ARTESYN CSU3200ET SERIES

12V Distributed Power System



Advanced Energy's Artesyn CSU front end series is designed to provide a flexible power conversion solution for compute, storage, and networking equipment in the common redundant power supply (CRPS) form factor. This series of AC-DC products is housed in the industry standard 1U x 73.5 mm x 265 mm CRPS form factor. Featuring a power rating of 3200 W, the series can cover power hungry applications where there are space constraints.

AT A GLANCE

Front-end Bulk Power

Total Output Power

3200 W

Input Voltage

90 to 264 VAC, 180 to 320 VDC

80 PLUS TITANIUM

PMBus® Power Management. Defined.

SPECIAL FEATURES

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

SAFETY

- UL/cUL/CSA
- DEMKO
- TUV
- CB Test Certificate
- CE Mark
- UKCA Mark
- CQC or CCC
- KC
- EAC
- BIS
- BSMI
- IEC 60950/62368

TARGET APPLICATIONS

- DCC

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ELECTRICAL SPECIFICATIONS

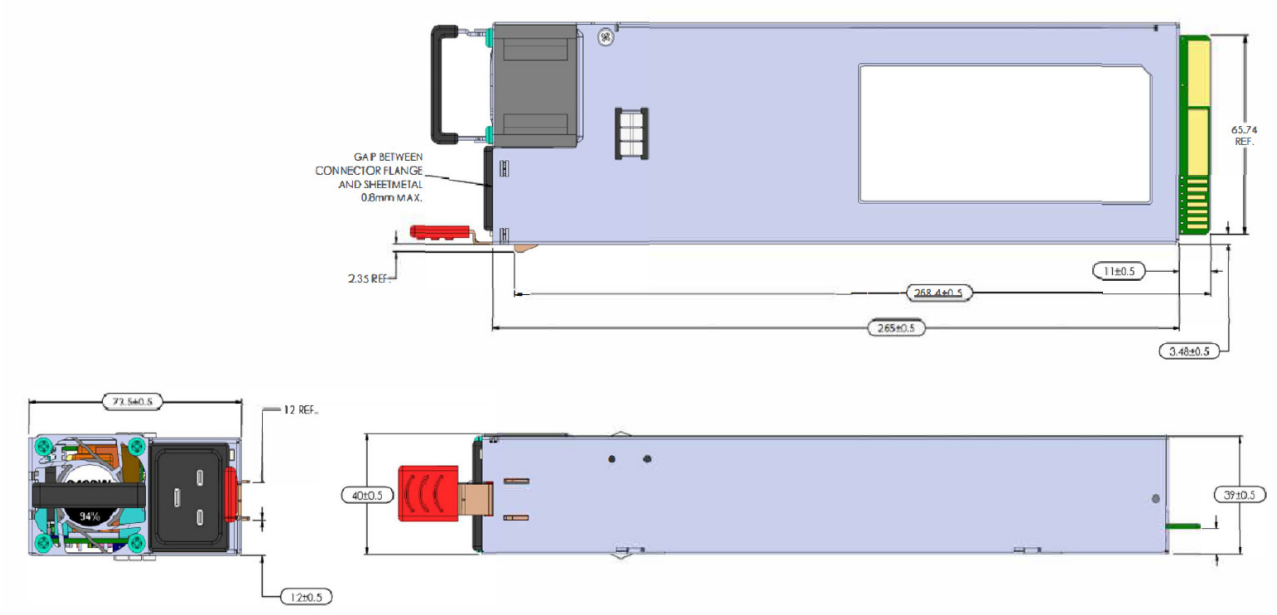
Input						
Input Range and Output Power	90-264 VAC		3000W to 3200W			
Frequency	47 Hz to 63 Hz					
Efficiency	96.0% peak, titanium efficiency rating					
Max input current	16A					
Inrush current	55 Apk, cold start					
Conducted EMI	Class A					
Radiated EMI	Class A					
Power factor	>0.9 beginning at 10% load					
Hold-up time	12 ms at full load					
Leakage current	<0.75 mA					
Output						
	Main DC Output			Standby DC Output		
	MIN	NOM	MAX	MIN	NOM	MAX
Nominal setting	-0.20%	12.2 V	0.20%	-2.5%	12.0 V	+2.5%
Total output regulation range	-5%	-	+5%	-5%	-	+5%
Dynamic load regulation range	-5%	-	+5%	-5%	-	+5%
Output ripple	-	-	1%	-	-	1%
Output current	1.0 A[1]	-	262.0 A	0 A	-	3.5 A
Current sharing	Within ±3% of full load rating, starting at 25% of PSU rated load			N/A		
Capacitive loading	2,200 µF	-	70,000 µF	10 µF	-	3,100 µF
Output rise time	10 ms	-	70 ms	10 ms	-	25 ms

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

ORDERING INFORMATION

Model Number	Descrption	Outputs		Airflow Direction
CSU3200ET-3-100	1U x 73.5 x 265mm 1800W, Platinum efficiency, red, C14	12.2V/262A	12.0V/3.5A	Forward
CSU3200ET-3-101	1U x 73.5 x 265mm 1800W, Platinum efficiency, red, C14	12.2V/262A	12.0V/3.5A	Reverse

MECHANICAL OUTLINE



ENVIRONMENTAL SPECIFICATIONS

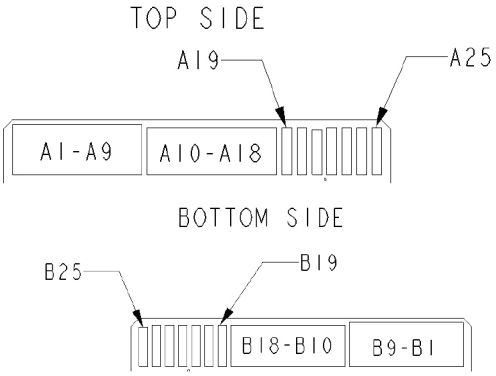
Operating temperature	Forward Airflow	-5 to 55°C full rated power. Allowable up to 65°C at 60% load for short term operation
	Reverse Airflow	-5 to 40°C full rated power. Allowable up to 50°C at 60% load for short term operation
Operating altitude		Up to 5,000 meters
Operating relative humidity		+5% 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 12,100 meters
Vibration and shock		Standard operating/non-operating random shock and vibration
RoHS compliance		Yes
MTBF		200 khours Telcordia Issue 3 at 55°C ambient (40°C for reverse air), 230 Vac input, 80% load, and sea level.
Operating life		Minimum of 5 years under 55°C ambient temperature (40°C for reverse air), and 80% load, 230Vac input, and sea level.

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

CONNECTOR DEFINITION

Reference	On Power Supply	Mating Connector or Equivalent
AC Input Connector	IEC320-C20	IEC320-C19
Output Connector	Card-edge	2x25 pin configuration power card connector or any approved equivalent. Right Angle FCI HPG12P14SRT153T-3

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	PSON#	B21	12VSB
A22	SMBAlert#	B22	CR_BUS
A23	$-V_{SENSE}$	B23	12V Load Share
A24	$+V_{SENSE}$	B24	GND
A25	PWOK	B25	VIN_GOOD



ADDRESSING

PMBUS		
A1	A0	Adddress
0	0	B0h
0	1	B2h
1	0	B4h
1	1	B6h

IPMI FRU		
A1	A0	Adddress
0	0	A0h
0	1	A2h
1	0	A4h
1	1	A6h

ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

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