



FSP850-50AFB

FEATURES

- Design for 230Vac Input Environment
- 80 Plus Titanium (230V EU Internal Non-redundant)
- Meet Intel ATX V3.1
- Certified IEC 62368-1 3rd
- High Reliability
- Over Current Protection
- Over Temperature Protection
- Over Voltage Protection

SAFETY STANDARD APPROVAL



DESCRIPTION

FSP850-50AFB is an industrial level of switching power supply. This power is designed to meet newest Intel ATX 3.1 standard, and high efficiency, in standard ATX size. Therefore, it is suitable for applications such as edge workstations, servers and GPU servers.

GENERAL SPECIFICATIONS

Operating altitude:	5,000 meters
MTBF:	≥ 100,000Hrs, full load at 25°C
Efficiency (230Vac input):	91%; 96%; 94%; 90% at 100%; 50%; 20%; 10% load

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	230Vac / 6.0A

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	0~50°C
Storage temperature:	-40~+70°C
Operating humidity:	10~85% RH non-condensing
Storage humidity:	10~95% RH non-condensing

OUTPUT SPECIFICATIONS

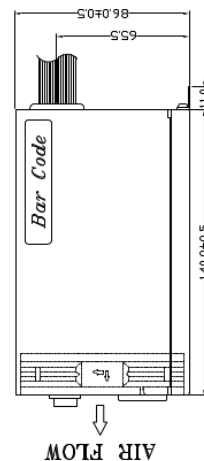
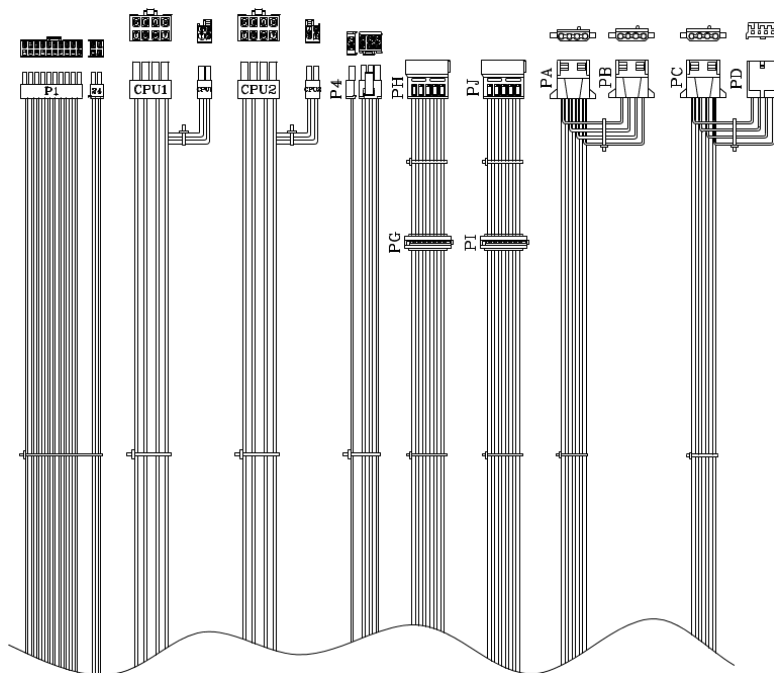
Max. output power:	850W (230Vac input)
Hold-up time:	115V / 60Hz: 12m Sec. minimum 230V / 50Hz: 12m Sec. minimum
Rise time:	The output voltages shall rise from ≤ 10% of nominal to within the regulation ranges specified in official specification "Section 3.1" within 0.1 ~ 20 ms (0.1 ms ≤ T ₂ ≤ 20 ms).
Protection:	Under 230Vac input condition
Over voltage:	+3.3Vdc: 3.76V~4.80V +5Vdc: 5.74V~7.00V +12Vdc: 13.40V~15.60V
Over current:	+3.3Vdc: 22A~30A +5Vdc: 26A~34A +12dc: 78A~106A
Short circuit:	Shutdown & latch off without damage PSU

OUTPUT RATING CHART (under 230Vac input condition):

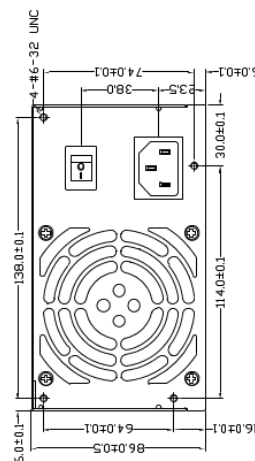
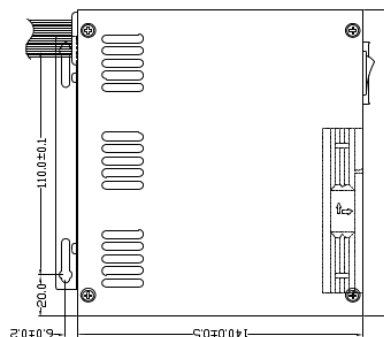
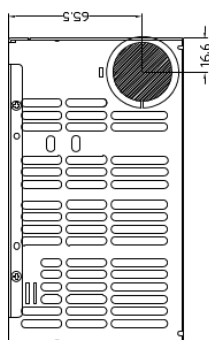
Outputs	+3.3V	+5V	+12V	-12V (Optional)	+5Vsb
Max. current	20.0A	20.0A	70.83A	0.3A	4.0A
Min. current	0.0A	0.0A	0.0A	0.0A	0.0A
Regulation	± 5%	± 5%	± 5%	± 10%	± 5%
Ripple/Noise	50mV	50mV	120mV	120mV	50mV

MECHANICAL & AC CONNECTOR SPECIFICATIONS

Unit: mm



REF. ID.	PIN NO.	SIGNAL	WIRE COLOR	GAUGE	CONNECTOR TYPE	CABLE LENGTH
P1/24	1	+3.3VDC	ORANGE	18	J17 C4202H02 ~A20P4 C4202H02 ~A4P4 OR EQUIV	350±15mm
	2	+3.3VDC	ORANGE	18		
	3	COM	BLACK	18		
	4	+5VDC	RED	18		
	5	COM	BLACK	18		
	6	+5VDC	RED	18		
	7	COM	BLACK	18		
	8	PW-ON	GRAY	22		
	9	+5Vsb	PURPLE	18		
	10	+12V	YELLOW	18		
	11	+12V	YELLOW	18		
	12	+3.3VDC	ORANGE	18		
	13	+3.3VDC	ORANGE	18		
	14	+3.3Vsb	BROWN	22		
	15	-12VDC	BLUE	22		
	16	COM	BLACK	18		
	17	PS-ON	GREEN	22		
	18	COM	BLACK	18		
	19	COM	BLACK	18		
	20	COM	BLACK	18		
	21	+5VDC	RED	18		
	22	+5VDC	RED	18		
	23	+5VDC	RED	18		
	24	COM	BLACK	18		
P4	1	+12V	YELLOW	18	WST P8-142002 K21B-B or EQUIV.	350±15mm
	2	+12V	YELLOW	18		
	3	+12V	YELLOW	18		
	4	COM	BLACK	18		
	5	COM	BLACK	18		
	6	COM	BLACK	18		
	7	COM	BLACK	18		
	8	COM	BLACK	18		
PA	1	+12V	YELLOW	18	AMP 1-480424-0 or EQUIV.	350±15mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+5V	RED	18		
PB	1	+12V	YELLOW	18	AMP 1-480424-0 or EQUIV.	150±10mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+5V	RED	18		
PD	1	+5V	RED	22	AMP 171822-4 or EQUIV.	150±10mm
	2	COM	BLACK	22		
	3	COM	BLACK	22		
	4	+12V	YELLOW	22		
PG	1	+3.3VDC	ORANGE	18	CL1271HS0 -15P or EQUIV.	350±15mm
	2	COM	BLACK	18		
	3	+5V	RED	18		
PI	4	COM	BLACK	18		
	5	+12V	YELLOW	18		
PH	1	+3.3VDC	ORANGE	18	CL1270H00 -15P or EQUIV.	150±10mm
	2	COM	BLACK	18		
PJ	3	+5V	RED	18		
	4	COM	BLACK	18		
	5	+12V	YELLOW	18		



CPU1	1	COM	BLACK	18	MOLEX 38-01-2080 or EQUIV. (BLACK)	350±15mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	COM	BLACK	18		
	5	+12V	YELLOW	18		
	6	+12V	YELLOW	18		
	7	+12V	YELLOW	18		
	8	+12V	YELLOW	18		
CPU2	1	COM	BLACK	18	MOLEX 38-01-2080 or EQUIV. (BLACK)	350±15mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	COM	BLACK	18		
	5	+12V	YELLOW	18		
	6	+12V	YELLOW	18		
	7	+12V	YELLOW	18		
	8	+12V	YELLOW	18		
CPU1	1	COM	BLACK	18	WST P4-142002 K4B or EQUIV	100±10mm
	2	COM	BLACK	18		
	3					
	4					
	5	+12V	YELLOW	18		
	6	+12V	YELLOW	18		
	7					
	8					
CPU2	1				WST P4-142002 K3B or EQUIV	100±10mm
	2					
	3	COM	BLACK	18		
	4	COM	BLACK	18		
	5					
	6					
	7	+12V	YELLOW	18		
	8	+12V	YELLOW	18		

