```
float value1;
void setup() {
  // put your setup code here, to run once:
//pinMode(13,OUTPUT);   //pin 13 as output(relay)
//pinMode(12,INPUT);    //pin 12 as input (reset)
pinMode(11,OUTPUT);    //pin 11 as OUTPUT (arduino2 fault)
digitalWrite(11,LOW); //pin 11 is low
Serial.begin(9600);   //start serial
}

void loop() {
  // put your main code here, to run repeatedly:
  value1=(analogRead(A0)*1.8180048077);  //voltage across shunt resistor or current
since R=1 // 4882.8125=5*1000/1024
  Serial.print("I1=");Serial.print(value1);Serial.println(" mA, "); //print current
value to serial monitor
  if(value1>=25){digitalWrite(11,HIGH);delay(500);}  //if current >100ma, activate
fault relay to notify arduino1
  else{digitalWrite(11,LOW);}             //if no fault,close fault relay
  //if(digitalRead(12)==HIGH){digitalWrite(13,LOW);} //if reset button os pressed,
close the relays
  delay(1);
}
```