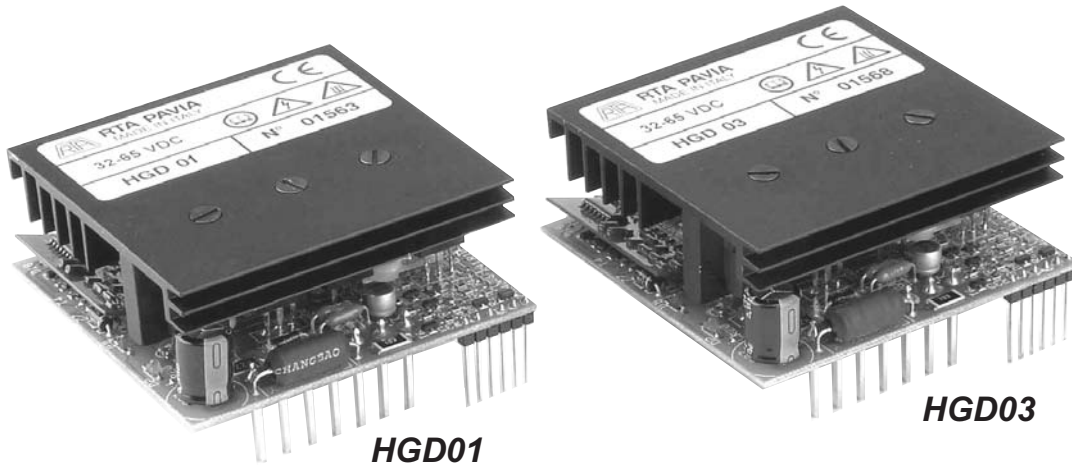




HGD01/03 SERIES STEPPING MOTOR DRIVES

LOW COST PCB MOUNTING DRIVES (Full / Half & Quarter step)



- PCB mounting, very small size.
- High efficiency bipolar chopper circuit.
- Ideal for low power, high volume OEM applications.
- Protection from motor short circuit, overtemperature and overvoltage.
- 200, 400 & 800 steps/rev for smooth running at low speeds.
- Low power up to 6 Amps @ 75V. Drives 17, 23 & 34 frame motors.
- Electronic damping reduces low speed resonance.
- Suitable for two phase motors, 4, 6 or 8 leads.
- Powered by simple unregulated DC power supply.

The HGD01 & HGD03 models of stepper motor drives are ideal for OEM single or multi axis motion control applications where a low cost solution is required. The footprint is very small and the drive is supplied with pins instead of connectors so it can be mounted directly onto a printed circuit board using the appropriate sockets. Control and power supply circuitry can also be mounted on the same circuit board. Drive settings such as current, damping and resolution are set by external switches.

The power supply is unregulated DC, from user supplied transformer, rectifier and filter capacitor. Two models are available to cover 17, 23 and 34 frame motors. The 800 step/rev resolution operation and electronic damping reduce resonance at low speeds. Protection against motor short circuit is also included. Applications include positioning systems, pick and place machines, packaging machines, XY tables and testing machines.

SPECIFICATIONS

LOGIC INPUTS

LOW = 0-1V (pull low), HIGH = open circuit

Maximum input 30V

Step

Direction

Current off

Current reduction

LOGIC OUTPUTS

50V @ 30mA (current sink open collector)

Drive fault

SETTINGS

(External CMOS inputs or dip switches)

Motor current (6 settings)

Damping (low speed)

Resolution (200, 400 or 800 steps/rev)

Automatic current reduction at standstill

MAXIMUM STEP FREQUENCY

100 kHz

OPERATING TEMPERATURE

0-45°C

(Forced cooling may be required)

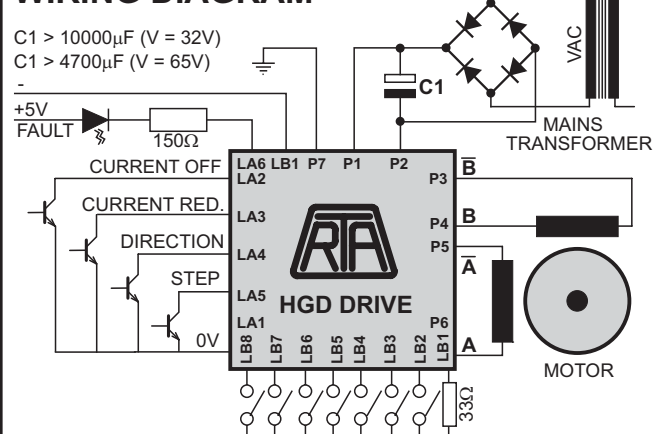
WEIGHT

0.3kg.

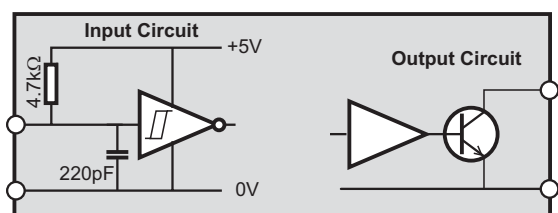
SPECIFICATIONS

	HGD01	HGD03
SUPPLY RANGE (VDC)	32 - 65	32 - 65
TRANSFORMER (VAC)	24 - 52	24 - 52
SUPPLY (VDC) (maximum)	75	75
SUPPLY (VDC) (minimum)	27	27
MOTOR CURRENT (A) (maximum)	2.0	6.0
MOTOR CURRENT (A) (minimum)	0.75	2.25
CURRENT STEPS (A)	0.25	0.75

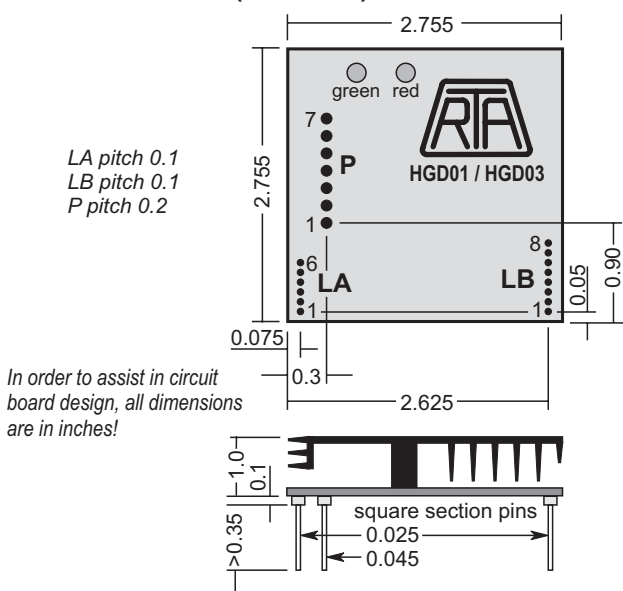
WIRING DIAGRAM



LOGIC SIGNALS



DIMENSIONS (in inches)



CONNECTIONS

- P3 Motor** Motor winding \bar{B} (2B or B+)
P4 Motor Motor winding B (2A or B-)
P5 Motor Motor winding A (1B or A-)
P6 Motor Motor winding A (1A or A+)
P7 Motor shield Motor cable shield
- P2 -Supply** - DC Power from rectifier and capacitor.
P1 +Supply + DC Power from rectifier and capacitor.
- LA1 Logic Gnd** 0V common for all logic signals.
- LA2 Current off** Forcing this signal low switches off motor current. When open (no connection) motor current is on.
- LA3 Current red.** Forcing this signal low (to 0V) reduces motor current to 50% of the set value.
- LA4 Direction** Forcing this signal low (to 0V) will reverse motor direction. This signal must be on for at least 50 μ sec before first step input is received and must remain on for at least 50 μ sec after the last step is received.
- LA5 Step input** Forcing this signal low (to 0V) will cause motor to step once on falling edge. Duty cycle should ideally be 50% and source should be <300 Ω impedance.
- LA6 Drive fault** Normally low (at 0V) but goes high when drive protection is active.
- LB Settings** Setting of drive current, damping, resolution and automatic current reduction at standstill.

Motors, transformers, controllers, motion control software and motor couplings also available on request.
 Continuous development may necessitate changes in models and specifications without notice.

AUTOMATED MOTION SYSTEMS PTY.LTD.

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