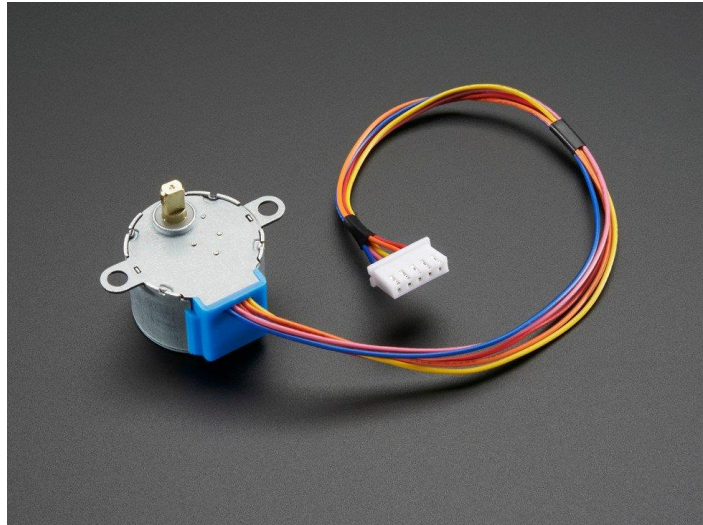




Small Reduction Stepper Motor – 5VDC 32–Step 1 / 16 Gearing

Product ID: 858

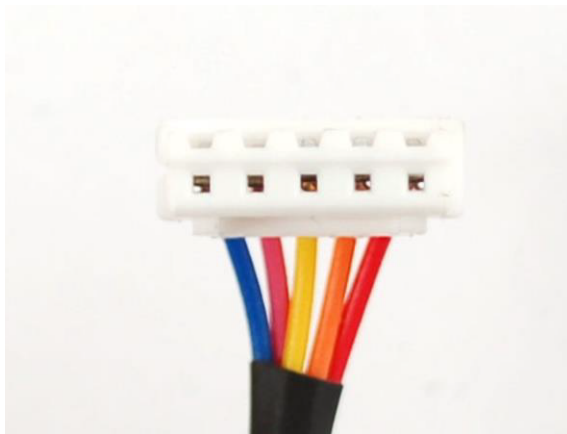
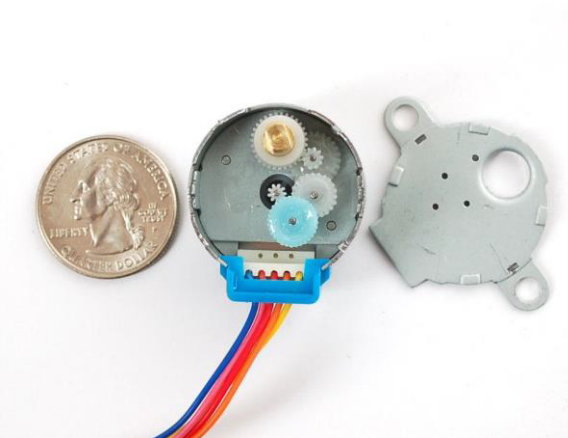


Description

This is a great first stepper motor, good for small projects and experimenting with steppers. This uni-polar motor has a built-in mounting plate with two mounting holes. There are only 32 steps (11.25 degree) per revolution, and inside is a 1/16 reduction gear set. (Actually it's 1/16.128 but for most purposes, 1/16 is a good enough approximation) What this means is that there are really $32 * 16.128$ steps per revolution = 516.096 steps! The shaft is flattened so it's easy to attach stuff to it with a set-screw. A perfect first stepper motor and works well with the Motor Shield for Arduino.

The gearing has a few side effects which are important to note. First, you shouldn't use interleaved or micro-stepping to control or it will take forever to turn. Instead use single or double stepping. The torque is fairly high but its slower than un-geared steppers - we maxed out at about 12 RPM by over-driving it a bit with 9VDC. At 5V try to stick to under 6 RPM

To use with the Adafruit Motor Shield, connect red to ground (middle), orange and pink to one motor port (say M1) and blue and yellow to the other motor port (say M2). So in order, thats: orange - pink - red - blue - yellow. Then just use the example code that comes with the Adafruit Motor Shield library and set the constructor to `Adafruit_StepperMotor *myMotor = AFMS.getStepper(516, motornum)` and the speed at 5 RPM by calling `motor->setSpeed(5)`. Otherwise, you can also wire it up with some transistors and use the Arduino Stepper library



<https://www.adafruit.com/product/858/3-31-22>