



G214

SMALL AND POWERFUL MICROSTEPPING DRIVER

DESCRIPTION

The G214 is a powerful and cost effective FPGA based step motor drive meant for high power applications. Designed from the ground up to eliminate resonance from stepper motors, the G214 is in a class above competing products.

Proprietary resonance compensation ensures a step motor will move with maximum smoothness and minimum vibration. Using GeckoDrive's resolution upscaling at all speeds means motor smoothness is optimized at all resolutions and velocities. Every microstep is broken down into higher interpolated microsteps to compensate for motor vibration due to coarse microstepping at extremely low speeds. The resolution upscaling will change depending on the microstep resolution chosen via DIP switch to be sure your motor is getting the smoothest possible operation at all times.

Motor current can be set with a tri-mode option, using either an onboard DIP switch, external voltage or external resistor. The G214 can drive stepper motors ranging from NEMA 11 all the way up to NEMA 42. High speed morphing will get the most torque out of any stepper motor at high speed.

Allowing for drop-in replacement of IM483 and IM805 motor controls means technology upgrades are simple. Competitive pricing allows users to have the latest technology and the best motor performance for very little cost.

FEATURES

- Fourteen selectable resolutions, up to 256 microstep
- High power operation, up to 80VDC and 7A
- Short circuit protection makes the G214 virtually indestructible
- Push button self-test for fast in-the-field error diagnosis
- Adjustable standby current using on board trimpot or external resistor
- Next generation multiband resonance compensation
- Optoisolated Full-Step output
- Resolution upscaling for smooth motion at all speeds
- High speed morphing for maximizing motor torque
- LED blink codes for error reporting
- Automatic low speed smoothness compensation
- Optically isolated inputs and outputs
- Form, fit, and function compatibility with IM805 and IM483

ELECTRICAL SPECIFICATIONS

Input Voltage	+18 to 80VDC
Motor Current Per Phase	0A to 7A Peak
Optically Isolated Inputs	Step, Direction, Reset and Enable
Optically Isolated Outputs	Full-Step and Fault
Steps Per Revolution on 200 Step Motor	400, 800, 1000, 1600, 2000, 3200, 5000, 6400, 10000, 12800, 25000, 25600, 50000, 51200
Protection	Motor short circuit, reverse polarity, overvoltage, undervoltage
Indicators	Two LED blink code and blown fuse LED
Maximum Step Pulse Input	2MHz

ENVIRONMENTAL RATINGS

Operating Temperature	0 to +70C (+32 to 158F)
Storage Temperature	0 to +70C (+32 to 158F)
Humidity	0 to 95% non-condensing

MECHANICAL INFORMATION

Dimensions	69.9mm L x 76.2mm W x 19.05mm H (2.75" L x 3" W x 0.75" H)
Mounting Holes	3.5mm (6-32) hole size
Connector Type	(Two) 8-position 5mm connector

