POWER SUPPLY

(INPUT 220VAC ,OUTPUT 5VDC)

The components in power supply circuit are:

* Transformer: The transformer converts the AC voltage from the mains to a lower DC voltage. The transformer in the circuit is providing 12VDC.
* Bridge rectifier: The bridge rectifier converts the AC output from the transformer to DC. The 4 1N4007 diodes in the circuit form a bridge rectifier.
* Filter capacitor: The filter capacitor smoothes out the output voltage from the bridge rectifier. The 4400uF capacitor in the circuit is a filter capacitor. This capacitor helps to remove the AC ripple from the DC output voltage, providing a smoother and more stable output voltage.
* 0.33uF capacitor: This is a small capacitor that helps to filter out noise from the output voltage. This capacitor helps to reduce the amount of noise that is present on the output voltage.
* 7805 voltage regulator: This regulates the output voltage to 5V. The 7805 voltage regulator in the circuit is a three-terminal, positive-voltage regulator that converts an input voltage to a fixed output voltage of 5V.
* 0.01uF capacitor: This is a small capacitor that helps to stabilize the output voltage of the voltage regulator. This capacitor helps to reduce the amount of voltage variation that can occur at the output of the voltage regulator.
* 150 ohm resistor: This resistor limits the current through the LED. The 150 ohm resistor in the circuit limits the current that flows through the LED. This helps to prevent the LED from overheating and being damaged.
* Red LED: This LED indicates that the power supply is working properly. The red LED in the circuit will light up when the power supply is turned on and working properly.