



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, 300 Vdc
- Outputs: 12, 24, 48 Vdc 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.

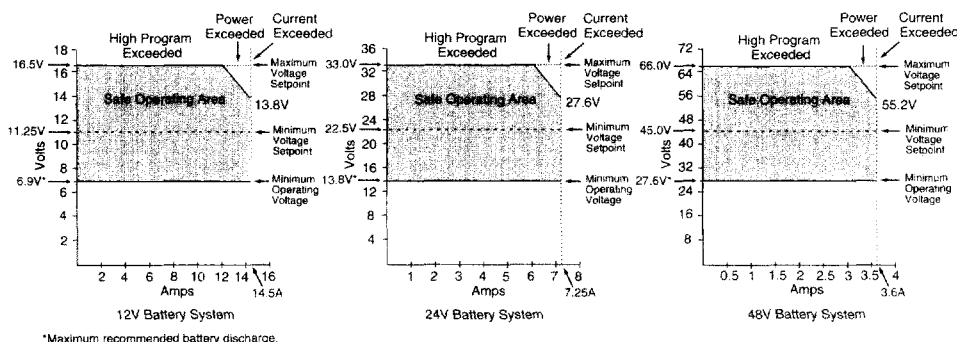
Consult factory for availability of input/output voltage ranges not shown.

BatMod Specifications

(typical $T_{BP} = 25^{\circ}\text{C}$, nominal line, 75% load, unless otherwise specified)

Parameter		Remarks
Nominal Input Voltage	48 Vdc, 150 Vdc, 300 Vdc	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	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 -25°C to +85°C, -40°C to +100°C -40°C to +85°C, -55°C to +100°C -55°C to +85°C, -65°C to +100°C	E-Grade C-Grade I-Grade M-Grade
Isolation		
Input to Output	3,000 V_{RMS}	
Output to Baseplate	500 V_{RMS}	
Input to Baseplate	1,500 V_{RMS}	

Safe Operating Conditions



Part Numbering

Typical Model:

V I - 2 6 1 - E U - B M

Input: 300 Vdc

Output: 12 Vdc at 200W

Module	Input Voltage	Output Voltage	Product Grade
2 = Driver	Nominal Range	Nominal Range	E = -10°C to +85°C
B = Booster	3 = 48V 42 - 60V	1 = 12V (11.25-16.5V)	C = -25°C to +85°C
	5 = 150V 100-200V	3 = 24V ¹ (22.5-33.0V)	I = -40°C to +85°C
	6 = 300V 200-400V	4 = 48V (45.0-66.0V)	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 .5"H Longitudinal Fin; -F3 for .25"H Transverse Fin; F4 for .5"H Transverse Fin

Compatible Products

VI-ARM

Autoranging Rectifier Module

- Autoranging Input
- Microprocessor Controlled
- VI-ARM-12
500 Watts @ 90-132 Vac
750 Watts @ 180-264 Vac
- VI-ARM-22
1000W @ 90-132 Vac
1500W @ 180-264 Vac
- 96-98% Efficiency
- 100°C Baseplate (no derating)
- UL, CSA, TÜV, VDE, BABT
- AC OK, Module Enable
- Inrush Limiting (no external circuitry)
- CE Marked

VI-AIM

AC Input Module

- Universal Input: 85-264 Vac
- Output Power: 250W
- 2.28" x 2.4" x 0.5"
(57,9 x 61,0 x 12,7)
- Operating Temperature: 100°C
- 97% Efficiency
- EMI/RFI Filtering to FCC/VDE Class A
- Input Transient Protection
- UL, CSA, TÜV, VDE, BABT
- Inrush Limiting
- Compatible Modules:
VI-X7X (85-264 Vac)
VI-X6X (170-264 Vac)
VI-X5X (85-135 Vac)
- CE Marked

VI-IAM

Input Attenuator Module

- Meets Bellcore & British Telecom Standards for EMI/RFI
- Meets Bellcore, IEC and British Telecom Standards for Transients
- Logic Disable
- UL, CSA, TÜV, VDE, BABT
- 97% Efficiency
- Input Reverse Polarity Protection
- Expansion Output for Arrays
- 2.28" x 2.4" x 0.5"
(57,9 x 61,0 x 12,7)
- CE Marked

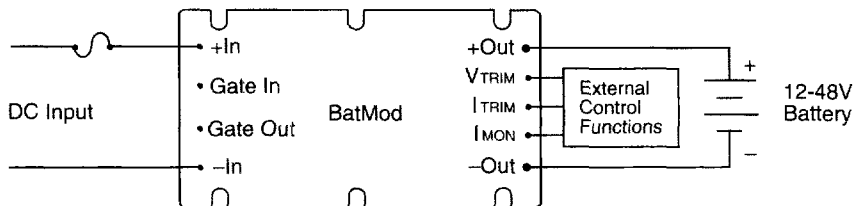
VI-HAM

Harmonic Attenuator Module

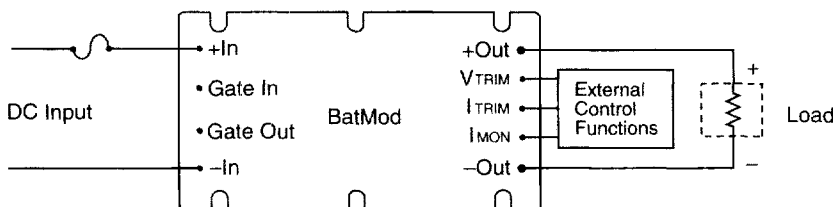
- Universal Input: 85-264Vac
- Power Factor: 0.99
- Meets IEC 61000-4-5
- 90-94% Efficiency
- 4.6" x 2.4" x 0.5"
(116,8 x 61,0 x 12,7)
- Filtering Options: EN 55011 Level A (Conducted)
- UL, CSA, TÜV
- Inrush Limiting
- Compatible with VI-X6X-XX Modules
- ZCS Power Architecture
- Low Noise FM Control
- CE Marked

Typical Applications

DC Input Battery Charger



DC Input Programmable Current Source



Mechanical Diagram

