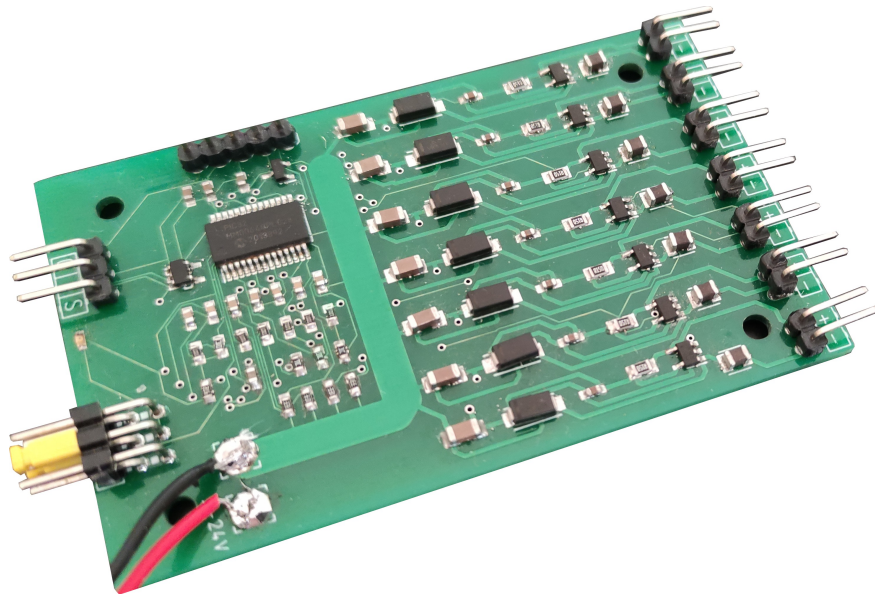


RC light controller datasheet

Model: M1



Date: 21.01.2020

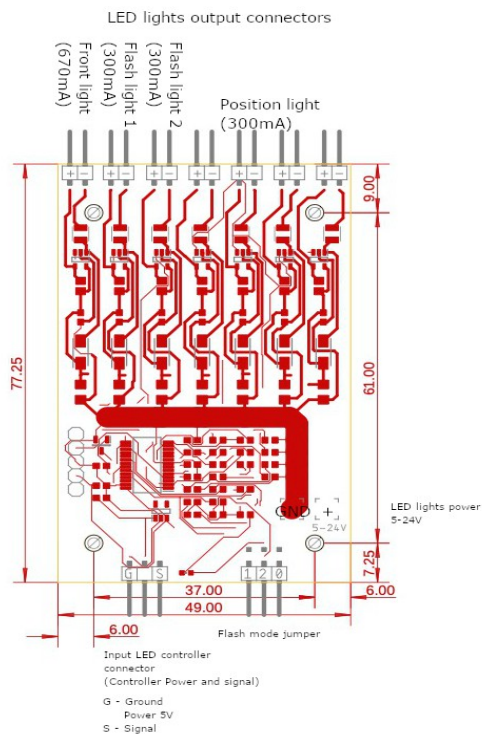
Version: 1.0

Created by: Martin Kita

1 Technical parameters

Size	77.25 x 49.00	mm
Weight (without cable)	16	g
LED controller voltage supply	5	V
LED controller current consumption	avg 9.2, max 11.3	mA
LED lights power	5 - 24	V
LED lights output current – front light connector (left)	max 670	mA
LED lights output current - rest of the outputs	max 300	mA
Signal pulse length	>0 - 2	ms
Signal period	20	ms
Front light signal enable width	1.5 - 2	ms

2 Pin diagram



3 Input LED controller connector

Led controller circuit is powered from plugged servo cable. Ensure the connector is clean and cable is well plugged. Sequence of the wires is Ground (G) , power (5 V), Signal (S).

When circuit is powered current consumption is about 9.2 mA. Current consumption can vary based on enabled LED outputs (flash light and front light).

Automatic signal detection:

When signal cable is unplugged or signal is grounded (no signal) all LED outputs are turned off even LED controller is powered. Once signal is detected led controller ifunction is enabled. Input signal period length is 20 ms. Maximum signal pulse length must be up to 2 ms to have proper function of LED controller. Front light LED output is enabled when signal pulse length is at least 1.5 ms .

4 Flash mode jumper connector

Led controller provides 3 modes of flashing. Set the flash mode with jumper on position 1,2 or 0. When no jumper is plugged default (0) flash mode is set,

5 LED light output pins connectors

LED controller has 7 outputs with current limiter

4 outputs are for position lights, each max. 300 mA

2 for flashing lights, each max 300 mA

1 for front light, max 670 mA

LED outputs are on only when input signal is detected on signal pin of the input LED controller connector. Position lights are static light they are always on, flashing lights are on and off based on flashing mode. Front light is on only when input pulse signal is between 1.5 – 2 ms.

6 LED light power connector

LED light power connector is powering output LED lights which are connected to output LED lights connector. Input voltage must be between 5-24 V. Voltage on LED light power connector and voltage on all LED light output connectors is the same.

Example:

Voltage on LED light power connector: 12 V

Voltage on all LED light output connectors: 12 V

7 LED light power calculation

Example with LED lights power voltage 12 V.

Front light: $12\text{ V} * 0.67\text{ A} = \text{aprox. } 8\text{W}$

Rest of the lights: $12\text{V} * 0.330\text{ A} = \text{aprox. } 4\text{W}$

Example with LED lights power voltage 24 V.

Front light: $24\text{ V} * 0.67\text{ A} = \text{aprox. } 16\text{W}$

Rest of the lights: $24\text{V} * 0.330\text{ A} = \text{aprox. } 8\text{W}$

8 General

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