

Dual Isolated Power Meter

Power supply efficiency measurement tool.

Two isolated -4 to +50V, -15 to +15 A voltage and current sense channels
with remote voltage sense.

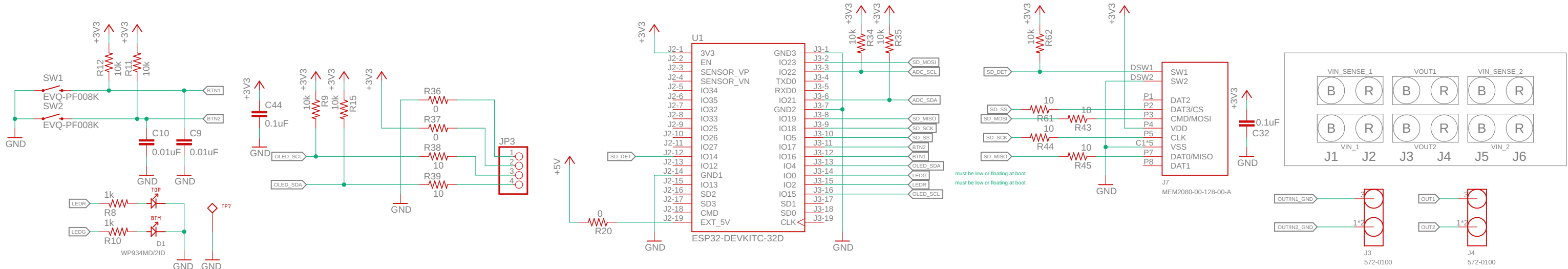
Supports calibration allowing for greater than to 0.1% Accuracy
Robert Ruark | 2023

Front Panel Switches & LEDs

OLED Screen Header

SD Card Slot

Back Panel Arrangement



Isolated Power

LT3088 post linear regulator can be used if isolated module is too noisy.

Rail Splitter Supply

REF is nominally 2.5V.

Voltage Sense

R6/R102 potentiometer allows for calibration. The calibrated divider ratio is 1/20. 50Vin/20=2.5Vout
10x 100R resistors join the sense input to power inputs.
This protects against damage if power is connected between power sense.

Current Sense

The target transfer function for current sense is 0.11938 V/A
Assuming a perfect sense resistor and current sense amplifier,
the range of adjustment with R27/R125 is 0.1181-0.1206 V/A.

Differential Input Filter

Differential mode low pass of 800 Hz on voltage sense.
Differential mode low pass of 160 Hz on current.

ADC

I2C Isolator

