

## DS1200

1200 Watts

Distributed Power System

**Distributed Power Bulk Front-End**  
**Total Output Power:** 1200 Watts  
**+3.3 Vdc Stand-by Output**  
**Wide Range Input Voltage:** 90 - 264 Vac



## Special Features

- Active power factor correction
- EN61000-3-2 harmonic compliance
- Active AC inrush control
- 1U X 2U form factor
- 21.71 W / in<sup>3</sup>
- +12 Vdc Output
- +3.3 Vdc stand-by (5 V standby - consult factory)
- No minimum load required
- Hot plug operation
- N + 1 redundant
- Internal OR'ing fets
- Active current sharing (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

## Safety

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

## Electrical Specifications

| Input                  |  |
|------------------------|--|
| Input range:           | 180 - 264 (1200 W)<br>90 - 264 (1000 W)  |
| Frequency:             | 47-63 Hz, single phase AC  |
| Inrush current:        | 40 Apk maximum inrush current  |
| Efficiency:            | > 91% typical at high line 50% load  |
| Conducted EMI:         | FCC Subpart J EN55022 Class B  |
| Radiated EMI:          | FCC Subpart J EN55022 Class B  |
| Power factor:          | 0.99 typical   |
| Leakage current:       | 1.40 mA @ 240 VAC  |
| Hold up time:          | 12 ms minimum  |
| Output                 |  |
| Main DC voltage:       | +12 V @ 100 A (high line)<br>+12 V @ 81.6 A (low line)   |
| 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% / -5%<br>+3.3 Vsb; +5% / -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<br>+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 50 °C   |
| Storage temperature:                               | -40 °C to +85 °C  |
| Altitude, operating:                               | 10,000 ft   |
| Electromagnetic susceptibility / Input transients: | -EN61000-3-2, -3-3<br>-EN61000-4-2, 4.3, 4-4, -4-5, 4-11 Level<br>-EN55024:1998 |
| RoHS & lead-free compliant:                        | No tantalum caps.   |
| Humidity:  | 20 to 90% RH, non-condensing  |
| Shock and vibration specifications:                | Complies with Astec Std. Specifications, Q3205                                  |
| MTBF (Demonstrated):                               | 500K Hrs at full load, 40 °C  |

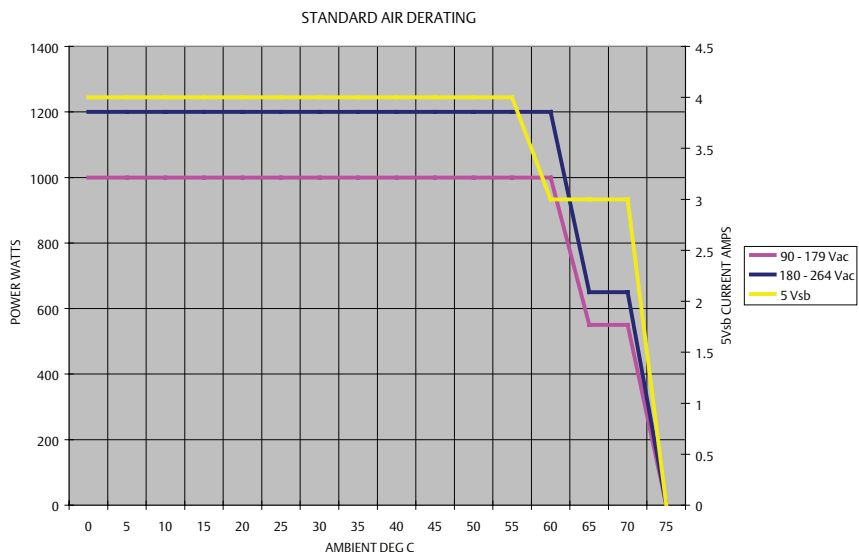
### Ordering Information

| 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 |
|----------------|----------------------------------|---------------------|------------------|-----------------|-----------------|-------------------|------------------|-------------|----------|
| DS1200-3       | 12.0 Vdc                         | ±0.2%               | ±5%              | 0 A             | 100 A           | 120 mV            | 118 A - 147.6 A* | 3.3 V @ 6 A | STD      |
| DS1200-3-002   | 12.0 Vdc                         | ±0.2%               | ±5%              | 0 A             | 100 A           | 120 mV            | 118 A - 147.6 A* | 5.0 V @ 4 A | STD      |
| DS1200-3-003** | 12.0 Vdc                         | ±0.2%               | ±5%              | 0 A             | 100 A           | 120 mV            | 118 A - 147.6 A* | 3.3 V @ 6 A | REV†     |
| DS1200-3-004** | 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.

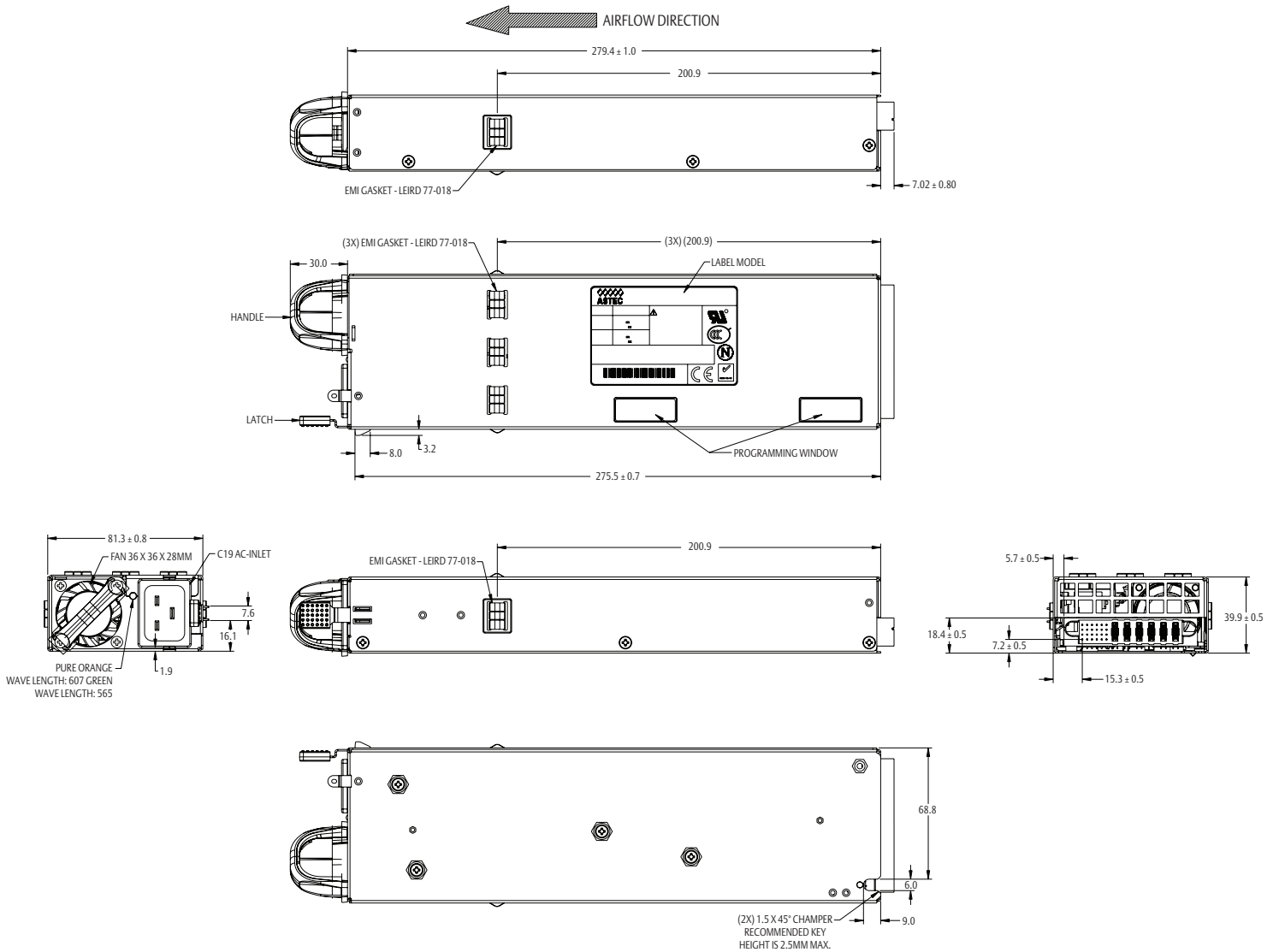
\*\*Release in April 2010

† 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                            |

\*Supports I<sup>2</sup>C standard mode (100 kHz) only

### 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.

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А