

GLENTEK LINEAR BRUSHLESS SERVO DRIVES MODELS: SMA6520

Revision: 1/12/18



Glentek's Linear Brushless Servo Drives provide the optimum solution for applications which require high current loop bandwidth, low radiated electrical noise and zero crossover distortion. This series is highly configurable and can operate in external sine commutation, trapezoidal commutation, or encoder-based sinusoidal commutation modes. These drives incorporate our latest generation ISO-BIAS current sense technology, which results in one of the lowest drift linear drives on the market today. These drives are constructed using surface mount technology and incorporate the latest in heat transfer technology, which make them one of the most powerful drives for a given form factor.

ELECTRICAL RATINGS										
Model Number	Input Voltage		Stall Current (A)	Continuous Current (A)	Peak Current (A)	Continuous Power Output*	Peak Power Output*	Available Package Configurations		
	VDC	VAC						Module	Stand Alone	Multi-Axis
SMA6520 (50HS)	20-55	17-53	5	10	25	400	2000	•		•
SMA6520 (50HF)	20-75	17-53	5	10	25	500	2000	•		•

Note 1: * Heatsink dissipation power @ 25°C

Note 2: Current trip time and peak current is adjustable.

Note 3: Output power ratings based on Glentek or customer supplied airflow.

Note 4: If the motor is not rotating, stall current is used. If the motor is rotating, continuous current is used.

Command/Control Modes
External Sine Commutation (2-Phase Current Mode)
Hall Sensor / Trapezoidal Commutation Current Mode
Encoder-Based Sinusoidal Commutation Current or Velocity Mode
Dedicated Inputs
Dedicated Inputs: +/- Limits, enable, fault, motor over temperature and reset for Trapezoidal and Encoder-based versions. Enable, fault, motor over temperature and reset for 2-phase sinusoidal versions.

FEATURES

Performance	
Multimode operation	The 2-phase sinusoidal current mode servo drive can drive 3-phase brushless servo motors in current (torque) mode. The trapezoidal servo drive can drive 3-phase brushless servo motors in current (torque) mode and can close the velocity loop via feedback of a DC tachometer. The encoder-based sinusoidal servo drive can drive 3-phase brushless servo motors in current (torque) or velocity (RPM) mode.
Linear output stage	Provides high bandwidth, low noise and zero crossover distortion.
Bandwidth	All servo drives have a nominal 10kHz current loop bandwidth which varies with the motor inductance.
Fault protection	Short from output to output, short from output to ground, drive RMS over current, drive under/over voltage and drive over temperature.
Motor over temp.	An input is provided for a motor over temperature switch and will shutdown the drive and display a fault.
External fault reset	An input is provided to reset the drive in the event of a fault.
Current limit	Peak motor current is adjustable.
Dedicated Inputs	
Dedicated Inputs	+/- Limits, enable, fault, motor over temperature and reset for Trapezoidal and Encoder-based versions. Enable, fault, motor over temperature and reset for 2-phase sinusoidal versions.
Input	
Wide operating voltage	Operating voltages range from +/-20 to +/-55 VDC for standard voltage versions or +/-25 to +/-75 VDC for high power versions and 17-53 VAC for multi-axis configurations.
Build	
Ergonomic design	Easy access to connections, adjustments and test points.
Industry standard mounting	Available in a standard heatsink module, large heatsink module with fan and cover or a 2-axis chassis version. Note: Glentek offers custom mounting configurations to meet virtually any requirement.
Status indicator	7-segment display indicates drive status and diagnostics.
Manual reset	A push button reset is available to reset a fault.

ENVIRONMENTAL CONDITIONS

Storage Temperature:	-40°C to 80°C
Operating Temperature:	Standard: 0°C to 40°C without current derating, up to 50°C with 25% current derating Special: -40°C to 40°C without current derating, up to 50°C with 25% current derating
Humidity:	5% to 95% relative humidity, non-condensing
Altitude:	Up to 1000m without derating, derate current 10% per 1000m above 1000m

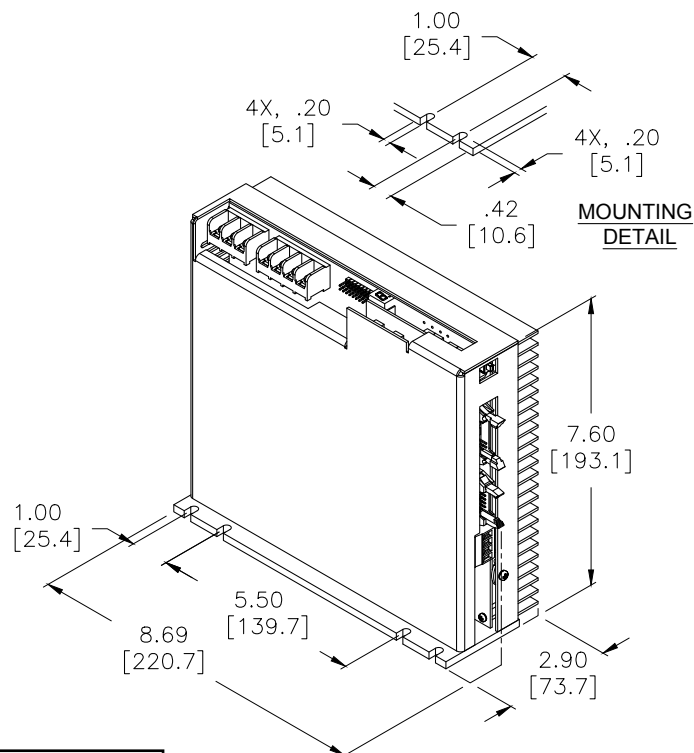
DIMENSIONS

Mounting Configurations

Module	Glentek's SMA6520 series linear servo drives are offered in two module styles: the standard 50HS and the 50HF (which has a cover and a fan). Both modules accept any of the three available plug in boards (2-phase sinusoidal current mode, trapezoidal or encoder-based commutation).
Multi-Axis	A 2-axis baseplate design with 2 slots available for 50HS modules has a bridge rectifier, cooling fan and filter capacitors for the required bipolar DC voltage for the modules along with the +/-15 VDC logic supply needed for the bias voltages. Available in 2 axis packages.

SMA6520 Module (50HS)

Dimensions are inches [millimeter]



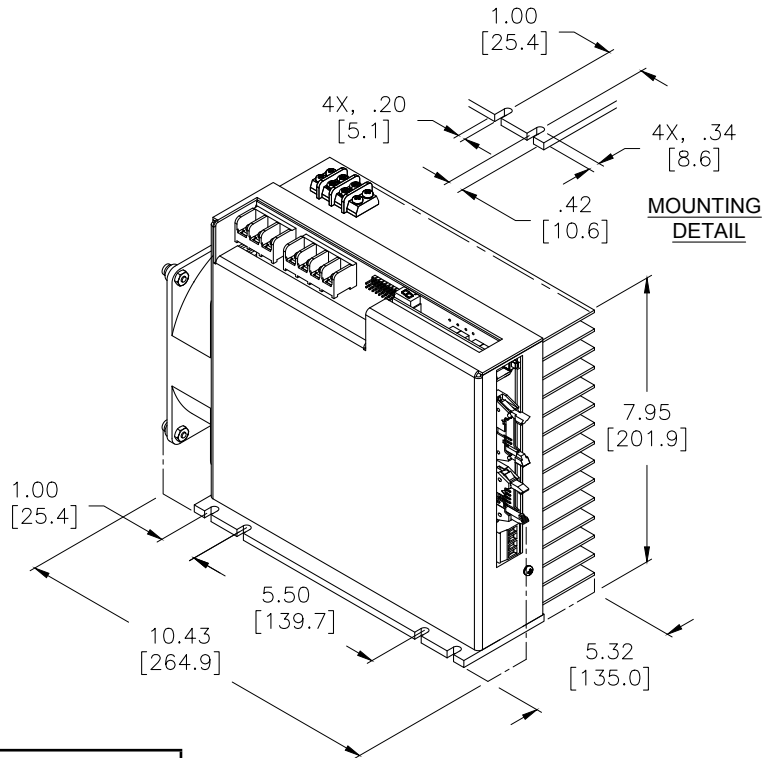
Weight

4.2 lb / 1.9 kg

DIMENSIONS

SMA6520 Module (50HF)

Dimensions are inches [millimeter]

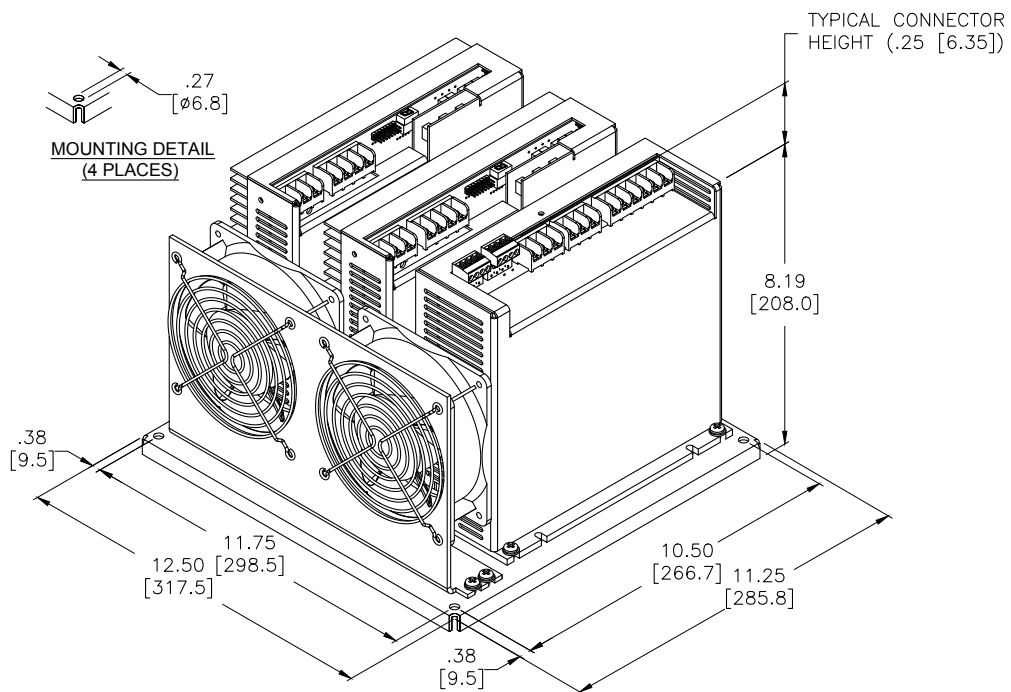


Weight

7.4 lb / 3.4 kg

SMA6520 2-Axis Package

Dimensions are inches [millimeter]



Weight

15.4 lb / 7.0 kg

MODULE MODEL NUMBERING

This section explains the model numbering system for Glentek's Linear Brushless Servo Drives. The model numbering system is designed so that you, our customer, will be able to quickly and accurately create the model number for the drive that best suits your requirements. Please complete the drive configuration code you require using the information on this page. After completing your model number, please contact a Glentek Sales Engineer to confirm that the model number you have created is correct.

SMA6520 - 50HS - 11 - 003

Module Version 50HS = Standard Heatsink Module
Commutation Mode 11 = External Sine Commutation (2-Phase Current Mode), Plug in board
Power Board(Input Voltage) 003 = Standard Configuration Power Board, +/- 55 VDC

SMA6520 - 50HS - 11 - 003

Module Version	
50HS	Standard Heatsink Module
50HF	Large Heatsink Module with Fan & Cover

Commutation Mode	
11	External Sine Commutation (2-Phase Current Mode) Plug In Board
12	Hall Sensor / Trapezoidal Commutation Current Mode Plug In Board
24	Encoder-Based Sinusoidal Commutation Current or Velocity Mode Plug In Board

Power Board	
003	Standard Configuration Power Board, +/- 55 VDC
006	High Voltage Configuration Power Board, +/- 75 VDC

Note: Voice coil and DC brush modes are also available upon request.

2-AXIS MODEL NUMBERING

This section explains the model numbering system for Glentek's Linear Brushless Servo Drives. The model numbering system is designed so that you, our customer, will be able to quickly and accurately create the model number for the drive that best suits your requirements. Please complete the drive configuration code you require using the information on this page. After completing your model number, please contact a Glentek Sales Engineer to confirm that the model number you have created is correct.

SMA6520 - 50HS - 11 - 003 - 2A - 2

Module Version 50HS = Standard Heatsink Module

Commutation Mode 11 = External Sine Commutation (2-Phase Current Mode) Plug in board

Power Board (Input Voltage) 003 = Standard Configuration Power Board, +/- 55 VDC

Baseplate 2A = 2 Axis Baseplate with Fans and Power Supplies

Number of Modules Installed (50HS Modules Only) 2 = 2 Modules Installed

SMA6520 - 50HS - [] - [] - 2A - []

Commutation Mode	
11	External Sine Commutation (2-Phase Current Mode) Plug In Board
12	Hall Sensor / Trapezoidal Commutation Current Mode Plug In Board
24	Encoder-Based Sinusoidal Commutation Current or Velocity Mode Plug In Board

Power Board	
003	Standard Configuration Power Board, +/- 55 VDC
006	High Voltage Configuration Power Board, +/- 75 VDC

Number of Modules Installed (50HS Modules Only)	
0	No Modules Installed
1	1 Module Installed
2	2 Modules Installed

Note: Voice coil and DC brush modes are also available upon request.