



# PROGRAMMABLE STEPPER DRIVE

## WITH INTEGRATED POWER SUPPLY



Si3540  
**\$1045**



- 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

### 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

AC  
Power  
Supply

Multiple  
Command  
Options

Complete  
Stepper  
Motor  
Solution

Si3540, \$1045,  
shown smaller  
than actual size.



#### 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

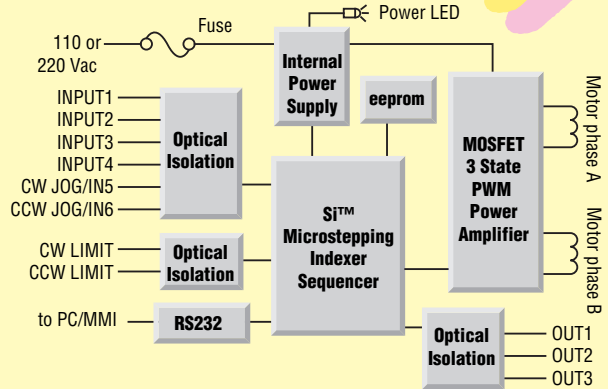
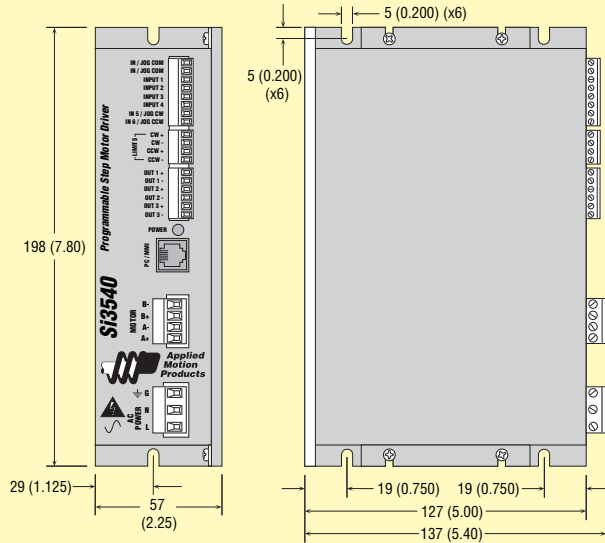
**Motors:** Can drive 4, 6 or 8 lead motors, NEMA sizes 11, 14, 17 and 23

**Case:** Steel with black paint and white epoxy silk screen, includes switch covers

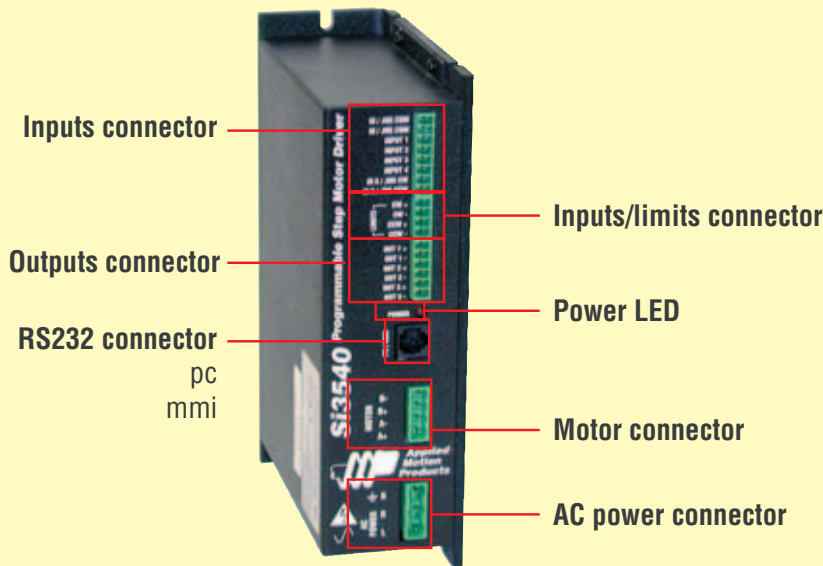
**Agency Approvals:** CE and TUV



Dimensions: mm (in)



## 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
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



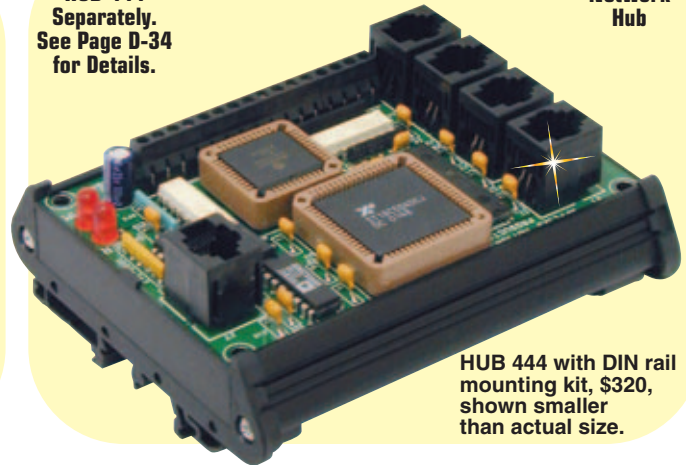
MMI-01, \$695, shown smaller than actual size.

Real-Time Communication with Operator Interface

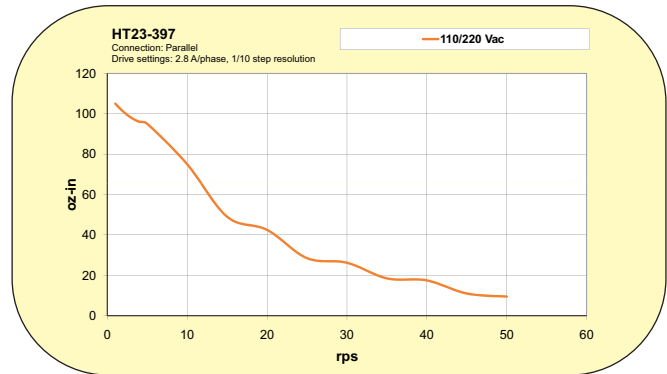
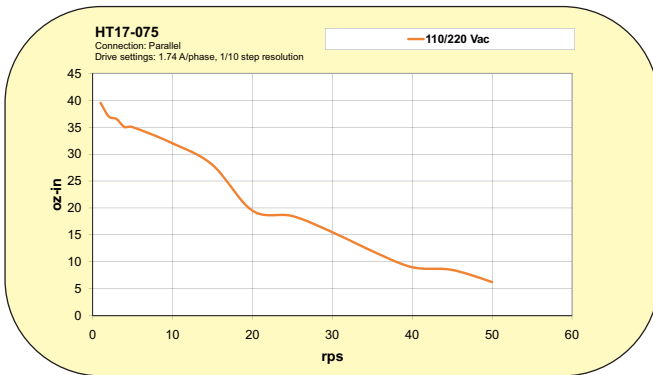
Order MMI-01 Separately. See Page D-36 for Details.

Order HUB 444 Separately. See Page D-34 for Details.

HUB 444 Multi-Axis Motion Network Hub



HUB 444 with DIN rail mounting kit, \$320, shown smaller than actual size.



## TORQUE—SPEED CURVES

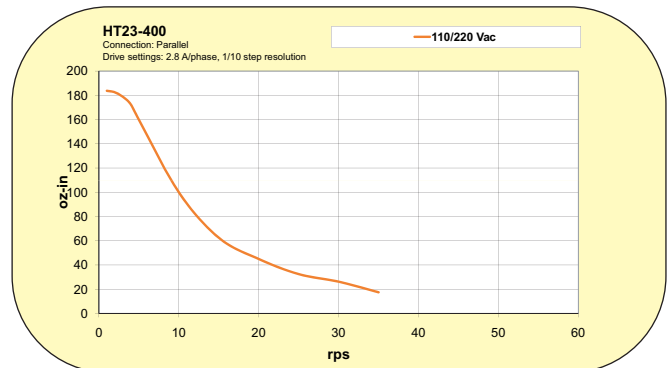
Order motors separately, see below for details

**To Order**  
(Specify Model Number)

**AVAILABLE FOR FAST DELIVERY!**

MODEL NO.	PRICE	DESCRIPTION
Si3540	\$1045	Programmable step motor drive with integral power supply

Ordering Example: Si3540, programmable step motor drive with AC power supply, \$1045.



### RECOMMENDED MOTORS

MODEL NO.	PRICE	HOLDING TORQUE g-cm (oz-in)	RATED VOLTAGE (V)	RATED CURRENT (A)	RESISTANCE Ω	INDUCTANCE MH	ROTOR INERTIA g-cm <sup>2</sup> (oz-in <sup>2</sup> )
<b>NEMA 17 STEP MOTOR SPECIFICATIONS (RATINGS ARE WITH MOTOR CONNECTED IN PARALLEL)</b>							
OMHT17-075	\$90	4522 (62.8)	2.8	1.7	1.7	3.0	68 (0.37)
<b>NEMA 23 STEP MOTOR SPECIFICATIONS (RATINGS ARE WITH MOTOR CONNECTED IN PARALLEL)</b>							
OMHT23-397	\$125	12,746 (177)	2.5	2.83	0.9	2.5	300 (1.64)
OMHT23-400	160	19,011 (264)	3.2	2.83	1.1	3.6	480 (2.62)

Ordering Example: OMHT23-400, high torque step motor with 264 oz-in holding torque, \$160. See pages D-7 through 10 for more stepper motor information.

### ACCESSORY

MODEL NO.	PRICE	DESCRIPTION
OM-CONV-USB	\$15	USB to RS232 interface converter

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