proSupply – Protoboard Power Supply
Operating Guide

Thank you very much for your support. We hope you enjoy your new breadboard power supply.

Description:

This is a power supply designed to be used in a breadboard for development and testing of digital logic circuits. It has 5v, 3.3v and 1.8v outputs that makes it great for this purpose. It is powered via a micro USB connector, so you can attach it your PC, phone charger or power bank. Also, it has an external Vin pin that is protected from inverse polarization. All the output pins feature an overcurrent and overheating protection, so you don't need to worry about burning your computer's USB port by a short circuit. The input voltage has an overvoltage and undervoltage protection to prevent damage or malfunctioning circuits.

It has an unregulated Vout pin that can supply up to 750ma, regulated 5v, 3.3v and 1.8v. Each regulated voltage output can give up to 250ma (the 1.8v output only supplies 200ma) and the power supply can give up to 750ma in total (shared between all outputs) before the protection circuit starts pulsing the output and the red led blinks indicating a fault condition. The protection circuit shutdown the outputs if the input voltage is too high or to low and the red led remains on until the fault condition disappears.

Also, it has an external Vin pin, so you can power it without using the micro usb port. Please note that this board is designed to work with 5vdc input and inverse polarization protection only works when powering from Vin pin. You should also consider that the protection diode will affect slightly the undervoltage and undervoltage protection thresholds. Don't power both inputs at the same time.

DO NOT SUPPLY MORE THAN 20 VDC OR THE BOARD WILL BE DAMAGED.

Technical details:

- Overvoltage protection up to 20 volts.
- Vo+ can supply unregulated voltage up to 750ma. Shared with the regulated voltage outputs.
- 5v and 3v3 can supply up to 250ma of regulated voltage. Independent protected against overcurrent.
- 1v8 can supply up to 200ma of regulated voltage. Independent protected against overcurrent.
- Power from micro USB and Vin pin. The input voltage is 5v. Don't power both inputs at the same time.
- Inverse polarization protection only in Vin pin. Protection diode can alter slightly the voltage thresholds.
- Low voltage threshold at around 3v in the input, outputs turned off. Red LED is ON indicating the fault.
- High voltage threshold at around 5.67v in the input, outputs turned off. Red LED is ON indicating the fault.
- Overcurrent threshold at 750ma, outputs will start pulsing. Red LED BLINKS indicating the fault.
- Green LED turn on if the board is powered.

Everything is open source, so you can check the schematics and eagle board files. We highly recommended to check the regulators and USB protector datasheets and the schematic of the board for more information.
https://github.com/DAFRELECTRONICS/proSupply

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