

ARTESYN CSU1600AT SERIES

12 V 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 185 mm CRPS form factor. Featuring a 1600 W rated power, the model can cover cost-sensitive entry level systems, or power hungry applications where there are space constraints.

AT A GLANCE

Front-end Bulk Power

Total Output Power

1600 W

Input Voltage

90 to 127 VAC, 180 to 264 VAC,
180 to 336 VDC



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

COMPLIANCE

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

SAFETY

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

TARGET APPLICATIONS

- Server and Storage
- Networking

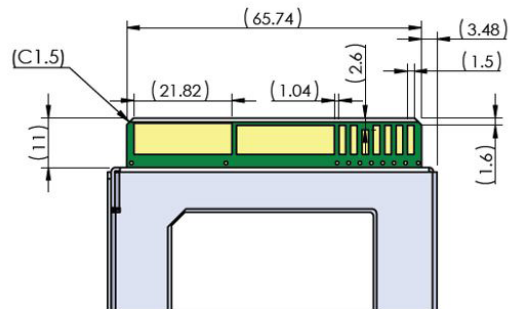
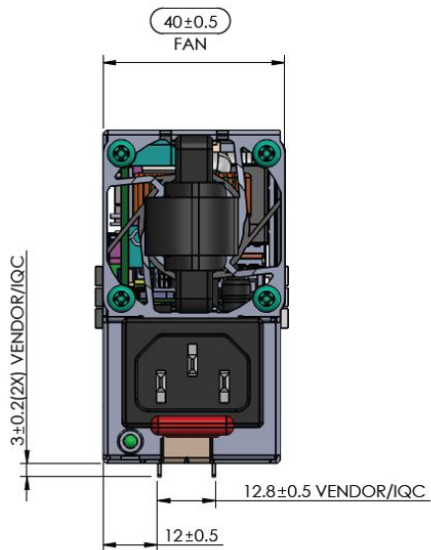
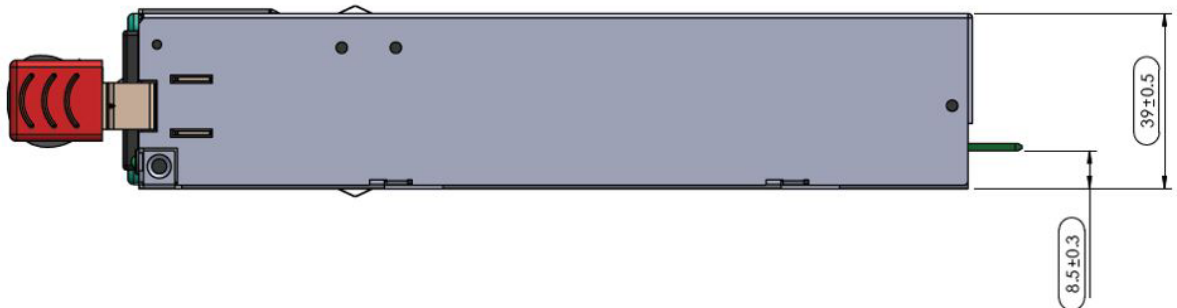
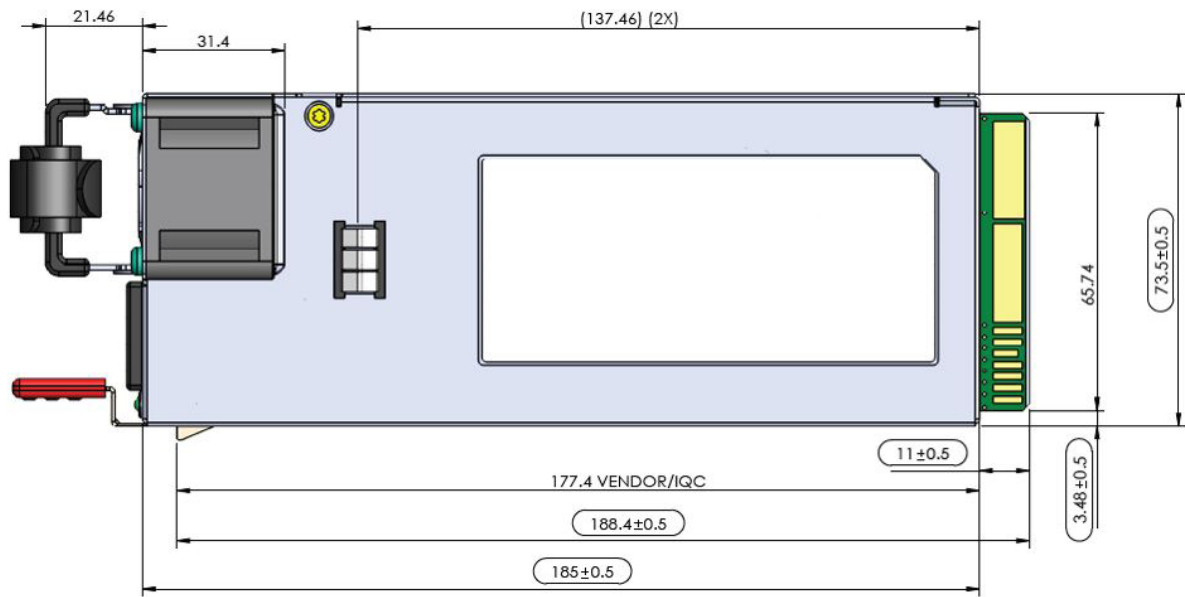
ELECTRICAL SPECIFICATIONS

Input						
Input Range and Output Power	90 to 127 VAC 180 to 264 VAC 180 to 336 VDC	1000 W 1600 W 1600 W				
Input Current (Safety Rating)	100 VAC 200 VAC	8.5 A 13.3 A				
Efficiency	96.0% peak, titanium efficiency rating					
Frequency	47 to 63 Hz					
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 min. at full load					
Leakage Current	<0.583 mA					
Output						
	Main DC Output			Standby DC Output		
	MIN	NOM	MAX	MIN	NOM	MAX
Nominal Setting	-0.2%	12.2 V	0.2%	-2.5%	12.0	+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	-	131.1 A	0 A	-	3.5 A
Current Sharing Accuracy	±3%			-		
Capacitive Loading	2,000 uF	-	70,000 uF	47 uF	-	3,100 uF
Output Rise Time	10 ms	-	70 ms	-	-	25 ms

Notes:

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

MECHANICAL OUTLINE



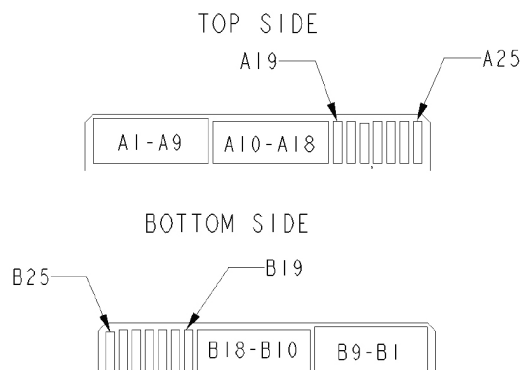
ORDERING INFORMATION

Model Number	Description	Outputs		Airflow Direction
		12.2 V / 131.1 A	12.0 V / 3.5 A	
CSU1600AT-3-100	1U x 73.5 x 185 mm 1600 W, Titanium efficiency			Forward

CONNECTOR DEFINITION

Connector Type	On Power Supply	Recommended Mating Connector
AC Input Connector	IEC320-C14	IEC320-C13
Output Connector	Card-edge	FCI HPG12P14SRT153T / TE 2343428-1

Output Connector Pin Configuration			
A1-A9	POWER GND	B1-B9	POWER GND
A10-A18	+12V	B10-B18	+12V
A19	SDA	B19	A0 (SMBus Address)
A20	SCL	B20	A1 (SMBus Address)
A21	PSON	B21	12V _{SB}
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	Write Address	Read Address
0	0	B0h	B1h
0	1	B2h	B3h
1	0	B4h	B5h
1	1	B6h	B7h

FRU			
A1	A0	Write Address	Read Address
0	0	A0h	A1h
0	1	A2h	A3h
1	0	A4h	A5h
1	1	A6h	A7h



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ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than four 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.

PRECISION | POWER | PERFORMANCE | TRUST

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