

# Applied Motion Products STR4-8 Stepper Drives User Guide

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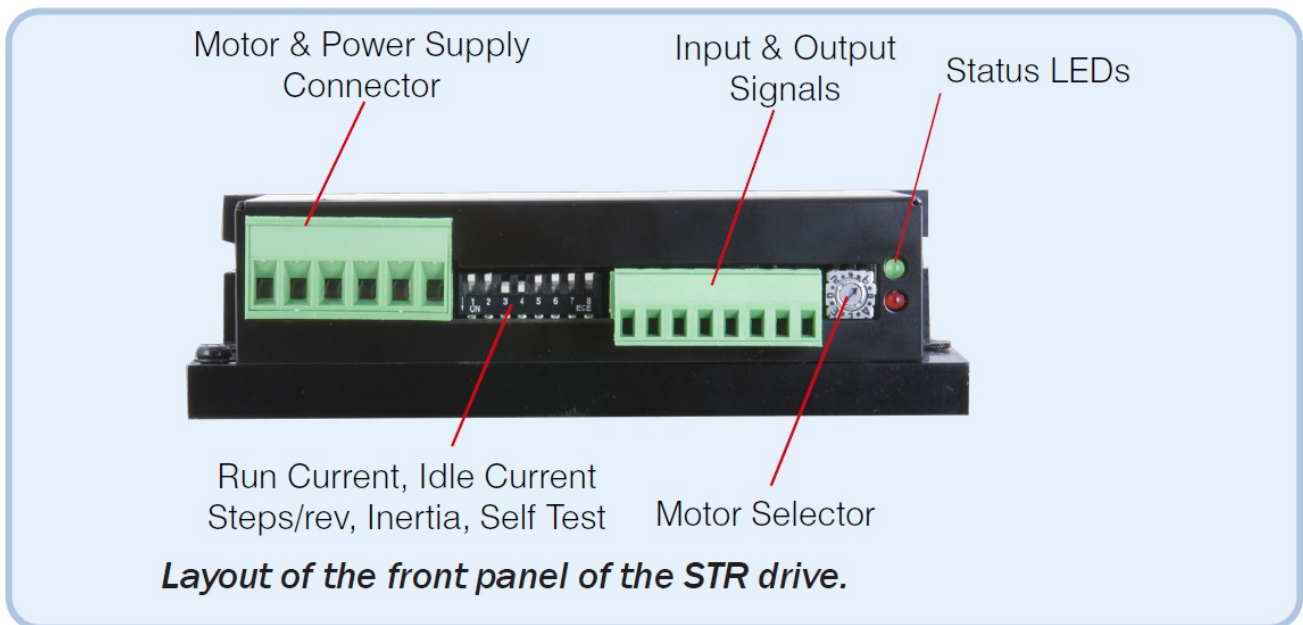
**Applied Motion Products STR4-8 Stepper Drives**



## Requirements

To begin, make sure you have the following equipment:

- A compatible stepper motor.
- A small flat blade screwdriver for tightening the connectors (included).
- A suitable DC power supply. AMP recommends the PS150A24 or PS320A48 available from Applied Motion.

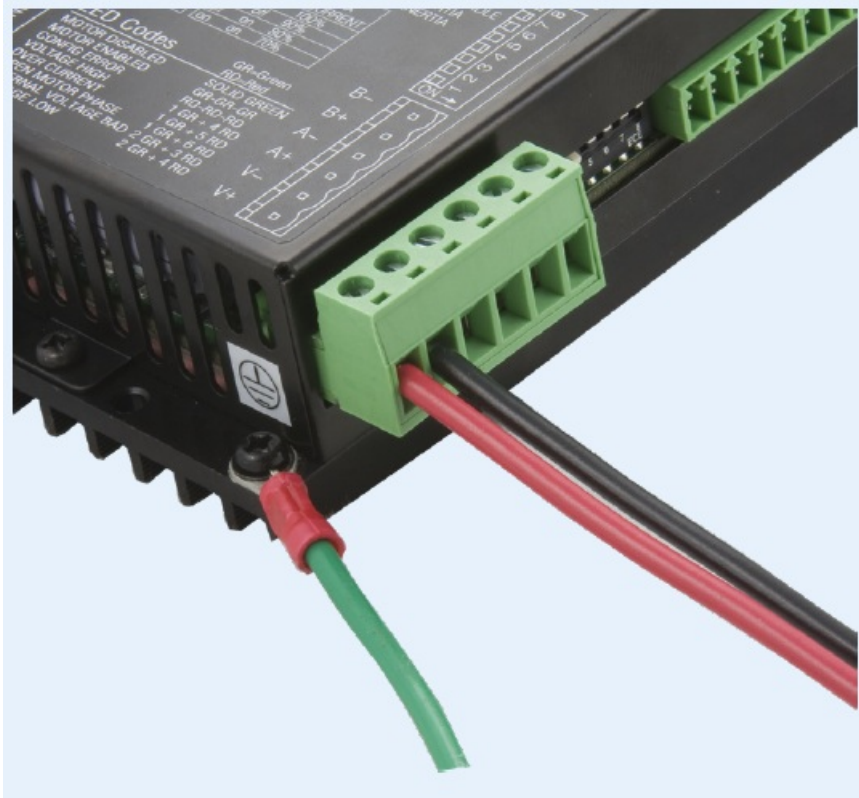


## Wiring the Drive

### Wiring the DC supply

1. Wire the drive to the DC power source.
  - DO NOT apply power until all connections to the drive have been made
  - DO NOT alter any rotary or dip switch settings of the drive while power is applied. This can cause

permanent damage to the drive.



2. Note, the STR4 accepts DC voltages from 24-48V, while the STR8 accepts DC voltages from 24-75V.

Ensure a proper earth ground connection by using the screw on the left side of the chassis.

If using an external fuse, we recommend the following in-line with the V+ connection :

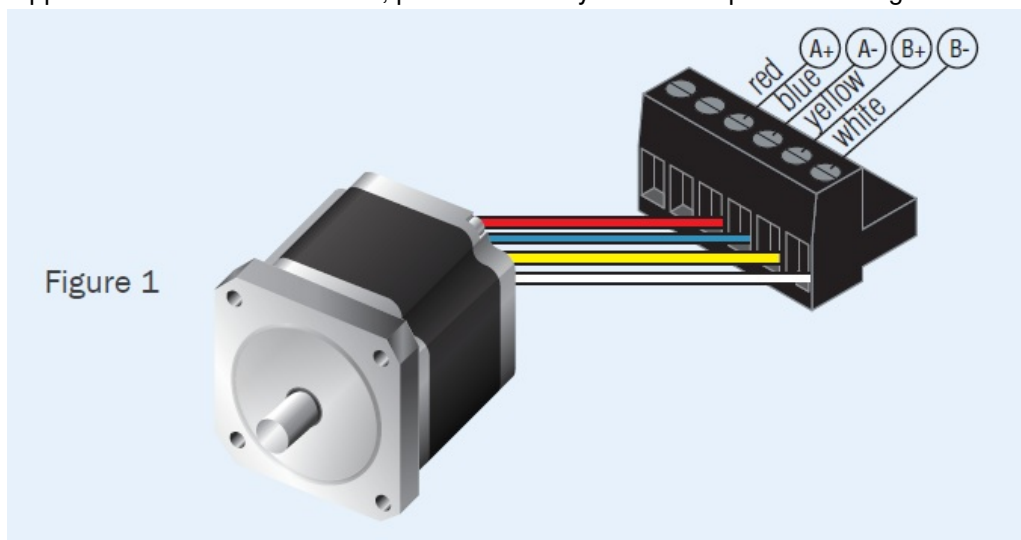
- STR4: 3AG, 4 amp (Littlefuse 313004P)
- STR8: 3AG, 6.25 amp (Littlefuse 3136.25P)

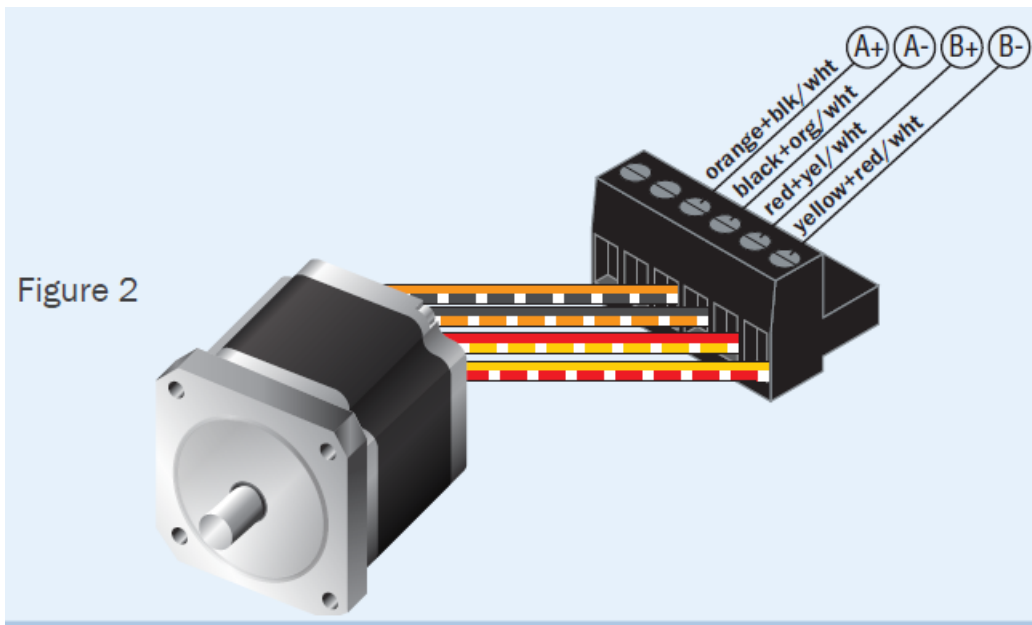
See the STR Hardware Manual for more information about power supply and fuse selection.

## Wiring the motor

Connect the drive to the motor. Four lead motors can be connected in only one way, as shown in Figure 1. We recommend that eight lead motors be connected in parallel, as shown in Figure 2.

If using a non-Applied Motion Products motor, please refer to your motor specs for wiring information.





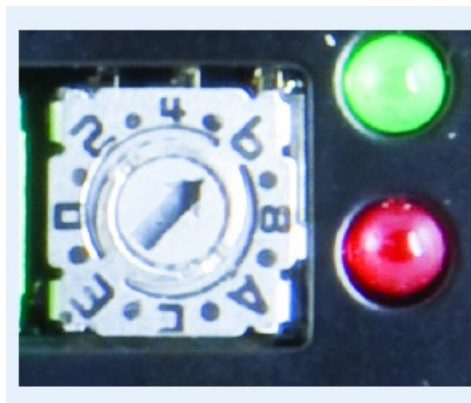
## Setting up the Drive

**WARNING:** Do NOT alter any switch settings while the drive is powered. This can cause failure of the drive.

### Selecting the motor

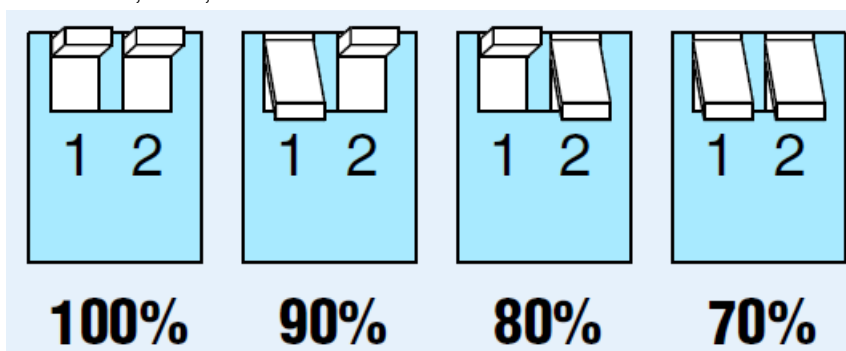
#### Selecting the motor

Motor selection is done with the 16 position rotary switch on the front of the drive; refer to the label on the drive to see the motor choices available to you. Turn the rotary switch to the number that represents the motor you have. This selects important information stored on the drive, such as current and anti-resonance settings, to get the best performance from your motor.

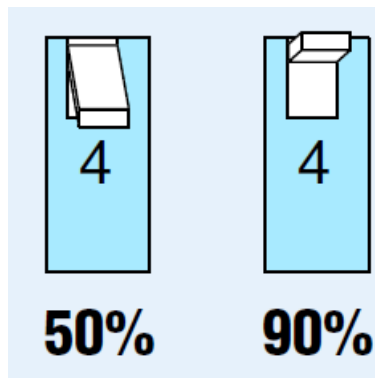


### Selecting current

Sets the running current to 70%, 80%, 90% or 100% of the motor's rated maximum current.

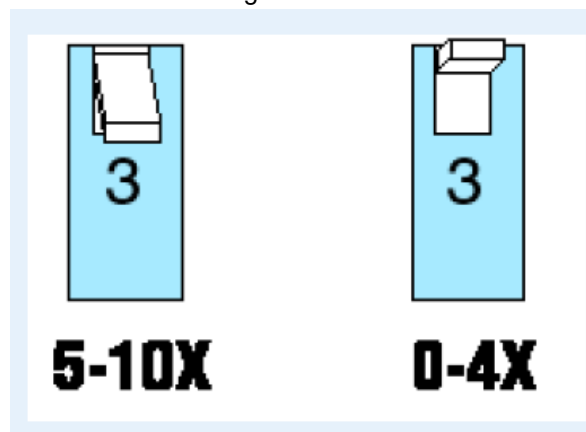


SW4 sets the idle current to either 50% or 90% of the selected running current.



### Load inertia

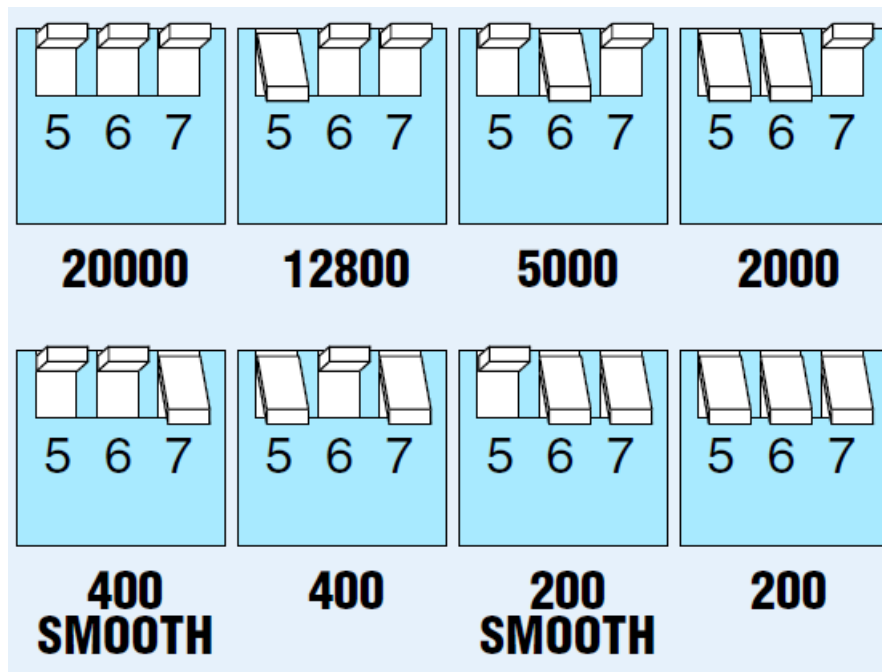
SW3 chooses between two load inertia ratio ranges.  
This information is used in the anti- resonance configuration.



### Step resolution

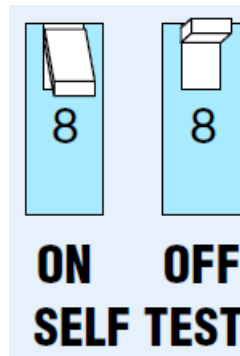
There are 4 microstep resolutions to choose from as well as full and half step.

- 200
- 200 with microstep emulation (smooth)
- 400
- 400 with microstep emulation (smooth)
- 2000
- 5000
- 12800
- 20000



### Self test

The STR has a built in Self Test function. If switch 8 is moved to the ON position the drive will automatically rotate the motor back and forth, two turns in each direction. This feature can be used to confirm that the motor is correctly wired, selected and otherwise operational.



### User manual

A full user manual for the STR is available for download from our web site. This contains full details on setup, wiring and installation.

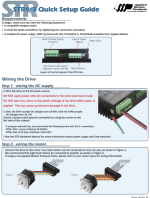
[www.applied-motion.com/support](http://www.applied-motion.com/support)



If you have any questions or comments, please call Applied Motion Products Customer Support: (800) 525-1609,

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Documents / Resources

	<a href="#">Applied Motion Products STR4-8 Stepper Drives</a> [pdf] User Guide STR4-8 Stepper Drives, STR4-8, Stepper Drives, Drives
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References

- [Applied Motion](#)
- [Applied Motion](#)
- [Support | Applied Motion](#)