PROGRAMMABLE STEP MOTOR INDEXER/DRIVE

MICROSTEPPING 3.5 A, 40 Vdc

3540i

MADE IN USA CE

3540i shown close to actual size.

- **Powerful, Precise and Efficient MOSFET Driver Providing Up to 3.5 A per Phase and Microstepping to 50,800 Steps per Revolution**
- **Accepts 12 to 42 Vdc Power Supply**
- **Powerful, Flexible, Easy-to-Use Indexer**
- **Connects by a Simple Cable to Your PC for Programming (Cable Included)**
- **Microsoft Windows™-Based Software for Easy Set up and Programming**
- **Eight Inputs for Interacting with the User and Other Equipment**
- **Three Outputs for Coordinating External Equipment**
- **All I/O is Optically Isolated, 5 to 24V, Sinking or Sourcing Signals (Except PC/MMI Port which is ±12V RS232)**
- **Sturdy 38.1 x 76.2 x 127 mm (1.5 x 3 x 5") Metal Chassis**
- **Screw Terminal Connectors for Motor, DC Power and I/O Signals**
- **Optional Man Machine Interface (MMI) Allows Operator to Enter Distances, Speeds, Loop Counts and More**

Includes Programming Software and Cable!

The 3540i is a programmable step motor driver suitable for a wide range of motion control applications. It includes a sophisticated controller integrated with a 140 watt microstepping amplifier. The 3540i includes Applied Motion's easy to use Si Programmer™ Windows software for the rapid development of stand-alone motion control programs. The 3540i can also be commanded in real time from a host PC or PLC, using the Si Command Language™. For multi-axis applications, up to 4 of our "Si" or "i" drives (stepper or Servo) can be networked using a single SiNet™ Hub 444. The 3540i includes 8 optically isolated programmable inputs for triggering, branching, position sensing and end of travel detection. 3 optically isolated programmable outputs can send signals to other electronic devices and activate relays.

SPECIFICATIONS

Amplifiers: Dual, MOSFET H-bridge, 3 state, pulse width modulated switching at 20 KHz. 0.2 to 3.5 A/phase output current, software selectable. 147 Watts maximum output power. Automatic idle current reduction (software programmable) reduces current to motor when idle. Minimum motor inductance is 0.8 mH.

Power Supply: Accepts 12 to 42 Vdc power supply. 3.5 A typical maximum load. 7 A maximum power on surge.

Inputs: 5 to 24V, optically isolated. 2200 Ω internal resistance. Can be configured for sinking (NPN) or sourcing (PNP) signals.

Outputs: Optically isolated, 24V, 100 mA maximum

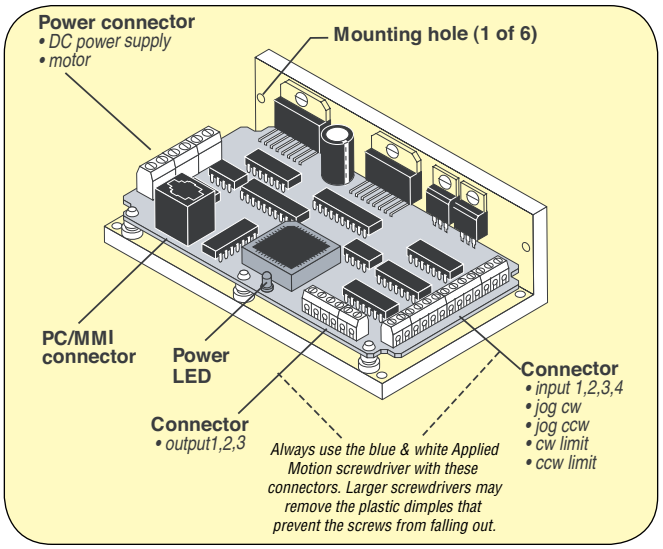
Microstepping: 13 software selectable resolutions. Steps per revolution with 1.8° motor: 2000, 5000, 10,000, 12,800, 18,000, 20,000, 21,600, 25,000, 25,400, 25,600, 36,000, 50,000, 50,800. Waveform: pure sine

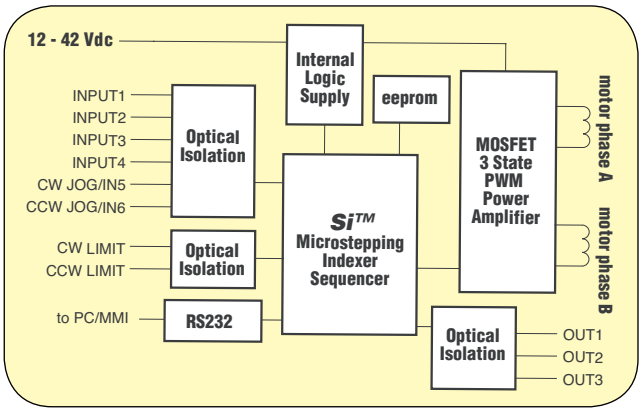
Motion Update: 12,800 Hz

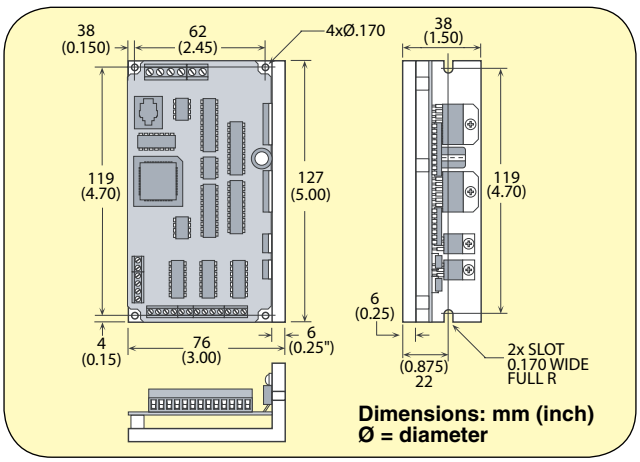
Physical: Constructed on black anodized aluminum chassis/heat sink 38.1 x 76.2 x 127 mm (1.5 x 3 x 5") overall. 341.64 gm (12 oz) weight, 0 to 70°C (32 to 158°F) ambient temperature range. Power LED.

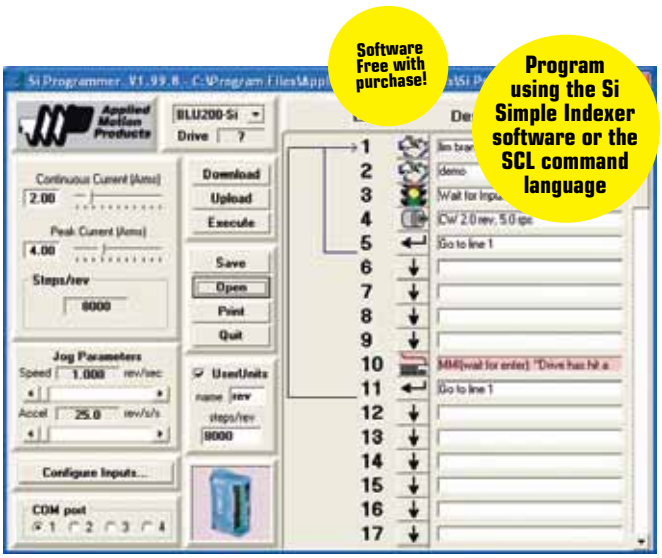
Connectors:

Power and Motor: Screw terminal block
Wire Size: 12 to 28 AWG
I/O Signals: Screw terminal block
Wire size: 16 to 28 AWG









Si Programmer™

ACCESORIES INCLUDED

Programming software
Programming cable

OPTIONAL ACCESSORIES

Power Supply (Required for Drive Operation):
Recommended: OMPS150A24; 24 Vdc, 6.3 A

Multi-Axis Systems:
Hub 444: Network up to 4 drives

Operator Interface:
MMI-01: Stand-alone operation

OMPS150A24 shown smaller than actual size.

Order OMPS150A24 sold separately. Visit omega.com/ps_series

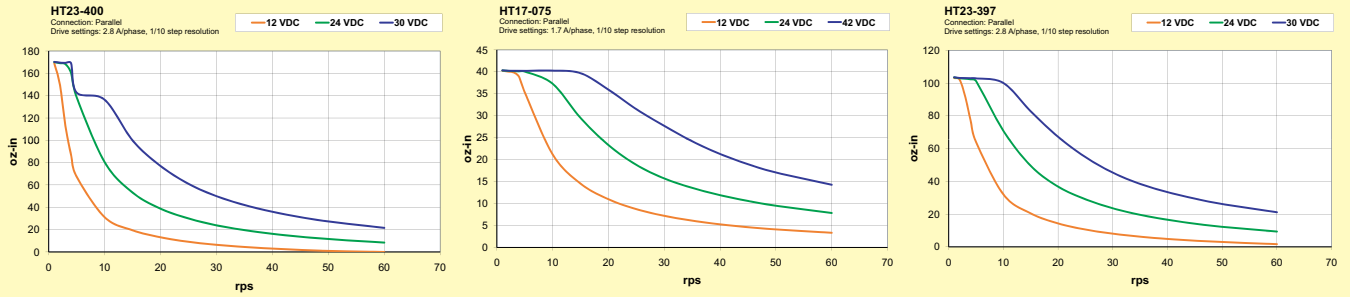
Order Hub 444 separately. Visit omega.com/hub444

HUB 444 with DIN rail shown smaller than actual size

MMI-01 shown smaller than actual size.

Order MMI-01 sold separately. Visit omega.com/mmi-01

TORQUE-SPEED CURVES FOR RECOMMENDED MOTORS



To Order *Visit omega.com/3540i for Pricing and Details*

MODEL NO.	DESCRIPTION
3540i	Programmable step motor index drive

Ordering Example: 3540i, *programmable step motor drive.*

RECOMMENDED MOTORS FOR 3540i

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
DOUBLE SHAFT MOTORS (REQUIRED FOR ENCODER MOUNTING)	
OMHT17-075-D	NEMA 17, 62.8 oz-in holding torque, double shaft
OMHT17-275-D	NEMA 17, 62.3 oz-in holding torque, double shaft
OMHT23-393-D	NEMA 23, 76.6 oz-in holding torque, double shaft
OMHT23-593-D	NEMA 23, 79.3 oz-in holding torque, double shaft
OMHT24-100-D	NEMA 24, 123 oz-in holding torque, double shaft
OMHT23-397-D	NEMA 23, 177 oz-in holding torque, double shaft
OMHT23-597-D	NEMA 23, 177 oz-in holding torque, double shaft
OMHT23-400-D	NEMA 23, 264 oz-in holding torque, double shaft
OMHT23-600-D	NEMA 23, 264.8 oz-in holding torque, double shaft

ACCESSORIES

MODEL NO.	DESCRIPTION
ENC-1000-175	Accessory daughterboard for encoder inputs + RS485 comm
ENC-1000i	Differential encoder for NEMA 11/14/17 motors, 1000-line, with index pulse
ENC-1000i-23	Differential encoder for NEMA 23/24 motors, 1000-line, with index pulse
ENC-CA-4217-6FT	Encoder cable, 2 m (6')
ENC-CA-4217-10FT	Encoder cable, 3 m (10')
ENC-CA-4217-20FT	Encoder cable, 6 m (20')
MMI-01	Operator Interface
HUB 444 DIN RAIL	Multi-axis network hub with DIN rail mounting kit
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.
OMPS150A24	Stepper drive power supply, 24 Vdc, 6.3A
Power Cord-SE	AC Power cord with stripped end termination
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-25-MF	DIN rail interface module, 25-pin
DSUB-9-MF-CBL	DSUB cable, 9-pin, 2 m (6.6'), male/female connectors
DSUB-25-MF-CBL	DSUB cable, 25-pin, 2 m (6.6'), male/female connectors

Note: *Programming cable included. Software is a free download. To see torque-speed curves for recommended motors, visit omega.com*
Ordering Example: 3540i *Programmable step motor indexer/drive, plus* ***OMHT17-075*** *NEMA 17 stepper motor, 62.8 oz-in holding torque, plus* ***OM-CONV-USB*** *USB to RS232 Interface Converter, plus* ***OMPS150A24*** *Stepper drive power supply, 24 Vdc, 6.3A.*