```
// constants
const int hallPin = 8; // the number of the hallsensor pin

// variables will change:
int hallState = 0; // variable for reading the pushbutton status
unsigned long startTime;
unsigned int count;
int check = 0;
int rpm = 0;

void setup() {
  Serial.begin(9600);
  // initialize the pushbutton pin as an input:
  pinMode(hallPin, INPUT);
  startTime = millis();
  count=0;
}

void loop() {

  if (millis() == startTime + 4000) {
    startTime = millis();
    rpm = (count/4000)*15;
    count = 0;
    Serial.println(rpm);
  }

  hallState = digitalRead(hallPin);

  if (hallState == 1 && check == 0) {
    check = 1;
    count++;
    //Serial.println(count);
  } else {
    check = 0;
  }
//delay(200);
constrain(rpm,0,255);
analogWrite(3,rpm);
}
```