



Arduino:
 Microcontroller ATmega328
 Operating Voltage 5V
 Input Voltage (recommended) 7-12V
 Input Voltage (limits) 6-20V
 Digital I/O Pins 14 (of which 6 provide PWM output)
 Analog Input Pins 6
 DC Current per I/O Pin 40 mA
 DC Current for 3.3V Pin 50 mA

AH337 Current draw max 25mA

ATmega128 Input Leakage Current I/O Pin: +/-1µA (CMOS)

$$R = V / I$$

$$R = 5v / 25mA$$

$$R = 5 / 0.025$$

$$R = 200 \text{ ohms}$$

Using a 1k

$$V = I \times R$$

$$I = V / R$$

$$I = 5v / 1k$$

$$I = 5 / 1000$$

$$I = 0.005$$

$$I = 5mA$$

$$V = I \times R$$

$$R = V / I$$

$$R = 5v / 40mA$$

$$R = 5 / 0.040$$

$$R = 125 \text{ ohms}$$