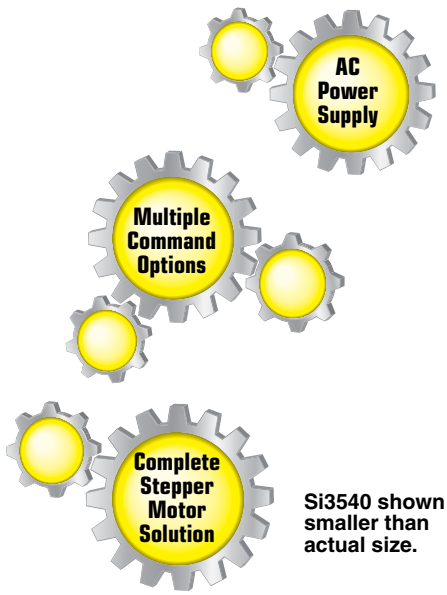
PROGRAMMABLE STEPPER DRIVE
WITH INTEGRATED POWER SUPPLY

Si3540

MADE IN USA CE

- 3.5 A, 40 Vdc
- 110/220 Vac Input, 50/60 Hz Switch Selectable
- Microstepping 2000 to 50,800 Steps/Rev
- Idle Current Reduction Software Selectable: 0, 25, 50, or 100%
- Software Selectable Motor Current 0.2 to 3.5 A/Phase
- Eight Optically Isolated Inputs 5 to 24 Vdc
- Three Optically Isolated Outputs 12 to 24 Vdc, 100 mA max
- One Optically Isolated Output 5V, Dedicated to Fault Out
- Si Programming Software and Cable Included; Download, Store and Execute Programs
- SCL Software Included; Send Commands and Execute in Real-Time
- Mating Connectors Included



Si3540 shown smaller than actual size.

SPECIFICATIONS

POWER AMPLIFIER

Amplifier Type: MOSFET, dual H-bridge
Current Control: 3 state, pulse width modulated, switching at 20 to 30 KHz
Output Current: 0.2 to 3.5 A, software selectable
Power Supply: Linear, toroidal transformer-based for high reliability and low noise, 110 or 220 Vac input; switch selectable; 50/60 Hz
DC Bus Voltage (DC Voltage at Nominal Line Voltage):
Full Load: 35 Vdc
No Load: 40 Vdc
AC Input Voltage: 110 or 220 Vac (switch selectable) 50/60 Hz
Maximum Output Power: 140 W
Idle Current Reduction: 0, 25, 50, or 100% software selectable
Motor Resolution: 13 resolutions, software selectable; steps per revolution with 1.8° motor: 2000, 5000, 10,000, 12,800, 18,000, 20,000, 21,600, 25,000, 25,400, 25,600, 36,000, 50,000, 50,800
Status LEDs: AC power (red)

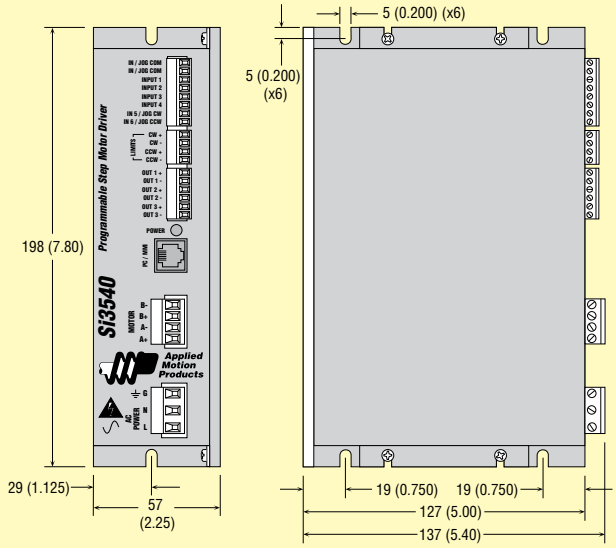
CONTROLLER (INDEXER) SECTION

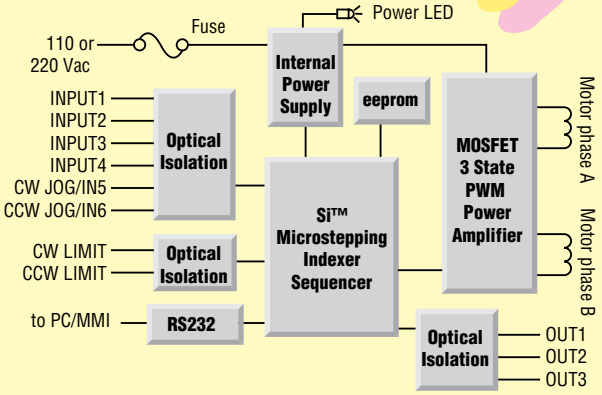
Serial Communication: RS232 programming port
Motion Update: 12,800 Hz
Inputs: 8 user programmable inputs can be used for triggering, sensing, homing, branching, jogging or limits; 5 to 24 Vdc optically isolated
Outputs: 3 general purpose, optically isolated 12 to 24 Vdc outputs for interfacing to other equipment; open collector and emitter; 100 mA max
Parameter Ranges:
Distance: 1 to 16,000,000 steps
Speed: 0.025 to 50 revolutions per second (in any microstep resolution)
Acceleration: 1 to 3000 rev/sec/sec
Deceleration: 1 to 3000 rev/sec/sec (set independently from acceleration)
Time Delays: 0.01 to 300 seconds
Output Pulse Widths: 2 to 500 milliseconds
Iterations per Repeat Loop: 1 to 65,535
Optional Operator Interface (MMI): NEMA 4/12 (IP56/52) rated (splash proof and dust proof); 4 x 20 characters liquid crystal display (LCD); 20-key membrane keypad

SYSTEM SPECIFICATIONS

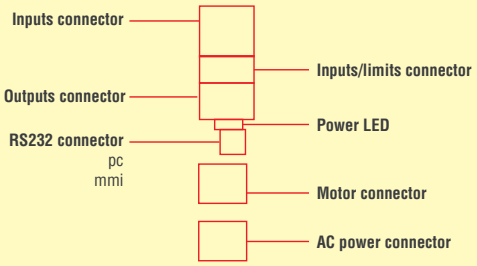
Overall Size: 57 x 198 x 137 mm (2.25 x 7.8 x 5.40")
Chassis Material: Aluminum, black anodized with integral heat sink
Weight: 1814 g (4 lb)
Ambient Temperature: 0 to 50°C (32 to 122°F)
Humidity: Maximum of 90% non-condensing
Connectors: Screw terminal connectors for input power, motor, and I/O signals
Motors: Can drive 4, 6 or 8 lead motors, NEMA sizes 11, 14, 17 and 23
Case: Steel with black paint and white epoxy silk screen, includes switch covers
Agency Approvals: CE and TUV

Dimensions: mm (inch)





Si3540 CONNECTIONS



I/O

Position Number	
1	in/jog com
2	in/jog com
3	input 1
4	input 2
5	input 3
6	input 4
7	in 5/jog cw
8	in 6/jog ccw
LIMITS 9	cw+
10	cw–
11	ccw+
12	ccw–
13	out 1+
14	out 1–
15	out 2+
16	out 2–
17	out 3+
18	out 3–

MOTOR

Position Number	
1	B–
2	B+
3	A–
4	A+

AC POWER

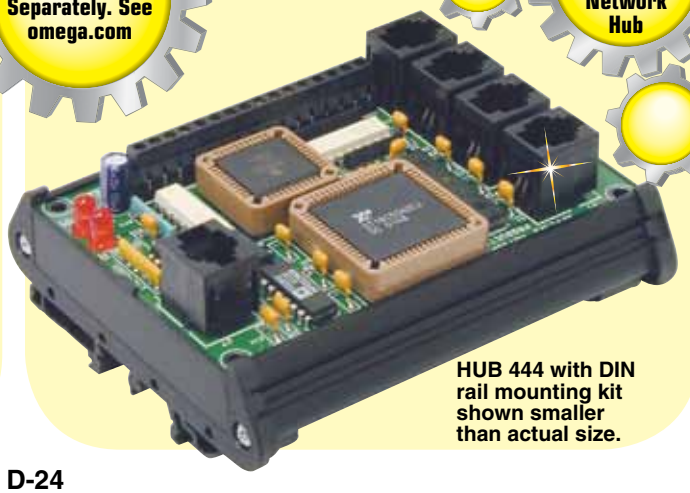
Position Number	
1	G
2	N
3	L

ACCESSORIES

MMI-01 shown smaller than actual size.

Order HUB 444 Separately. See omega.com

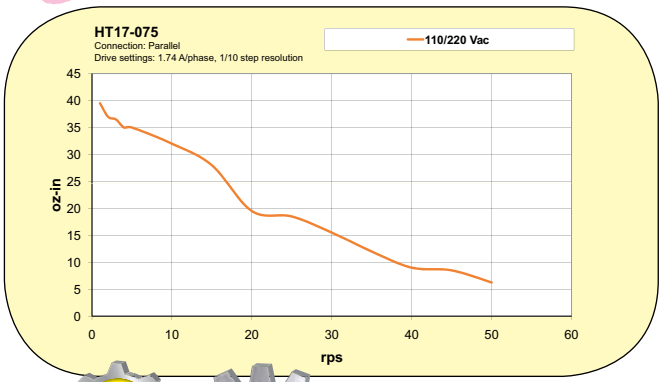
HUB 444 Multi-Axis Motion Network Hub

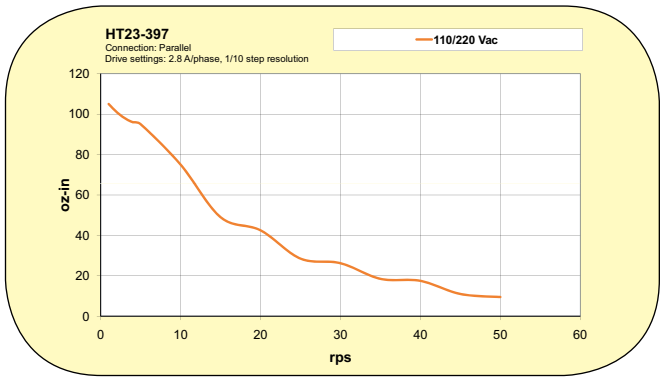


HUB 444 with DIN rail mounting kit shown smaller than actual size.

Real-Time Communication with Operator Interface

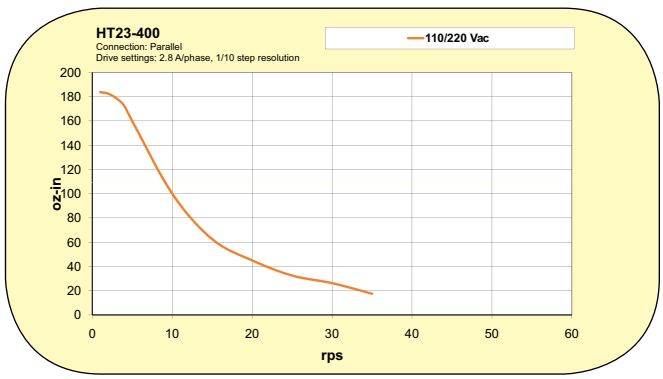
Order MMI-01 Separately. See omega.com





Order motors separately, see below for details

TORQUE—SPEED CURVES



To Order

Visit omegamation.com/si3540 for Pricing and Details

MODEL NO.	DESCRIPTION
Si3540	Programmable step motor drive with integral power supply

Ordering Example: Si3540, *programmable step motor drive with AC power supply.*

RECOMMENDED MOTORS

MODEL NO.	DESCRIPTION
OMHT17-075	NEMA 17, 62.8 oz-in holding torque
OMHT17-275	NEMA 17, 62.3 oz-in holding torque
OMHT23-393	NEMA 23, 76.6 oz-in holding torque
OMHT23-593	NEMA 23, 79.3 oz-in holding torque
OMHT24-100	NEMA 24, 123 oz-in holding torque
OMHT23-397	NEMA 23, 177 oz-in holding torque
OMHT23-597	NEMA 23, 177 oz-in holding torque
OMHT23-400	NEMA 23, 264 oz-in holding torque
OMHT23-600	NEMA 23, 264.8 oz-in holding torque

Ordering Example: OMHT23-400, *high torque step motor with 264 oz-in holding torque.*

ACCESSORIES

MODEL NO.	DESCRIPTION
HUB 444 DIN RAIL	Multi-axis network hub with DIN rail mounting kit
MMI-01	Operator Interface
OM-CONV-USB	USB to RS232 Interface Converter; USB-A to DB9-male
OM-PL-USBS	USB to RS232 converter; works with Windows Vista and Windows 7
POWER CORD-SE	AC Power cord with stripped end termination
POWER CORD-SE-M16	8' Power cord with M16 cable gland strain relief, 3x16 AWG, 250Vac max
SI-PROG-CBL	Replacement programming cable (comes with drive)
DRIVE-CBL	Replacement MMI and/or HUB communications cable (comes with MMI-01 and HUB 444)
DSUB-9-MF	DIN rail interface module, 9-pin
DSUB-9-MF-CBL	DSUB cable, 9-pin, 2 m (6.6'), male/female connectors