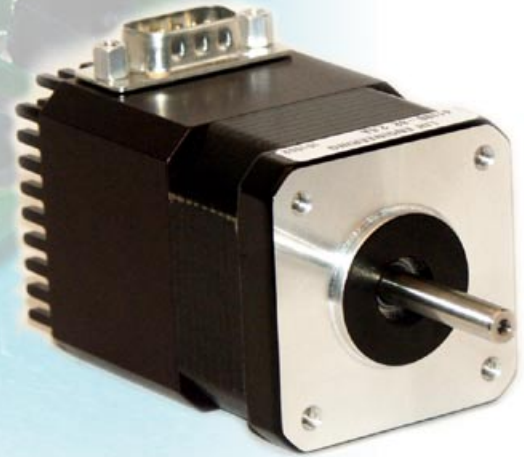


**MAXIMIZING
TORQUE
IN A SMALL
PACKAGE**

SilverPak™

**INTEGRATED STEP MOTOR
& DRIVER SOLUTION**



USER GUIDE

SILVERPAK INSTALLATION NOTES: (Rev.B - January 23,2003)

Thank you for purchasing the Silverpak integrated driver and motor unit. This unit is warranted to be free of manufacturing defects for up to 1 year from the date of purchase.

PLEASE READ FIRST BEFORE USING THE SILVERPAK

Before you start, ensure that there is a suitable DC power supply and a STEP and DIRECTION pulse source available. This is a current control, Bipolar driver.

Disclaimer

Lin Engineering, reserves the right to make changes without further notice to this product to improve reliability, function, or design. Lin Engineering does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights of others.

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Technical Specification

Features

Step & Direction Input

- A NEMA Size 17, 2 Phase, 1.8° Bipolar Step Motor With Built-In • Microstepping Driver.
- Selectable Step Resolution From Full Step To 8X Microsteps
- Optically Isolated Step, Direction, And Disable/Enable Inputs
- Automatic Current Reduction With Disable Switch
- Operates On 12 To 24 VDC
- Low Power Dissipation
- Efficient Current Control
- Quiet Operation
- Thermal Shutdown
- Power-On Indicator
- Power Disable/Enable Control
- Up To 85 oz-in Of Holding Torque

Operation

- | | |
|------------------------------------|-----------------|
| • Maximum Step Frequency | 250 kHz |
| • Minimum Step Pulse Width | 20 microseconds |
| • Minimum Step Low Time | 20 microseconds |
| • Maximum Power-Down Recovery Time | 20 milliseconds |

A Connectors

A DB-9 male connector provides power and the control connections for the module. Active signals are optically isolated. An open-collector drive is required to provide pulses for Step, or levels for Direction and Disable/Enable. The Opto Supply for the optocouplers can be between +5 to 24 VDC with respect to the signal input. However, if the supply is greater than 5 VDC then a resistor must be connected in series with each signal line to limit the current to 5mA.

PIN NUMBER	COLOR (#26 AWG Lead)	FUNCTION
1	Red	+V
2	Black	SR 1 (in)
3	Brown	SR 2 (in)
4	Black/ White	Disable (in)
5	Orange	Direction (in)
6	Green	PWR Ground
7	White	Logic Ground
8	Blue	Opto Supply
9	Yellow	Step (in)

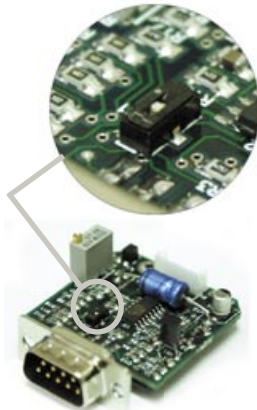


Figure A
To enable, adjust position of switch towards the white dot.

Operating Temperature Range

-20° to 50°

Step Resolution Control

The two control signals SR1 (Pin 2) and SR2 (Pin 3) are used to preset the step resolution by selective contact closure to ground (Pin 7)

FUNCTION	SR1	SR2
Full-Step	Close	Close
Half-Step	Close	Open
4X Microstep	Open	Close
8X Microstep	Open	Open

LIN Engineering also introduces other excellent drivers which may be suitable for your applications, please view our website at www.linengineering.com

B Motor Front Shaft Extension Length

Standard length is 0.94". Customized length is available.

C Motor Shaft Diameter

Standard shaft diameter is 0.1968". Customized diameter is available.

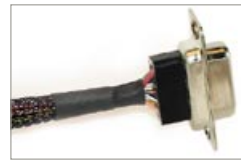
D Overall Body Length

Motor body length is available in various lengths

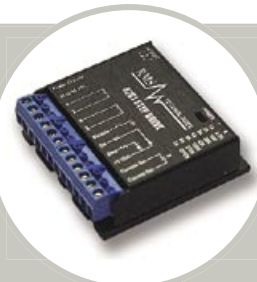
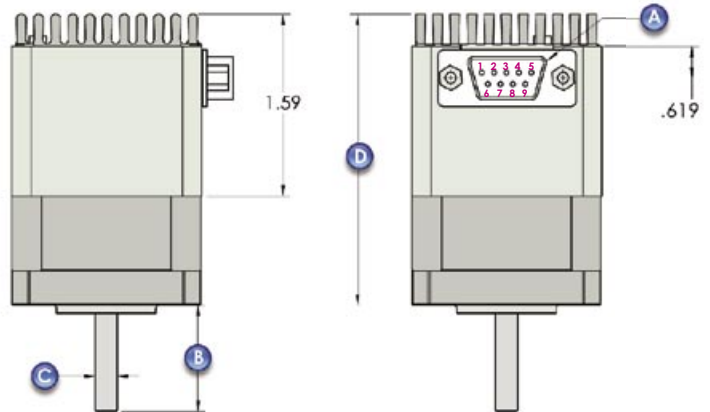
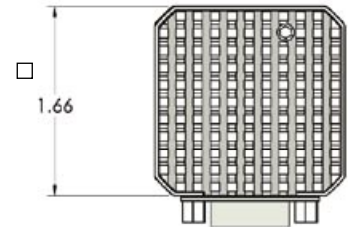
- Model 4118S (2.69")
- Model 4118M (2.92")
- Model 4118L (3.24")

Mating Connectors

A mating D-Sub connector will be provided.



Part# 90-019



R701/ R710

- High Current
- Low Cost
- High Efficiency
- Low Heat Dissipation
- Smooth Motion
- Low Noise



R208

- Bipolar step motor driver
- Low power dissipation
- Low Cost
- Excellent step accuracy
- Efficient Current Control