



CMI

Composite Motors

CMI-8112-04 DATA SHEET

Hermetically Packaged DC Motor Controller

Description:

Composite Motors offers a unique line of high-performance BDCM controllers. Models available include both printed circuit types and Hi-Rel hermetic packages. Powers range from fractional to integral horsepower. Composite Motors utilizes the latest in advanced controller technologies such as Digital Signal Processors (DSP) and High Voltage ASIC's integrated with our proprietary High Power Drives.

All controllers are made to last and perform in hostile environments.

The drivers are hermetically sealed, and the entire unit is Class B Autoclavable at 134°C.



Features:

- Voltage Range from 8-24VDC
- Peak Current of 80A
- Size is 3.5" (length) x 1.25" (width) x 0.40" (height)
- Operating Temperature Range of -20C to +125C
- Achieves Hermeticity of 1.0×10^{-7} Leak Rate Maximum (ATM-CC/SEC HE)

Applications:

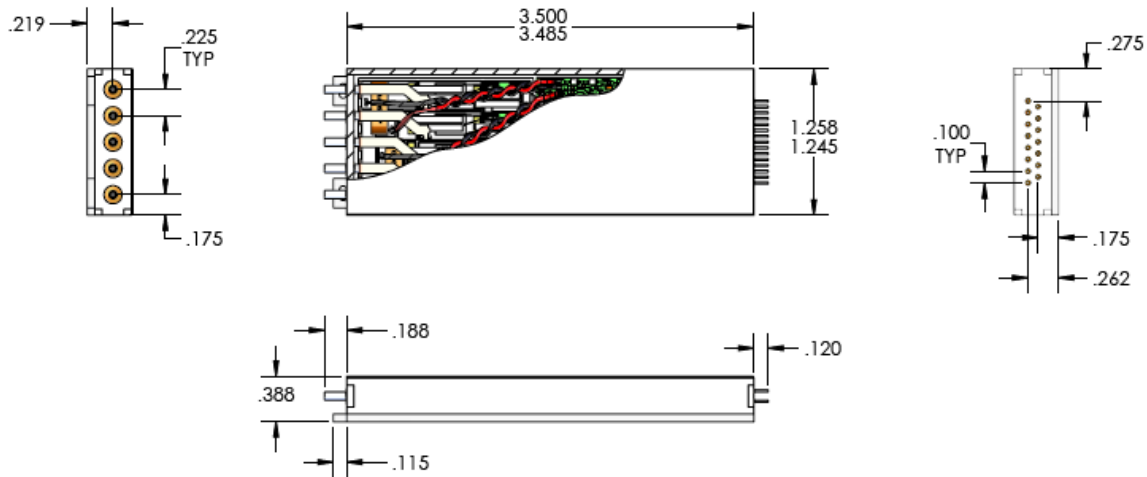
- Surgical Devices
- Military/Aerospace

Note: Composite Motors gives no warranties implied or otherwise regarding the information contained herein. Specifications subject to change without notice – consult factory for specific operating ranges and the latest specifications.



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Mechanical Outline



ALL DIMENSIONS - INCH

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Controller Specifications

PARAMETER: ELECTRICAL	UNITS	Min	Max	COMMENTS
Operating Voltage	VDC	8.0	24.0	
Peak Output Current	Amps	N/A	80.0	Peak Output current limit protection set to 60 amps.
Quiescent Input Current Max	mAmps	N/A	50	
PWM Frequency	kHz	N/A	60.0	
PARAMETER: OPERATING MODES		YES	NO	
Speed Control (Open Loop)		X		
Speed Control (Closed Loop)		X		
Torque Control (Closed Loop)		X		
Block Commutation		X		
PARAMETER: ANALOG & DIGITAL INPUT/OUTUT				
Hall Sensor Inputs	Each			3 Total: H1, H2, H3
Digital I/O	Each			6 Total
Analog Inputs	Each			2 Total
Digital Input Low Level	VDC	-0.3	0.8	
Digital Input High Level	VDC	2.0	3.6	
Digital Output High Level Min	VDC	2.4	N/A	
Digital Output Low Level Max	VDC	N/A	0.4	
Digital Output Source/Sink Current	mAmps	n/A	4.0	
Analog Input Voltage Level	VDC	0.0	3.3	
Hall Sensor Supply	VDC	4.6	5.4	
Hall Sensor Supply Output Current	mAmps	n/A	60	
Aux Supply Voltage Range	VDC	3.2	3.45	
Aux Supply Max Output Current	mAmps	N/A	100	
PARAMETER: HERMETICITY				
Leak Rate	ATM-CC/SEC-HE	N/A	1.0 x 10 ⁻⁷	
PARAMETER: TEMPERATURE RATINGS				
Operating Temperature Range	°C	-20	125	Overtemperature protection will shut down the driver when internal temperature reaches 126C
Storage Temperature Range	°C	-40	125	
PARAMETER: MECHANICAL				
Weight	grams		88	
Dimensions (L,W,H)	inches			3.50 x 1.25 x 0.4

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