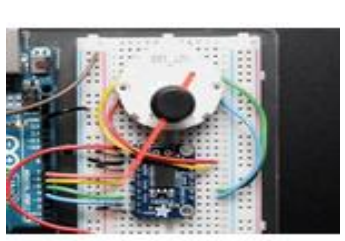

## 2424

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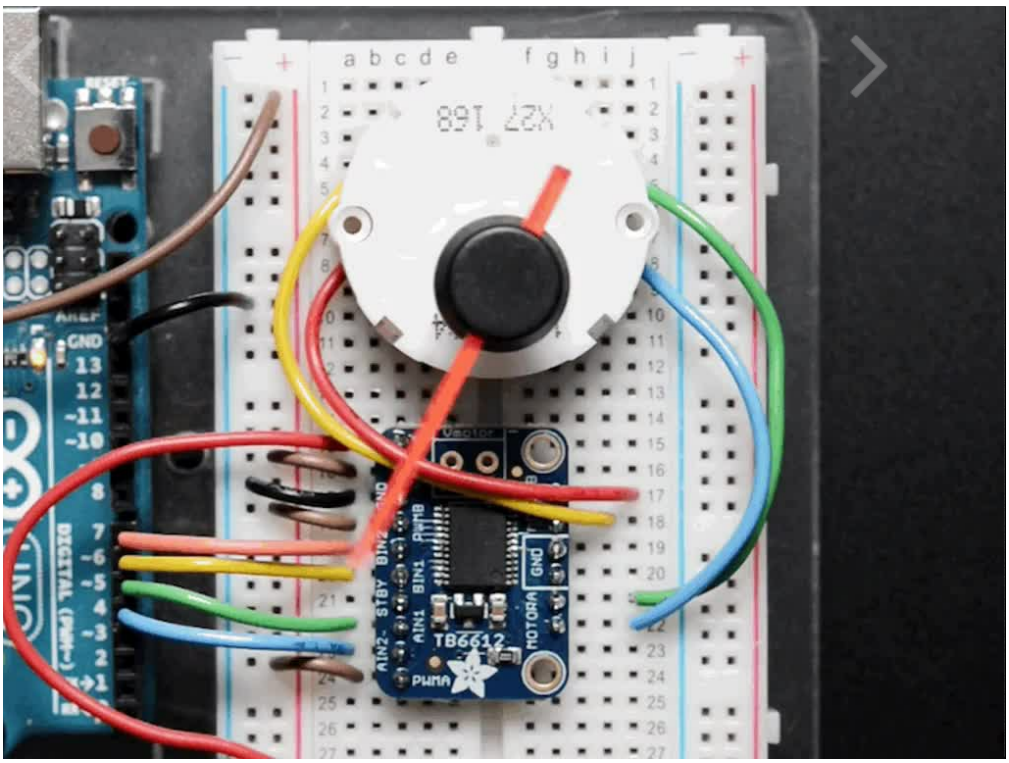


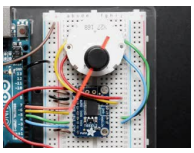

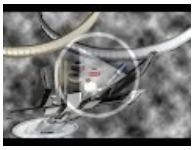

# Automotive Gauge Stepper Motor - x27.168

PRODUCT ID: 2424

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## DESCRIPTION

This stepper motor is a little different than the large NEMA-17 types you may be used to. These are often used in gauges for motorcycles and cars to replace the old-style fully-analog type.

They have extremely fine step precision of about 1/2 a degree per step, 600 steps for single stepping, fast response for quick movements, and a range of ~315° degrees. Their smooth motion makes good for small projects that need a dial indicator, and more precision motion than you may get with a needle gauge.

Since this is a bi-polar stepper motor you do need to have some sort of H-Bridge to drive it. A L293D or TB6612 will do the job nicely. If you have a microcontroller that can drive 200 ohm loads you might be able to use the direct pins without extra MOSFETs, just remember to include kickback/flyback protection diodes!

Note that the motor is quite 'weak', not good for moving anything but a light indicator. We include a red-line dial that fits nicely on top by pushing onto the needle shaft.

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## TECHNICAL DETAILS

Datasheet - we don't have an exact datasheet but did find one for a compatible gauge, which may be helpful (although not guaranteed to be identical)!

- Axial Force Maximum: 150N
- Axial Pull Force Maximum: 100N
- Radial Force Maximum: 12N
- Rotation Angle Maximum: 315°
- Coil Resistance: 260 ohm
- General Tolerance: ± 0.1 / ± 5°
- Rotation Angle Maximum: ~315°
- 600 steps per 'rotation' (315 degree rotation)

Dimensions:

- Red-Line Dial Diameter: 13mm / 0.5"
- Red-Line Dial Length: 42mm / 1.65"
- Dial Thickness: 1mm / 0.04"
- Motor Diameter: 32mm / 1.3"
- Motor Thickness (w/o pins): 9mm / 0.35"

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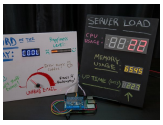
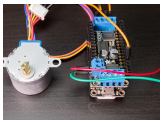
## LEARN




Raspberry Pi Physical Dashboard
Build a dashboard to visualize data on LED displays and automotive gauges!



CircuitPython Hardware: PCA9685 DC Motor & Stepper Driver
How to use the PCA9685 DC Motor & Stepper driver with CircuitPython!

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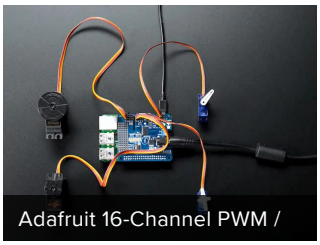
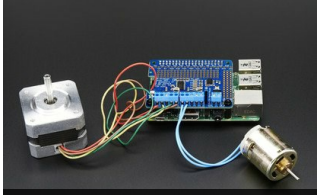
## MAY WE ALSO SUGGEST...


Adafruit 16-Channel PWM /


Small Reduction Stepper

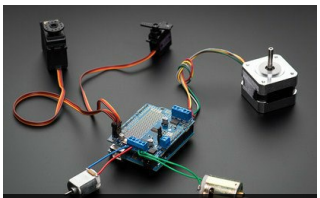

DC Toy / Hobby Motor - 130



Adafruit DC & Stepper

Stepper motor - NEMA-17

Dual H-Bridge Motor Driver



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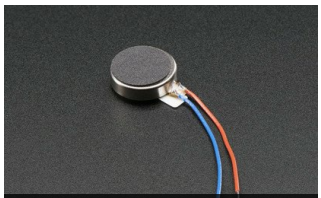
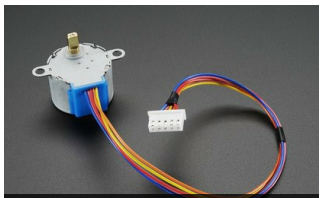
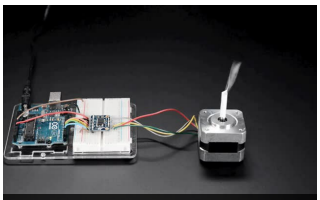


Vibrating Mini Motor Disc



Small Reduction Stepper



Adafruit TB6612 1.2A

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- Clay Shirky