VICOR

PFC Mini

AC-DC Switcher Up to 1500 Watts

Features

- Fan Cooled
- Power Factor Corrected
- 1-6 Outputs
- Enable/Disable
- General Shutdown
- Size: 1.75" x 6.0" x 12" (44,5 x 152,4 x 304,8)
- Efficiency: >80%
- UL , CSA, TÜV, VDE
- CE Marking
- Designed to meet IEC 61000
- 600W, 115/230 Vac (VI-200/VI-J00 modules)
- 800W, 115 Vac (2nd Generation modules)
- 1200W, 230 Vac (2nd Generation modules)

Product Highlights

The PFC Mini is a power factor corrected, fan-cooled, AC-DC switching power supply that provides up to 1500 Watts of output from 1 to 6 outputs. It can accommodate up to three full size (VI-200 or 2nd Generation) or up to six half size (VI-J00) Vicor DC-DC converter modules.

The PFC Mini's 1.75" height makes it one of the lowest profile, highest power switchers available today.

Module outputs of the same voltage and power level can be factory paralleled for additional power.

PFC Mini Specifications

(typical at 25°C, nominal line, 75% load, unless otherwise specified)

PARAMETER	INPUT
AC input voltage	85-264 Vac, 47-500 Hz
DC input voltage	100-380 Vdc
Line regulation	±0.2%, from 10% load
Inrush current	30A rms max. @ 115 Vac 60A rms max. @ 230 Vac
Ride through time	20 ms minimum at 1200W
Conducted EMI/RFI	IEC 1000-4-5 Class B, FCC Class B (VI-200 and VI-J00 modules) IEC 1000-4-5 Class B, FCC Class B Pending (2nd Gen. modules)
Power Factor	.99 at 115 Vac; .95 at 230 Vac
Transient Surge	IEC 60801-5 Level 3
Dielectric Withstand	
• Primary to Chassis GND	2121 Vdc
• Primary to Secondary	4242 Vdc
• Secondary to Chassis GND	707 Vdc

■ OUTPUT CHARACTERISTICS (VI-200/VI-J00 MODULES)

PARAMETER	MIN	TYP	MAX	UNITS	NOTES
Setpoint accuracy		0.5	1	%	
Load/line regulation		0.05	0.2	%	LL to HL, 10% to 100%
Load/line regulation		0.2	0.5	%	LL to HL, 0% to 10%
Temperature regulation		0.01	0.02	%/°C	Over rated temp.
Long term drift		0.02		%/1K hrs	
Output Ripple p-p					
• 2V, 3.3V		60(100)[1]	100(150)[1]	mV	20 MHz BW
• 5V		2	3	%	20 MHz BW
• 12-95V		0.75	1.5	%	20 MHz BW
Trim[2]	50		110	%	
Total remote sense compensation	0.5			Volts	0.25V max. each leg
OVP setpoint[3]	115	125	135	%	Recycle power
Current Limit	105		125	% of I max	Auto. restart
Short Circuit Current[4]	20(105%)[1]		130	% of I max	

■ 2ND GENERATION MODULES

PARAMETER	MIN	TYP	MAX	UNITS	NOTES
Setpoint accuracy		0.5	1	%	
Load/line regulation		.02	0.1	%	LL to HL, 0% to 100%
Temp. regulation		0.002	0.005	%/°C	-20 to +65°C
Long term drift		0.02		%/1K hrs	
Output ripple p-p					
• 2V, 3.3V		100	150	mV	20 MHz BW
• 5V		2	3	%	20 MHz BW
• 12-95V		1	2	%	20 MHz BW
Trim	10		110	%	
Total remote sense compensation	0.5			Volts	0.25V max. each leg
OVP setpoint	110		135	%	Recycle power
Current limit (straight line)	102		135	% of I max	Auto. restart
Short Circuit Current	100		150	% of I max	V out < 250 mV

■ ENVIRONMENTAL CHARACTERISTICS

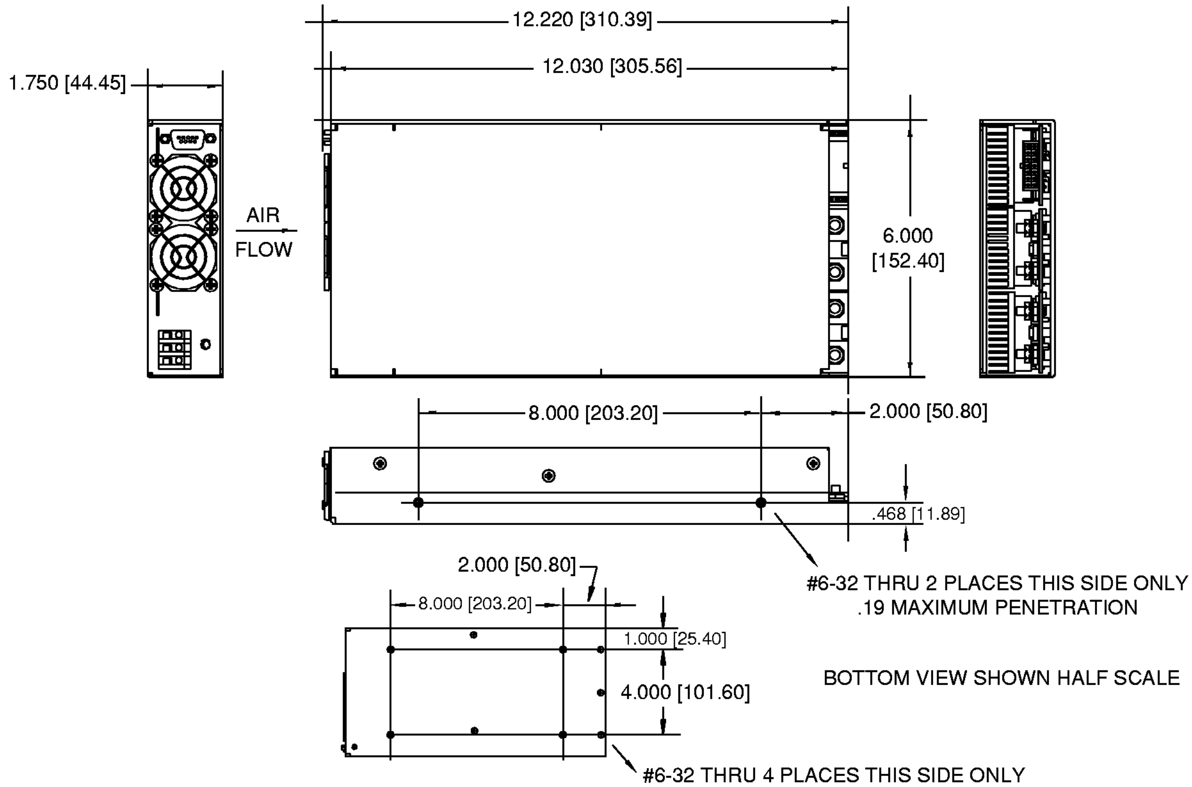
Storage temperature	-40 to +85°C
Operating temperature	
• C-Grade, full power	0 to +45°C
• C-Grade, half power	0 to +65°C
• I- or T-Grade, full power	-20 to +45°C
• I- or T-Grade, half power	-20 to +65°C

■ MECHANICAL CHARACTERISTICS

Product Weight	4.5 lbs.
Dimensions	1.75" (44,5)H x 6.0"(152,4)W x 12" (304,8)L

1 VI-J00 modules only.
2 12V and 15V outputs, standard trim range ±10%
3 131% nominal for booster modules. No OVP for VI-J00.
4 Output voltages of 5V or less incorporate foldback current limiting; outputs of 12V and above contain straight line limiting.

Mechanical Drawing



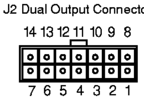
J10 Interface
Connector Identification

J3 Interface Pin Out

J3-1	E/D-1
J3-2	E/D-2
J3-3	E/D-3
J3-4	Signal Ground
J3-5	VCC +5V 300mA
J3-6	AC Power OK
J3-7	GSD General Shutdown
J3-8	Spare
J3-9	Spare

Hdwr: Mating receptacle cinch 9 pin subminiature D connector (DEUE09P) and cinch pins (030-1952-000)

J2 Dual Output Connector



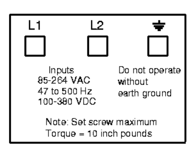
PIN DESCRIPTION	PIN DESCRIPTION
1. +Sense #1	8. -Sense #1
2. +Output #1	9. +Output #1
3. -Output #1	10. -Output #2
4. Trim #1	11. Trim #2
5. +Output #2	12. +Output #2
6. -Output #2	13. -Output #2
7. +Sense #2	14. -Sense #2

J2 Remote Sense/Output Connectors are Molex #39-30-1140 Mini-Fit Jr. hdrs. Mating receptacle is Molex #39-01-2145 housing with #39-00-0039 terminals and 18-24 AWG stranded wire. Use Molex tool #11-01-0122.

J2	Pin	
	1	Trim Pin
	2	+ Remote Sense
	3	- Remote Sense

J2 "Remote Sense" & "Trim Pin Access" Connector Hardware: Molex #705-53-0002 to mate with #50-57-9403 hsg, using #16-02-0103 terminals and 22-24 AWG stranded wire. Use Molex tool #11-01-0118.

Input Connections



J9-1 Earth Ground
J9-2 L2
J9-3 L1

Clamping screws for input leads, maximum torque 10 inch-pounds.040 x .13 slot openings (J9-1 through J9-3) for #12 AWG input wires

Ordering Guidelines

For price, delivery, product, accessory or applications assistance, or to simply find out how your system can benefit from Vicor's complete line of Component Power Solutions, contact Vicor Express at (800) 735-6200 or fax us at (978) 475-6715.

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