

RF-L-UP 1-10 V Radio Dimmer

Technical specifications and installation instructions

Item number 60547



1. Description

The **RF-L-UP 1-10 V** is a wireless dimmer for the Elsner RF wireless control protocol. The **RF-L-UP 1-10 V** has a 230 V switch output (6 A) and a 1-10 V control device for dimming. With this the **Radio dimmer RF-L-UP 1-10 V** is specially designed for the connection of electronic enhanced voltage generators (EVG), LED converters or electronic power supplies for low voltage systems.

The lighting connected to the wireless dimmer can be controlled automatically and manually via the WS1 or (KNX) WS1000 Color Style building controller or the Solexa II wireless control system. Alternatively, direct manual operation is possible using the Remo 8/pro wireless remote control, via the RF-B2-UP button interface or the Corlo P RF solar wireless control button.

Functions:

- Dimmer with 4 connections for electronic ballasts, LED converters, electronic power supply units for low-voltage systems
- 230 V switched output, 6 A
- 1-10 V control device with 4 connections
- Basic brightness and maximum brightness can be set via the DIP switch (starting value 1%, 10%, 20%, 30% or 40%, maximum value 60%, 70%, 80%, 90% or 100%)
- Suitable for: WS1 Color, WS1 Style, WS1000 Color, WS1000 Style, KNX WS1000 Style (each from software version 1.818), Solexa II, Remo 8 (from version 0.1), Remo pro, RF-B2-UP, Corlo P1 RF, Corlo P2 RF (The **RF-L-UP 1-10 V** can only be taught-in at one of these devices)

1.0.1. Deliverables

- Wireless dimmer

1.1. Technical specifications

Housing	Plastic
Colour	White
Assembly	Flush mounting (in junction box Ø 60 mm, 60 mm deep)
Degree of protection	IP 20
Dimensions	approx. 50 x 50 x 54 (W x H x D, mm)
Weight	approx. 90 g
Ambient temperature	Operation -20...+70°C, storage -30...+85°C
Ambient humidity	5...80% RH, non-condensing
Operating voltage	230 V AC
Standby power consumption	1 W
Outputs	• Switched output 230 V, 6 A • Dimming 1-10 V, in total maximum 100 mA
Wireless frequency	868.2 MHz

The product is compliant with the provisions of EU guidelines.

2. Installation and commissioning



Installation, testing, operational start-up and troubleshooting should only be performed by an authorised electrician.



DANGER!
Risk to life from live voltage (mains voltage)!

- Inspect the device for damage before installation. Only put undamaged devices into operation.
- Comply with the locally applicable directives, regulations and provisions for electrical installation.
- Immediately take the device or system out of service and secure it against unintentional switch-on if risk-free operation is no longer guaranteed.

Use the device exclusively for building automation and observe the operating instructions. Improper use, modifications to the device or failure to observe the operating instructions will invalidate any warranty or guarantee claims.

Operate the device only as a fixed-site installation, i.e. only in assembled condition and after conclusion of all installation and operational start-up tasks, and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

2.1. Notes on wireless equipment

When planning facilities with devices that communicate via radio, adequate radio reception must be guaranteed. The range of wireless control will be limited by legal regulation and structural circumstances. Avoid sources of interference and obstacles between receiver and transmitter, that could disturb the wireless communication. Those would be for example:

- Walls and ceilings (especially concrete and solar protection glazing).
- Metal surfaces next to the wireless participants (e.g. aluminium construction of a conservatory).
- Other wireless devices and powerful local transmitters (e.g. wireless headphones), which transmit on the same frequency. Please maintain a minimum distance of 30 cm between wireless transmitters for that reason.

2.2. Notes on mounting and commissioning

Device must not be exposed to water (rain). This could result in the electronic being damaged. A relative air humidity of 95% must not be exceeded. Avoid bedewing.

2.3. Connection

2.3.1. Dimming output

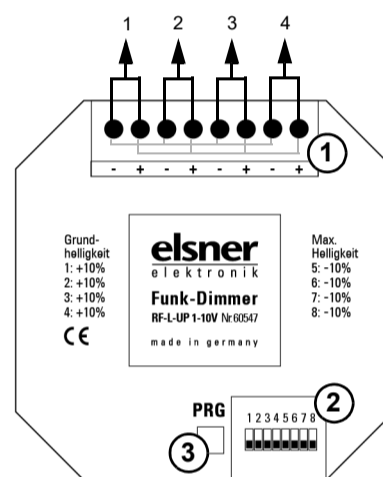


Fig. 1

- 1 Dimming output with 4 connections (+/-) in total maximum of 100 mA
- 2 DIP switches for setting the basic brightness and the maximum brightness (see „Switched output mains voltage“)
- 3 Programming button and programming LED (countersunk)

Legend

Grundhelligkeit: basic brightness
Max. Helligkeit: maximum brightness

2.3.2. Switched output mains voltage

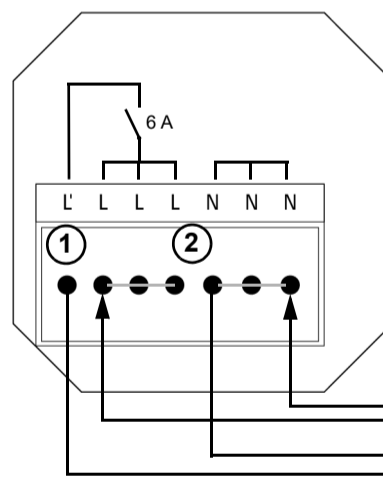
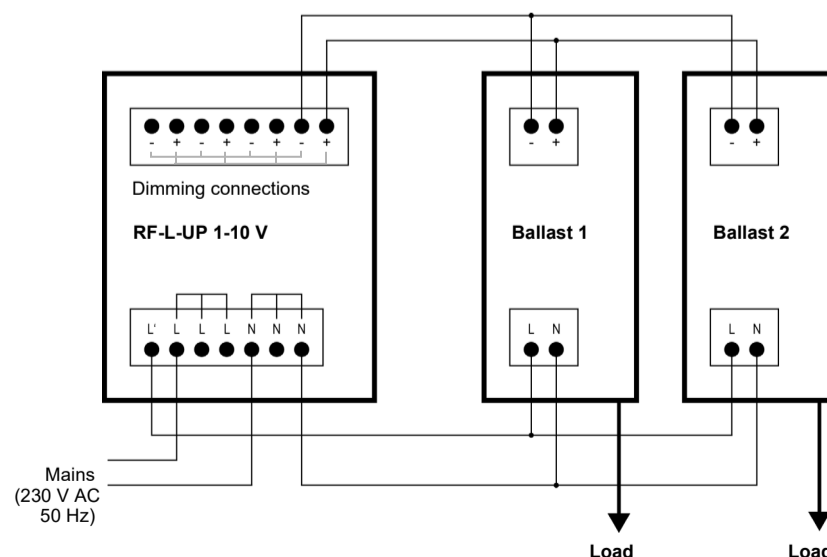


Fig. 2

- 1 Switched output 230V, 6 A
- 2 Mains connections and supply for enhanced voltage generator/converter (L/N) each bridged internally

2.3.3. Connection example



2.4. Defining basic brightness and maximum brightness

Using the DIP switch (fig. 1, No. 2) the basic lightness with which dimming begins and what level the maximum brightness is to be, can be set. The setting is valid for all four dimming outputs.

DIP switch 1-4: Basic lightness

DIP switch 5-8: maximum brightness

Switch down: OFF | up: ON

DIP switch	Output voltage:	Dimming
None ON	1...10 V	10...100%
One of the switches 1-4 ON	Starting value 2 V	Starting value 20%
Two of the switches 1-4 ON	Starting value 3 V	Starting value 30%
Three of the switches 1-4 ON	Starting value 4 V	Starting value 40%
Switches 1-4 ON	Starting value 5 V	Starting value 50%
One of the switches 5-8 ON	Maximum value 9 V	Maximum value 90%
Two of the switches 5-8 ON	Maximum value 8 V	Maximum value 80%
Three of the switches 5-8 ON	Maximum value 7 V	Maximum value 70%
Switches 5-8 ON	Maximum value 6 V	Maximum value 60%

2.4.1. Illumination brightness (dimming behaviour)

For the Elsner controls, 10 V are specified with 100% dimming brightness (maximum brightness) and 1 V with 10% dimming brightness. How bright the minimum illumination at 1 V actually is and how the brightness changes between 1 and 10 V depends on the connected lighting system.

2.5. Establish wireless connection

1. Set the control unit and/or remote control or the button to teaching mode (observe the corresponding manual/data sheet)
2. Press the programming button on the **RF-L-UP 1-10 V**. The red programming LED lights up briefly.
OR
Switch on the **RF-L-UP 1-10 V** voltage supply or shut it off for at least 3 seconds if the unit is already supplied with power.
3. For 5 minutes after connecting the voltage, the **RF-L-UP 1-10 V** will send a "Learn" telegram every 10 seconds.
4. The wireless connection will be established automatically. For building control systems, the display will display "Device is learning".
5. The **RF-L-UP 1-10 V** will stop sending "Learn" telegrams once the reply "Learned" (for a learning process) or a control command is received (in the event of a power interruption during operation).

3. Disposal

After use, the device must be disposed of in accordance with the legal regulations. Do not dispose of it with the household waste!