



Applied Motion Products STRAC8 Stepper Drive User Guide

[Home](#) » [Applied Motion Products](#) » Applied Motion Products STRAC8 Stepper Drive User Guide 

Contents

- [1 Applied Motion Products STRAC8 Stepper Drive User Guide](#)
- [2 Requirements](#)
- [3 Step 1 -Wiring AC Power Supply](#)
- [4 Step 2 – Wiring the Motor](#)
- [5 Step 3 – Select the Motor](#)
- [6 Step 4 – Config the Drive](#)
- [7 Step 5 – Self Test](#)
- [8 Read More About This Manual & Download PDF:](#)
- [9 Documents / Resources](#)
 - [9.1 References](#)
- [10 Related Posts](#)

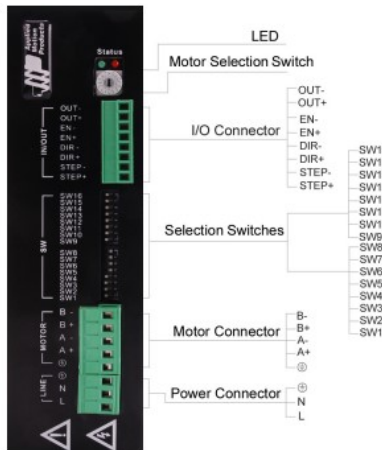
Applied Motion Products STRAC8 Stepper Drive User Guide



Requirements

To begin, make sure you have the following equipment

- A compatible stepper motor. Visit applied-motion.com to purchase one.
- A small flat blade screwdriver for tightening the connectors (included).
- An AC supply voltage, 90VAC – 240VAC volts single-phase.
- A source of pulse & direction signals



Step 1 -Wiring AC Power Supply

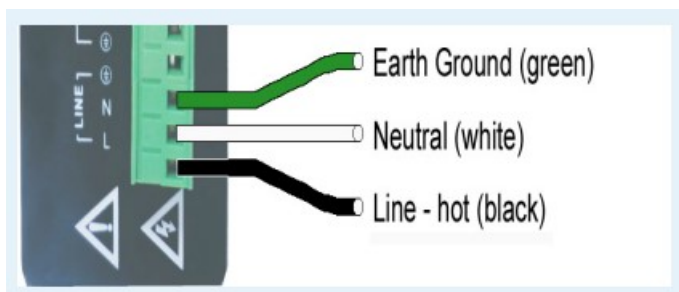
DO NOT apply power until all connections to the drive have been made.

Wire the drive to the AC power source.

Use the connector supplied with the drive and one of the ground terminals on the drive to connect the AC supply

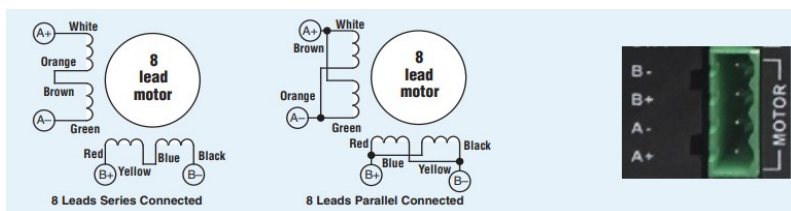
Use 16 AWG wire for Line (L) and Neutral (N). Use 14 AWG for Earth Ground (G).

Care should be taken when working with high voltages



Step 2 – Wiring the Motor

Connect the drive to the motor. If using a non Applied Motion Products' motor, consult the motor specs for wiring information.



Step 3 – Select the Motor

Each position of the 16-bit rotary switch selects a different motor, automatically setting the configuration parameters in the drive. The STRAC8 drive comes programmed with up to 16 typical motors as factory defaults. Drives can be customized with specially selected motors when required. Available options are in the hardware manual.

Note: Motor current is limited by the lower value between rotary switch setting and dip switches SW5 – SW8



If the motor selection is changed, the drive power supply will need to be cycled.

For a custom motor, please select custom motor via the rotary switch, then use the DIP switches to configure running current , anti-resonance and other settings.

SW position	MOTOR	WIRING	Motor Current	Input Voltage
0	Reserved		0 A	

1	Reserved		0 A	
2	HT23-552	Parallel	1.5 A	120VAC
3	HT23-553	Parallel	1.5 A	120VAC
4	HT23-554	Parallel	1.8 A	120VAC
5	HT34-495/695	Parallel	5.1 A	120VAC
6	HT34-496/696	Parallel	5.1 A	120VAC
7	HT34-497/697	Parallel	5.8 A	120VAC
8	HT23-552	Series	0.75 A	240VAC
9	HT23-553	Series	0.75 A	240VAC
A	HT23-554	Series	0.9 A	240VAC
B	HT34-495/695	Series	2.5 A	240VAC
C	HT34-496/696	Series	2.5 A	240VAC

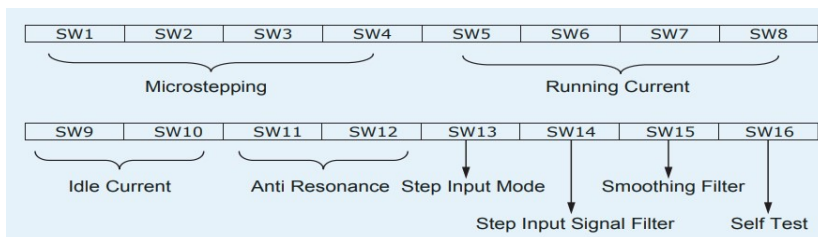
D	HT34-497/697	Series	2.5 A	240VAC
E	Custom Motor	Reserved	8 A	120VAC/240VAC
F	Custom Motor	Reserved	8 A	120VAC/240VAC

Step 4 – Config the Drive

Selection Switches

Many operational parameters of the STRAC8 can be set or changed by DIP switches – either by a single switch or a combination of

ON/OFF settings of 2 or more switches



1. Microstepping – 4 switches for a total of 16 settings:

Microsteps(step/rev)	SW1	SW2	SW3	SW4
200	ON	ON	ON	ON
400	OFF	ON	ON	ON
800	ON	OFF	ON	ON
1600	OFF	OFF	ON	ON
3200	ON	ON	OFF	ON

6400	OFF	ON	OFF	ON
12800	ON	OFF	OFF	ON
25600	OFF	OFF	OFF	ON
1000	ON	ON	ON	OFF
2000	OFF	ON	ON	OFF
4000	ON	OFF	ON	OFF
5000	OFF	OFF	ON	OFF
8000	ON	ON	OFF	OFF
10000	OFF	ON	OFF	OFF
20000	ON	OFF	OFF	OFF
25000	OFF	OFF	OFF	OFF

2.Idle Current – 2 switches for a total of 4 settings

Idle	SW9	SW10
25%	ON	ON
50%	OFF	ON
70%	ON	OFF
90%	OFF	OFF

3. Step Input Mode (SW13) – OFF for Step and Direction input, ON for CW/CCW input

4. Step Smoothing Filter (SW15) – ON to enable, OFF to disable

5. Running current – 4 switches for a total of 16 settings:

Note: Motor current is limited by the lower value between rotary switch setting (step 3) and dip switches SW5 – SW8.

Current(Peak)	SW5	SW6	SW7	SW8
0.4A	ON	ON	ON	ON
0.6A	OFF	ON	ON	ON
0.9A	ON	OFF	ON	ON
1.2A	OFF	OFF	ON	ON
1.5A	ON	ON	OFF	ON
2.0A	OFF	ON	OFF	ON
2.5A	ON	OFF	OFF	ON

3.0A	OFF	OFF	OFF	ON
3.5A	ON	ON	ON	OFF
4.0A	OFF	ON	ON	OFF
4.5A	ON	OFF	ON	OFF
5.2A	OFF	OFF	ON	OFF
5.9A	ON	ON	OFF	OFF
6.6A	OFF	ON	OFF	OFF
7.3A	ON	OFF	OFF	OFF
8.0A	OFF	OFF	OFF	OFF

6. Anti-Resonance(SW11 & 12)

Option	SW11	SW12	Interia
0	ON	ON	Low
1	OFF	ON	
2	ON	OFF	
3	OFF	OFF	High

7. Step input Signal Filter (SW14) – ON for 150 kHz, OFF for 2 kHz
8. Self test (SW16) – ON for 2 rev CW/CCW .5 rps self tes, OFF for none

Step 5 – Self Test

The STRAC8 has a built in Self Test function. If switch 16 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.

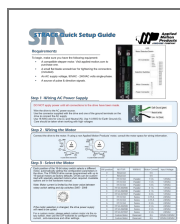
A full user manual for the STRAC8 is available for download from our web site. This contains full details on setup, wiring and installation.

If you have any questions or comments, please call

Applied Motion Products Customer Support: (800) 525-1609, or visit us online: applied-motion.com.

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References

-  [Applied Motion](#)