CAR1248FP SERIES

1200 Watt +48V Front End Power Supply

Product Features

- 1200 Watts in 1U
- Ultra High Power Density of 19W/in³
- Active Current Sharing (Single Wire)
- Remote on/off, Remote Sense, Voltage Program & Current Share Control Circuits
- Constant Current
- Current, Voltage, AC OK, DC OK & Temperature OK
- Microprocessor based design allows for I²C communication
- Optional Universal / 5-Bay 19" Rack Delivers 6kW of Total Power
- International Safety Approvals - UL, CSA, CE Mark (LVD), TUV

RoHS COMPLIANT

FEATURES	BENEFITS
High Power Density 19W/in³	Leaves plenty of room for your applications
System Scalability up to 6000W	Allows flexibility with minimum investment
1U x 2U High Form Factor	Minimize space required for power needs
Load Sharing & Fault Tolerant	Excellent reliability in N+1 operation
5VSB Standby Voltage	Provides voltage for external housekeeping and monitoring circuitry
I²C Digital Control & Monitoring	Ideal for monitoring, housekeeping and control

KEY MARKET SEGMENTS & APPLICATIONS

- Distributed Power
- Blade Servers
- Mid-end servers
- Network Equipment
- Network Attached Storage
- Automatic Test Equipment
- Storage Area Networks

SPECIFICATIONS	1200 Watt +48V Front End Power Supply
Input Voltage Range	85-264 VAC, 47-63 Hz
Input Current Maximum	12.75A @ 100VAC, 7.9A @ 180 VAC, full load
Inrush Current	40A max. cold start (per ETS 300 132-1 and bellcore specifications)
Input Protection	Dual Fused (Line & Neutral) 20 Amp / 250 VAC Type 3AB Axial
Power Factor	0.99 typical complies with IEC555, EN60555-2, EN61000-3-2
Efficiency	91% typical at 230 VAC Full Load Operation, 85% Typical @ 90 VAC Full Load Operation
Output Power	1200W at High Line Operation (230 VAC), Derate to 1000 W at Low Line Operation (90 VAC)
Output Voltage Range	+48 VDC (±10%)
Output Current	25A @ +48 VDC for High Line Operation (230 VAC), reduced to 20.8A at Low Line Operation (90VAC)
Voltage Programming	Vout = 43.2V + 3.3x (Vprog - 0.364)V where 0.364 < Vprog < 3.27V
Standby Bias Voltage	5VSB@500mA, reference to +48VDC Return
Voltage Regulation	±2% of Vnom for any combination of line, load and temperature
Ouput Ripple & Noise	Complies with ETS300 132-2, 32dBnrc. Bandwidth: 25Hz - 20kHz. 2mVrms pk-pk with 0.1μF ceramic and 10μF electrolytics caps at the output
Transient Response	5% max deviation Recovery time 300μs @ 50% load step and di/dt < 1A/μs
Switching Frequency	200kHz (input) / 400kHz (output)
Hold-Up Time	20ms at 1KW (typical) @ 90VAC
Remote On/Off	ON if >3V or open; OFF if <1V (max. sink 1mA) Open collector type
Current Limit Protection	110-130% of Iout Nominal
Short Circuit Protection	Self protected with auto recovery
Over Voltage Protection	+60 VDC max, latched. Reset condition by recycling AC Input or toggling remote on/off
Operating Temperature	-10°C to +70°C. power derating above 55°C at 2.5% per °C
Over Temperature Protection	Non latching; protection active at 110°C internal temperature, restart at 95°C (typical)
EMI	FCC-B & EN55022-B with specified filter or at rack level, GR-1089-CORE
LED Indicators	Green = AC OK & DC OK, Red = Fault
Analog Status & Control	Voltage Programming (V Prog), Load sharing (I Share), Remote ON/OFF, Current Monitor (I Monitor), Over temperature (Temp Warning), Fault, PS Present, Module Enable
Digital Status & Control	I²C Option, see detailed specification for details
Shock & Vibration	IEC68-2-27, MIL-STD-810E, Telcordia GR-63-CORE
Dimensions	11.02 x 3.44 x 1.65" / 284.5 x 87.4 x 41.9mm
Weight	2.8 lbs
Safety Approvals	IEC 950 per EN60950, UL60950, CSA 22.2-950, CE Mark (LVD), TUV
Options	I²C Signals, Bezel

Specifications listed assume 25°C Ambient Operating Temperature and Full Load Operation unlesss otherwise specfified. This product is qualified for use in OEM equipment and is not appropriate for stand-alone operatiuon. The information contained within this specification is believed to be true and correct at the time of publication, however, Cherokee International accepts no responsiblity for consequences arising from printing errors or inaccuracies. The information and specifications contained herein are subject to change without notice.

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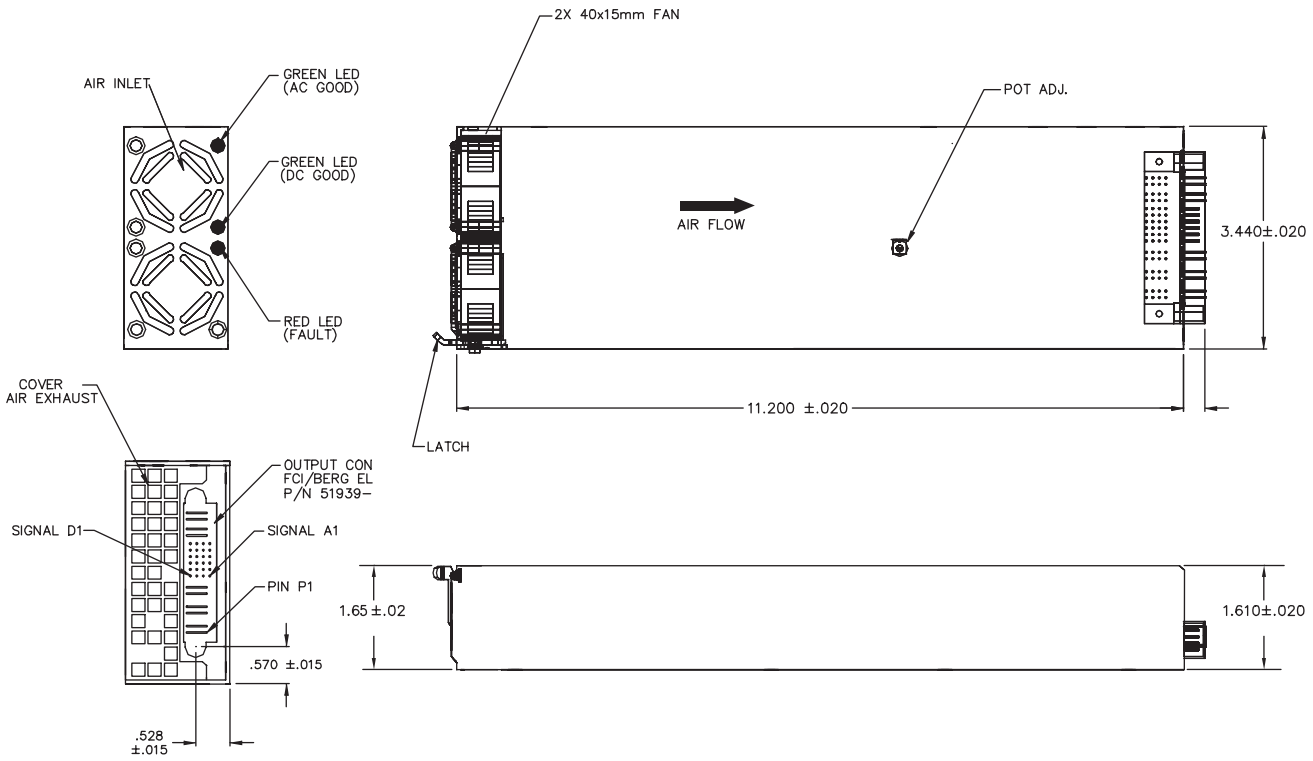
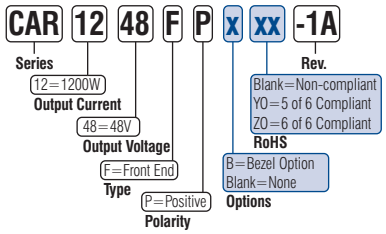
OUTLINE DRAWING



All Dimensions in Inches (mm)
Tolerance: .XX = ± .02 in (.50 mm)
.XXX = ± .010 in (.254 mm)

PART NUMBER DEFINITION GUIDE



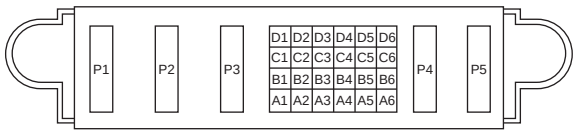
Examples:

CAR1248FPZO-1A
1200W/48V Front End, 6 of 6 RoHS

CAR1248FPBYO-1A
1200W/48V Front End, Bezel, 5 of 6 RoHS

CAR1248FPB-1A
1200W/48V Front End, Bezel

CONNECTOR DRAWING



Connector is FCI / Ber Part # 51939-070
Mates with FCI / Berg Part # 51915-050

PIN OUT INFORMATION

A1	VSB 5V	B4	PS Present	D1	V Prog	P4	Vout
A2	VSB 5V Return	B5	Serial Data Line	D2	OVP Test Point	P5	Vout Return
A3	Signal RTN	B6	Serial Data Clock	D3	Remote On/Off		
A4	Write Protect	C1	I Share	D4	DC OK		
A5	Remote Sense (+)	C2	N/C	D5	AC OK		
A6	Remote Sense (–)	C3	Temp Warning	D6	Interrupt		
B1	Fault	C4	I²C Address (A0)	P1	Line		
B2	I Monitor	C5	I²C Address (A1)	P2	Neutral		
B3	Module Enable	C6	I²C Address (A2)	P3	Chassis		

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