

FSP2000-50AQB

FEATURES

- Meet Intel ATX V3.1
- Meet 80 Plus Platinum
- Certified IEC 62368-1 3rd
- High Reliability
- Over Current Protection
- Over Temperature Protection
- Over Voltage Protection

SAFETY STANDARD APPROVAL



DESCRIPTION

FSP2000-50AQB is an industrial level of switching power supply. This power is designed to meet newest Intel ATX 3.1 standard, and high efficiency. Therefore, it is suitable for edge AI or GPGPU applications in "Industrial 4U or tower chassis" equipments.

GENERAL SPECIFICATIONS

Input power at power off: < 0.5W (5Vsb)
 Operating altitude: 5,000 meters
 MTBF: ≥ 100,000Hrs, full load at 25°C
 Efficiency (230Vac input): 92%; 94%; 90% at 100%; 50%; 20% load

INPUT SPECIFICATIONS

Input voltage: 90-264 VAC
 Input frequency: 47-63 Hz
 Input current: 115Vac / 15.0A, 230Vac / 12.0A Max.

ENVIRONMENTAL SPECIFICATIONS

Operating temperature: 0~50°C
 Storage temperature: -20~+80°C
 Operating humidity: 5~85% RH non-condensing
 Storage humidity: 5~95% RH non-condensing

OUTPUT SPECIFICATIONS

Max. output power: 180~240Vac: 2000W
 Hold-up time: 230V / 50Hz: 13m Sec. minimum

Rise time: Power-on time: < 200 ms
 +5/+3.3/+12Vdc: < 20 ms
 PWR_OK rise: ≤ 250 ms
 PWR_OK delay: < 250 ms

Protection:

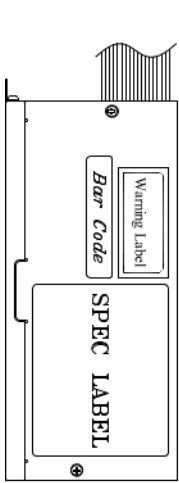
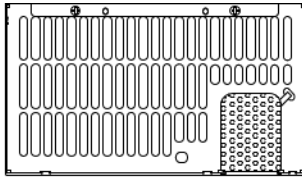
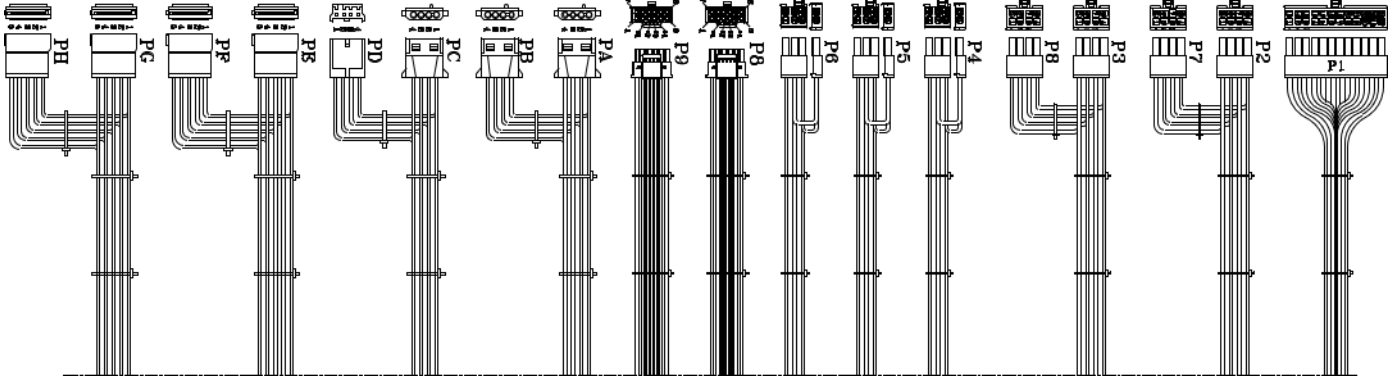
Over voltage: +3.3Vdc: 3.76V~4.8V
 +5Vdc: 5.75V~7.0V
 +12Vdc: 13.5V~15.5V
 Over current: +3.3dc: 34A~50A
 +5Vdc: 34A~50A
 +12Vdc: 200A~250A
 Short circuit: Shutdown & latch off without damage PSU

OUTPUT RATING CHART:

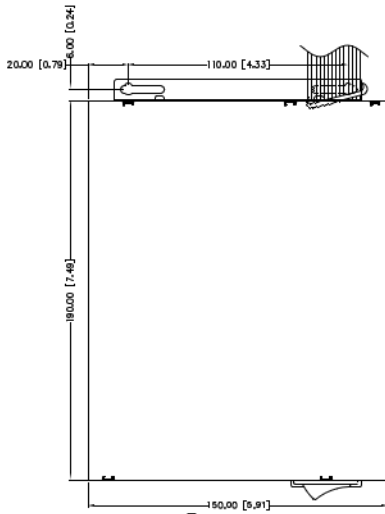
Outputs	+3.3V	+5V	+12V	+12V	+5Vsb
Max. current	30.0A	30.0A	166.6A	0.5A	5.0A
Min. current	0.0A	0.0A	0.0A	0.0A	0.0A
Regulation	± 5%	± 5%	± 5%	± 10%	± 5%
Ripple/Noise	50mV	50mV	120mV	120mV	50mV

MECHANICAL & AC CONNECTOR SPECIFICATIONS

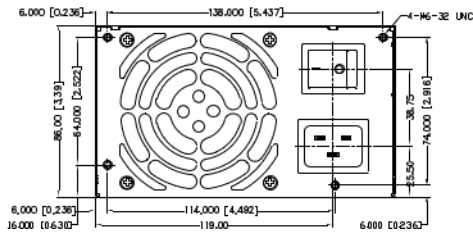
Unit: mm



AIR FLOW



AIR FLOW



REF. ID.	PN NO.	SIGNAL	WIRE COLOR	GAUGE	CONNECTOR TYPE	CABLE LENGTH
P1	1	+3.3V	ORANGE	16	WSP P24-142002 or EQUIV.	500±20mm
	2	+3.3V	ORANGE	16		
	3	COM	BLACK	16		
	4	COM	BLACK	16		
	5	COM	BLACK	16		
	6	COM	BLACK	16		
	7	COM	BLACK	16		
	8	COM	BLACK	16		
	9	COM	BLACK	16		
	10	COM	BLACK	16		
	11	COM	BLACK	16		
	12	COM	BLACK	16		
	13	COM	BLACK	16		
	14	COM	BLACK	16		
	15	COM	BLACK	16		
	16	COM	BLACK	16		
	17	COM	BLACK	16		
	18	COM	BLACK	16		
	19	COM	BLACK	16		
	20	COM	BLACK	16		
	21	+5V	RED	16		
	22	+5V	RED	16		
	23	+5V	RED	16		
	24	COM	BLACK	16		
P2	1	COM	BLACK	16	WSP P8-142002 or EQUIV.	500±20mm
	2	COM	BLACK	16		
	3	COM	BLACK	16		
	4	COM	BLACK	16		
P3	5	+12V	YELLOW	16	WSP P8-142002 or EQUIV.	155±20mm
	6	+12V	YELLOW	16		
	7	+12V	YELLOW	16		
	8	+12V	YELLOW	16		
P7	1	COM	BLACK	16	WSP P8-142002 or EQUIV.	155±20mm
	2	COM	BLACK	16		
	3	COM	BLACK	16		
	4	COM	BLACK	16		
P8	5	+12V	YELLOW	16	WSP P8-142002 or EQUIV.	500±20mm
	6	+12V	YELLOW	16		
	7	+12V	YELLOW	16		
	8	+12V	YELLOW	16		
P4	1	+12V	YELLOW	16	WSP P4-102002 or EQUIV. (Black)	500±20mm
	2	+12V	YELLOW	16		
	3	COM	BLACK	16		
	4	COM	BLACK	16		
P5	5	COM	BLACK	16	WSP P4-102002 or EQUIV.	70±10mm
	6	COM	BLACK	16		
	7	COM	BLACK	16		
	8	COM	BLACK	16		
P6	1	+12V	YELLOW	16	WSP P4-102002 or EQUIV.	500±20mm
	2	COM	BLACK	16		
	3	COM	BLACK	16		
	4	COM	BLACK	16		
PA	1	+12V	YELLOW	16	WSP P4-102002 or EQUIV.	155±10mm
	2	COM	BLACK	16		
	3	COM	BLACK	16		
	4	+5V	RED	16		
PC	1	+5V	RED	24	AMP 171822-4 or EQUIV.	155±10mm
	2	COM	BLACK	24		
	3	COM	BLACK	24		
	4	+12V	YELLOW	24		
PB	1	+3.3V	ORANGE	16	MOLEX SD-87582-001 or EQUIV.	500±20mm
	2	COM	BLACK	16		
	3	+5V	RED	16		
	4	COM	BLACK	16		
PD	1	+3.3V	ORANGE	16	MOLEX SD-87582-001 or EQUIV.	155±10mm
	2	COM	BLACK	16		
	3	+5V	RED	16		
	4	COM	BLACK	16		
PH	1	+12V	YELLOW	16	WSP P4-102002 or EQUIV.	500±20mm
	2	COM	BLACK	16		
	3	+5V	RED	16		
	4	COM	BLACK	16		

REF. ID.	PN NO.	SIGNAL	WIRE COLOR	GAUGE	CONNECTOR TYPE	CABLE LENGTH
P8	1	+12V	YELLOW	16	WSP P12-130006PS42 -B or EQUIV. (Black)	500±20mm
	2	+12V	YELLOW	16		
	3	+12V	YELLOW	16		
	4	+12V	YELLOW	16		
	5	+12V	YELLOW	16		
	6	+12V	YELLOW	16		
	7	COM	BLACK	16		
	8	COM	BLACK	16		
	9	COM	BLACK	16		
	10	COM	BLACK	16		
	11	COM	BLACK	16		
	12	COM	BLACK	16		
P9	S1	TEMP_SENS	BLUE	26		
	S2	TEMP_SENS	BLUE	26		
	S3	TEMP_SENS	BLUE	26		
	S4	TEMP_SENS	BLUE	26		

- Note:
- ALL THE LENGTH OF OUTPUT WIRES EXCLUDE HOUSING.
 - TOLERANCE: .XX = ± 0.5 [0.02]; .XXX = ± 0.25 [0.01]