

Proxxon MF70 CNC

Sunday, November 26, 2017 20:58

Stepper motor 42BYGHW811



42BYGHW8
11 Steppe...

1.8 Graden / stap
360 / 1.8 Graden = 200 Stappen

800 Stappen per omwenteling

Motor bedrading

Motor - Kabel

Groen - Groen (4)
Zwart - Bruin (1)
Rood - Geel (2)
Blauw - Wit (3)

DRV8825

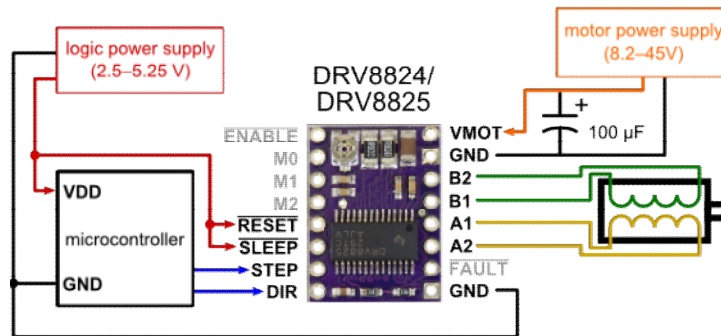
For the [Pololu DRV8825 Stepper Motor Driver](#), the current sense resistors are 0.1Ω. The calculation changes to " $I_{TripMax} = V_{ref} \times 2$ ", or " $V_{ref} = I_{TripMax} / 2$ ".

Note: Check pinout before placing driver, Vref pot on the Pololu DRV8825 is usually on the opposite side of the board when compared to the Pololu A4988, placing driver backwards can destroy the driver.

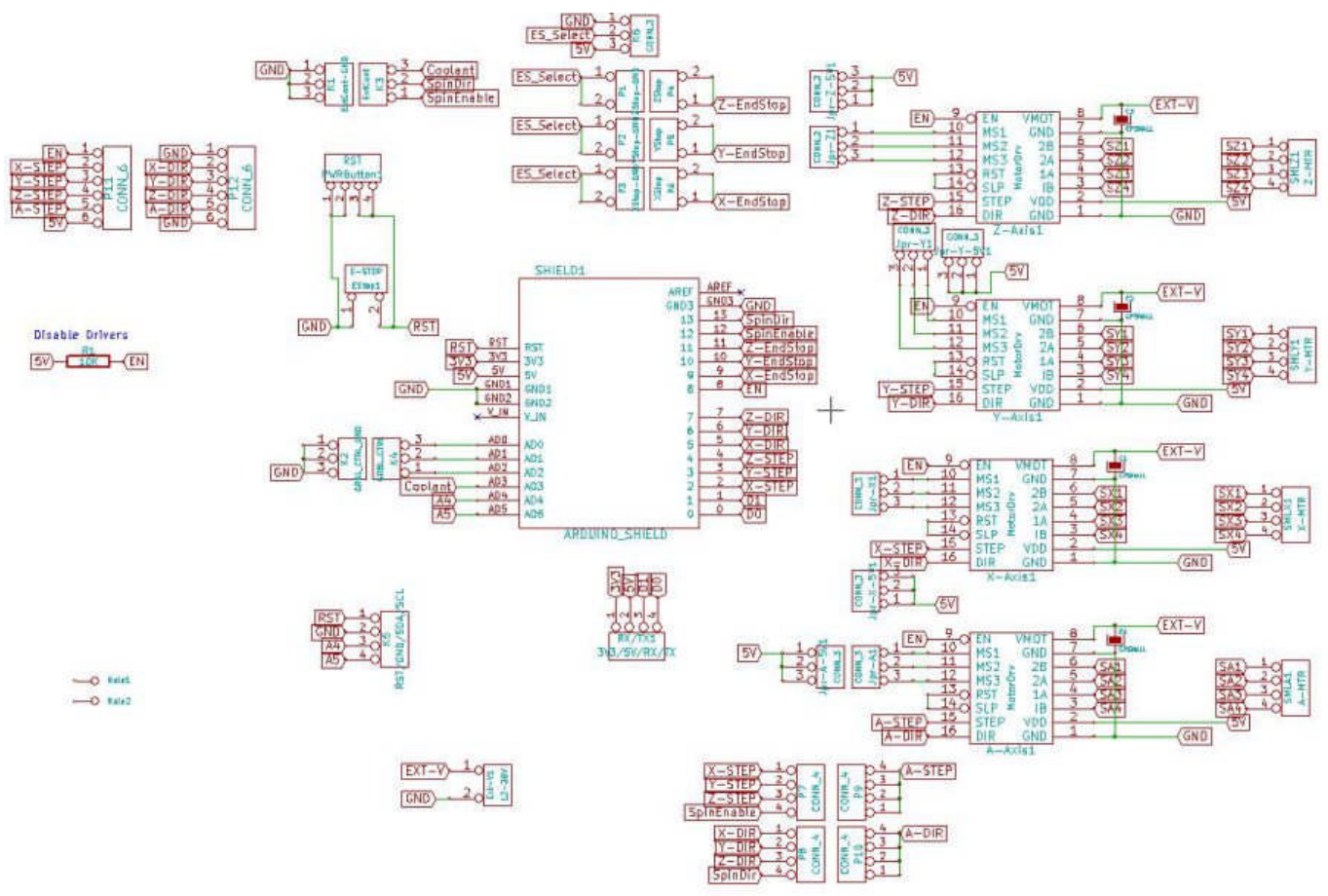
$$V_{ref} = I_{TripMax} / 2$$

As an example, running at 70% of a maximum 1A motor current, use the formula as follows:

$$V_{ref} = 0.7A / 2 = 0.350V$$



MODE0	MODE1	MODE2	Microstep Resolution
Low	Low	Low	Full step
High	Low	Low	Half step
Low	High	Low	1/4 step
High	High	Low	1/8 step
Low	Low	High	1/16 step
High	Low	High	1/32 step
Low	High	High	1/32 step
High	High	High	1/32 step



Preset:

USB / COM port:

Pin layout:

	X:	Y:	Z:
Steps per revolution:	<input type="text" value="1600"/>	<input type="text" value="1600"/>	<input type="text" value="1600"/>
Distance per revolution:	<input type="text" value="40.00mm"/>	<input type="text" value="40.00mm"/>	<input type="text" value="40.00mm"/>
Maximum feedrate:	<input type="text" value="133.3mm/s"/>	<input type="text" value="133.3mm/s"/>	<input type="text" value="133.3mm/s"/>
Inertia:	<input type="text" value="75%"/>	<input type="text" value="75%"/>	<input type="text" value="75%"/>
Reverse direction:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Acceleration distance:	<input type="text" value="3.00mm"/>		
Start feedrate:	<input type="text" value="1.0mm/s"/>		

Invert stepper enable signal

CNC controller state:

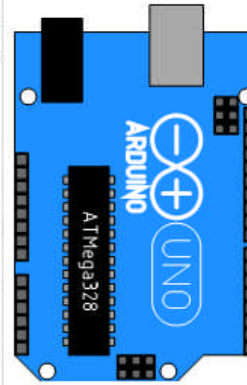
Activating bootloader: OK...
 Bootloader version: 4.4...
 Entering programming mode: OK...
 Controller: AtMega328...
 Uploading: 100 %...
 Leaving programming mode: OK...
 CNC controller active...
 Firmware version: Estlcam V10.001_3...

USB CNC Controller:

The controller requires:

- An Arduino UNO (R3) or Arduino Nano...
- Most Uno / Nano clones are compatible - but not all...

Pin layout "GRBL 0.9 - 1.1 with PWM":



- A0: Error input
- A1: Limit switch 4
- A2: Limit switch 5
- A3: Output 1
- A4: --
- A5: Probe input
- D02: Step X
- D03: Step Y
- D04: Step Z
- D05: Dir X
- D06: Dir Y
- D07: Dir Z
- D08: Stepper Enable
- D09: Limit switch 1
- D10: Limit switch 2
- D11: PWM
- D12: Limit switch 3
- D13: Spindle on / off

Make sure everything is connected correctly!
 Especially switches connected to output pins may damage the Arduino!