I am using a relay and a voltage monitor that senses the voltage at the battery input. Once the battery input drops below a 10V the relay switches to the mains power until the battery gets up to 12V. I have tested this with the power supply and it works. The only proof I have is the code for the relay.

#include <Adafruit\_INA219.h>

#include <Wire.h>

int Relay1 =7;

int val1=1;

Adafruit\_INA219 ina219;

void setup() {

Serial.begin(115200);

ina219.begin();

ina219.setCalibration\_16V\_400mA();

pinMode(Relay1, OUTPUT);

digitalWrite(Relay1, val1);

}

void loop() {

//float voltage= 0;

float voltage=ina219.getBusVoltage\_V();

Serial.println("voltage: ");

Serial.println(voltage);

delay(200);

if (voltage<=5)

{

val1 = 1;

digitalWrite(Relay1, HIGH);

}

if (voltage>=15)

{

val1=0;

digitalWrite(Relay1, LOW);

}

else{

return;

}

}