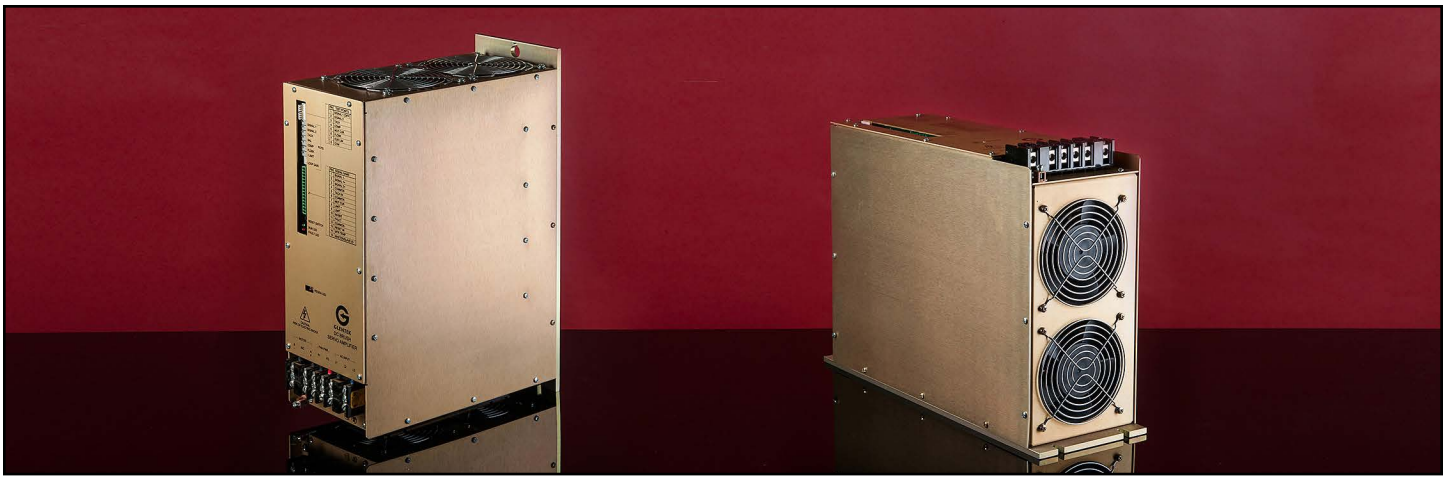
GLENTEK ANALOG BRUSH PWM SERVO DRIVES
MODELS: SMB72100

Revision: 8/7/2020



Glentek's Analog Brush PWM Servo Drives offer high performance analog control of brush type rotary and voice coil motors. Both AC powered (stand alone and multi-axis) and DC powered (module) packages are available. Glentek has been designing and manufacturing analog brush PWM servo drives for over 40 years and continually updates each product as advances in technology become available so that customers are assured of optimal performance and reliability. These drives offer a cost effective, simple (tuning is accomplished by the adjustment of potentiometers) and high performance solution.

ELECTRICAL RATINGS							
Model Number	Input Voltage		Continuous Current (A)	Peak Current (A)	Available Package Configurations		
	VDC	VAC			Module	Stand Alone	Multi-Axis
SMB72100	N/A	60-120	100	150		•	

Command/Control Modes
+/-10 VDC for current (torque)
+/-10 VDC for velocity (RPM)
Feedback
Analog tachometer (required for velocity control)
Dedicated Inputs
Single-ended or differential signal command, tachometer, +/- limits, inhibit/enable, fault, reset
Motor temperature
Master slave
Dedicated Outputs
Motor current, fault, low-speed electronic circuit breaker, high-speed electronic circuit breaker, over-voltage and over-temperature

FEATURES

Performance	
Current limit	Peak motor current is adjustable.
Frequency response	2 kHz minimum for current loop and 750 Hertz minimum for velocity loop.
Fault protection	Short from output to output, short from output to ground, drive RMS over current, drive under/over voltage and drive over temperature.
Silent operation	18 kHz PWM standard.
External fault reset	Can reset drive externally in the event of a fault condition.
Feedback	
Tachometer	Required for velocity feedback.
Dedicated I/O	
+/- Limits & inhibit	Three separate logic inputs can stop the motor in either or both directions. Inputs may be con figured for active-high or active-low, pull-up or pull down termination, and a 0 to +5 VDC or 0 to +15 VDC range.
Dual signal inputs	One single-ended and one differential. Both inputs may be used simultaneously. Both have up to 15,000A/V gain (velocity mode), and inputs will accept the typical ±10 VDC analog signal.
Fault input/output	Open-collector output goes low in the event of a fault. Forcing the fault terminal low will inhibit the drive. The fault terminals outputs in a multi-axis system may be connected together to shut down all drives should any drive have a fault.
Master/slave	
Input	
Operating voltage	The Stand Alone version can be ordered for operation from 60-120 VAC (single or 3-phase, 50/60 Hz).
Direct AC operation	The stand alone units include a DC bus power supply, cooling fans and a regen clamp with dumping resistor.
Build	
Complete isolation	Complete isolation between signal and power stage.
LED diagnostics	Display various fault and operating conditions.
Short circuit protection	Complete short circuit and ground fault protection.
SMT construction	Provides ultra compact size, cost competitive package and high reliability.
Ergonomic design	Easy access to connections, adjustments, and test points.

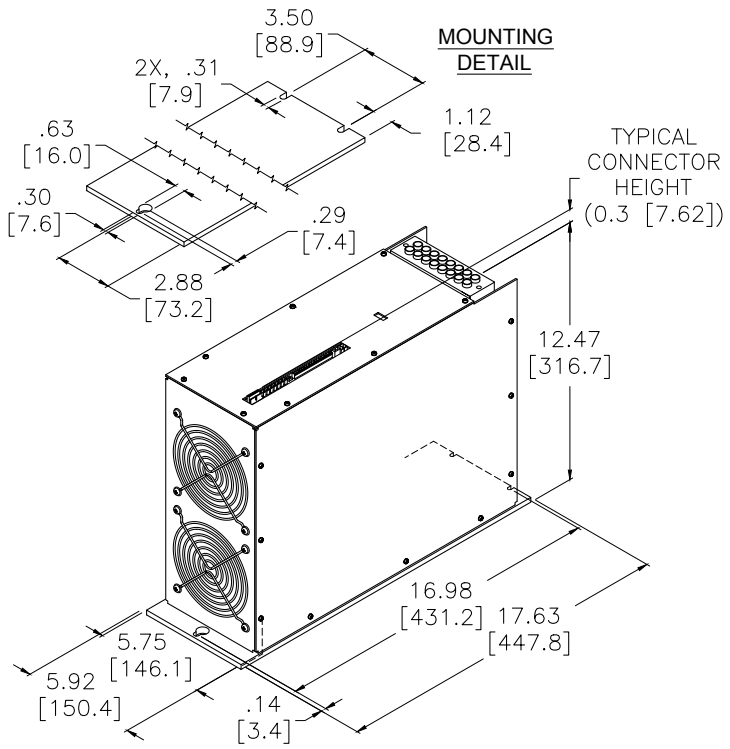
ENVIRONMENTAL CONDITIONS	
Storage Temperature:	-40°C to 80°C
Operating Temperature:	Standard: 0°C to 40°C without current derating, up to 50°C with 25% current derating Special: -40°C to 40°C without current derating, up to 50°C with 25% current derating
Humidity:	5% to 95% relative humidity, non-condensing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

DIMENSIONS

Mounting Configurations	
Stand Alone	This package consists of an amplifier module, DC bus power supply, regen clamp with dumping resistor, in-rush current limiting protection at power-on, fuses and one or more cooling fans. This type of package is typically used for one or multi-axis applications.

SMB72100-1A Stand Alone

Dimensions are inches [millimeter]



Weight	25.5 lb / 11.3 kg

STAND ALONE MODEL NUMBERING

This section explains the model numbering system for Glentek's Analog Brush PWM servo drives. The model numbering system is designed so that you, our customer, will be able to create the model number for the drive that best suits your needs. In order to accurately select a complete model number, please choose the model and package configuration you require based on its electrical ratings. Then complete the drive configuration code you require using the information on this page. After completing your model number, be sure to contact a Glentek Sales Engineer to confirm that the model number you have created is correct.

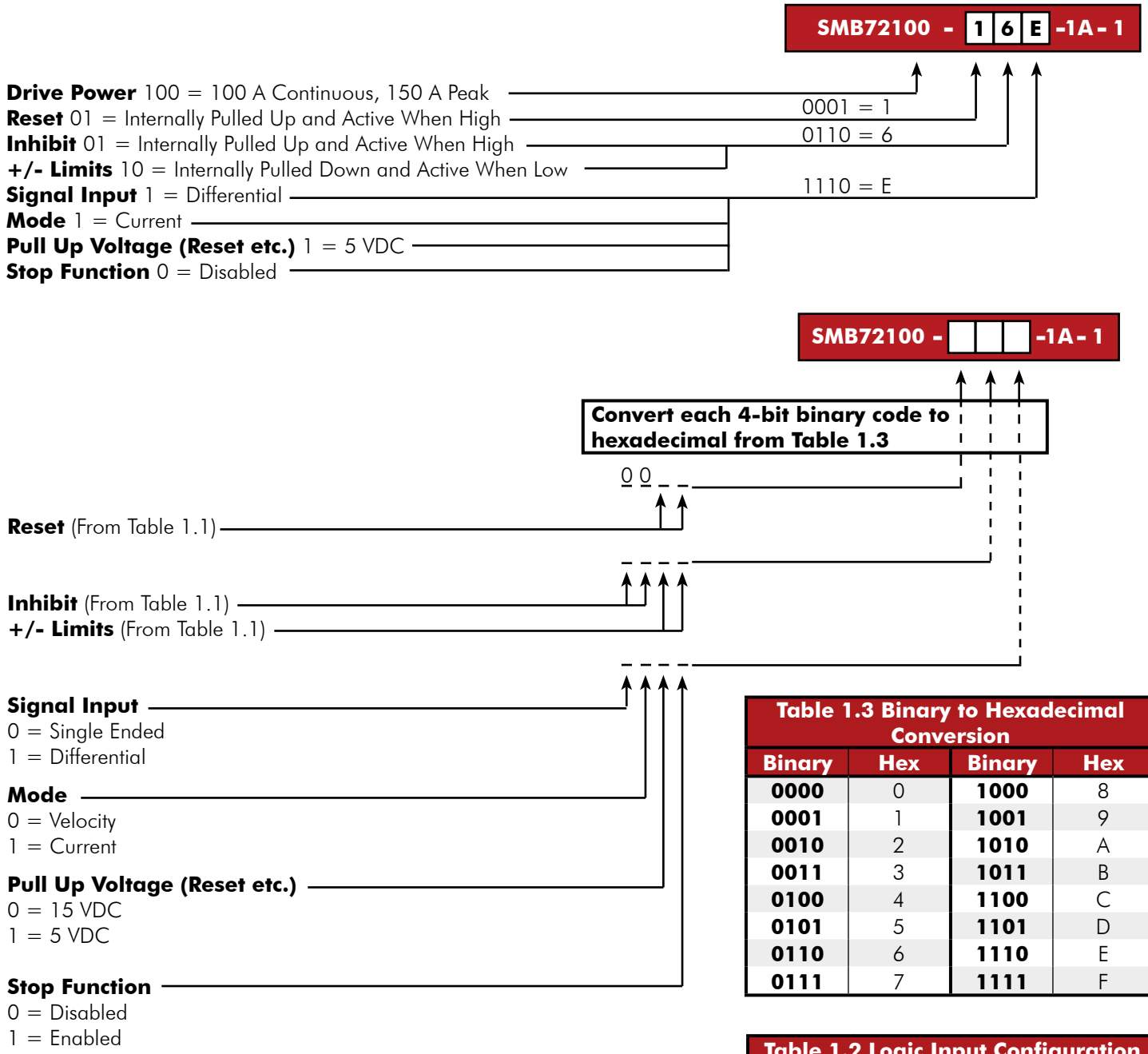


Table 1.3 Binary to Hexadecimal Conversion

Binary	Hex	Binary	Hex
0000	0	**1000**	8
0001	1	**1001**	9
0010	2	**1010**	A
0011	3	**1011**	B
0100	4	**1100**	C
0101	5	**1101**	D
0110	6	**1110**	E
0111	7	**1111**	F

Table 1.2 Logic Input Configuration

Type	Logic
A	Requires grounding of input to disable the drive.
B	Requires a positive voltage at input to disable the drive.
C	Requires grounding of input to enable the drive.
D	Requires a positive voltage at input to enable the drive.

Table 1.1 Inhibit, Reset, +/- Limits Configuration

Type	Input is:	Input State:	Binary
A	Internally Pulled Up	Active When Low	00
B	Internally Pulled Down	Active When High	11
C	Internally Pulled Up	Active When High	01
D	Internally Pulled Down	Active When Low	10