

3540MO Step Motor Drive with Digital Oscillator

Microstepping

3.5 amps, 40 VDC

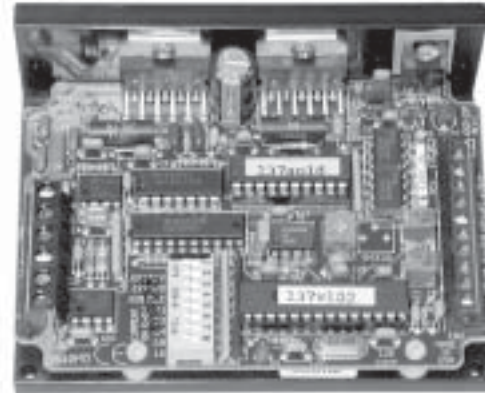
Features

- DC bus voltage 12-42 VDC motor supply (including ripple)
- Switch selectable currents from 0.4–3.5 amps/phase motor current
- Microstepping at 12,800 steps/rev
- Switch selectable idle current reduction, 0 or 50%
- Optically isolated 5–12 VDC inputs
 - Run, directs drive to run or stop
 - Direction, sets direction of rotation
 - Speed, selects high speed (25rps) or low speed (5rps) range
 - Enable, removes all motor current when active
- Wiper, 0–5V analog for external speed signal, pot or joystick
- Output, Tach: 5–24V optically isolated, 100 pulses per revolution
- Internal Pot, accel/decel (1–250 rev/sec/sec, Low speed (0–5 rps), High speed (0–25 rps))
- External Speed, Pot or Joystick 3 terminal type, 1k–10k ohms
- 140 watts of usable power
- Screw terminal connectors
- MOSFET, dual H-bridge, inaudible PWM amplifier
- 3 state, pulse width modulated current control, switching at 20–30 KHz
- Drives 4, 6 or 8 lead size 11, 14, 17, 23 or 34 step motors
- CE compliant

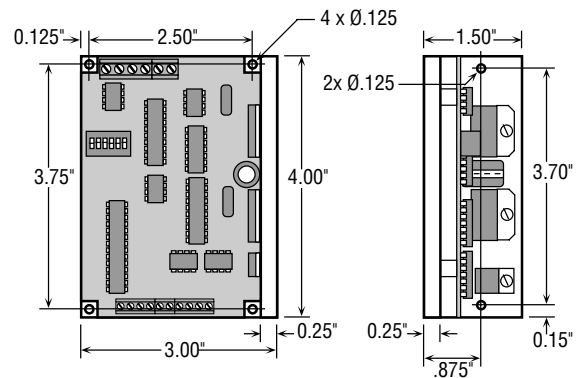
Description

The 3540MO step motor driver is a microstepping drive at 12,800 steps per revolution, step phase sequencer with MOSFET three state switching amplifiers and optoisolated circuits. This drive includes 5 optically isolated inputs, external speed control, tach output, and internal pots for accel/decel rate along with high/low speed range selection.

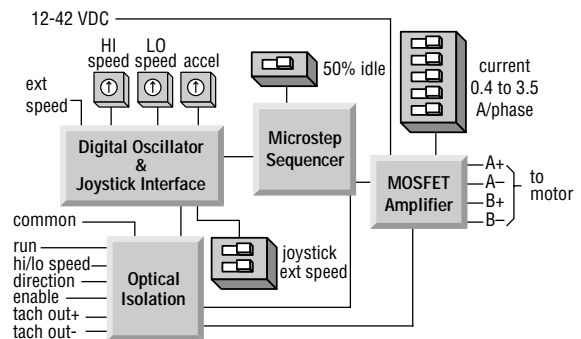
The amplifier regulates motor current by chopping at a constant, inaudible frequency. Phase current is selected from 32 levels by a DIP switch. Microstepping resolution is also selected by DIP switch.



MECHANICAL OUTLINE



BLOCK DIAGRAM



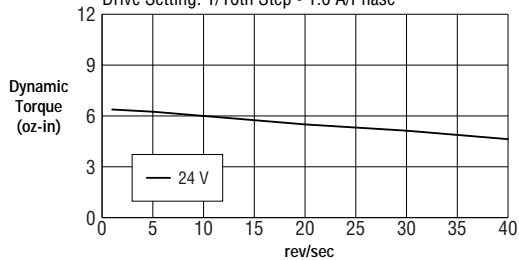
Recommended motors for the 3540MO drive:

Size 11	Size 14	Size 17	Size 23
HT11-012	5014-842	HT17-068	HT23-394
HT11-013		HT17-071	HT23-397
		HT17-075	HT23-400
Size 34			
5034-348			

3540MO Torque Curves

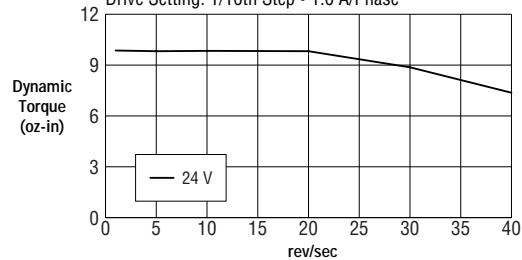
HT11-012 MOTOR

Motor Connection: 4 Lead Bipolar
Drive Setting: 1/10th Step • 1.0 A/Phase



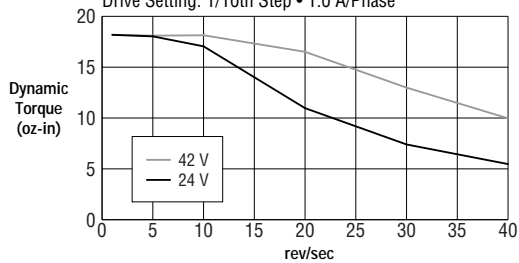
HT11-013 MOTOR

Motor Connection: 4 Lead Bipolar
Drive Setting: 1/10th Step • 1.0 A/Phase



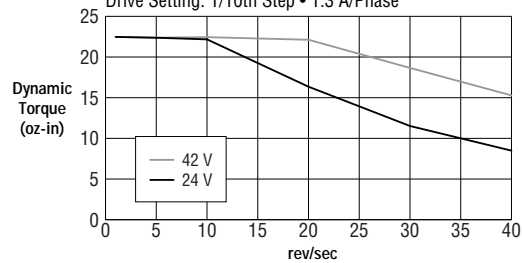
5014-842 MOTOR

Motor Connection: Parallel
Drive Setting: 1/10th Step • 1.0 A/Phase



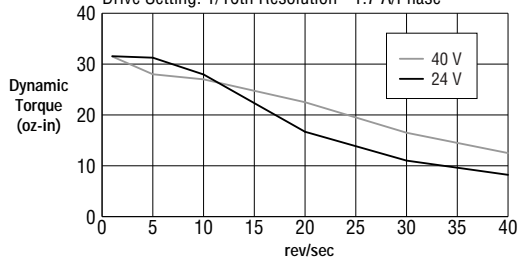
HT17-068 MOTOR

Motor Connection: Parallel
Drive Setting: 1/10th Step • 1.3 A/Phase



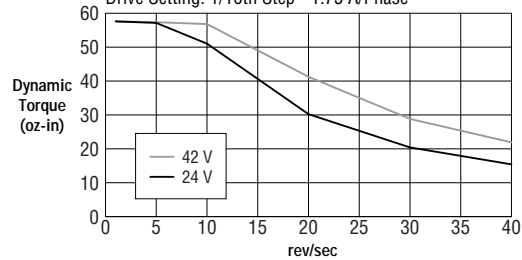
HT17-071 MOTOR

Motor Connection: Parallel
Drive Setting: 1/10th Resolution • 1.7 A/Phase



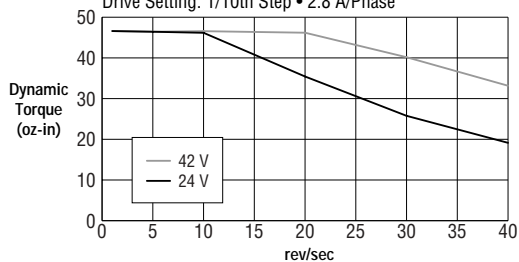
HT17-075 MOTOR

Motor Connection: Parallel
Drive Setting: 1/10th Step • 1.75 A/Phase



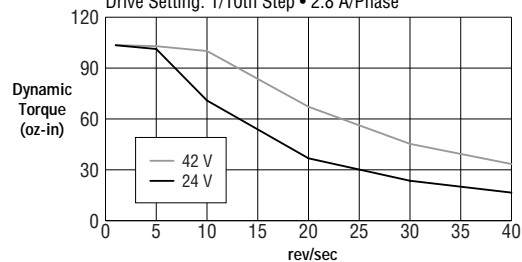
HT23-394 MOTOR

Motor Connection: Parallel
Drive Setting: 1/10th Step • 2.8 A/Phase



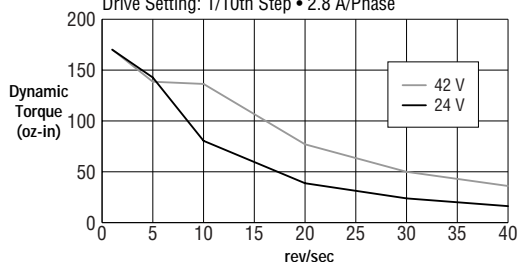
HT23-397 MOTOR

Motor Connection: Parallel
Drive Setting: 1/10th Step • 2.8 A/Phase



HT23-400 MOTOR

Motor Connection: Parallel
Drive Setting: 1/10th Step • 2.8 A/Phase



5034-348 MOTOR

Motor Connection: Parallel
Drive Setting: 1/10th Step • 3.5 A/Phase

