HIGH PERFORMANCE STEPPER DRIVES
WITH AC POWER SUPPLY

NEW®

AC Power Supply

Configuration Software and Programming Cables Included!

STAC6 Series

MADE IN USA CE

STAC6-Si shown smaller than actual size.

STAC6-S shown smaller than actual size.

- Current Output 0.5 to 6.0 A
- 90 to 135 Vac Input
- Configurator™ Configuration Software
- Configurable Idle Current Reduction
- External Control Options
- Pulse and Direction
- Analog Command Signal
- Host Command via RS232/485
- Fault Protection:
  - Over-Voltage, Under-Voltage
  - Over-Temp
  - External Output Shorts
  - Internal Amplifier Shorts
  - Motor Regeneration
- Multi-Axis System with SiNet™ Hub
- Stand-Alone Programming on Si Model
- Microstepping Emulation: Up to 51,200 Steps/Revolution

Advanced Features

- Auto Setup Measures Motor Parameters and Configures Tuning Parameters
- Self-Test Detects Encoder and Determines Resolution; Diagnoses Miswires and Open Phases
- Torque Ripple Smoothing Assures Smoother Motion at Lower Speeds
- Comand Signal Smoothing Assures Smooth Acceleration/ Deceleration Ramps
- Anti-Resonance Eliminates Midrange Instability; Allows Stable Operation to 50 rps or Greater

SPECIFICATIONS

POWER AMPLIFIER SECTION

Amplifier Type: MOSFET, dual H-bridge, 4 quadrant
Current Control: 4 state PWM at 20 KHz
Output Current: 0.5 to 6.0 A in 0.01 A increments
Power Supply: Line operated nominal 120 Vac, 50/60 Hz
DC Bus Voltage: Nominal 165 Vdc
AC Input Voltage: 94 to 135 Vac, 50/60 Hz
Protection: Over/under-voltage, over-temp, external output shorts (phase-to-phase, phase-to-ground), internal amplifier shorts
Idle Current Reduction: Reduction to any integral percent of full-current after delay (selectable in milliseconds)
Motor Regeneration: Built-in regeneration circuit (25 W max)

CONTROLLER SECTION

Non-Volatile Storage: Configurations are stored in FLASH memory
Step and Direction Inputs: Optically Isolated: 5 to 12V; minimum pulse width = 200 ns; maximum pulse frequency = 2 MHz
Speed Range: Depends upon selected resolution; amplifier is suitable for speeds up to 133 rps
Resolution: Software selectable from 200 to 51,200 steps/rev in increments of 1 step/rev
Encoder Option: Differential line receivers suitable for 200 KHz or greater
Interface: RS232 and RS485 bus
Ambient Temperature: 0 to 55°C (32 to 158°F)
Humidity: 90% non-condensing

INPUTS AND OUTPUTS

STAC6-S:
7 Digital Inputs: Two 5V, five 12 to 24V
3 Digital Outputs: 30V
2 Analog Inputs: ±10V

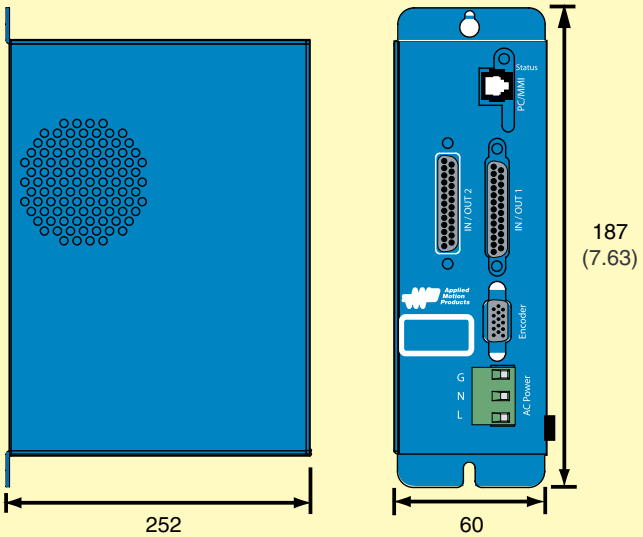
STAC6-Si:
15 Digital Inputs: Two 5V, thirteen 12 to 24V
7 Digital Outputs: 30V

CONFIGURATOR™— CONFIGURATION SOFTWARE

The new CONFIGURATOR™ software simplifies the setup and configuration of the STAC6. Click on the icon representing the aspect of the drive that needs changing and an intuitive dialog box will open. Configuration data for recommended motors is available from a drop down menu. The Configurator also allows the user to create a custom motor configuration.

Configuration Software Included!

The CONFIGURATOR™ incorporates a new on-line help menu. All technical data, application information and advice on setting up the drive, now just a mouse click away.



Dimensions:
mm (inch)

ACCESSORIES

The STAC6-Si is available with an optional MMI operator interface. The MMI-01 is an easy-to-use, NEMA 4/12 (IP56/52) terminal with a 20 key membrane keypad and 4x20 character LCD display. Software for using the MMI is contained in the Si Programmer itself, and therefore all functions of the MMI come with each Si drive. The MMI can be used to display messages to an operator, wait for an operator to press the ENTER key, allow an operator to enter move distances, move speeds, and loop counts, and much more.

Real-Time Communication with Operator Interface

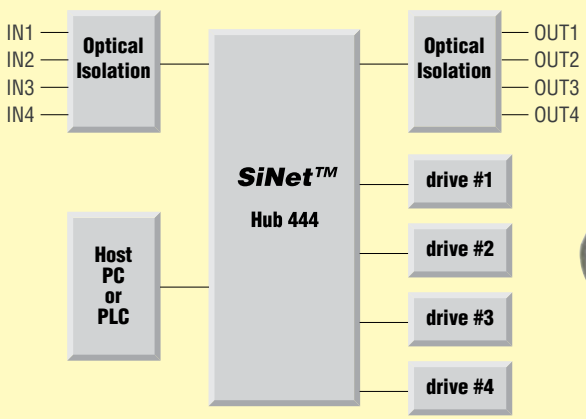
Order MMI-01 Separately. Visit omega.com/mmi-01

MMI-01 shown smaller than actual size.

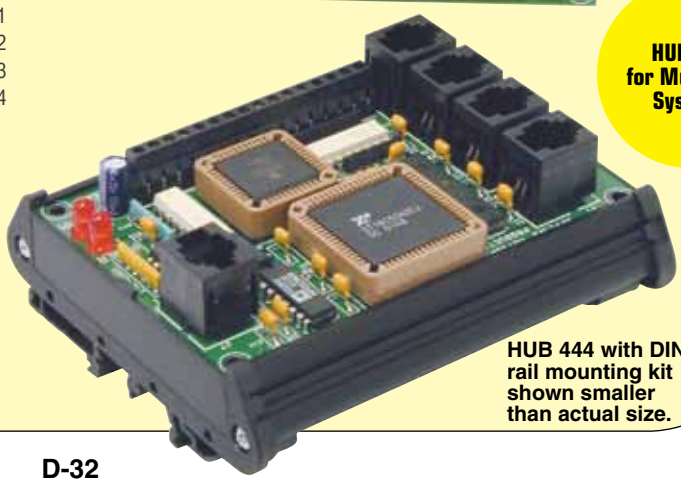
Multi-Axis Systems

Connect up to 4 drives on a multi-axis system using SiNet™ Hub 444. Use SiNet Hub Programmer™ software to develop your sequence of events, then download to the hub for a stand-alone system or send serial commands to the drives from a PC, PLC, HMI, or other host controller.

Order HUB 444 Separately. Visit omega.com/hub444



HUB 444 for Multi-Axis Systems



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

NEW®

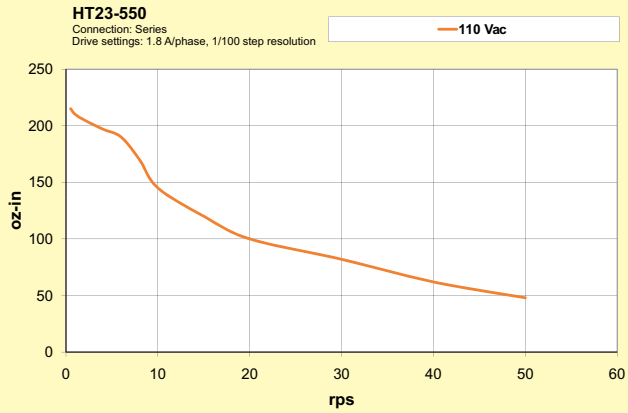
OMBOB-1
shown smaller
than actual size.

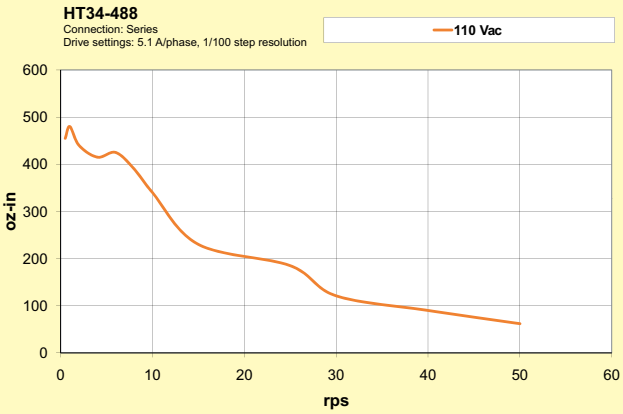
Great for prototyping systems!

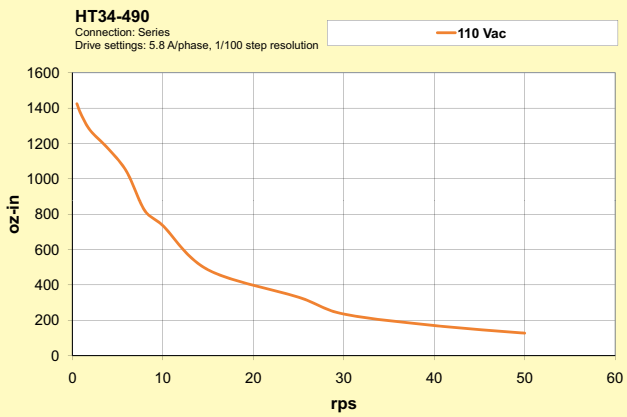
OMBOB-1/OMBOB-2
Breakout Box for I/O Connector

- Break out DB-25 I/O Connector to Screw Terminals
- Includes 1 m (3') Cable
- OMBOB-1: Compatible with all STAC6 Models
- OMBOB-2: Compatible with STAC6-Si

TORQUE—SPEED CURVES







Order motors separately, see below for details

To Order *Visit omegamation.com/stac6 for Pricing and Details*

MODEL NO.	DESCRIPTION
STAC6-S	High performance stepper drive complete with AC power supply
STAC6-Si	High performance stepper drive with Si Programmer™
STAC6-S-220V	High performance stepper drive complete with 220 Vac power supply
STAC6-Si-220V	High performance stepper drive complete with 220 Vac power supply and Si programmer

** Software and download cable included.*
***Ordering Example: STAC6-S,** high performance stepper drive with AC power supply.*

RECOMMENDED MOTORS

MODEL NO.	DESCRIPTION
OMHT23-550	NEMA 23, 255 oz-in holding torque, shielded cable
OMHT34-488	NEMA 34, 650 oz-in holding torque, shielded cable
OMHT34-490	NEMA 34, 1845 oz-in holding torque, shielded cable

***Ordering Example: OMHT34-488,** high torque step motor with 650 oz-in holding torque.*
Visit omega.com for additional stepper motor information.

ACCESSORIES

MODEL NO.	DESCRIPTION
OMBOB-1	Breakout box for I/O connector #1
OMBOB-2	Breakout box for I/O connector #2

***Ordering Example: OMBOB-1,** breakout box for I/O connector #1.*