BatMod™

Battery Charger Current Source Modules

Features

- Programmable Output Current
- Booster Versions Available
- Size: 4.6" x 2.4" x 0.5" (116,8 x 61,0 x 12,7)
- UL, CSA, TÜV
- Compatible with All Major Battery Types
- Inputs: 48, 150, 300Vdc
- Outputs: 12, 24, 48Vdc Nom.
- Analog Current Monitor
- Analog Overvoltage Adjust
- CE Marked

Product Highlights

The BatMod combines Vicor's industry standard package with the flexibility of a power converter whose output voltage and output current may be independently set. BatMod's allow the user to independently program a constant output current and a maximum float voltage. The float voltage is the point at which the BatMod transitions from constant current to constant voltage. These features make the BatMod an ideal candidate for battery charging and other applications which require a controlled current source.

The BatMod is also available in booster versions that enable the designer to create systems capable of multiple kilowatts of output power.

With its wide range of input options, the BatMod is compatible with all major battery types. This new current output module finds application in systems where easily programmable current is of primary importance.

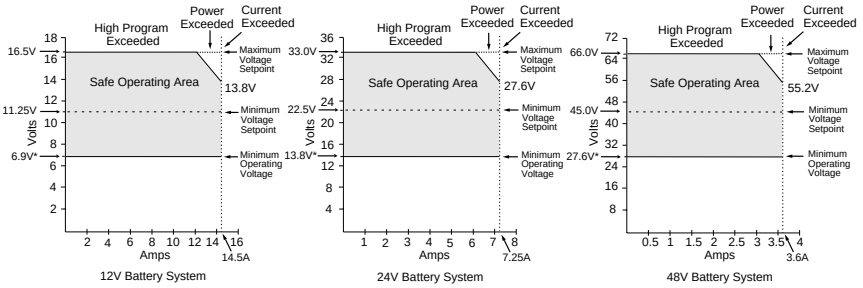
Consult factory for availability of input/output voltage ranges not shown.

BatMod Specifications

(typical T_{BP} = 25°C, nominal line, 75% load, unless otherwise specified)

Parameter		Remarks
Nominal Input Voltage	48Vdc, 150Vdc, 300Vdc	42-60V, 100-200V, 200-400V
Output Current (Refer to Safe Operating Curves below)	0-14.5A 0-7.25A 0-3.6A	12V battery system 24V battery system 48V battery system
Current Control Input	1V to 5V	Zero to max. current
Current Monitor Output	1V to 5V	Zero to full load
Voltage Control Input	0V to 2.5V	Zero to FS output
Voltage Regulation Mode +10%, -25% trimmable	15V, 30V, 60V +/-1%	
Dynamic Characteristics	V Mode: 300 µsec typ. I Mode: 250 µsec typ.	V_{NOM} for 50-100% load changes
Operating Temp./Storage Temp.		
-10°C to +85°C, -20°C to +100°C		E-Grade
-25°C to +85°C, -40°C to +100°C		C-Grade
-40°C to +85°C, -55°C to +100°C		I-Grade
-55°C to +85°C, -65°C to +100°C		M-Grade
Dielectric Withstand		
Input to Output	$3{,}000V_{RMS}$	
Output to Baseplate	$500V_{RMS}$	
Input to Baseplate	$1{,}500V_{RMS}$	

Safe Operating Conditions



*Maximum recommended battery discharge.

Part Numbering

Typical Model: **V I - 2 6 1 - E U - B M**

Input: 300Vdc
Output: 12Vdc at 200W

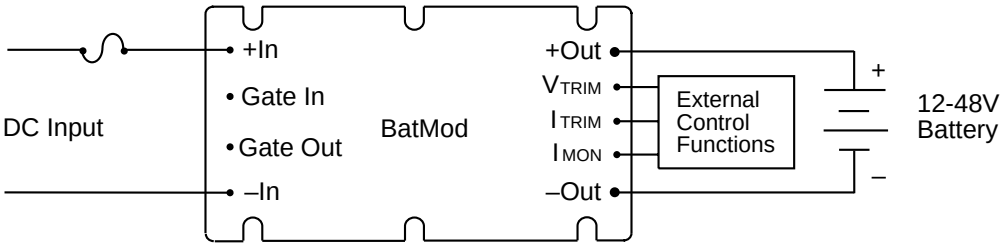
Module	Input Voltage		Output Voltage		Product Grade
	Nominal	Range	Nominal	Range	
2 = Driver	3 = 48V	42 - 60V	1 = 12V	(11.25-16.5V)	E = -10°C to +85°C
B = Booster	5 = 150V	100 - 200V	3 = 24V[1]	(22.5-33.0V)	C = -25°C to +85°C
	6 = 300V	200 - 400V	4 = 48V	(45.0-66.0V)	I = -40°C to +85°C
					M = -55°C to +85°C

1. Available in 300V input only.

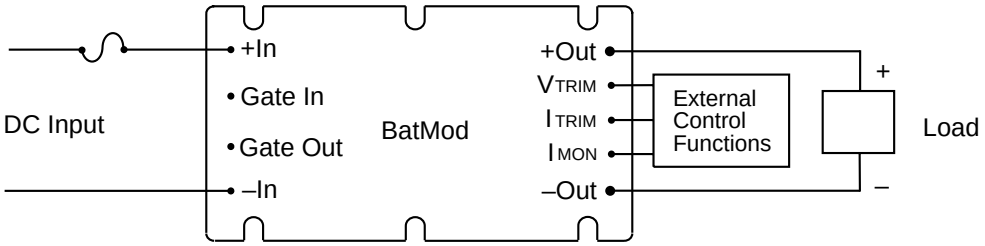
Packaging Options:
SlimMod™, high power density, flangeless packages and FinMods™, featuring integral finned heatsinks.
SlimMod: Add the suffix -S to the end of the BatMod part number.
FinMods: Add the suffix -F1 for .25"H Longitudinal Fin; F2 for .25"H Longitudinal Fin
-F3 for .25"H Transverse Fin; F4 for .25"H Transverse Fin

Typical Applications

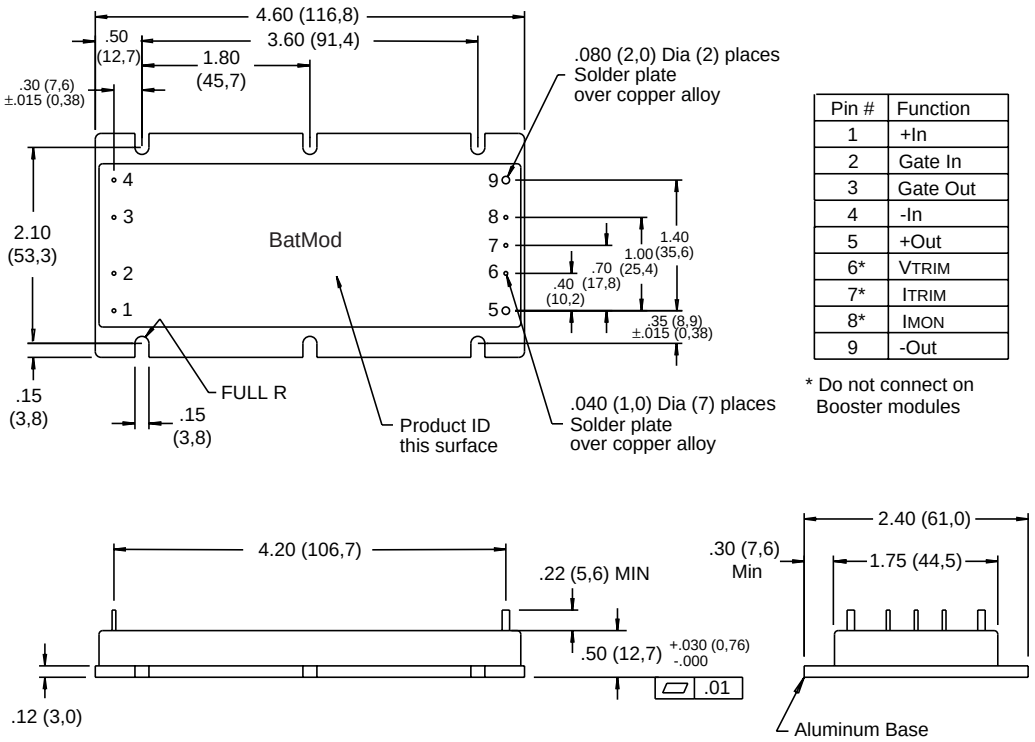
DC Input Battery Charger



DC Input Programmable Current Source



Mechanical Diagram



Pin #	Function
1	+In
2	Gate In
3	Gate Out
4	-In
5	+Out
6*	VTRIM
7*	ITRIM
8*	IMON
9	-Out

* Do not connect on Booster modules