



LED CONTROLLER S56



The LED Controller S56 allows for controlling digital LED strips (pixels) using momentary push buttons. The connected buttons are used to select the controller's functions. The controller has over 90 built-in effects.

Controller Versions (written on the casing):

S56-1000M Music Version: 1000 LED pixels (100m of WS2811 digital strip or 33m of WS2812 strip)

NOTE: All versions of the controller have two outputs. If it is stated that the controller supports, for example, 1000 pixels, it means that each output has a signal for 500 pixels. The given lengths refer to a strip with 30 LEDs/m.

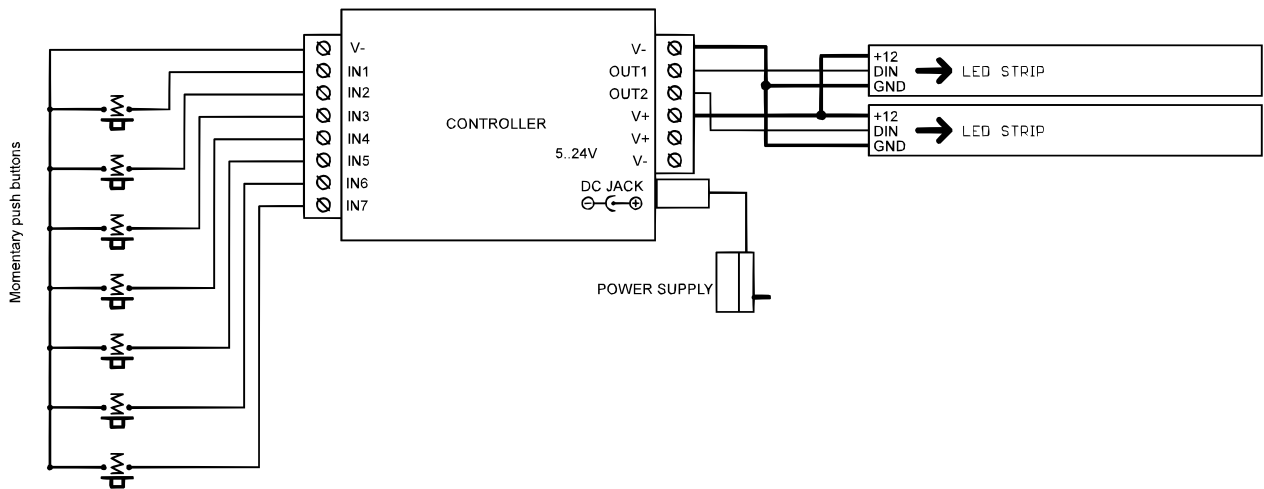
Music-Responsive Controllers (Music Version):

The music controller automatically detects the tempo of the track and adjusts its sensitivity to the volume. The quality of synchronization with the music depends on the genre. The controller is optimized for disco/dance music (with a clear, regular rhythm). The controller "listens" to the bass and, therefore, will not pick up music played from small speakers (laptop, phone).
Memory Settings: The controller remembers settings 10 seconds after the last use of the buttons.

Connecting momentary push buttons.

A keyboard in the form of momentary push buttons can be connected to the controller.

Example connection.



The inputs for the buttons are labeled as IN1, IN2, IN3, IN4, IN5, IN6, IN7. The buttons can perform different functions depending on whether they are pressed briefly or held down. The functions of the individual buttons are presented in the table below.

	Short press of the button	Long press the button
Input 1	Turn on/off lighting	Adjusts the brightness (dims). After the maximum dimming, it brightens again
Input 2	Switch to next program	Switch to static light program (no animation)
Input 3	Switch to previous program	No function
Input 4	Change color	Turn on the white light. Longer hold changes the shade of white from warm to cold
Input 5	Change the speed from fastest to slowest	No function
Input 6	Change the color saturation. Adjusts the color saturation from highest to lowest.	Change the color saturation. Adjusts the color saturation from highest to lowest.
Input 7	Changes color, opposite direction to input 4	No function

Turning off the microphone. You can disable the microphone in the controller by following these steps:

- connect the LED strip to the first output.
- press and hold the button connected to input number 1.
- while holding this button, turn on the controller's power.
- keep holding the button for at least 5 seconds.
- the LEDs should light up.
- the fifth LED (or a section of 3 LEDs) on the LED strip indicates the microphone status. If it is lit, the microphone is on. If it is not lit, the microphone is off.
- to turn the microphone on or off, press the button connected to output number 2.
- wait at least 3 seconds and then turn off the power.

Incorrect Colors - Color Adjustment

Digital LED strips, depending on the manufacturer, may have swapped colors. To resolve this issue, follow these steps:

- connect the LED strip to the first output.
- press and hold the button connected to input number 1.
- while holding this button, turn on the controller's power.
- keep holding the button for at least 5 seconds.
- the LEDs should light up. Now, repeatedly press the button (connected to input 1) until the first three LEDs (or sections of the LED strip) light up sequentially in the colors: red, green, and blue.
- wait at least 3 seconds and then turn off the power.

Controller Specifications

- supply voltage:
 - controller S56: 5...24V
- supported ICs (Digital LEDs):
 - WS2811, WS2812S, WS2812B, WS2812D, WS2813, WS2815, WS2818, PD9823, SK6812, TM1803, TM1804, TM1809, UCS1903, UCS1909, UCS1912, UCS2903, UCS2909, UCS2912, APA104
- maximum LED current via DC Connector (5.5/2.1mm): 5A
- maximum LED current via screw connector: 9A
 - For higher current requirements, power the LEDs separately and connect only the LED ground, power supply positive, and signal wires (OUT1, OUT2) to the controller.
- dimensions: 60 x 84 x 30 mm

Required operating conditions

- Ambient temperature: +1°C to +40°C
- Relative Humidity: 30% to 75%
- Installation: The device should be installed only by a person with the appropriate qualifications.
- LED Strip Control Cable: The cable connected to the device output should not exceed 10 cm. If a longer cable is needed, use a shielded (coaxial) cable for the control signal. The installer is responsible for selecting the appropriate cable and any radio interference caused by improper wiring.
- Connected Digital LED Strips or Modules: Must comply with applicable electromagnetic compatibility standards.
- Connection: Make all connections with the power supply disconnected.
- Operating Environment: The device should not be used near sources of heat, harmful radiation, or strong electromagnetic fields.

- Cleaning the enclosure: clean the enclosure with a damp cloth while the power is disconnected.
- Visible Damage: do not connect the device to the power supply if it has visible damage.
- Protection: protect the device from contact with water and other liquids.

Required storage conditions

- Environment: store only in enclosed spaces free from vapors and corrosive substances.
- Ambient Temperature: -30°C to +40°C
- Air Humidity: 30% to 90% (without condensation)

Device Disposal

- Disposal Method: Do not dispose of the device in regular waste containers. Dispose of the unwanted or used product at special waste segregation centers run by municipal authorities.

The manufacturer assumes no responsibility for any possible consequences resulting from improper installation, incorrect use of the device, non-compliance with the operating instructions, or unauthorized repairs.

