

Motor RPM regulator.

1. Description of the product

Motor RPM regulator using a PWM method is dedicated to 12-24V DC motors. By using a regulator we are able to change an RPM of the motor, power of heating equipment and the LED lightening up to 30A current consumption.

2. Functions of the regulator.

- RPM regulation or power by changing a pulse width in range of 0-100%
- Regulation of a frequency of the pulse in range of 500Hz-5kHz
- Regulation of current limit (regulation is not allowing to exceed a current limit that is set by a potentiometer despite different load conditions eg. by the starting of the motor).

3. Specification:

Operating voltage: 12-24V (filtered)

Max nominal current load: 30A

Max overcurrent 50A (10ms)

Frequency 500Hz- 5kHz

Pulse width regulation 0-100%

4. Functions for the regulator.

P1- pulse width regulation (RPM)

P2- Current limit regulation (the max current that is allowed to flow eg. by the start of a motor)

P3- Frequency regulation 500Hz - 5kHz

Z1- Power +

Z2- Motor -

Z3- Power -

Potentiometer P1 is for pulse width regulation that is going through a motor, in consequence, the RPM is changing.

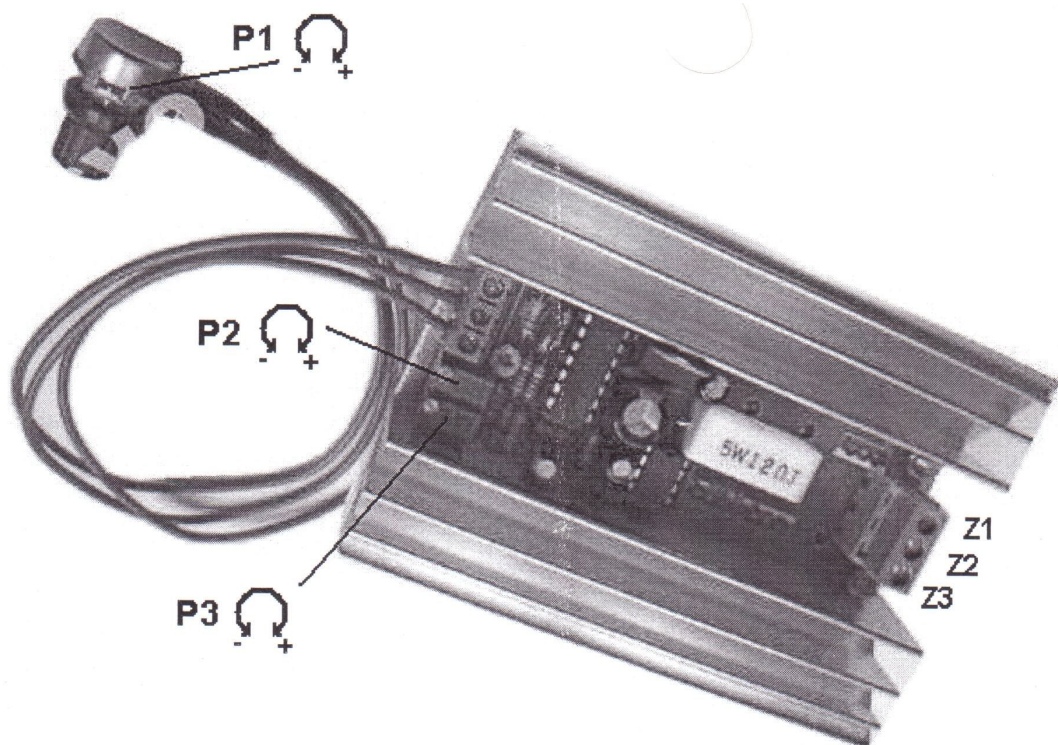
Potentiometer P2 is for setting a current limit. Turning CW increasing a limit up to 30A.

Potentiometer P3 is used for frequency regulation.

Potentiometers P2 and P3 are multi rotation (20rev). eg. If the max current is 30A and we want to limit it to 20A You need to turn potentiometer CW up to the end and go back CCW by 6-7rev.

IMPORTANT!

Minimum of the current limit cannot be lower than 10A, because that can cause of improper behavior of the regulator.



Regulator connection scheme

