TECHNICAL DATASHEET

650W Flex

FSP650-50FUB

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FEATURES

- 80 Plus Platinum
- 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

FSP650-50FUB is an industrial level of switching power supply. This power is designed to meet newest Intel ATX 3.1 standard, and high efficiency, in such small size. Therefore, it is suitable for applications in “Industrial Edge Server” equipment.

GENERAL SPECIFICATIONS

Operating altitude:	5,000 meters
MTBF:	≥ 100,000Hrs, full load at 25°C
Efficiency (115Vac input):	89%; 92%; 90% at 100%; 50%; 20% load

INTPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	115Vac / 10.0A, 230Vac / 5.0A

ENVIRONMENTAL SPECITICATIONS

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:	650W
Hold-up time:	115V / 60Hz: 12m Sec. minimum 230V / 50Hz: 12m Sec. minimum
Rise time: +3.3V, +5V & +12V	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 ≤ T2 ≤ 20 ms).

Protection:

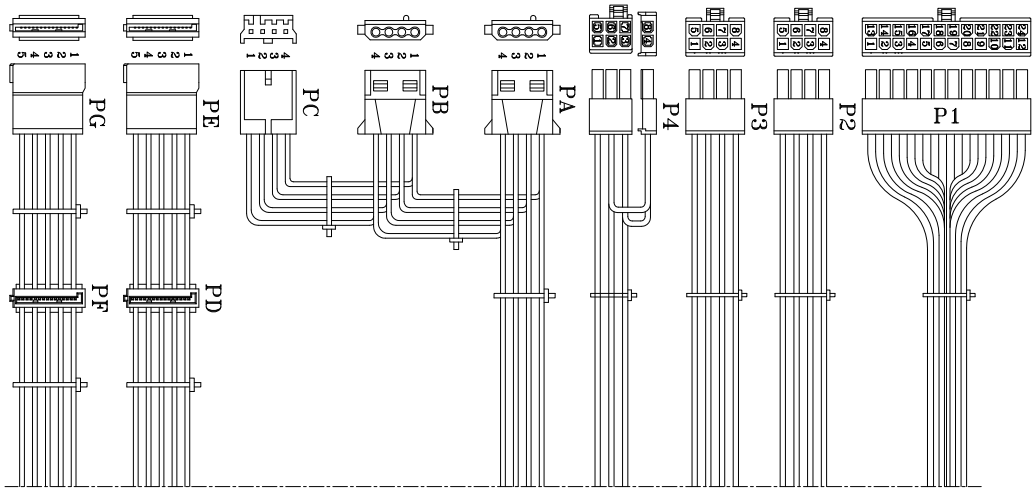
Over voltage:	+3.3Vdc: 3.76V~4.80V +5Vdc: 5.75V~7.00V +12Vdc: 13.50V~15.50V
Over current:	+3.3Vdc: 25A~45A +5Vdc: 25A~45A +12dc: 65A~75A
Short circuit:	Shutdown & latch off without damage PSU

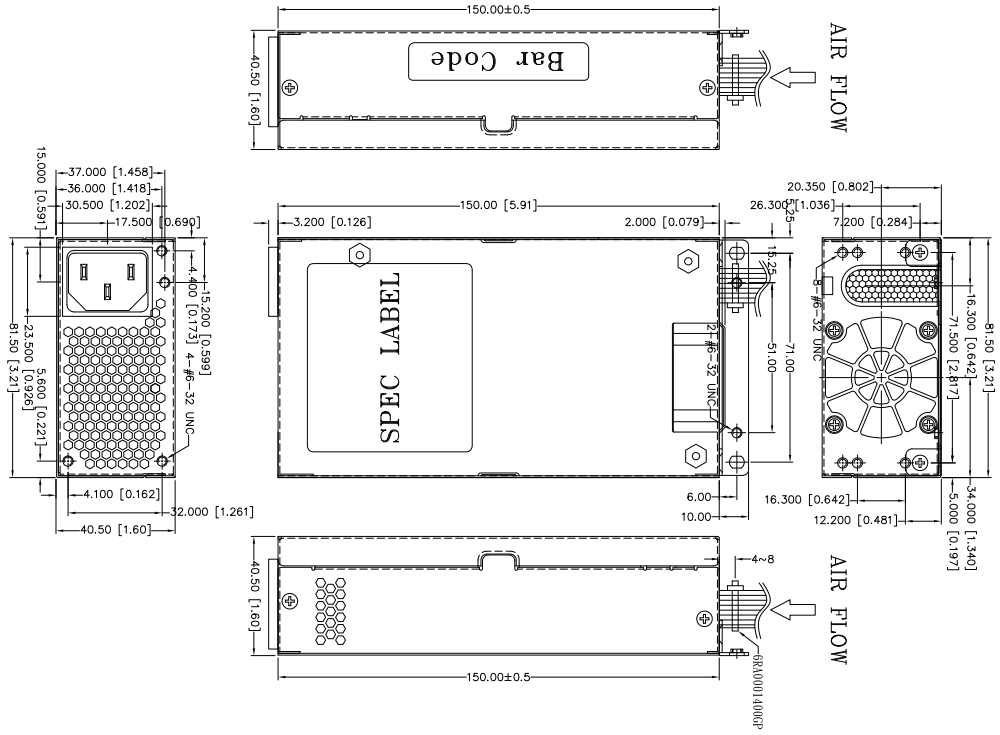
OUTPUT RATING CHART:

Outputs	+3.3V	+5V	+12V	−12V	+5Vsb
Max. current	14.0A	16.0A	54.17A	0.3A	3.0A
Min. current	0.0A	0.0A	0.0A	0.0A	0.0A
Regulation	± 5%	± 5%	+5/−7%	± 10%	± 5%
Ripple/Noise	50mV	50mV	120mV	120mV	50mV

MECHANICAL & AC CONNECTOR SPECIFICTIONS

Unit: mm





REF. ID.	PIN NO.	SIGNAL	WIRE COLOR	GAUGE	CONNECTOR TYPE	CABLE LENGTH
P1	1	+3.3V	ORANGE	20	MOLEX 39-01-2240 or EQUIV.	350±15mm
	2	+3.3V	ORANGE	20		
	3	COM	BLACK	20		
	4	+5V	RED	20		
	5	COM	BLACK	20		
	6	+5V	RED	20		
	7	COM	BLACK	20		
	8	PW_OK	GRAY	22		
	9	+5VSB	PURPLE	20		
	10	+12V	YELLOW	20		
	11	+12V	YELLOW	20		
	12	+3.3V	ORANGE	20		
	13	+3.3V	ORANGE	20		
	14	-12V	BROWN	22		
	15	COM	BLACK	20		
	16	PS-ON	GREEN	22		
	17	COM	BLACK	20		
	18	COM	BLACK	20		
	19	COM	BLACK	20		
	20					
	21	+5V	RED	20		
	22	+5V	RED	20		
	23	+5V	RED	20		
	24	COM	BLACK	18		
P2 P3	1	COM	BLACK	18	MOLEX 39-01-2080 or EQUIV.	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		
P4	1	+12V	YELLOW	18	P8 WST H4202K231B 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	20	WST P4-A10202 or EQUIV.	350±15mm
	2	+12V	YELLOW	20		
	3	COM	BLACK	20		
	4	+5V	RED	20		
PB	1	+5V	RED	20	WST P4-A10202 or EQUIV.	155±10mm
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+12V	YELLOW	20		
PC	1	+12V	YELLOW	22	AMP 171822-4 or EQUIV.	155±10mm
	2	COM	BLACK	22		
	3	COM	BLACK	22		
	4	+5V	RED	22		
PF	1	+3.3V	ORANGE	20	MOLEX SD-67926-0311 or EQUIV.	350±15mm
	2	COM	BLACK	20		
	3	+5V	RED	20		
	4	COM	BLACK	20		
	5	+12V	YELLOW	20		
PD	1	+3.3V	ORANGE	20	MOLEX SD-67582-001 or EQUIV.	155±10mm
	2	COM	BLACK	20		
	3	+5V	RED	20		
	4	COM	BLACK	20		
	5	+12V	YELLOW	20		
PE	1	+3.3V	ORANGE	20		
	2	COM	BLACK	20		
	3	+5V	RED	20		
	4	COM	BLACK	20		
	5	+12V	YELLOW	20		
PG	1	+3.3V	ORANGE	20		
	2	COM	BLACK	20		
	3	+5V	RED	20		
	4	COM	BLACK	20		
	5	+12V	YELLOW	20		