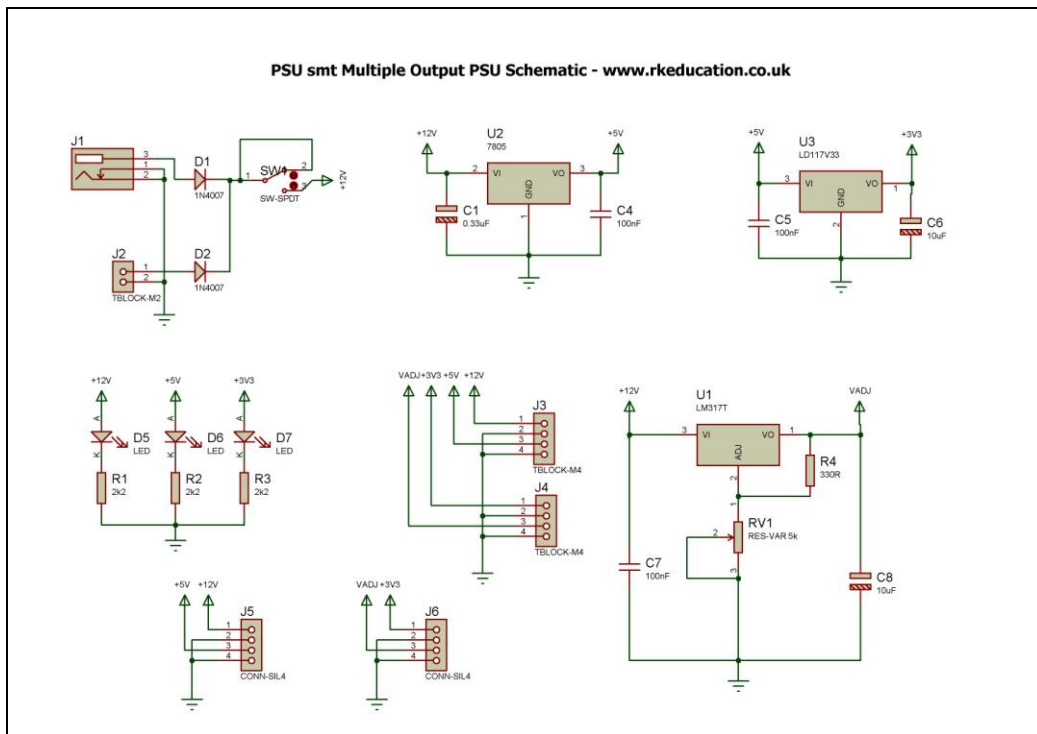
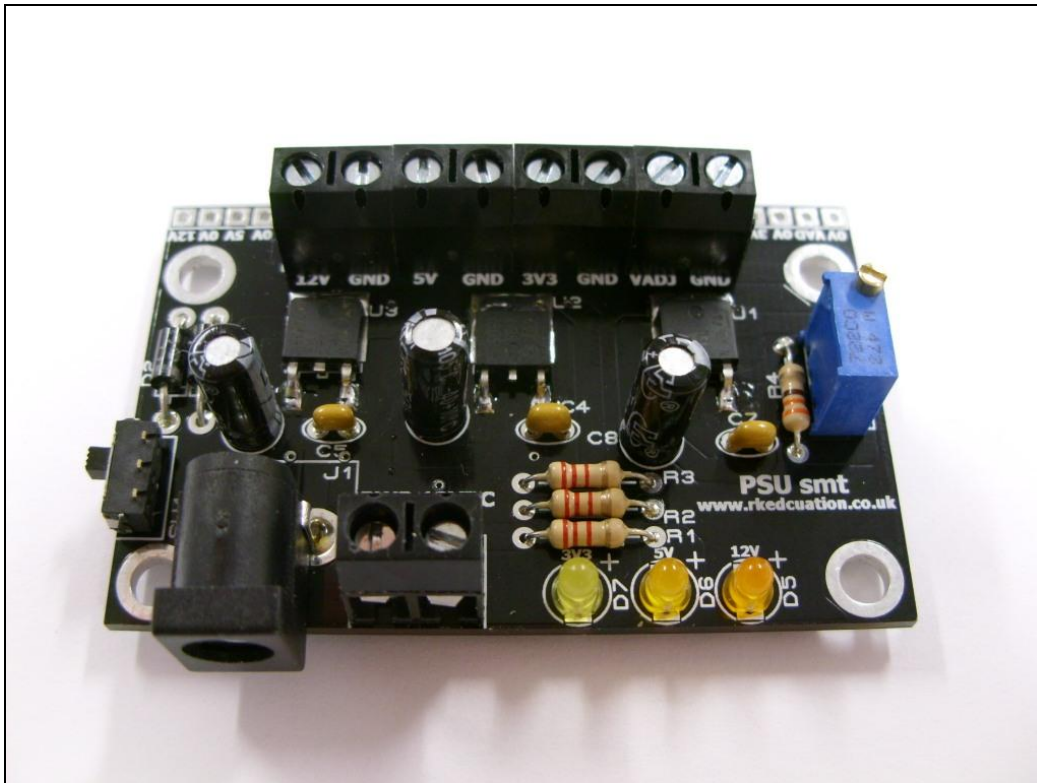


70-9114 Multiple Output SMT Power Supply Project Kit Components List and Instructions



Schematic Diagram
Component List

C1 – 10 μ F electrolytic radial
C4 - 100nF multilayer ceramic
C5 - 100nF multilayer ceramic
C6 - 10 μ F electrolytic radial
C7 - 100nF multilayer ceramic
C8 - 10 μ F electrolytic radial
D1, D2 – 1N400x diodes
D5, D6, D7 - LEDs
J1 - DC power socket 2.1mm
J2 - 2 way 5mm PCB terminal blocks
J3 to J4 – 2/4 way 5mm PCB terminal blocks
J5, J6 - SIL sockets
R1, R2, R3 - 1k Ω ¼ Watt resistor
R4 – 330 Ω ¼ Watt resistor
RV1 – 4.7k Ω variable resistor
SW1 - Ultra miniature PCB slide switch
U1 – LM317 TO252 variable voltage regulator
U2 – 7805 TO252 5V regulator
U3 - LD1117 V33 3V3 regulator

Description

The PSU SMT Power Supply has been designed for electronic project work and is ideal to use with electronic projects.

- Small and compact
- Easily connected to breadboards and strip-boards
- Uses LM317T, 7805 and LD1117 voltage regulators
- Has a variable output – uses a LM317T variable voltage regulator
- Quad output, outputs the input voltage, variable and regulated 5V DC and 3.3V DC (please note that the input voltage will be reduced by 0.7V due to the diode)
- Power switch and LED power indicators

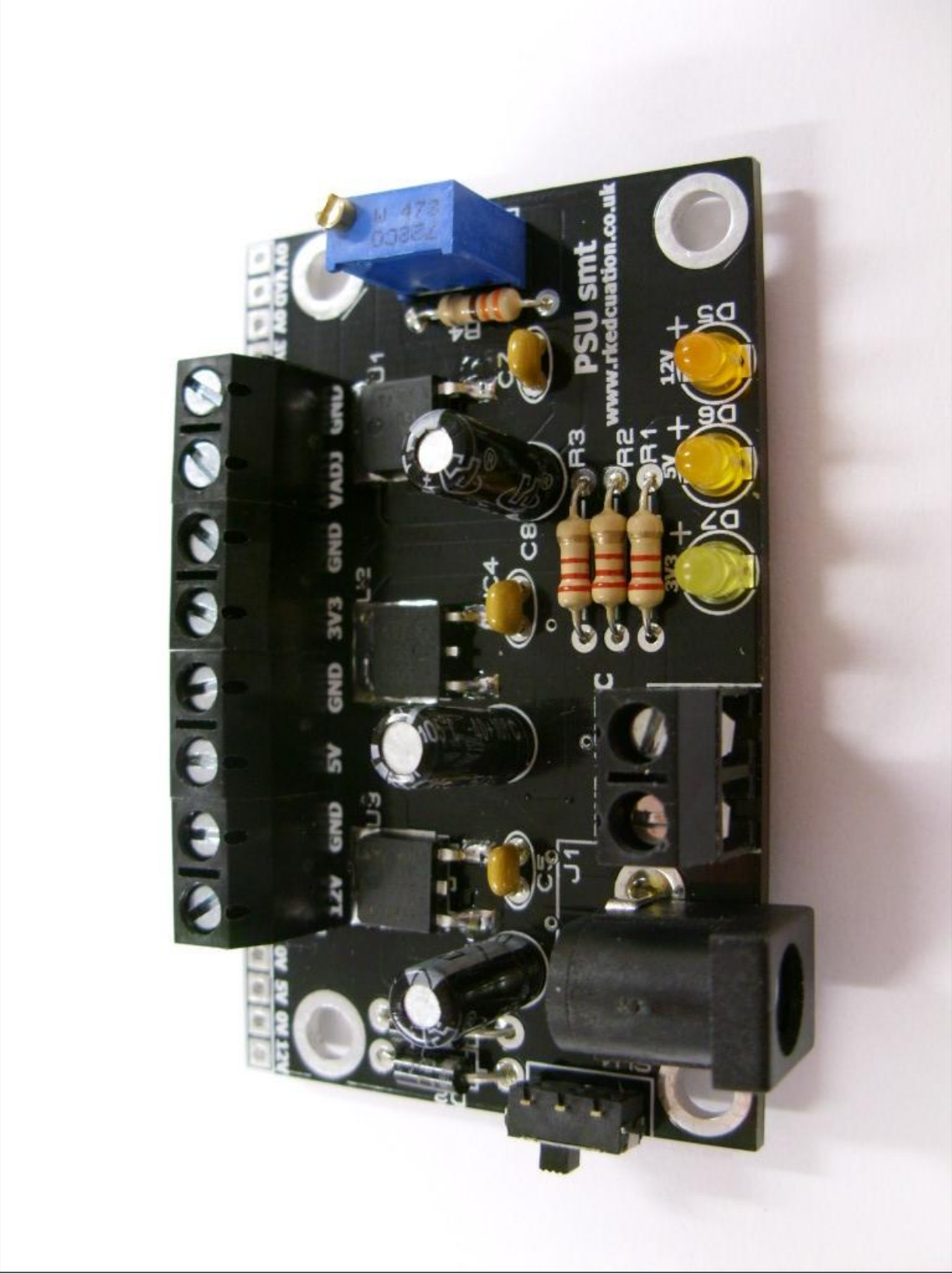
Instructions

When constructing PCBs it is advisable to start with the components with the lowest profile, for example the surface mount ICs.

Once constructed, operation is simple, input 12V DC and the unit will output approx 11V DC, regulated 5V DC and 3.3V and a variable output, to vary this voltage adjust RV1. To ensure the unit is operating correctly, test the voltages with a digital multi meter or DVM. The unit has 1N4007 diodes in series with the input voltage incase of reverse polarity, this reduces the input voltage by approx. 0.7V, to overcome this they can be replaced with shorting links or the input voltage can be increased.

To use simply connect the output from the unit to the target circuit using jumper wires inserted into the terminal blocks.

When using the power supply with high output currents the components will become hot and will need heat sinking to prevent damage.



PSU smt Multiple Output PSU Schematic - www.rkeducation.co.uk

