

# Large push-pull solenoid

PRODUCT ID: 413



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## DESCRIPTION

Solenoids are basically electromagnets: they are made of a big coil of copper wire with an armature (a slug of metal) in the middle. When the coil is energized, the slug is pulled into the center of the coil. This makes the solenoid able to pull (from one end) or push (from the other)

This solenoid in particular is nice and strong, with a 40mm long body and a 'captive' armature with a return spring. This means that when activated with up to 24VDC, the solenoid moves and then the voltage is removed it springs back to the original position, which is quite handy. Many lower cost solenoids are only push type or only pull type and may not have a captive armature (it'll fall out!) or don't have a return spring. This solenoid has 4xM3 (metric) threaded holes in the bottom for easy mounting.

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[To drive a solenoid you will need a power transistor and a diode, check this diagram for how to wire it to an Arduino or other microcontroller. You will need a fairly good power supply to drive a solenoid, as a lot of current will rush into the solenoid to charge up the electro-magnet, about 250mA, so don't try to power it with a 9V battery!](#)

## Technical Details

24 DC operation (you can use 9–24 DC volts, but lower voltage results in weaker/slower operation)

Push or pull type with 10 mm throw

Coil resistance: 43 ohms

15 Newton starting force (24VDC / 50% duty cycle)

5.1 oz / 144 grams

