

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.

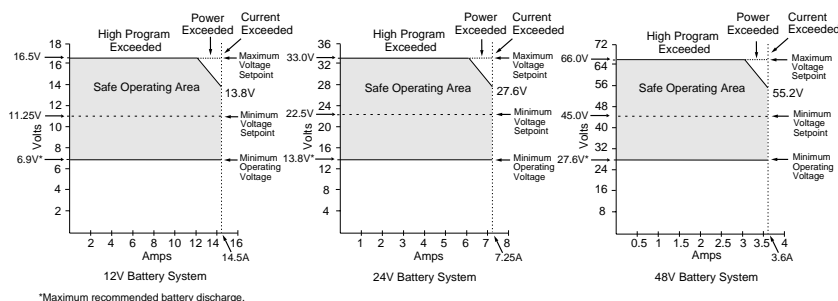
Consult factory for availability of input/output voltage ranges not shown.

BatMod Specifications

(typical $T_{BP} = 25^{\circ}\text{C}$, 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 |
| Output Voltage Setpoint Trimmable +10%, -25% | 15V, 30V, 60V +/-1% | 12V, 24V, 48V Output Respectively |
| 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 |
| Dielectric Withstand | | |
| Input to Output | 3,000V _{RMS} | |
| Output to Baseplate | 500V _{RMS} | |
| Input to Baseplate | 1,500V _{RMS} | |

Safe Operating Conditions



Part Numbering

Typical Model:

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

Input: 300Vdc

Output: 12Vdc at 200W

| Module | Input Voltage Nominal Range | Output Voltage Nominal Range | Product Grade |
|-------------|--------------------------------|-----------------------------------|--------------------|
| 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:

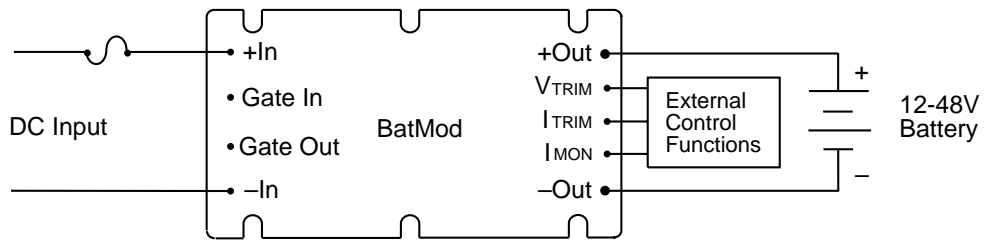
SlimMod™, high power density, flangeless packages and FinMods™, featuring integral finned heatsinks.

SlimMod: Add the suffix -S to the end of the BatMod part number.

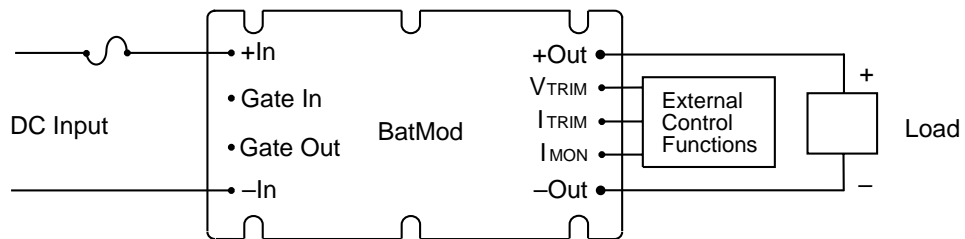
FinMods: Add the suffix -F1 for .25"H Longitudinal Fin; F2 for .5"H Longitudinal Fin; -F3 for .25"H Transverse Fin; F4 for .5"H Transverse Fin

Typical Applications

DC Input Battery Charger



DC Input Programmable Current Source



Mechanical Diagram

