

## DS450HE-3/ DS550HE-3

450 W - 550 W

Distributed Power System

Distributed Power Bulk Front-End  
Total Output Power: 450 - 550 Watts  
+12 Vdc Main Output  
+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
- 10.3 W / in<sup>3</sup> (DS550HE)  
8.4 W / in<sup>3</sup> (DS450HE)
- +12 Vdc Output
- +3.3 Vdc Stand-By
- No Minimum Load Required
- Hot Plug Operation
- N + 1 Redundant
- Internal OR'ing Fets
- Active Current Sharing
- Built-in Cooling Fans (40 mm x 28 mm)
- I<sup>2</sup>C Communication Interface Bus
- EERPOM for FRU Data
- Amber LED Status, Fan\_Fail
- Green LED Status, Power Good / AC\_OK Status
- Internal Fan Speed Control
- Fan Fail Tach Output Signal
- Two Year Warranty

### Safety

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

## Electrical Specifications

Input	
Input range:	90 - 264 Vac (wide range)
Frequency:	47 - 63 Hz, single phase AC
Inrush current:	15 A maximum
Efficiency:	See curve
Conducted EMI:	FCC Subpart J EN55022 Class A
Radiated EMI:	FCC Subpart J EN55022 Class A
Power factor:	0.99 typical
Leakage current:	1.30 mA @ 240 Vac
Hold up time:	20 ms minimum
Output	
Main DC voltage:	+12 V
Stand-By:	+3.3 Vsb
Adjustment range:	Factory Set, no pot adjustments
Regulation:	+12 Vdc; +5%/-3% +3.3 Vsb; +5%/-4%
Overcurrent:	See Table 1 next page
Overvoltage:	+12 Vdc; 13.5 - 15 Vdc +3.3 Vsb; 3.76 - 4.30 Vdc
Undervoltage:	+12 Vdc; 11.0 - 11.5 Vdc +3.3 Vsb; 2.77 - 3.00 Vdc
Turn-on delay:	1 Second max
+12 V Output Rise Time:	2 - 20 mS, Monotonic

### Logic Control

PS Inhibit:	When supply is inserted into the system the pin is pulled LOW and power supply is ON after all other pins are seated
PS_Status:	I <sup>2</sup> C port P6. When the power supply is on and running normal P6 is low. When the power supply is off, either due to -PS_ON, PS_KILL, or a fault, then P6 is high.
AC_Pfail:	I <sup>2</sup> C port P7. P7 is high except when the power supply turns the main outputs, not +3.3 Vsb, off due to an AC failure (AC missing or too low for power supply operation). If the supply is turned off due to -PS_ON, PS_KILL, or a fault, then P7 remains high.
Fan_Fault:	The PSU will provide an open collector Tach 1 output.
Tach_1:	This signal is generated from the fan. The signal should generate 2 pulses per revolution. The logic in the system will be operating at 3.3 V.

## Environmental Specifications

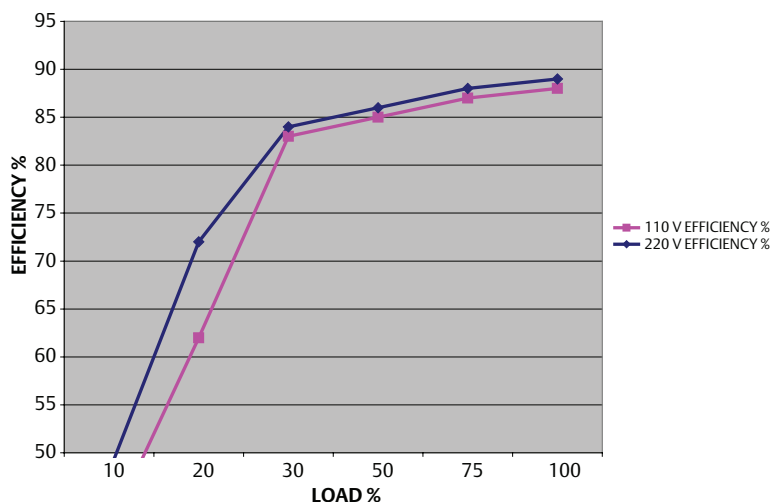
Operating temperature:	-10 °C to 50 °C
Storage temperature:	-40 °C to +70 °C
Altitude, operating:	10,000 ft.
Electromagnetic susceptibility / Input transients:	-EN61000-3-2, -3-3 -EN61000-4-2, 4.3, 4-4, -4-5, 4-11 Level -EN55024:1998
RoHS & lead-free compliant (no tantalum caps)	
Humidity:	20 to 90% RH, non-condensing
Shock and vibration specifications	complies with Emerson Network Power Std. Specification, Q3205
MTBF (Demonstrated):	400K Hrs at full load, 40 °C

### Ordering Information

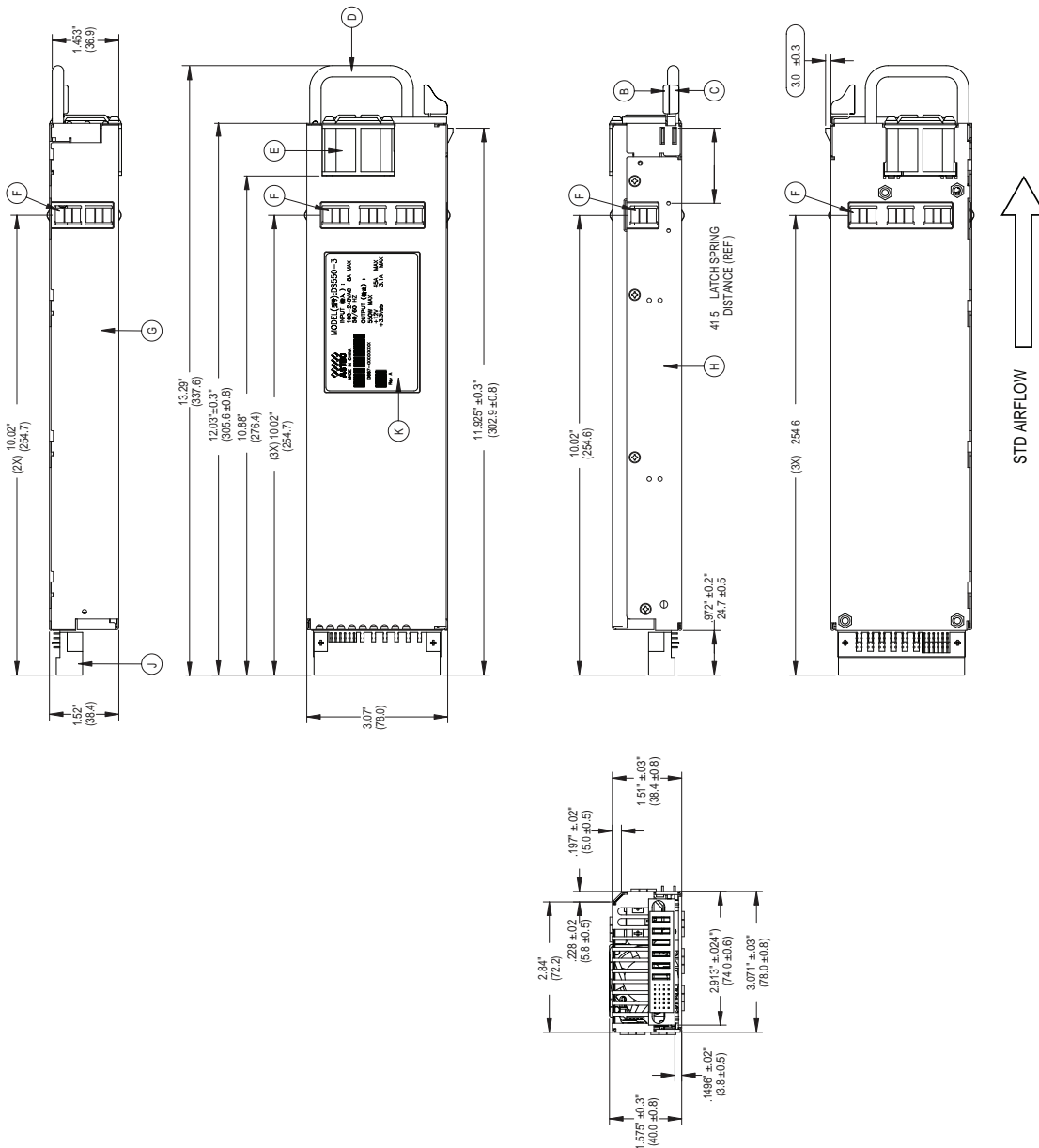
Output	Nominal Output Voltage Set Point	Set Point Tolerance	Total Regulation	Minimum Current	Maximum Current	Output Ripple P/P	Overcurrent
DS450HE-3	12.0 Vdc	± 0.2%	+5 / -3%	0 A	37.0 A	120 mV	39.5 A - 44.4 A
	3.3 Vsb	± 1%	+5 / -4%	0 A	3.0 A	60 mV	4.9 A Avg, 7 A max
DS550HE-3	12.0 Vdc	± 0.2%	+5 / -3%	0 A	45.0 A	120 mV	48.0 A - 54.0 A
	3.3 Vsb	± 1%	+5 / -4%	0A	3.0 A	60 mV	4.9 A Avg, 7 A max

\*Overcurrent latches off if overcurrent lasts over 1 second, otherwise it is auto recovery.

\*For 5 Vsb, consult marketing.



# Mechanical Drawing



## 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  
Strait Pins
2. FCI Power Blade  
51761-10002406AA  
Right Angle

Pin	Signal Name
PB 1	+12 V Return
PB 2	+12 V Return
PB 3	+12 V Return
PB 4	+12 V
PB 5	+12 V
PB 6	+12 V
A1	PS_KILL
A2	+12 V_Current Share
A3	Logic Return
A4	Write Protect
A5	A0 (I <sup>2</sup> C Address BIT 0 Signal)
A6	+3.3V Stand-By
B1	Logic Return
B2	12V Sense Return
B3	Logic Return
B4	+3.3 V Stand-By
B5	SDA (I <sup>2</sup> C Data Signal)
B6	PSON (Power Enable Signal)
C1	Logic Return
C2	Tach_1 (Fan Fail Signal)
C3	Logic Return
C4	+3.3 V Stand-By
C5	SCL (I <sup>2</sup> C Clock Signal)
C6	VIN_GOOD (AC Input present)
D1	-PS_Present (Power Supply Seated)
D2	+12 V Sense
D3	Logic Return
D4	+3.3 V Stand-By
D5	S_INT (Alert)
D6	POK (Output Power Ok)

### 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.  
©2010 Emerson Electric Co.



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

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.