

DS1200DC

1200 Watt Distributed Power System

Data Sheet

Front-end Bulk Power

Total Output Power:

180 to 264 Vac: 1200 W

3.3 Vdc or 5.0 Vdc Standby Output

Telco Input Range:

-40 to -72 Vdc



SPECIAL FEATURES

- GR-1089-CORE Issue 4 compliant
- 1U X 2U form factor
- 21.71 W / in³
- +12 Vdc Output
- +3.3 Vdc standby (5 V standby option)
- No minimum load required
- Hot plug operation
- N + 1 redundant
- Internal OR'ing fets
- Active current sharing shares with DS1200 AC unit (10 - 100% load)
- Built-in cooling fan (40 mm x 28 mm)
- I²C communication interface bus
- PMBus compliant
- EERPOM for FRU data
- Red/green bi-color LED status
- Internal fan speed control
- Fan Fail Tach Output Signal
- INTEL, SSI Std. logic timing
- INTEL, SSI Std. FRU data format
- Full digital control
- Two year warranty
- NEBS compliant

SAFETY

- UL/cUL 60950 (UL Recognized)
- NEMKO+ CB Report EN60950
- EN60950
- CE Mark
- China CCC

Electrical Specifications

Input	
Input range	-40 Vdc to -72 Vdc
Inrush current	ETSI EN300 132-2 part 4.7 compliant
Efficiency	> 85% typical at high line 50% load
Conducted EMI	Per GR-1089-CORE Issue 4
Radiated EMI	Per GR-1089-CORE Issue 4
Leakage current	1.40 mA @ 240 Vac
Hold up time	12 ms minimum
Output	
Main DC voltage	+12 V @ 100 A
Standby	+3.3 Vsb @ 6 A (5 V @ 4 A available)
Adjustment range	±5% on +12 V only using I ² C
Regulation	+12 Vdc; ±5% +3.3 or 5.0 Vsb ±5%
Overcurrent	+12 Vdc; latches off if overcurrent lasts over 1 second, otherwise it is auto recovery (See Table 1 next page) +3.3 Vsb, 9 A max (hiccup mode)
Overvoltage	+12 Vdc; 13.2 - 14.4 Vdc +3.3 Vsb; 3.76 - 4.30 Vdc
Undervoltage	+12 Vdc; 9 - 10.8 V (latch off)
Turn-on delay	2 second max, 5 - 50 mS, monotonic rise
Main output rise time	5 - 50 mS, monotonic rise

Logic Control

PS_SEATED (A4)	TTL logic LOW if power supply is seated into system connector. This is a short pin. A logic HIGH if the PSU is removed
PWR_GOOD (C3)	Active TTL high when output is within regulation limits.
AC_OK (B1)	A low logic level if the input voltage is within allowable limits. A TTL logic HIGH level, and a 5 mS early warning signal before 12.0 V DC output loss of regulation.
PS_INHIBIT/PS_KILL (B4)	When left open power supply operation will be inhibited. When the power supply is inserted into the system, this pin will be pull low by the system and turn the power supply on only after all other power supply pins have seated.
PS_ON (A1)	The output will be enabled when this signal is pulled low, below 0.8 V outputs disabled when pin is driven high or left open.

Environmental Specifications

Operating temperature	-10 to 55 °C
Storage temperature	-40 to +85 °C
Altitude, operating	13,000 feet
Electromagnetic susceptibility / Input transients	GR-1089-CORE Issue 4
RoHS & lead free	Compliant
Humidity	20 - 90% RH, non condensing
Shock and vibration specifications	Complies with Artesyn standard specifications plus additional NEBS requirement
MTBF (demonstrated)	500 K Hrs at full load, 40 °C

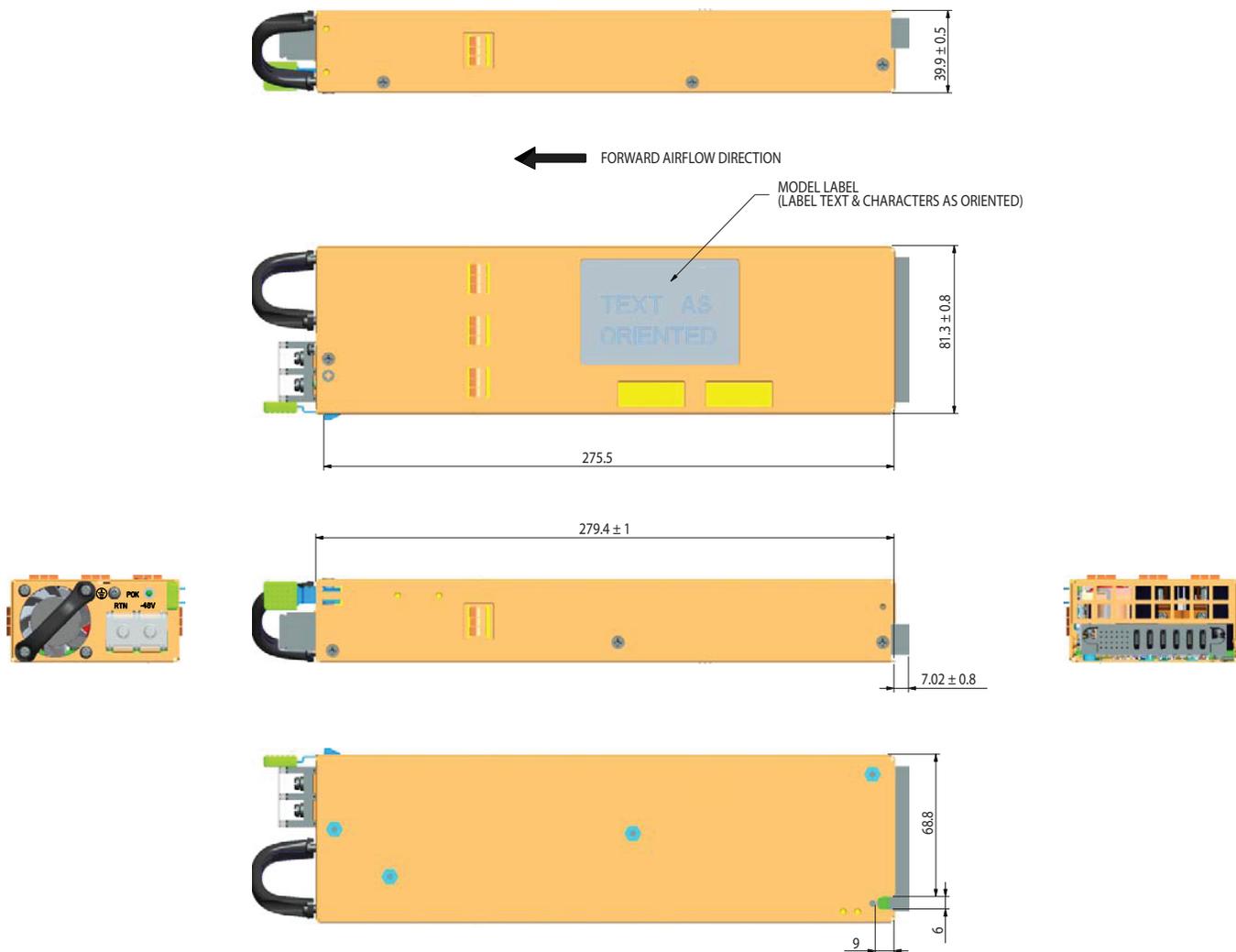
Ordering Information

Model Number*	Nominal Output Voltage Set Point	Set Point Tolerance	Total Regulation	Current		Output Ripple P/P	Overcurrent	Standby	Air Flow
				Min	Max				
DS1200DC-3	12.0 V	±0.2%	±0.5%	0 A	100 A	120 mV	118 A - 147.6 A*	3.3 V @ 6 A	STD
DS1200DC-3-001	12.0 V	±0.2%	±0.5%	0 A	100 A	120 mV	118 A - 147.6 A*	3.3 V @ 6 A	REV**
DS1200DC-3-002	12.0 V	±0.2%	±0.5%	0 A	100 A	120 mV	118 A - 147.6 A*	5.0 V @ 4 A	STD
DS1200DC-3-004	12.0 V	±0.2%	±0.5%	0 A	100 A	120 mV	118 A - 147.6 A*	5.0 V @ 4 A	REV**

* Over current latches off if overcurrent lasts over 1 seconds, otherwise it is auto recovery.

** Derating may apply.

Mechanical Drawing



Conditon	LED Status
Stand-by - ON; Main output - OFF; AC PRESENT	Blinking green
Stand-by - ON; Main output - ON	Solid green
Main output OCP, UVP, OVP	Blinking Amber
FAN_FAULT; OTP; Stand-by OCP/UVP	Amber

Mechanical Specifications

DC Output Connector Pinout Assignment

Male connector as viewed from the rear of the supply:

D1	D2	D3	D4	D5	D6	PB1	PB2	PB3	PB4	PB5	PB6
C1	C2	C3	C4	C5	C6						
B1	B2	B3	B4	B5	B6						
A1	A2	A3	A4	A5	A6						

Power Supply Side

1. FCI Power Blade 51721 series
51721-10002406AA
2. Molex Power Connector
SD-87667 series
87667-7002

Mating Connector (System Side)

1. FCI Power Blade
51741-10002406CC
Straight Pins
2. FCI Power Blade
51761-10002406AALF
Right Angle

Pin Assignments

Pin	Signal Name
PB1	Main output return
PB2	Main output return
PB3	Main output return
PB4	+ Main output
PB5	+ Main output
PB6	+ Main output
A1	PS_ON_
A2	Main output remote sense return
A3	Spare
A4	PS_SEATED (Power supply seated)
A5	STANDBY
A6	STANDBY RETURN
B1	AC_OK (AC Input Present)
B2	Main output remote sense
B3	Main output current share
B4	PS_INHIBIT / PS_Kill
B5	STANDBY
B6	STANDBY Return
C1	ADC (I ² C Data Signal)
C2	SCL (I ² C Clock Signal)
C3	POWER GOOD
C4	Spare
C5	STANDBY
C6	STANDBY RETURN
D1	A0 (I ² C Address BIT 0 Signal)
D2	A1 (I ² C Address BIT 1 Signal)
D3	S_INT (Alarm)
D4	STANDYBY RMT SENSE
D5	STANDBY
D6	STANDBY RETURN

WORLDWIDE OFFICES

Americas

2900 S.Diablo Way
Tempe, AZ 85282
USA
+1 888 412 7832

Europe (UK)

Waterfront Business Park
Merry Hill, Dudley
West Midlands, DY5 1LX
United Kingdom
+44 (0) 1384 842 211

Asia (HK)

14/F, Lu Plaza
2 Wing Yip Street
Kwun Tong, Kowloon
Hong Kong
+852 2176 3333

ARTESYN[™]
EMBEDDED TECHNOLOGIES

www.artesyn.com

While every precaution has been taken to ensure accuracy and completeness in this literature, Artesyn Embedded Technologies assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions. Artesyn Embedded Technologies, Artesyn and the Artesyn Embedded Technologies logo are trademarks and service marks of Artesyn Embedded Technologies, Inc. All other names and logos referred to are trade names, trademarks, or registered trademarks of their respective owners. © 2015 Artesyn Embedded Technologies, Inc.

For more information: www.artesyn.com/power
For support: productsupport.ep@artesyn.com