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**SCO-802-LED**  
Lighting dimmer with  
„memory” of light intensity  
setting and Softstart function



**Do not dispose of this device in the trash along with other waste!** According to the Law on Waste, electro coming from households free of charge and can give any amount to up to that end point of collection, as well as to store the occasion of the purchase of new equipment (in accordance with the principle of old-for-new, regardless of brand). Electro thrown in the trash or abandoned in nature, pose a threat to the environment and human health.



## Purpose

Universal lighting dimmer SCO-802-LED is designed for adjusting the brightness of dimmable lighting sources<sup>1</sup>, in particular LED lighting with power up to 150 W<sup>2</sup>.

- 1 Dimmable light sources must be connected to the dimmer in order for it to work properly. Make sure that the packaging or instructions for the light source clearly state that the brightness can be adjusted. It is often represented by one of the following two symbols:



**Dimmable**

Dimmable light source



No brightness adjustment

Due to the wide variety of dimmable LED lamp designs, it may happen (in rare cases) that the selected lamp will not work properly with the SCO-802 LED dimmer. Typical symptoms of such cases include: low adjustment range and light flickering. Therefore, it is advisable to carry out a test before installing the dimmer.

- 2 Indicative value. The limit value of the power depends on the design and quality of the connected light sources and in reality may be significantly lower than the specified value.

## Properties

- » Installation in a standard  $\varnothing 60$  mm installation box;
- » Can be connected to any installation (both 3-wire and 2-wire, without available neutral wire in the installation box);
- » The lighting can be switched on, switched off and adjusted using any momentary (even backlit<sup>3</sup>) button;
- » Memory of set brightness level (also after power failure and its return);
- » Smooth lighting brightening and dimming;
- » Programmable minimum brightness level (elimination of led lamps flashing at low brightness levels)
- » Built-in thermal protection to prevent dimmer overload.

## Functioning

### Control

The lighting is switched on and off by briefly pressing the momentary button connected to the control input of the dimmer<sup>4</sup>.

Long press of a button smoothly<sup>5</sup> brightens/dims the light.

Another long press of the button changes the action direction: brightening → dimming or dimming → brightening.

After reaching the minimum or maximum value, pressing the button no longer changes the brightness level. If the dimmer

- 3 Operation verified for buttons backlitged by a neon lamp. In case of buttons backlitged by LEDs, it is recommended to check their proper functioning. Malfunctioning can be manifested by spontaneous switching on and off and changing of brightness level. If an abnormality is detected, it is recommended to disconnect the backlight circuit
- 4 If the brightness level is set to low, the light may become brighter when switched on and then decrease to the set value. This is to ensure that the LED lamps start up properly. The light switches on smoothly in approximately 0.5÷1 second.
- 5 The transition time from off to full brightness level with a long press of the dimmer button in the SCO-802 is about 10 seconds. The actual brightness/dimming characteristics will depend on the design of the light sources. It may happen that this process will not be smooth, for example, in the initial adjustment range there will be large changes in the brightness level, and in the final very small.

is set to maximum value, another long press will decrease the brightness level. If the dimmer is set to minimum value, another long press will increase the brightness level.

The brightness level set by a long press of the button is stored in the non-volatile memory of the dimmer. Turning the light on by briefly pressing the button restores the previously set brightness level.

### **Minimum brightness level**

A characteristic feature of LED lamps is the brightness adjustment range limited from below. This can be manifested by flickering of the light when the brightness level is set too low. The SCO-802-LED dimmer allows you to program a minimum brightness level and thus eliminate the area of unstable lamp operation.

To set the minimum brightness level:

1. Turn on the light.
2. Dim the light by holding down the button for a long time.
3. Keep the button pressed like this. After about 30 seconds the light will turn on to 100% and after another 2 seconds it will turn off.
4. Release the button.
5. Use long presses of the button to set the required minimum brightness level (first press brightens, subsequent presses dims the light)<sup>6</sup>.
6. After setting the minimum brightness level, release the button and wait about 15 seconds.
7. After this time, the light will be switched off and the programming process will be completed.

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<sup>6</sup> The minimum brightness level can be set from 0 to 50% of full brightness.

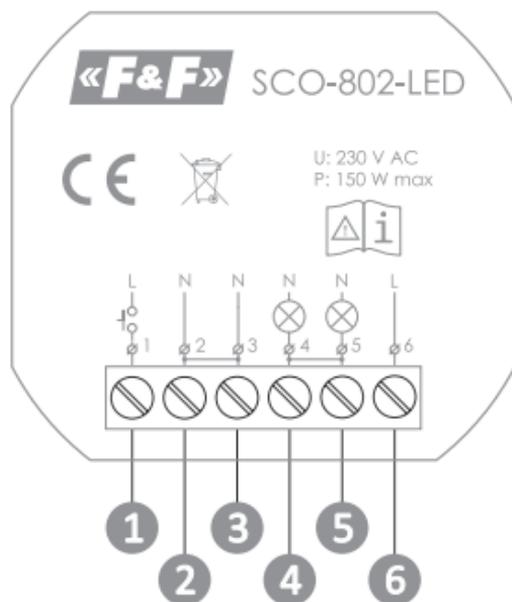
## Thermal protection

The SCO-802-LED dimmer is equipped with thermal protection which prevents the controller from overheating. Activation of the thermal protection<sup>7</sup> is indicated by the periodic flashing of the lamps connected to the dimmer:

- » light on at 50 % – 1 second,
- » light off – 5 seconds.

When the thermal protection is triggered, it is recommended to switch off the light (short press of the button). Return to normal operation will be possible when the temperature inside the dimmer is reduced to a safe value<sup>8</sup>.

## Description of terminals



<sup>7</sup> In the case of repeated thermal protection activation, the load connected to the dimmer must be reduced.

<sup>8</sup> When the temperature is lowered, the dimmer returns to its previous state – if the dimmer was on, it returns to the previously set brightness level.

- 1 1 control input – connection of momentary button
- 2-3 power supply N – connection of a supply neutral wire (**only for 3-wire installations**: terminals 2 and 3 are connected internally)
- 4-5 receiver – connection of controlled lamps (terminals 4 and 5 are connected internally).
- 6 power supply L – connection of the power supply phase wire

## Mounting

The SCO-802-LED dimmer is designed for mounting in a standard  $\varnothing 60$  mm installation box.



**Before starting installation, switch off the power supply to the box!**

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Depending on the type of installation led to the installation box, one of the installation schemes should be used:

» **2-wire installation (traditional)**

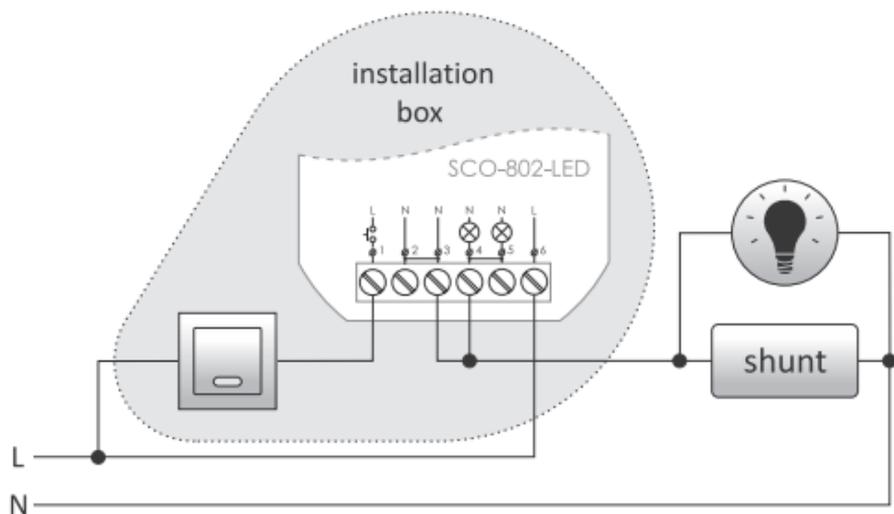
In traditional installations two wires are led to the installation box - the power (phase) wire from the distribution board and the output wire to the powered lamp.

» **3-wire installation**

For a 3-wire installation, at least 3 wires are led to the installation box: phase (L) and neutral (N) from the distribution board and output wire to the lamp.

## Connection diagram

### 2-wire installation (traditional)

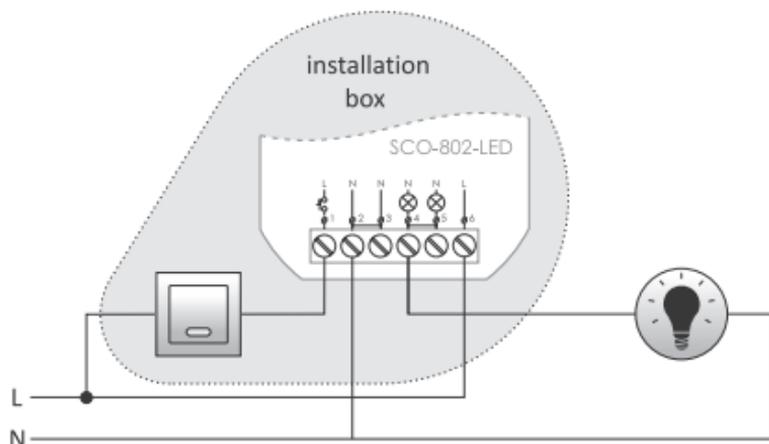


In case of 2-wire installation, terminals 3 and 4 of the SCO-802-LED controller should be connected together.



Connect the shunt included with the controller in parallel to the lamp being controlled.

## 3-wire installation



### Technical data

power supply	230 V AC, 50 Hz
power supply tolerance	-20/+10% <sup>9</sup>
maximum power of connected light bulbs	150 W <sup>10</sup>
power consumption of the controller	<0.25 W
terminal	1.5 mm <sup>2</sup> screw terminals
tightening torque	0.3 Nm
working temperature	-25÷50°C
dimensions	48×43×20 mm
mounting	for ø60 flush-mounted box
ingress protection	IP20

<sup>9</sup> Fluctuations in the supply voltage may cause the controlled lighting to flicker.

<sup>10</sup> Indicative value. The limit value of the power depends on the design and quality of the connected light sources and in reality may be significantly lower than the specified value. .

## Warranty

The F&F products are covered by a warranty of the 24 months from the date of purchase. Effective only with proof of purchase. Contact your dealer or directly with us.

## CE declaration

F&F Filipowski sp. j. declares that the device is in conformity with the essential requirements of The Low Voltage Directive (LVD) 2014/35/EU and the Electromagnetic Compatibility (EMC) Directive 2014/30/UE. The CE Declaration of Conformity, along with the references to the standards in relation to which conformity is declared, can be found at [www.fif.com.pl](http://www.fif.com.pl) on the product page.