



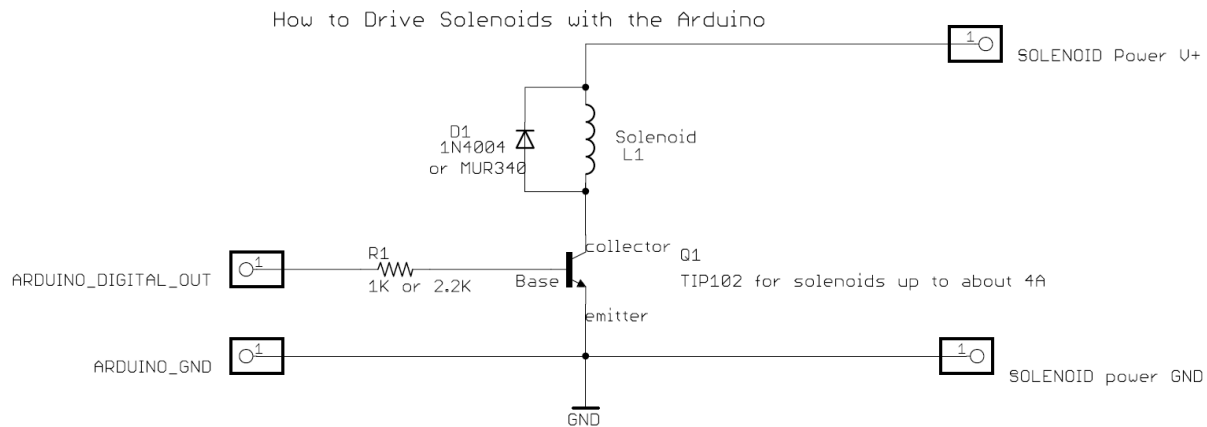
Small Push-Pull Solenoid – 12VDC

PRODUCT ID: 412

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 fairly small, with a 30mm long body and a 'captive' armature with a return spring. This means that when activated with up to 12VDC, 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 one even has nice mounting tabs, its a great all-purpose solenoid.

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!



Notes:

- you will most likely need a heat sink on the transistor.
- This diagram is for DC solenoids rated up to about 24W: i.e. 12V@2A, 6V@4A, 24V@1A etc.
- The protection diode should preferably be a schottky type, which has better response times. Something like a MUR340 is good for loads up to 3A.

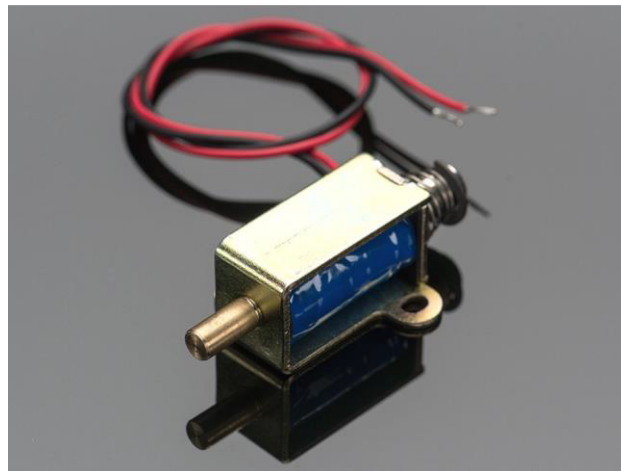
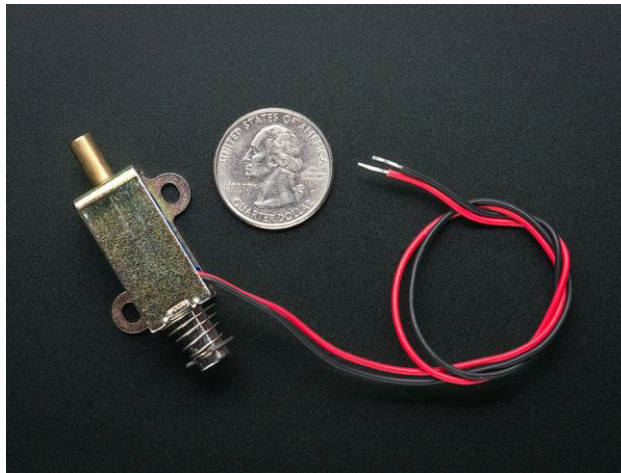
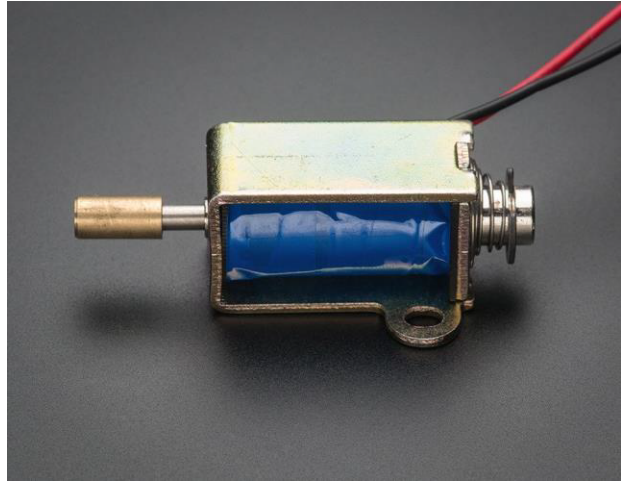
TECHNICAL DETAILS

Details:

- 12 VDC operation (please note lower voltage results in weaker/slower operation) – 250mA current draw
- Push or pull type with 5.5 mm throw
- DC coil resistance: 40 ohms
- 5 Newton starting force (12VDC)
- 1.4 oz / 39 grams

Revision History

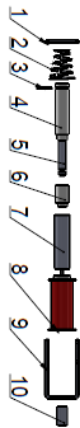
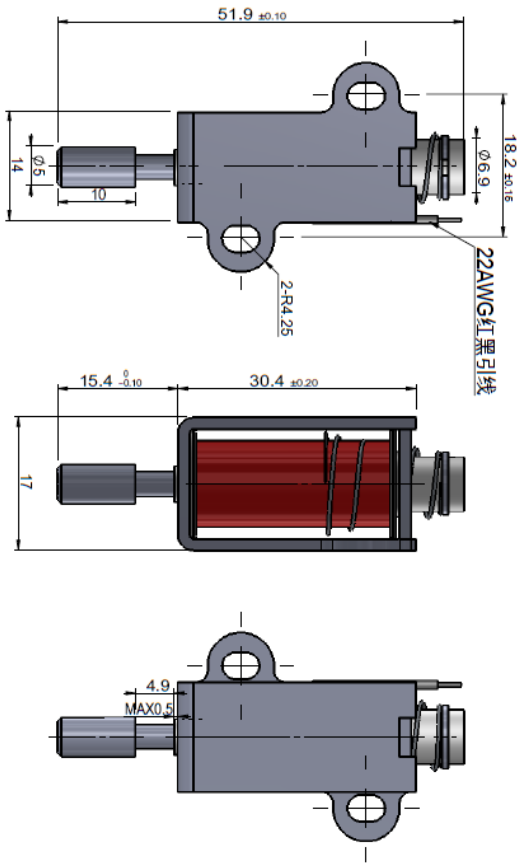
- As of Jan 17, 2018 we're selling this solenoid with a 12VDC actuation voltage instead of 24V



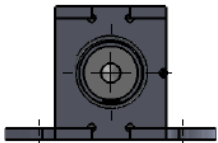
• Datasheet

DC24V	96	100%	4.9	270+10	
电压	电阻 _{on} /Ω	通电流	行程	引线长mm	备注

版本	日期	变更文件	变更内容描述
1	18.08.14		新增



序号	名称	料号	材质规格	数量	备注
10	推杆臂	30116-00073002	862	1	
9	磁芯	30103-00073002	20#	1	
8	骨架	30105-00073001	F46+105#	1	
7	骨架臂	30110-00073001	862	1	
6	挡块	30102-00073001	电工绝缘胶泥	1	
5	推杆	30108-00073002	312S01	1	
4	衔铁	30101-00073001	电工绝缘胶泥	1	
3	挡圈	标准件	内径φ3.0, S	1	
2	弹簧	标准件	1CMH9	1	
1	磁板	30104-00073001	20#	1	



技术要求:
 1. 外观整洁;
 2. 符合ROHS环保要求;
 3. 由磁芯状态与芯孔配合轻滑, 无松动, 卡点现象。
 4. 衔铁活动自如。

尺寸公差	名称	料号	材质规格	数量	备注
0.5-3	±0.2				
>3-6	±0.3				
>6-30	±0.5				
>30-120	±0.8				
>120-400	±1.2				
>400	±2				
单位:mm	比例: 2:1				
未注角度公差: ±1°					
未注平行度: 0.05					
未注同心度: 0.05					
未注粗糙度要求: 3.2					
视图	☐				



上海超成电子科技有限公司

机种名称 TAU0730T-02

料品编号 10104-00073002

成品料号 TAU0730T-02

核准	确认	设计	版本号: 1
			页码: 1/1