

# R208

## MICROSTEPPING DRIVER

### FEATURES & BENEFITS

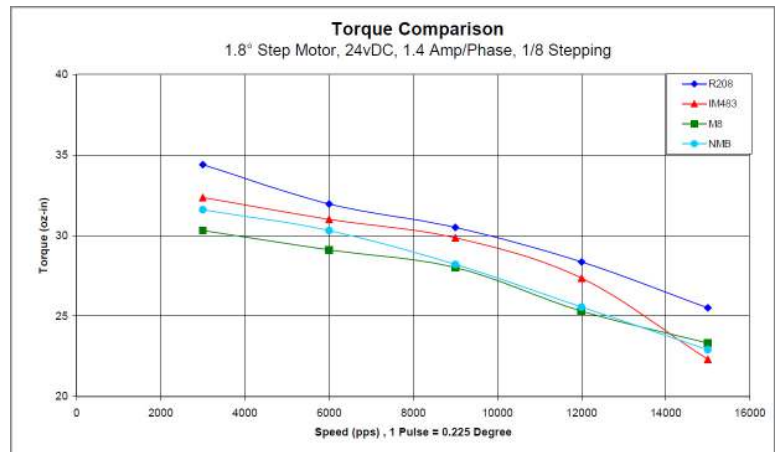
- Bipolar Step Motor Driver
- Operates from +12 to 24 VDC
- Phase current ranges from 0.35 to 2.0 Amps Peak
- Selectable Step Resolution from Full, Half, 1/4, and 1/8 microsteps
- Optically isolated Step, Direction, and Disable/Enable Inputs
- Selectable Current Reduction of 33%
- Low Power Dissipation
- Efficient Current Control
- Thermal Shutdown, Under-voltage Protection
- Power-on Indicator
- Power Disable/Enable Control
- Sinusoidal current waveform Low Cost Driver



### PERFORMANCE COMPARISON

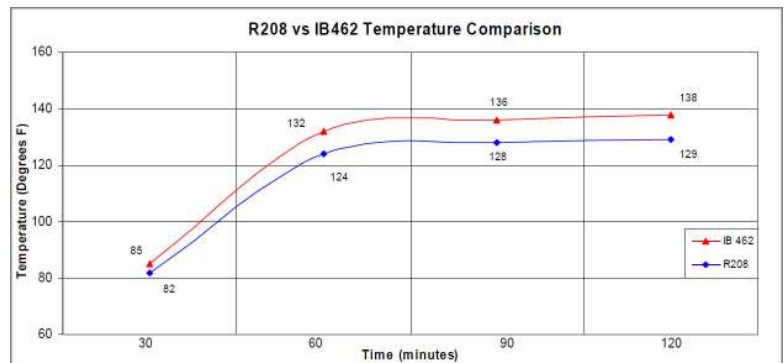
#### TORQUE COMPARISON

As a simple 2 Amp driver, the R208 outperforms all of its competitors in its class in maximizing the torque output of a step motor. In the test below you can see that it even outperforms the IMS IM483, a driver that costs over twice as much. Using a standard 1.8° step motor at 8x microstepping, you can see how the R208 outperforms the competition on the torque/speed curve below. The R208 gets over 10% more torque out of the motor at the various speeds compared to the lowest performer.



#### TEMPERATURE COMPARISON

The R208 directly competes with the IMS IB462. They are both 2 Amp peak drivers. Both feature full and half step, while the R208 is also capable of 4x and 8x microstepping. Using a standard 1.8° Step motor, 24 VDC, 2 Amps/phase, half-stepping, and 20 revolutions per second, you can see that the R208 runs much cooler than the IB462. After running both for 120 minutes the R208 is at 129° F (53.8° C), while the IB462 is at 138° F (58.8° C). If overall system temperature is important in your application, the R208 has a clear advantage running 9° F (5° C) cooler.



## ELECTRICAL SPECIFICATIONS

Input Voltage	+12 to 24 VDC (Including Unregulated Power Supplies)
Drive Current(Per Phase)	0.25 to1.4 Amps RMS, 2 Amps Peak
Isolated Inputs	Step Clock, Direction, Enable & Disable
Step Frequency (Max)	500 kHz
Steps Per Revolution (1.8° Motor)	200, 400, 8000, 16000

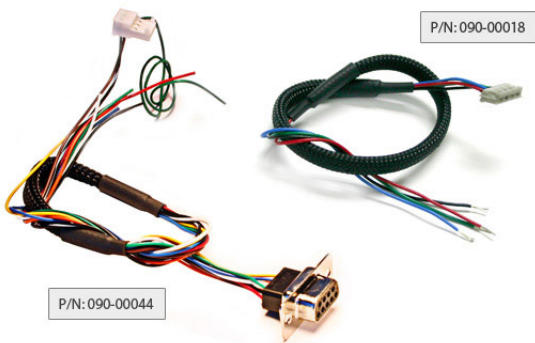
## CONNECTORS

A DB-9 male connector provides power and control connections. Mating connector provided.



## CABLE OPTION

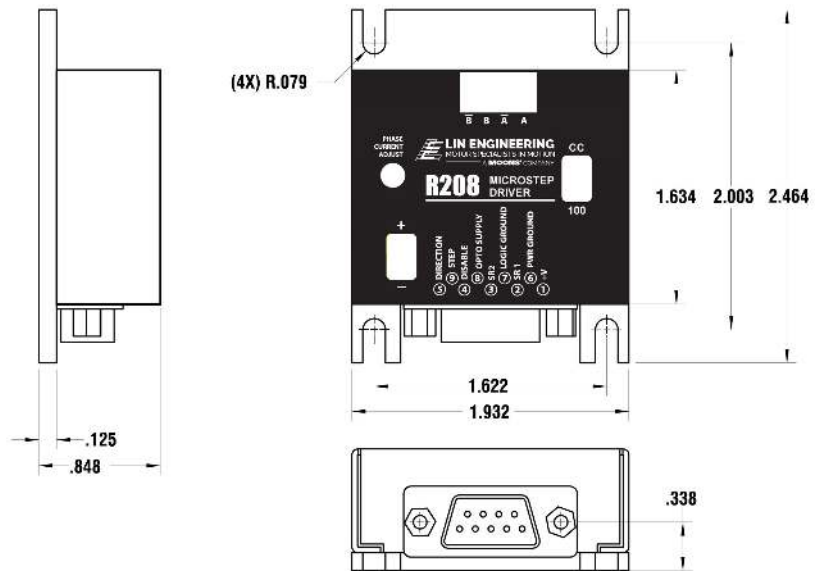
Each R208 comes with the following cables  
(Lin part number 090-00018 and 090-00019):  
DB-9 cable with white 3-pin connector | 4-pin cable



## PIN OUTS

PIN NUMBER	COLOR (#26 AWG LEAD)	FUNCTION
1	Red	+ 12 to 24 VDC
2	Black	Step Resolution
3	Brown	Step Resolution
4	Black/White	Disable
5	Orange	Direction
6	Green	Power Ground
7	White	Logic Ground
8	Blue	Opto Supply
9	Yellow	Step

## DIMENSIONS



# Motion Control, Solved.

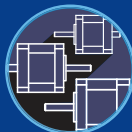
## MOTOR ENGINEERING & MANUFACTURING



Optimized  
For Your  
Application



Quick  
Prototype  
Turnaround



Small Batch  
to OEM Volume  
Production



US Based  
Support &  
Manufacturing