

## DS1200DC

1200 Watts

Distributed Power System

**Distributed Power Bulk Front-End**

**Total Output Power:** 1200 Watts

3.3 or 5.0 Vdc Stand-by Output

**Telco Input Range:** -40 to -72 Vdc



## Special Features

- GR-1089-CORE Issue 4 compliant
- 1U X 2U form factor
- 21.71 W / in<sup>3</sup>
- +12 Vdc Output
- +3.3 Vdc stand-by (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)
- I<sup>2</sup>C 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
Stand-By:	+3.3 Vsb @ 6 A (5 V @ 4 A available)
Adjustment range:	±5% on +12V only using I <sup>2</sup> C
Regulation:	+12 Vdc; ± 5% 3.3 or 5.0 Vsb ± 5%
Over current:	+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)
Over voltage:	+12 Vdc; 13.2 - 14.4 Vdc +3.3 Vsb; 3.76 - 4.30 Vdc
Under voltage:	+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 5mS 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 °C to +85 °C
Altitude, operating:	13,000 ft
Electromagnetic susceptibility / Input transients:	GR-1089-CORE Issue 4
RoHS & lead-free	Compliant
Humidity:	20 to 90% RH, non-condensing
Shock and vibration specifications:	Complies with Astec Std. Specifications, Q3205 + additional NEBS requirement
MTBF (Demonstrated):	500K Hrs at full load, 40 °C

## Ordering Information

Model Number	Nominal Output Voltage Set Point	Set Point Tolerance	Total Regulation	Minimum Current	Maximum Current	Output Ripple P/P	Over Current	Stand-by	Air Flow
DS1200DC-3	12.0 Vdc	±0.2%	±5%	0 A	100 A	120 mV	118 A - 147.6 A*	3.3 V @ 6 A	STD
DS1200DC-3-001	12.0 Vdc	±0.2%	±5%	0 A	100 A	120 mV	118 A - 147.6 A*	3.3 V @ 6 A	REV†
DS1200DC-3-002	12.0 Vdc	±0.2%	±5%	0 A	100 A	120 mV	118 A - 147.6 A*	5.0 V @ 4 A	STD
DS1200DC-3-004**	12.0 Vdc	±0.2%	±5%	0 A	100 A	120 mV	118 A - 147.6 A*	5.0 V @ 4 A	REV†

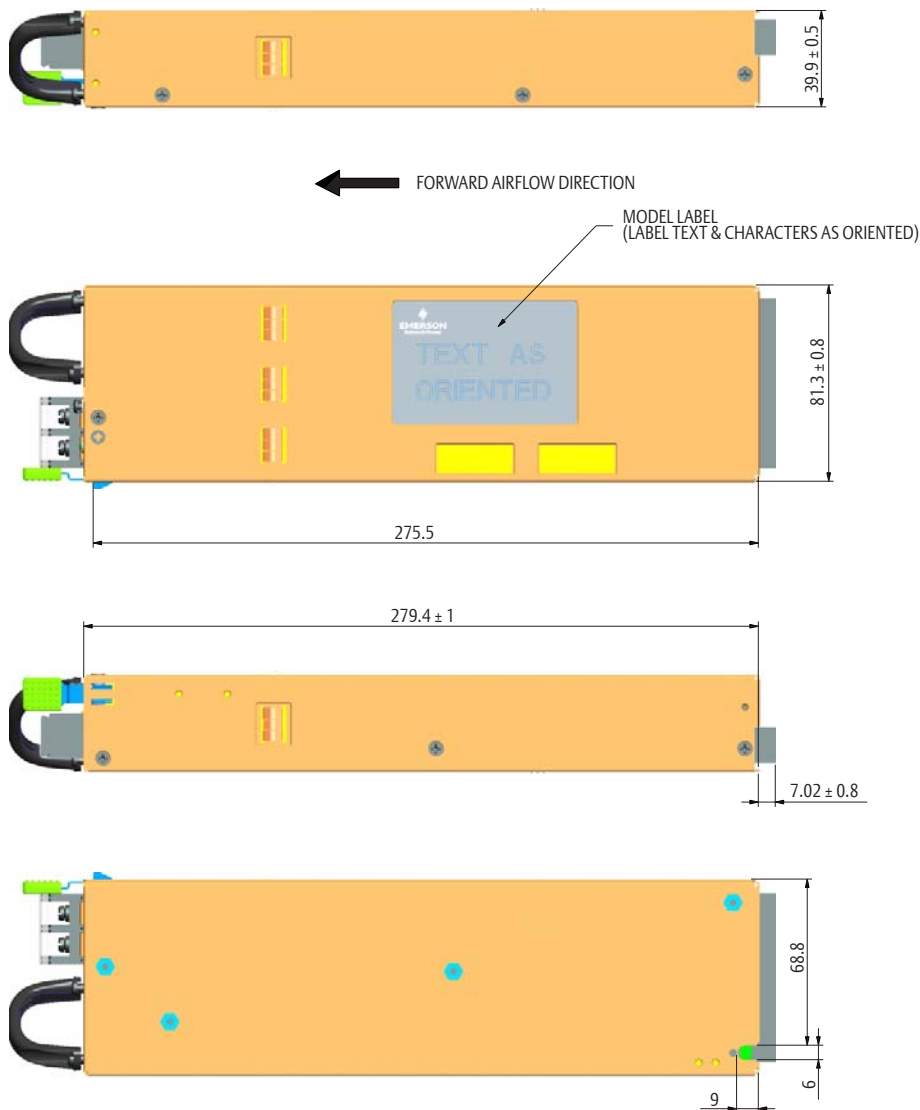
\*Over current latches off if overcurrent lasts over 1 seconds, otherwise it is auto recovery.

\*\*Release in April 2010

† Derating may apply.

## Mechanical Drawing

Condition	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



## DC Output Connector Pinout Assignment

Male connector as viewed from the rear of the supply:

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

### P1 - 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
PB 1	Main output return
PB 2	Main output return
PB 3	Main output return
PB 4	+ Main output
PB 5	+ Main output
PB 6	+ Main output
A1	PS_ON
A2	Main output remote sense return
A3	Spare
A4	PS_SEATED (Power Supply Seated)
A5	STAND-BY
A6	STAND-BY RETURN
B1	AC_OK (AC Input Present)
B2	Main output remote sense
B3	Main output current share
B4	PS_INHIBIT / PS_Kill
B5	STAND-BY
B6	STAND-BY RETURN
C1	SDA (I <sup>2</sup> C Data Signal)
C2	SCL (I <sup>2</sup> C Clock Signal)
C3	POWER GOOD
C4	Spare
C5	STAND-BY
C6	STAND-BY RETURN
D1	A0 (I <sup>2</sup> C Address BIT 0 Signal)
D2	A1 (I <sup>2</sup> C Address BIT 1 Signal)
D3	S_INT (Alarm)
D4	STAND-BY RMT SENSE
D5	STAND-BY
D6	STAND-BY RETURN

### Americas

5810 Van Allen Way  
Carlsbad, CA 92008  
USA  
Telephone: +1 760 930 4600  
Facsimile: +1 760 930 0698

### Europe (UK)

Waterfront Business Park  
Merry Hill, Dudley  
West Midlands, DY5 1LX  
United Kingdom  
Telephone: +44 (0) 1384 842 211  
Facsimile: +44 (0) 1384 843 355

### Asia (HK)

14/F, Lu Plaza  
2 Wing Yip Street  
Kwun Tong, Kowloon  
Hong Kong  
Telephone: +852 2176 3333  
Facsimile: +852 2176 3888

For global contact, visit:

[www.Emerson.com/EmbeddedPower](http://www.Emerson.com/EmbeddedPower)  
[techsupport.embeddedpower@emerson.com](mailto:techsupport.embeddedpower@emerson.com)

While every precaution has been taken to ensure accuracy and completeness in this literature, Emerson Network Power assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

### Emerson Network Power.

The global leader in enabling business-critical continuity.

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- Embedded Power**
- Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

### EmersonNetworkPower.com

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co.  
©2011 Emerson Electric Co.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Artesyn Embedded Technologies:](#)

[DS1200DC-3](#) [DS1200DC-3-002](#) [DS1200DC-3-005](#)