RF-L PWM-ST Wireless Dimmer

Technical Data and Installation Instructions
Item number 60564

1. Description

RF-L PWM-ST is a wireless dimmer for LED lighting strips. The power supply is provided by a suitable power supply unit.
A light connected to the **Wireless Dimmer RF-L PWM-ST** can be operated directly using Elsner's remote controls Remo or via the RF-B2-UP button interface. The wireless dimmer is also suitable for operation together with Elsner's WS1 and WS1000 Color and Style, WS1000 Connect controls and for the Solexa II/Home wireless systems. It is programmed to a wireless channel of the control system, receiving automatic and manual commands from it.

Functions:

- Dimmer with pulse width modulation (PWM),
  max. load 120 W / 5 A at 24 V DC (60 W / 5 A at 12 V DC)
- For LED lighting strips (12 to 24 V DC)
- Dimming in 1% steps
- STAS3/STAK3 terminals
- Reception of the wireless control signal
- Suitable for one of the following devices: WS1 Color, WS1 Style, WS1000 Color, WS1000 Style, KNX WS1000 Style (each from software version 1.8). WS1000 Connect.
  Solexa II, Solexa Home.
  Remo 8 (from version 0.1), Remo pro, Remo 8i, RF-B2-UP.

1.0.1. Deliverables

- Wireless dimmer

1.1. Technical Data

Housing	Plastic
Protection category	IP 54
Dimensions (without locking bow)	approx. 147 x 36 x 29 (W x H x D, mm)
Weight	approx. 140 g
Ambient temperature	Operation -20…+55°C, storage -30…+85°C
Ambient humidity	max. 95% RH, avoid condensation
Operating voltage	12...24 V DC, STAS3 plug. The voltage of the used power supply must match the connected LEDs.
Output	STAK3 coupling, load at 24 V DC up to a maximum of 120 W / 5 A, at 12 V DC up to a maximum of 60 W / 5 A. Output voltage corresponds to input voltage
Radio frequency	868,2 MHz (Elsner RF)

The product conforms with the provisions of EU directives.

2. Installation and start-up

2.1. Installation notes

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

DANGER!
Risk to life from live voltage (mains voltage)!
There are unprotected live components within the device.
- VDE regulations and national regulations are to be followed.
- Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.
- Do not use the device if it is damaged.
- Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.

The device is only to be used for the intended purpose described in this manual. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

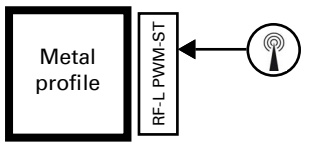
The device may only be used as a fixed-site installation; that means only when assembled and after conclusion of all installation and operational start-up tasks and only in the surroundings designated for it.

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

2.2. 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.



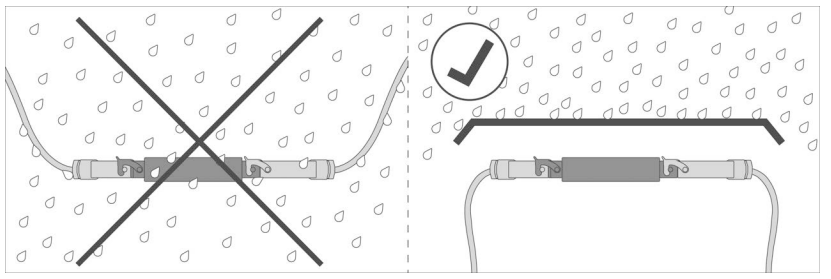
The antenna symbol on the housing shows the position of the antenna in **RF-L PWM-ST**. This side must not be positioned directly on metal surfaces or objects. Otherwise, the radio signal might disturbed.

2.3. Connection

The wireless module is inserted between the terminal box with the consumer and the voltage supply (power supply unit). It may only be connected to flexible lines using STAK/STAS connectors. The connectors must be locked using the locking bow.

Do not expose to continuous sun radiation to avoid overheating.
The housing is not UV-resistant.

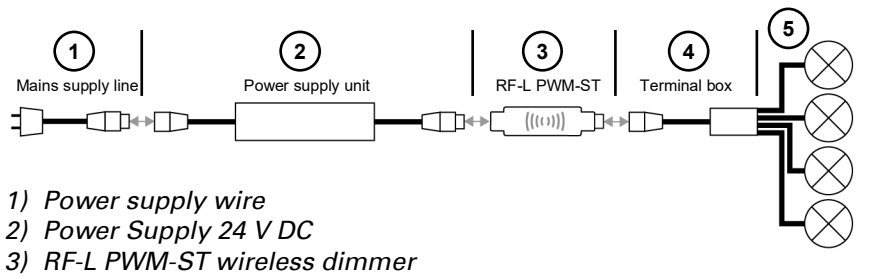
No water may run along the supply line and device.



- Assembly the device in a protected area (e. g. in the box for the blinds/marquee/shutters in a construction profile beneath the roof tiles or in a housing).
- Lay the supply lines out and down from the device.

No vibrations!
- Assemble the device in a place that is free of vibrations.

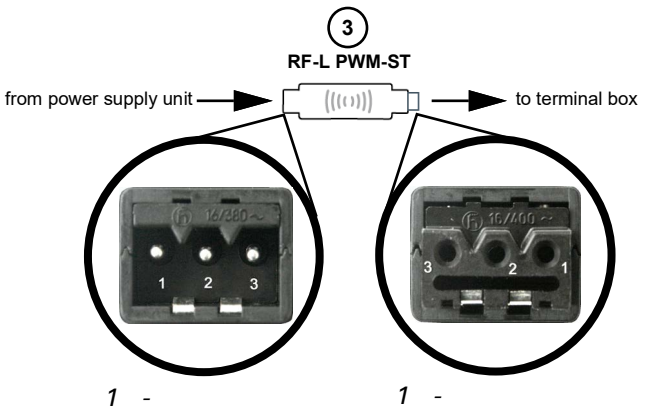
2.3.1. Connection overview



1) Power supply wire
2) Power Supply 24 V DC
3) RF-L PWM-ST wireless dimmer
4) Terminal box
5) Consumer (LED strips)

2.3.2. Wireless dimmer

ATTENTION!
Destruction of the device due to incorrect connection!
The connections are not protected against polarity reversal.
- Ensure correct connection.



1	*-*
2	*nc (not connected)*
3	*+*
PE	*nc (not connected)*

1	*-*
2	*nc (not connected)*
3	*+*
PE	*nc (not connected)*

2.4. Establishing a wireless connection

1. Set the control unit and/or remote control or the button to teaching mode (observe the corresponding manual/data sheet).

2. Switch on the dimmer voltage supply or briefly 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 dimmer 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 PWM-ST 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).

2.5. 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.

2.6. Disposal

Observe legal regulations and do not dispose of with household waste!