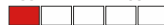


ASSEMBLY DIFFICULTY



An extremely simple, but functional timer circuit that allows you to control any intermittent devices – it is used to cyclically turn load on and off. The 'heart' of the timer is the immortal and legendary NE555 chip. A typical astable circuit was used – the generator produces pulses with a time constant determined by the combinations of capacitor and resistors. A relay was used as the control element. This guarantees full separation from the 230 V mains.

Characteristics

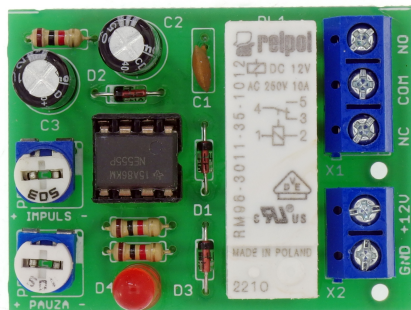
- fluid regulation of on and off times, and the interval between them
- time range for turning on: 0,5...8 s
- shutdown time range: 0,5...60 s
- operation indication: LED
- executive element: relay
- contact load: 8 A / 230 V AC
- power supply: 12...15 V DC

Circuit description

"The heart" of the circuit is the still immortal NE555 timer, working in one of the most common solutions, i.e. an astable generator circuit that generates pulses of duration depending on the C3 capacitance, R2 resistance and the setting of the PR2 potentiometer slider.

Fig. 1 shows the wiring diagram of the timing circuit, controlling a relay directly from the Q output (pin3). A circuit consisting of the C2 capacitor, R1 resistor, and PR1 potentiometer determines the time interval between successive output pulses. The D4 LED acts as an indicator for the tripping of the RL1 relay. Two potentiometers, PR1 and PR2, allow to independently adjust the on time (about 0.5...8 seconds) and off time (about 0.5...60 seconds).

Fig. 2 shows the layout of the components on the circuit board. The assembly is typical, and the circuit, assembled from working components, does not require any adjustment. Once connected to the power supply it immediately works properly. The circuit will find a number of applications, not only for controlling flashing light bulbs, but also in photography, model making, and various automatic devices. The device can be powered by 12...15 V from a power supply, battery or rechargeable battery and draws no more than 100 mA of current.



CON1, CON2:Screw connectors
RL1RM96P12 or equivalent

