

POWER

CSU Series 1800W - 2400W 12V Distributed Power System

Preliminary Data Sheet

Front-end Bulk Power

Total Output Power: 1800W,
2000W, 2400 W

Input Voltage: 90 to 127, 180-264
Vac, 240Vdc

SPECIAL FEATURES

- Ultra-high density
- 1U power supply
- Active power factor correction
- EN61000-3-2 Harmonic compliance
- Inrush current control
- 80PLUS® Platinum efficiency
- N+N, N+1 redundant
- Hot-pluggable
- Active current sharing
- PMBus® compliant
- Closed loop throttle
- Cold redundancy
- Two-year warranty

COMPLIANCE

- Conducted/Radiated EMI Class A Limits
- RoHS
- IEC 60950/62368

SAFETY

- UL/cUL
- CB Test Certificate
- CE Mark
- KC
- EAC
- BIS
- CQC
- BSMI



Electrical Specifications

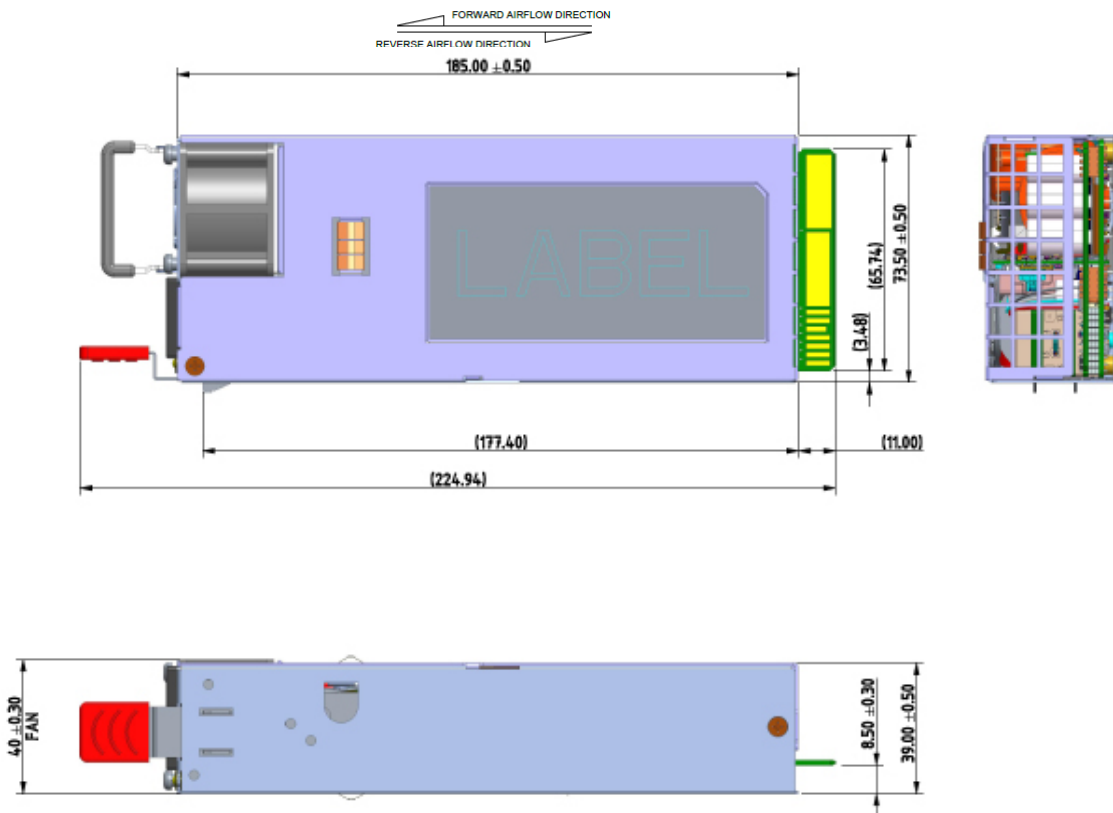
Input						
Input Range and Output Power	CSU1800AP		CSU2000AP		CSU2400AP	
	90-127 Vac	1000W		1400W ¹		N/A
180-264 Vac	1800W		2000W ²		2400W	
Frequency	47 Hz to 63 Hz					
Efficiency	94.0% peak, platinum efficiency rating					
Max input current	100/200Vac	11.3A/10A	C14 14.4A/10A	13.8A		
Inrush current	35 Apk, cold start					
Conducted EMI	Class A					
Radiated EMI	Class A					
Power factor	>0.9 beginning at 10% load					
Hold-up time	11 ms at full load					
Leakage current	<0.585 mA					
Output						
	Main DC Output			Standby DC Output		
	MIN	NOM	MAX	MIN	NOM	MAX
Nominal setting	-0.20%	12.2V	0.20%	-3.5%	12.0	+3.5%
Total output regulation range	-5%		+5%	-5%		+5%
Dynamic load regulation range	-5%		+5%	-5%		+5%
Output ripple			1%			1%
Output current	CSU1800AP	1.0 A ³	147.5	0.1 A		3.5 A
	CSU2000AP		163.9			
	CSU2400AP		196.7			
Current sharing	Within ±6% of full load rating, starting at 25% of PSU rated load			N/A		
Capacitive loading	2,000		50,000	10		3,100
Output rise time	10 ms		70 ms	10 ms		70 ms

¹ Output power limited at 1400W at 120Vac; linearly derated to 1250W at 100Vac.

² CSU2000AP-3-200/201 only. CSU2000AP-3-100/101 output power rating limited by 10A input current.

³ Minimum current for transient load response testing only. Unit is designed to operate and be within output regulation range at zero load.

Mechanical Outline CSU1800AP-3-100/101 and CSU2000AP-3-100/-101

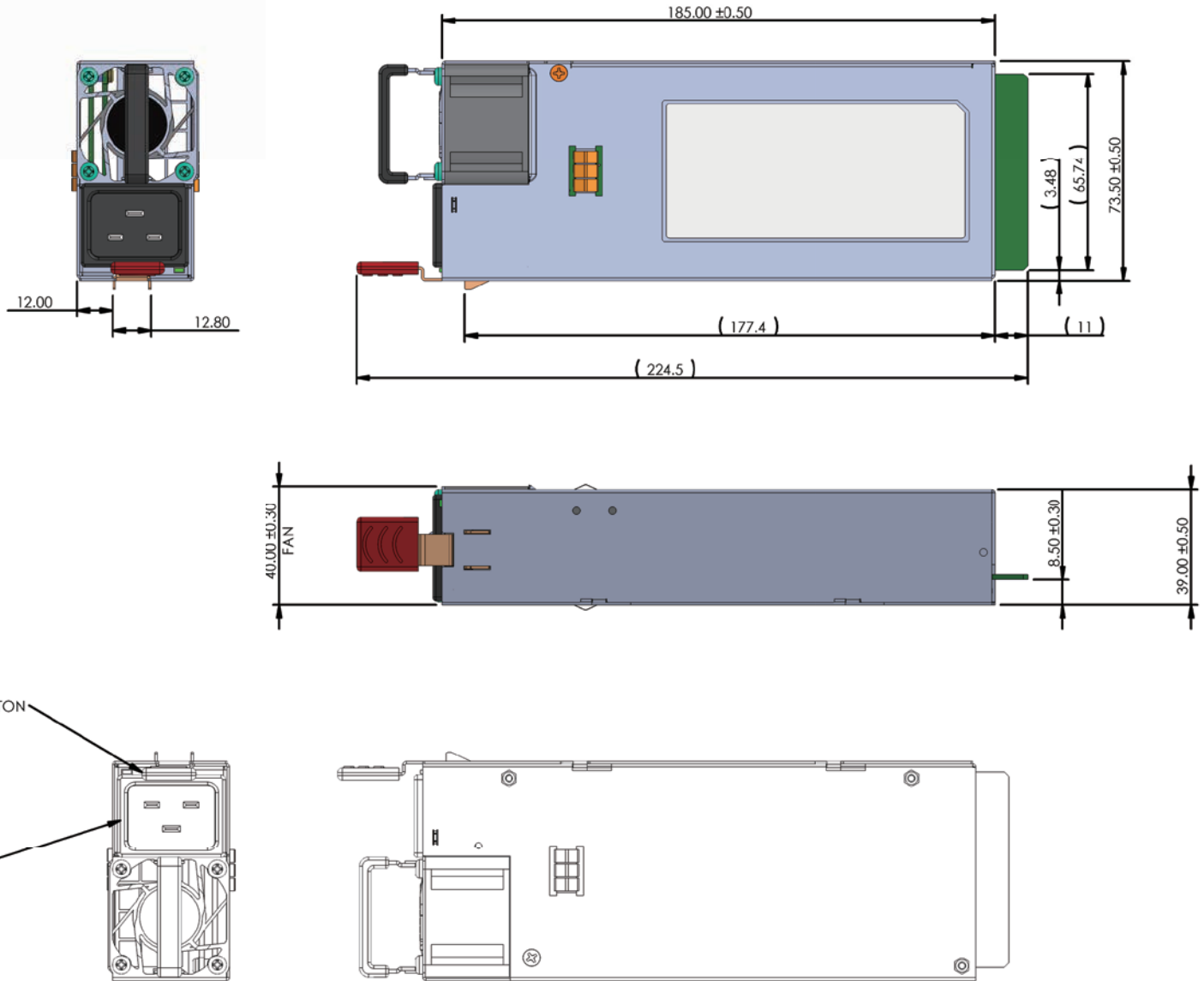


Environmental Specifications

Operating temperature	Forward Airflow	CSU1800AP-3-100/CSU2000AP-3-100/CSU2000AP-3-200: -5 to 55°C full rated power Allowable up to TBD °C for short term operation
	Reverse Airflow	CSU2400AP-3-100: -5 to 50°C full rated power, allowable up to 55°C at derated power Allowable up to TBD °C for short term operation
		Continuous maximum 40°C, allowable up to 50°C for short term duration
		TBD
Operating altitude		Up to 10,000 feet ¹
Operating relative humidity		+5% to 95%, non-condensing
Non-operating temperature		-40 to +70 °C
Shipping and storage relative humidity		+5% to 95%, non-condensing
Non-operating altitude		Up to 50,000 feet
Vibration and shock		Standard operating/non-operating random shock and vibration
RoHS compliance		Yes
MTBF		500 k hours at 50 °C, 85% load, nominal input
Operating life		Minimum of 5 years at 50°C, 85% load, nominal input

¹ Safety creepage/clearance rated for 5,000m altitude for CQC

Mechanical Outline CSU2000AP-3-200/201 and CSU2400AP-3-100/101



Model Number	Description	Outputs		Airflow Direction
CSU1800AP-3-100	1U x 73.5 x 185mm 1800W, Platinum efficiency, red, C14	12.2V/147.5A	12.0V/3.5A	Forward
CSU2000AP-3-100	1U x 73.5 x 185mm 2000W, Platinum efficiency, red, C14	12.2V/163.9A	12.0V/3.5A	Forward
CSU2000AP-3-200	1U x 73.5 x 185mm 2000W, Platinum efficiency, red, C20	12.2V/163.9A	12.0V/3.5A	Forward
CSU2400AP-3-100	1U x 73.5 x 185mm 2400W, Platinum efficiency, red, C20	12.2V/196.7A	12.0V/3.5A	Forward

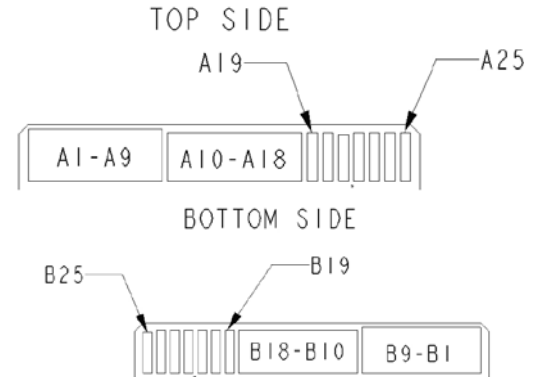
Connector Definition

Output connector part number	Card-edge
Recommended mating connector part number	FCI Amphenol 10035388*
	FCI Amphenol GPCEFX361411HHR (CSU1800AP-3-xxx and CSU2000AP-3-xxx)
	FCI Amphenol 10147875-001LF (CSU2400AP-3-xxx)

* Use with caution to maintain connector temperature rise and connector temperature

Output Connector Pin Configuration

A1-A9	POWER GND	B1-B9	POWER GND
A10-18	+12V	B10-B18	+12V
A19	SDA	B19	A0 (addressing)
A20	SCL	B20	A1 (addressing)
A21	PSOEN#	B21	12VSB
A22	SMBAlert#	B22	CR_BUS
A23	RETURN_SENSE	B23	ISHARE
A24	+12V_REMOTE_SENSE	B24	GND (used by system for presence detect)
A25	PWOK	B25	RESERVED



Addressing

PMBUS				IPMI FRU			
A1	A0	Read Address	Write Address	A1	A0	Read Address	Write Address
0	0	B0h	B1h	0	0	A0h	A1h
0	1	B2h	B3h	0	1	A2h	A3h
1	0	B4h	B5h	1	0	A4h	A5h
1	1	B6h	B7h	1	1	A6h	A7h

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