



wlightbox v2



control with WiFi technology
from any place in the World

WIRELESS CONTROLLER FOR LED AND LED RGB / RGBW / CT

ability to control by voice commands with
Amazon Alexa and Google Home



SAFETY RULES



Do not connect loads with more than permissible power.



Connect only in accordance with the diagram presented in the manual. Improper connections may be dangerous, it can damage the controller, and loss of the warranty.



DANGER! Risk of electric shock! Even with the device turned off, the outputs may be live. All assembly work should be ALWAYS performed with the disconnected power circuit.



Connecting the device to a power supply that does not meet the quality requirements specified in EN 50081-1, EN 50082-1, UL508, EN 60950 will invalidate the warranty.

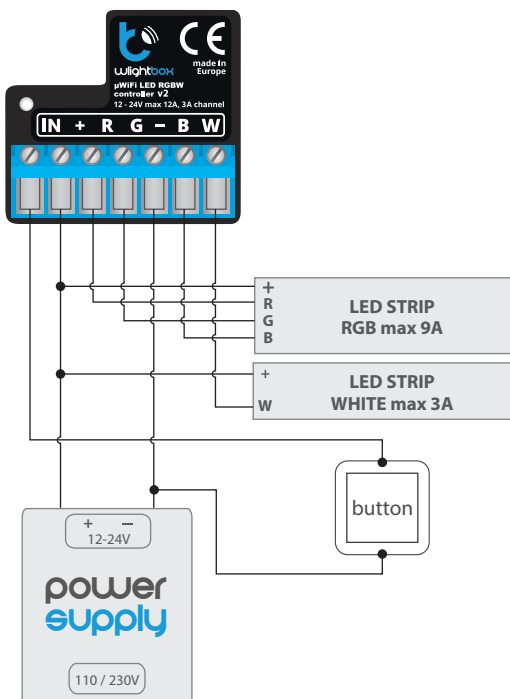
1

INSTALLATION

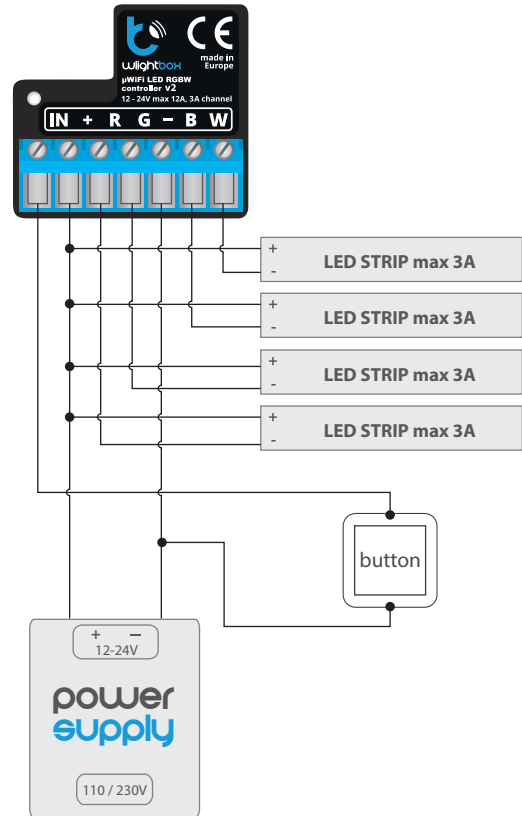
- Disconnect the installation supply voltage before installing the controller. Remember that any mounting works should be carried out when the mains voltage is disconnected (switch off the mains fuse or disconnect the power cord from the mains socket).

CONNECTION DIAGRAMS

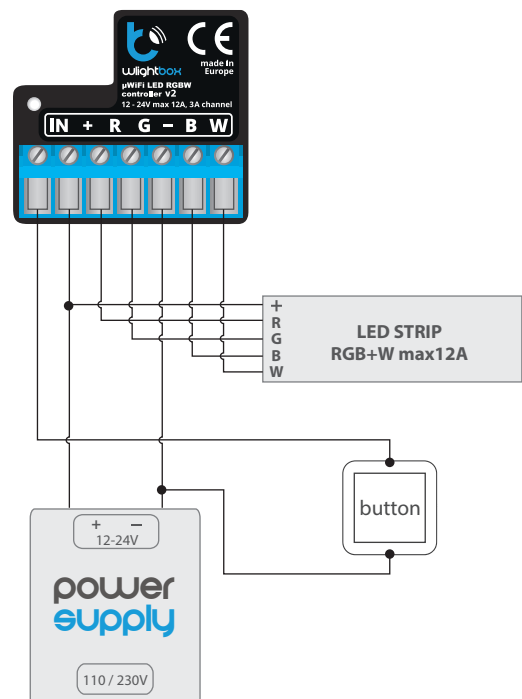
- wLightBox v2 + RGB LED strip + 1-channel LED strip (white color)



- wLightBox v2 + 4 single-channel LED strip



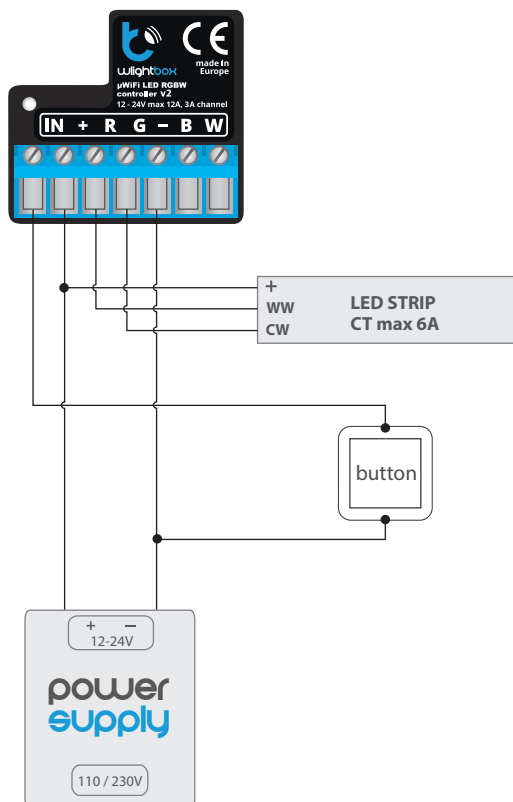
- wLightBox v2 + 4-channel RGBW LED strip



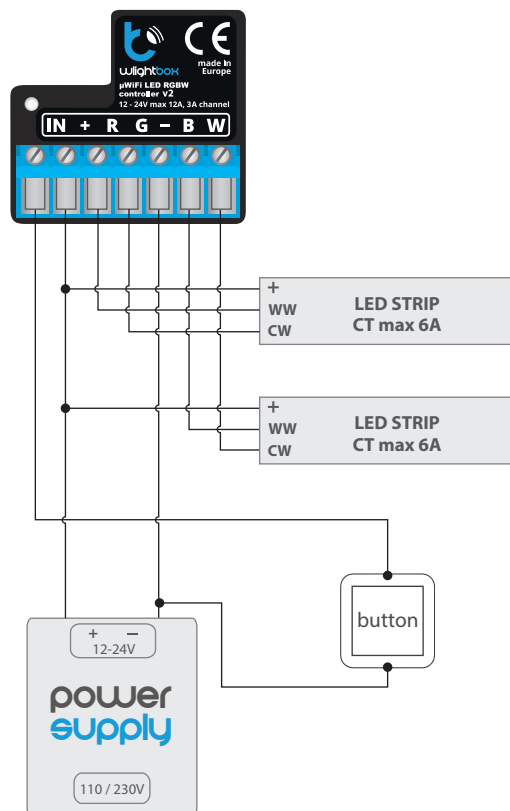
user manual



● wLightBox v2 + 2-channel CT LED strip (CW/WW, CCT)



● wLightBox v2 + 2 strips of 2-channel CT LED strip (CW/WW, CCT)



- The controller should be installed in a place protected against adverse environmental conditions, protected from third party access - in the flush box or inside the enclosure of the controlled device. It is recommended that the device be mounted in a stable and fixed position.
- Familiarize yourself with the diagram and then proceed with the installation of the controller. Pay special attention to the designation of the controller connectors. Start by connecting the power wires: (+) (red or black with a white dotted line) and (-) (black).
- Connect the LED strip paying attention to the polarity. Depending on the use, it is possible to connect a single RGBW strip, one RGB strip, an RGB strip with a white strip, four monochromatic strips (single-colour), individual 2-channel CT strip (CCT, CW/WW) or two 2-channel CT strips. The "+" anode wire (usually white color in multicolored strips or red in monochrome and CT strips) must be connected to the "+" connector of the controller, and the cathode wire "-" (color corresponding to each color of the LEDs in multi-color strips or more often black or white color in monochrome strips) to the corresponding output, i.e. R, G, B or W. For CT tapes, the WW wire (warm white) should be connected to the output of the controller marked with the letter R, and the CW wire (cold white) to the output marked with the letter G. In the situation of two CT tapes, the WW cable of the second tape should be connected to the output of the controller marked with the letter B, and the CW wire to the output marked with the letter W. The controller also allows to control halogen lamps, the polarity of the wiring is not important.
- If you wish to control locally by using a wall push-button, please connect the monostable push-button according to the diagram. To control only by using the smartphone or tablet, the connection of the push-button is not required
- After making sure that the device is connected in accordance with the diagram and that there are no metal components near the controller which may accidentally cause short-circuit, start the device by turning on the power (turning on the mains fuse or connecting the power cord to the power outlet).

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FIRST START

- Download the **free wBox application**. If you have an Android mobile device, you will find the application in the Play Store. For iOS devices the application is in the App Store.
- By using your mobile phone or tablet, connect it to the device wireless network. To do this, enter to your smartphone or tablet settings, then go to setting of the WiFi network and find the network name "wLightBox-xxxxxxx" where xxxxxxxx is the serial number of the device. Connect to this network.
- Open the wBox application. A device will appear at the top of the screen. To add it to the application, click on "+" on the right side of the name. To pre-configure the controller, click on the default device name.



You can also set the configuration using the web browser of your phone / tablet. After connecting to the wireless network of the controller, turn on the browser and go website www.blebox.eu

- Go to settings ("Settings" icon in the upper right corner of the screen) and select the correct option in the "Device type" field depending on the LED strip connected. You can choose between the options "RGBW or W" for three-color strips with additional white, which should work in self-exclusion mode (turning white deactivates the color), "RGB" - for three-color strips and "MONO" - for monochromatic strips, halogen bulbs or CT for 2-channel strip warm and cold shade of white. After saving the settings, go to the main panel by clicking the arrow in the upper left corner. Test the controller works - if you have a multi-colored tape, select color from the color selection circle and set



the brightness using the scrollbar. If you have monochrome strip, select the brightness of the channel with the scrollbar. If you have CT strip select the first scrollbar to set the white temperature, and use the second scrollbar to set the brightness. Test the controller's work by moving the brightness scrollbar several times in the extremes and intermediate positions - the light source should change its brightness.

- The control panel also has an additional effects menu – the access to it is achieved by moving-up the screen from the bottom ("More" at the bottom of the screen). In the menu you can choose predefined colors and set the duration of the color, or choose a predefined lighting effect and set the transition times.

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OTHER DEVICE SETTINGS

- Go to the configuration ("Settings" icon in the upper right corner of the screen). In the "Main configuration" section, you can change the name of the device that is displayed in the wBox application. The "Status LED enabled" option allows you to turn off the built-in LED on the device.
- When installing the controller in specific installations (eg film studios), it is possible to change the "PWM frequency" - smaller setpoints work better with low quality power supplies, but they can cause a flickering effect. Higher values can cause unstable operation of the controller when powering the system from low-performance power supplies.
- In the controller settings, in "Effects" section it is possible to edit predefined effects as well as create your own lighting effects. In order to create a new effect press "add new effect" and next complete the form. Set a name for the effect, select the type and next add colors choosing it from the color palette, and using the scrollbar adjust its brightness. It is possible to select additional color options sliding-up the lower screen (title "more") or also set colors by using scrollbars choosing the option "mono". Each time a new color is added it is necessary to confirm it by pressing "save". Next select "changing color duration in effect" (called passing time) and "color duration in effect" (called lighting length of said color). Remember to save the new effect by pressing the "save" button.

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ACCESS POINT AND WIFI NETWORK SETTINGS

- Once you turn on the controller for the first time, you can proceed to its further configuration. Being connected to the WiFi network emitted by the device, in the control panel of the wBox application select the device, then go to "Settings" (icon at the top-right corner of the screen).
- You can change the name of the device that is displayed in the wBox application. In addition, you can change the name and password of its generated WiFi network. Remember that changing the network name or password will disconnect the device immediately after you click the "Save" button, so re-connect to the device using the newly assigned network name and password.
- You can add the controller to your home WiFi network to control it through this home network or from anywhere in the World. To do this, in the "Connect" settings section, select a network name from the list and press "Connect". If it is required, enter the WiFi network password. During the connection of the controller to your home network, the phone / tablet may be disconnected from the network. In this case, you will need to reconnect your phone / tablet to the controller network.
- Please remember that in order to control the device outside the local WiFi network, from anywhere in the World by using the wBox application, the option "Remote access enabled" in the controller settings must be set to "Yes".
- Once you've finished configuring the WiFi network, you can disconnect your phone/tablet from the controller network and connect your mobile device directly to your home WiFi network. The control from the wBox application will work the same way as when the phone / tablet is connected to the controller network. If the user leaves the local network, for example, leaving home or using the mobile data, the wBox application will signal this state as "Remote mode". In this case, the devices can be controlled, but for security reasons settings are not available.

TECHNICAL SPECIFICATIONS

supply voltage	12 - 24V
maximum current	12A (3A / channel)
maximum voltage	24V
maximum load	288W
energy consumption	< 1W
color mode	RGB / RGBW / RGB or W / 4x MONO / CT / 2xCT
number of outputs	4
type of outputs	open drain, PWM, low side control
number of inputs	1
inputs type	low voltage, logical, push-button, short circuited to GND
supported switches	monostable (push-button), not-illuminated
dimensions	39 x 35 x 20 mm
housing	made of polyurethane composition not containing halogens, self-extinguishing for thermal class B (130 °C)
protection level	IP20
protection	inverted polarization, ESD
mounting method	in the flush-mounted box, on the lamp housing, directly connected to the LED strip, e.g. furniture
communication standard	µWiFi, compatible with WiFi, 802.11g
transmission type	bidirectional, encrypted
radio frequency	2.4 GHz
API	open
mode	direct connection (as Access Point), Wi-Fi connection via a standard router, connection with access from any location in the world (requires only access to the Internet)
compatible devices and systems	Apple iPhone, Apple iPad, iPad Mini, Android, computers and mobile devices supporting HTML5

ADDITIONAL INFORMATION

LOCATION AND TIME OF THE DEVICE, SCHEDULE

The controller has the ability to work according to a given schedule. To make this possible, set the device's time. Go to settings in the "Device time" section, click "Change timezone". Then select your region and location from the list, confirm your selection clicking the "Save" button. The device will synchronize its time with the server time (if the controller is in a WiFi network with access to Internet) or it will download time from the phone / tablet. It is recommended that the controller is always connected to a WiFi network with Internet access so that it can automatically synchronize its clock.

To be able to control devices using the local sunrise and sunset, you must also select the location of the controller. You can specify the location of the device using a smartphone or tablet. In the section "Device location", click "Set locations". Browser will ask whether to share locations - allow. In the "Coordinates" field, should appear the approximate coordinates of your location. If the "Set locations" button blinks red with the word "Error", or the "Coordinates" field did not change the value from "Not set" to numeric data, a failure has occurred during the location download. You should make sure that the phone / tablet has a GPS module and that the sharing location service is enabled on the phone.

Adding schedule entries can be performed by clicking the "Add item" button in the "Schedule" section of settings. You can select the days in which the task will be performed, the type of entry (at a specific time, or relative to sunrise / sunset - only having a correctly set location) and set the parameters of the task. The set tasks will be visible as a list, individual entries can be edited or deleted.

SOFTWARE UPDATE

To update the software in the controller, connect it to your home WiFi network (see "Access Point and WiFi Network Settings" section) which is connected to the Internet. Go to "Settings" (icon at the top-right corner of the screen) and click the "Get new firmware" button in the final section on settings. Wait about 1 minute, do not close the interface and don't perform other actions. The device will download the latest software. The software version number, hardware version and device identifier can be read at the bottom of the settings screen.

