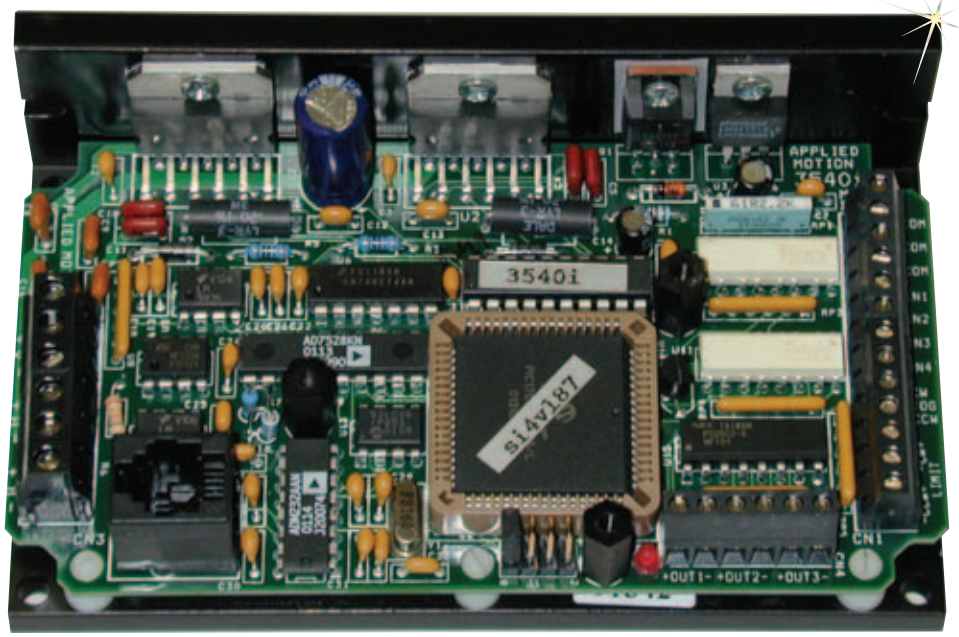
PROGRAMMABLE STEP MOTOR INDEXER/DRIVE

MICROSTEPPING 3.5 A, 40 Vdc

3540i
$415

MADE IN USA

Applied Motion Products
motors • drives • controls



3540i, $415, 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 max 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 max

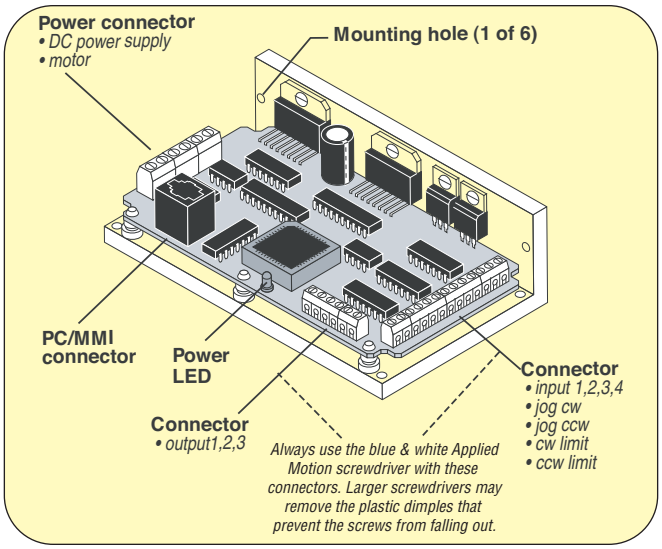
Microstepping: 13 software selectable resolutions. Steps per revolution with 1.8° motor: 2000, 5000, 10,000, 12,800, 18,000, 20,000, 21,600, 25,000, 25,400, 25,600, 36,000, 50,000, 50,800. Waveform: pure sine

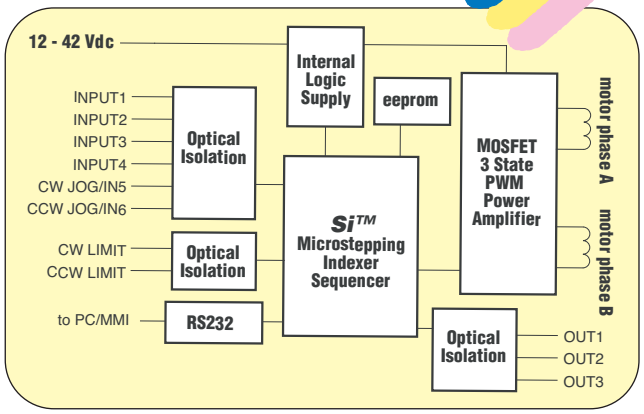
Motion Update: 12,800 Hz

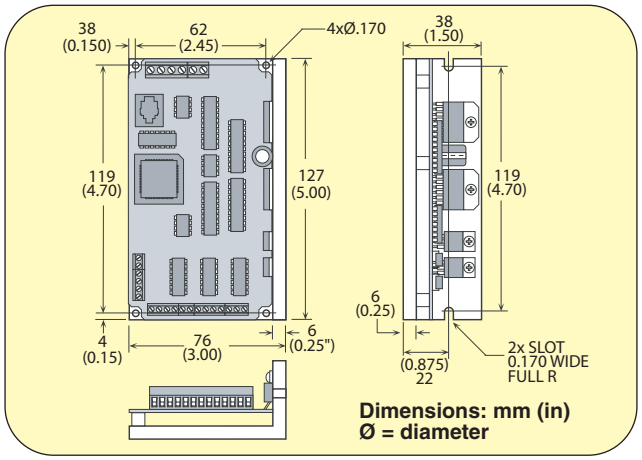
Physical: Constructed on black anodized aluminum chassis/heat sink 38.1 x 76.2 x 127 mm (1.5 x 3 x 5") overall. 341.64 gm (12 oz) weight, 0 to 70°C (32 to 158°F) ambient temperature range. Power LED.

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

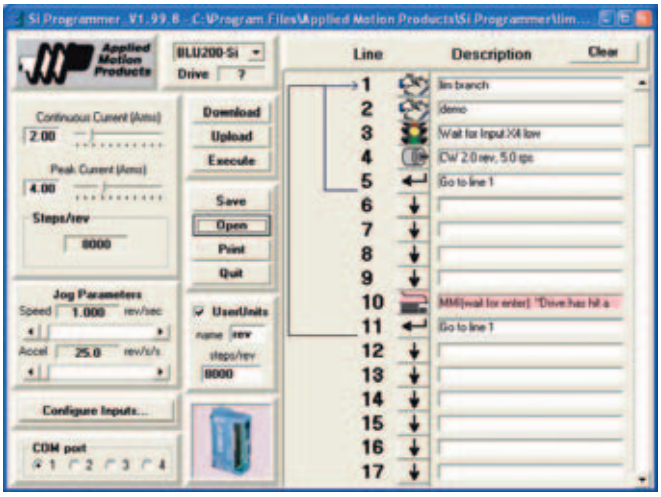






Software Free with purchase!

Program using the Si Simple Indexer software or the SCL command language



Si Programmer™

ACCESORIES INCLUDED

Programming software
Programming cable

OPTIONAL ACCESSORIES

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

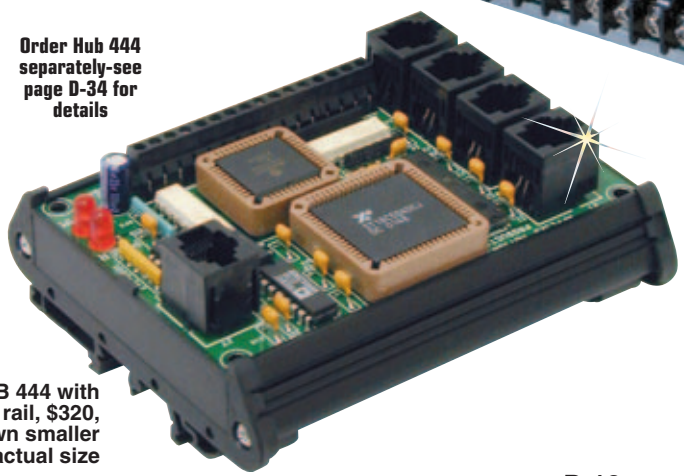
Multi-Axis Systems:
Hub 444: Network up to 4 drives

Operator Interface:
MMI-01: Stand-alone operation

OMPS150A24, $180, shown smaller than actual size. See page D-37 for details

Order OMPS150A24 sold separately. See page D-37 for details.

Order Hub 444 separately-see page D-34 for details

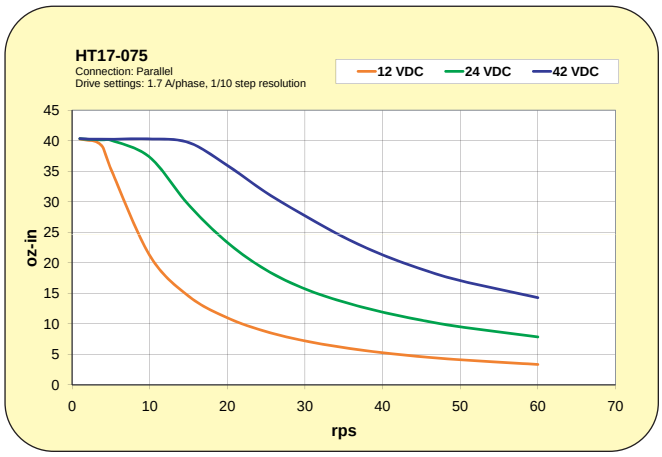


HUB 444 with DIN rail, $320, shown smaller than actual size

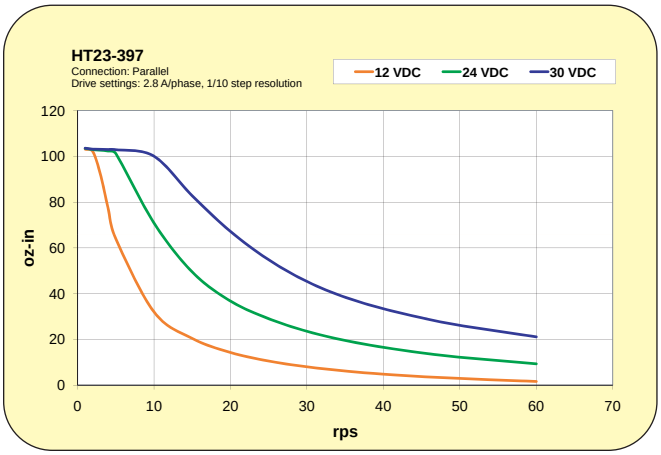
MMI-01, $695, shown smaller than actual size.

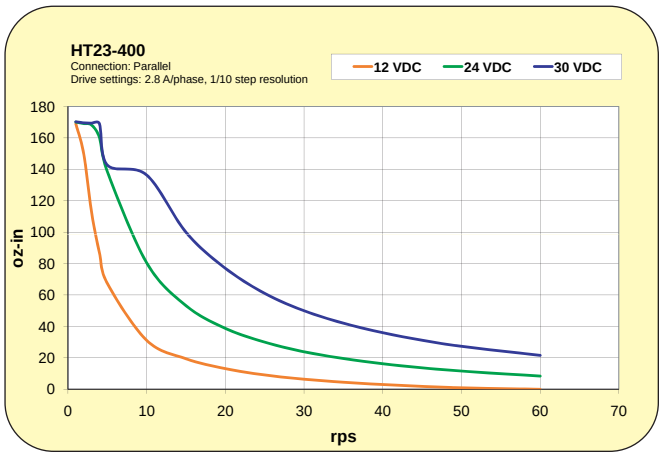
Order MMI-01 sold separately. See page D-36 for details.

TORQUE-SPEED CURVES FOR RECOMMENDED MOTORS



Order motors separately, see below for details





To Order *(Specify Model Number)*

AVAILABLE FOR FAST DELIVERY!

MODEL NO.	PRICE	DESCRIPTION
3540i	**$415**	Programmable step motor index drive

Ordering Example: 3540i, *programmable step motor drive,* ***$415.***

RECOMMENDED MOTORS FOR 3540i

MODEL NO.	PRICE	HOLDING TORQUE g-cm (oz-in)	RATED VOLTAGE (V)	RATED CURRENT (A)	RESISTANCE OHMS	INDUCTANCE MH	ROTOR INERTIA g-cm² (oz-in²)
NEMA 17 STEP MOTOR SPECIFICATIONS (RATINGS ARE WITH MOTOR CONNECTED IN PARALLEL)							
OMHT17-075	**$90**	4522 (62.8)	2.8	1.7	1.7	3.0	68 (0.37)
NEMA 23 STEP MOTOR SPECIFICATIONS (RATINGS ARE WITH MOTOR CONNECTED IN PARALLEL)							
OMHT23-397	**$125**	12746 (177)	2.5	2.83	0.9	2.5	300 (1.64)
OMHT23-400	**160**	19011 (264)	3.2	2.83	1.1	3.6	480 (2.62)

Ordering Example: OMHT17-075, *high torque step motor with 62.8 oz-in holding torque,* ***$90.***
See pages D-7 through 10 for more stepper motor information.

ACCESSORIES

MODEL NO.	PRICE	DESCRIPTION
ENC-1000-175	**$110**	Accessory daughterboard for encoder inputs, RS485 communications
OMPS150A24	**180**	Stepper drive power supply, 24 Vdc, 6.3 A
OM-CONV-USB	**15**	USB to RS232 interface converter

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Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

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Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Pressure Transmitters, Strain Gauges, Torque Transducers, Valves

- **Heaters**

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters