

# OEMZL Microstepping Drive



## Easy and Reliable

The OEMZL is a packaged 4 Apk microstepping drive with the needs of the OEM in mind. The connections are on removable screw terminals and a standard 25-pin header allowing simple installation and cable routing without having to cut off and reattach a connector.

## Advanced Damping Technologies

All step motors are subject to resonance and ringing after quick moves. The OEMZL Drive has two unique circuits that can damp resonance and ringing.

- Anti-Resonance – This general purpose damping circuit works automatically without any configuration necessary and provides aggressive and effective damping to eliminate mid-range instability. This minimizes the chances that the motor will stall allowing for more usable torque for a given motor size.
- Electronic Viscosity™ (EV) – This circuit provides damping at speeds from rest up to three revolutions per second. One rotary switch on the drive optimizes EV to reduce end-of-move settling time resulting in increased machine throughput.

## OEMZL4 Drive Features

### Performance

- 4 Amp @ 120VAC (170 VDC bus voltage)
- Standard step-and-direction input or CW/CCW input
- Operates with standard 1.8" hybrid step motors
- Torque from 43 oz-in (0.30 Nm) to 1907 oz-in (13.3 Nm)
- Electronic Viscosity benefits:
  - Reduce settling time
  - Increase slow speed smoothness (reduce velocity ripple)
  - Reduce audible noise
- Anti-resonance eliminates mid-range instability and provides damping ratios of up to 0.2
- CE marked for LVD compliance
- UL recognized

### Protection Circuit

- Motor short circuits (phase-to-phase and phase-to-ground)
- Overtemperature of internal devices and power supply
- Undervoltage (protects against low AC line or brownout)
- Power dump (dissipates excess energy caused by load regeneration)

### Physical

- 120VAC (170VDC bus voltage) operation
- Wide selection of available motors
- Removable connectors for easy installation
- Four diagnostic LEDs to confirm proper operation

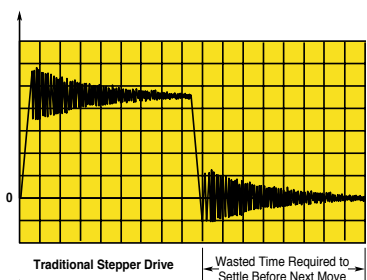
## Increased Throughput with Electronic Viscosity™

The figure below is an example of a repetitive move profile in an indexing, pick and place, or similar type of application requiring some type of action to occur between moves (i.e., scanning, probing, measuring, etc.). It is critical for the machine to be settled within a given tolerance before the action can occur. The conventional step motor system requires a significant amount of time (wasted time) to settle.

The OEMZL Series improves machine throughput by decreasing settling time and allowing the motor's torque to be used for greater acceleration instead of overcoming the step motor system's vibration.

With conventional stepper systems, the shaft oscillates around its commanded final position before settling after each move. This results in increased settling time that translates into wasted time.

Compumotor's patent-pending Electronic Viscosity™ (SV) damps the ringing of the motor system when decelerating the load.



## Electronic Viscosity™ Benefits:

- Decreased settling time
- Increased production time

