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DS650/DS850

650 / 850 Watts

Distributed Power System

Distributed Power Bulk Front-End

Total Output 650/850 Watts

Power: +3.3 Vdc Stand-by Output

Wide Range 90 - 264Vac Input Voltage: 12, 24 and 48V

Special Features

- Active power factor correction
- EN61000-3-2 harmonic compliance
- Active AC inrush control
- 1U X 2U form factor
- 15.4W/ in³
- 12 Vdc, 24 Vdc and 48 Vdc output
- +3.3 Vdc stand-by
 - (5V 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 fans (40mm x 28mm)
- I²C communication interface bus
- 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
- One year warranty

Safety

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



Electrical Specifications

nput	
nput range	90-264 Vac (wide range)
requency	47-63 Hz, single phase AC
nrush current	55 A maximum inrush current
Efficiency	>82% typical at full load, high line
Conducted EMI	FCC Subpart J EN55022 Class B
Radiated EMI	FCC Subpart J EN55022 Class B
	nput range requency nrush current ifficiency Conducted EMI

Power factor 0.99 typical Leakage current 1.40 mA @ 240 Vac Hold up time 20ms minimum

Output

Main DC voltage +12 V @ 52.5 A/70.0 A +24 V @ 26.3 A / 35.0 A

+48 V @ 13.1 A / 17.5 A

+3.3 vsb @ 6 A (5 V @ 4 A available) Stand-By

Adjustment range Factory Set, no pot adjustments

Regulation Main output; +5%/-5% +3.3 vsb; +5%/-5%

Over current 110% - 150% of nominal Latches off if overcurrent lasts

over 1 second, otherwise it is auto recovery.

+3.3 vsb, 9 A max (hiccup mode)

110% - 120% of nominal Over voltage +3.3 vsb; 3.76 - 4.30 Vdc

75% - 90% of nominal

Under voltage Turn-on delay 2 Second max, 5 - 50 mS, Monotonic Rise

Main output rise time 5 - 50 mS, Monotonic Rise





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Logic Control	
PS_SEATED	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	Active TTL HilGH when output is within regulation limits.
AC OK	A LOW logic level if the input voltage is within allowable limits. A TTL logic HIGH level, and a 5mS early warning signal before main output loss of regulation.
Temp OK	A TTL logic HIGH, when operating within allowable temperature range.
PS_INHIBIT/PS_KILL	This signal is connected to a short pin on the PSU 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.

Environmental Specifications

Operating temperature: -10° to 50°C; 50% power derating at 70°C

Storage temperature: -40°C to +85°C

Altitude, operating 10,000ft.

Electromagnetic -EN61000-3-2, -3-3

susceptibility / Input transients: -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 Astec Std. Specifications, Q3205

MTBF (Demonstrated) 500K Hrs at full load, 40°C

Or	Ordering Information								
Oı		Nominal Output Voltage Set Point	Set Point Tolerance	Total Regulation	Minimum Current	Maximum Current	Output Ripple P/P		
DS6	550-3	12.0 Vdc 3.3 vsb*	±0.2% ±1%	±5% ±5%	0A 0A	52.5 A 6.0 A	120mV 50mV		
DS6	550-5	24.0 Vdc 3.3 vsb*	±0.2% ±1%	±5% ±5%	0A 0A	26.3 A 6.0 A	240 mV 50 mV		
DS6	550-9	48.0 Vdc 3.3 vsb*	±0.2% ±1%	±5% ±5%	0A 0A	13.1 A 6.0 A	480mV 50mV		
DS8	350-3	12.0 Vdc 3.3 vsb*	±0.2% ±1%	±5% ±5%	0A 0A	70.0 A 6.0 A	120mV 50mV		
DS8	350-5	24.0 Vdc 3.3 vsb*	±0.2% ±1%	±5% ±5%	0A 0A	35.0 A 6.0 A	240 mV 50 mV		
DS8	350-9	48.0 Vdc 3.3 vsb*	±0.2% ±1%	±5% ±5%	0A 0A	17.5 A 6.0 A	480mV 50mV		

 $^{^{*}}$ For 5 vsb, consult marketing.

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Mechanical Drawing

	LED Green/Amber	AIRFLOW DIRECTION
	OFF	3.09" (78.5)
AC present/Standby outpus ON, Main output OFF	Blinking Green	(78.5)
11.2	Solid Green	(16.5)
	Blinking Amber	
Fan Fail, OTP, Standby output OCP/UVP S	Solid Amber	
BI-COLOR LED		11.0" ± .02" 7.48" (279.4 ± 0.5) (190.0) (65.5) (40.5) (15.5) (10.80" (275.5 ± 0.7)
1.58" (40.2) CLIP COMPRESSED (2X) 3.30"±.03" (83.8 ±0.7)	.897"±.02 (16.2±0.6) .897"±.02 (22.8±0.6)	142"±.02" 1.57"±.02" (3.6 ±0.5) (3.9 ±0.5) (3.9 ±0.5) (3.9 ±0.5) (3.6 ±0.5) (

DC Output Connector Pinout Assignment

Male connector as viewed from the rear of the supply:

D1	D2	D3	D4	D5	D6	DD1	PB1 PB2	מממ	DD 4	DDE	DD6
C1	C2	C3	C4	C5	C6						
B1	B2	В3	B4	B5	В6	PDI	PDZ	PD3	PD4	PBS	PDU
A1	A2	А3	A4	A5	A6						

D4 D5

D6

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	MAIN O/P RETURN
PB 2	MAIN O/P RETURN
PB 3	MAIN O/P RETURN
PB 4	+ MAIN O/P
PB 5	+ MAIN O/P
PB 6	+ MAIN O/P
A1	PS_ON
A2	MAIN O/P V RMT SENSE RETURN
A3	TEMP_OK
A4	PS_SEATED (Power Supply Seated)
A5	+3V3 STAND-BY
A6	+3V3SB RETURN
B1	AC_OK (AC Input Present)
B2	MAIN O/P RMT SENSE
B3	MAIN O/P CURRENT SHARE
B4	PS_INHIBIT
B5	+3V3 STAND-BY
B6	+3V3SB RETURN
C1	SDA (I2C Data Signal)
C2	SCL (I2C Clock Signal)
C3	POWER GOOD
C4	FAN FAIL (Fan Fail Signal)
C5	+3V3 STAND-BY
C6	+3V3SB RETURN
D1	A0 (I2C Address BIT 0 Signal)
D2	A1 (I2C Address BIT 1 Signal)
D3	S_INT (Alarm)

+3V3 STAND-BY RMT SENSE

+3V3 STAND-BY

+3V3SB RETURN

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