screwdriver to prise and take out from the box the holder with the fuse.
4. Exchange the blown fuse into the one determined in the technical data chart.
5. Insert the holder with a new fuse.
6. Assemble the button of the dimmer (with the window to the top).
7. Activate the main fuses of the electric home installation (if the load is properly assembled to the dimmer, the diode LED shall optically indicate presence of the supply voltage).

Malfunction type	Additional information	Possible cause	Procedure
The dimmer does not work	The optical indicator LED - does not flash	No voltage supply A blown fuse in the dimmer No load (eg. bulb is blown)	Check fuses of the electric home installation Exchanged the fuse following the instruction Exchanged the bulb
The dimmer does not work	The optical indicator LED - flashes	Electronical system of the dimmer is broken	Forward the dimmer to the service
Reverse action with manual control		The dimmer is assembled into the installation box in a reverse way	Turn the dimmer in the opposite direction (by 180°) so as the clamping pads are at the bottom

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## USER MANUAL AND PROGRAMMING GUIDE OF THE DIMMER

### Manual control

- Press shortly the top part of the button '+' - the bulb shall light maximum with so called 'soft start' effect and the diode LED shall disappear for the time of pressing the button
- Press shortly the bottom part of the button '-' - the bulb shall go out and the diode LED shall disappear for the time of pressing the button
- Press and hold down the top part of the button '+' - the bulb shall brighten from min. to max. light and the diode LED shall disappear for the time of pressing the button
- Press and hold down the bottom part of the button '-' - the bulb shall darken from max. to min. light (until it goes out completely) and the diode LED shall disappear for the time of pressing the button
- Press and hold the top part of the button '+' for a while - the bulb shall brighten to an expected level between min. and max.
- Press shortly the bottom part of the button '-' - the bulb shall go out
- Press shortly the top part of the button '+' - the bulb shall light with so called 'soft start' effect at the previously set level (so called memory of the last set).

### Control with any button from any remote transmitter

- Set switcher of the control type (available after the button removal) in position 0.
- Press shortly any button on the remote transmitter - the LED diode shall disappear for about 1 second (it shall indicate launch of the control of the dimmer), next the diode shall blink three times, during this time any button on the transmitter shall be shortly pressed - and the bulb shall light maximum with so called 'soft start' effect.
- Shortly press again any button on the remote transmitter - the LED diode shall disappear for about 1 second (it shall indicate launch of the control of the dimmer), next the diode shall blink three times, during this time any button on the transmitter shall be shortly pressed - and the bulb shall go out.
- Press shortly any button on the remote transmitter - the LED diode shall disappear for about 1 second (it shall indicate launch of the control of the dimmer), next the diode shall blink three times, during this time any button on the transmitter shall be shortly pressed - the bulb shall brighten from min. to max. light. The diode LED shall flash for the time of pressing the button.
- Press shortly any button on the remote transmitter - the LED diode shall disappear for about 1 second (it shall indicate launch of the control of the dimmer), next the diode shall blink three times, during this time any button on the transmitter shall be shortly pressed - the bulb shall darken from max. to min. light (until it goes out completely). The diode LED shall flash for the time of pressing the button.
- Press shortly any button on the remote transmitter - the LED diode shall disappear for about 1 second (it shall indicate launch of the control of the dimmer), next the diode shall blink three times, during this time any button on the transmitter shall be shortly pressed - the bulb shall brighten to a certain level between min. and max. The diode LED shall flash for the time of pressing the button.
- Shortly press again any button on the remote transmitter - the LED diode shall disappear for about 1 second (it shall indicate launch of the control of the dimmer), next the diode shall blink three times, during this time any button on the transmitter shall be shortly pressed - and the bulb shall go out.
- Press shortly any button on the remote transmitter - the LED diode shall disappear for about 1 second (it shall indicate launch of the control of the dimmer), next the diode shall blink three times, during this time any button on the transmitter shall be shortly pressed - the bulb shall light with so called 'soft start' effect at the previously set level (so called memory of the last set).
- Shortly press again any button on the remote transmitter - the LED diode shall disappear for about 1 second (it shall indicate launch of the control of the dimmer), next the diode shall blink three times, during this time any button on the transmitter shall be shortly pressed - and the bulb shall go out.

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## Double Action Control from the remote transmitter in RC-5 standard

### NOTE!

- At the first time a programming run shall be held, so as the dimmer realised suitable control function with press of one of the two selected buttons on the remote transmitter.
- Set switcher of the control type (available after the button removal) in position 1.

### Dimmer programming run for „Switching on - Brightening” function

Press and hold down button on the transmitter selected for „Switching on - Brightening” function, and next press and hold the button of the dimmer towards brightening '+'. At the moment the LED diode shall disappear, and after decoding the order from the remote transmitter and remembering it, the diode shall start flashing with speed of 1 second (for 1 second it appears, for 1 second it disappears). After such signalling the buttons on the transmitter and on the dimmer can be released. The command code selected on the transmitter shall be stored on the dimmer.

### Dimmer programming run for „Switching off - Darkening” function

Press and hold down button on the transmitter selected for 'Switching off - Darkening' function, and next press and hold the button of the dimmer towards brightening '-'. At the moment the LED diode shall disappear, and after decoding the order from the remote transmitter and remembering it, the diode shall start flashing with speed of 1 second (for 1 second it appears, for 1 second it disappears). After such signalling the buttons on the transmitter and on the dimmer can be released. The command code selected on the transmitter shall be stored on the dimmer.

**The dimmer programmed in such a way is ready operate with remote transmitter is compatible with RC-5 standard.**

### NOTE!!!

1. If during programming run the dimmer does not decode the command, which reveals in execution of brightening or darkening functions with pressed buttons both on the transmitter and on the dimmer, it means the remote transmitter is compatible with standard other than RC-5.
2. If during programming run on the remote transmitter compatible with RC-5 system (mistakenly) the same button has been chosen for „**Switching on - Brightening**” and „**Switching off - Darkening**” functions, the dimmer shall automatically change to action mode as with control with any button from any remote transmitter. At this moment any pressing the button on the remote transmitter shall evoke reverse movement of the dimmer (if it was switched off, it will be switched on, if brightening function was on, it shall start darkening function). In order to restore double action of the dimmer, the programming run shall be proceeded again with selection of two different buttons on the remote transmitter.

## Electrical schema

