Arduino: Nivel avanzado

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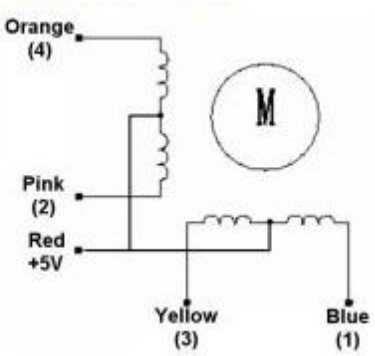
#ARDUINO2015

28BYJ-48:
pequeño
barato (5$)
5v (hasta 12v)
con reducción *approximadamente* 64:1

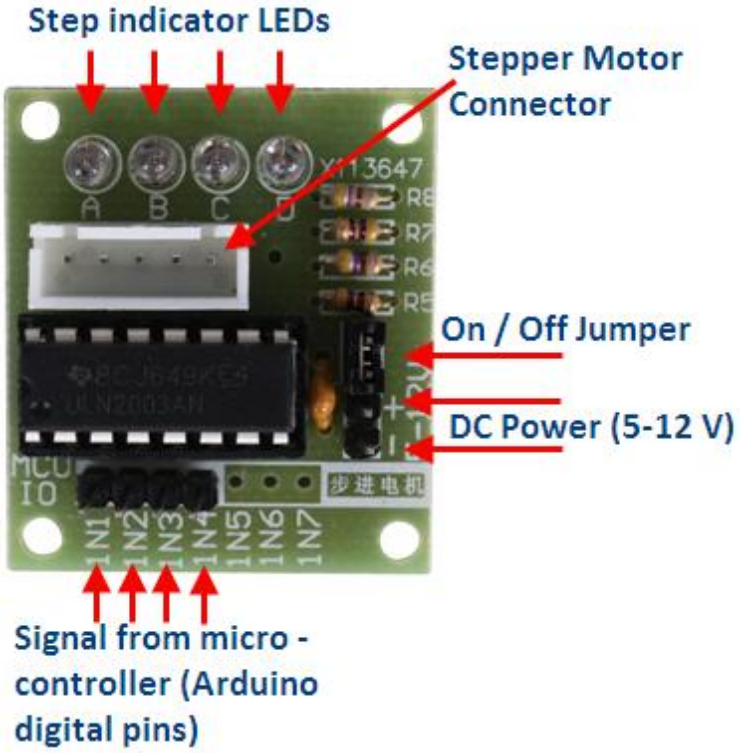
Motor Type	**Unipolar stepper motor**
Connection Type	5 Wire Connection (to the motor controller)
Voltage	5-12 Volts DC
Frequency	100 Hz
Step mode	Half-step mode recommended (8 step control signal sequence)
Step angle	Half-step mode: 8 step control signal sequence (recommended) 5.625 degrees per step / 64 steps per one revolution of the internal motor shaftFull Step mode: 4 step control signal sequence 11.25 degrees per step / 32 steps per one revolution of the internal motor shaft
	Manufacturer specifies 64:1. Some patient and diligent people on the

Gear ratio	Arduino forums have disassembled the gear train of these little motors and determined that the exact gear ratio is in fact 63.68395:1. My observations confirm their findings. These means that in the recommended half-step mode we will have:64 steps per motor rotation x 63.684 gear ratio = 4076 steps per full revolution (approximately).
Wiring to the ULN2003 controller	A (Blue), B (Pink), C (Yellow), D (Orange), E (Red, Mid-Point)
Weight	30g



Half-Step Switching Sequence

Lead Wire Color	---> CW Direction (1-2 Phase)							
	1	2	3	4	5	6	7	8
4 Orange	-	-						-
3 Yellow		-	-	-				
2 Pink				-	-	-		
1 Blue						-	-	-



código

Usaremos la librería AccelStepper (http://www.airspayce.com/mikem/arduino/AccelStepper/)

```
#include <AccelStepper.h>
#define HALFSTEP 8

// Motor pin definitions
#define motorPin1  3     // IN1 on the ULN2003 driver 1
#define motorPin2  4     // IN2 on the ULN2003 driver 1
#define motorPin3  5     // IN3 on the ULN2003 driver 1
#define motorPin4  6     // IN4 on the ULN2003 driver 1

// Initialize with pin sequence IN1-IN3-IN2-IN4 for using the AccelStepper with
AccelStepper stepper1(HALFSTEP, motorPin1, motorPin3, motorPin2, motorPin4);

void setup() {
  stepper1.setMaxSpeed(1000.0);
  stepper1.setAcceleration(100.0);
  stepper1.setSpeed(200);
  stepper1.moveTo(20000);

}//--(end setup )---

void loop() {

  //Change direction when the stepper reaches the target position
  if (stepper1.distanceToGo() == 0) {
    stepper1.moveTo(-stepper1.currentPosition());
  }
  stepper1.run();
}
```

Resumido de aquí (http://42bots.com/tutorials/28byj-48-stepper-motor-with-uln2003-driver-and-arduino-uno/)