



全漢企業股份有限公司
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SPECIFICATION



ESD07052746

FSP238-4F01

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SPECIFICATION

US version 120V only

FSP238-4F01

P.E	R/D	APPROVED	REV.
Lerry	Anson	LJ Wei	000

表單編號：7000P-0105



Electrical Specification

History

REV.	Description	Date	Drawn	Mechanical	Electrical	Approved
<u>000</u>	SPEC. ISSUE	Nov.20 '07	Gigi	Allens	Anson	LJ Wei

MODEL NO. **FSP238-4F01**

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Electrical Specification

Electrical Requirements

1. Input Characteristics:		※Measured the output voltage at the PCB
ITEM	CONDITION	SPECIFICATION
1.1 Rated Input Voltage		120V
1.2 Input Voltage Range	Continuously	108VAC to 132VAC
1.3 Input Frequency Range	Continuously	57Hz to 63Hz
1.4 Input Current	120Vac / typical load	≤ 2.5A
1.5 Efficiency:	120Vac / typical load	≥ 85%
1.6 Power Consumption (Power saving)	It must be measured in PSON signal is low condition at rated AC input 120Vac with 5Vsb/60mA	≤ 0.6W
1.7 Inrush current:	Hot start up	Must be met the stress required for all concerned parts

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Electrical Specification

2. Output Characteristics:

※Measured the output voltage at the PCB

ITEM	CONDITION	SPECIFICATION
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2.1 Output Rated Voltage :

a. PSON signal is L

No.	Symbol	Output Current	Ripple & Noise	Min.(V)	Typ. (V)	Max.(V)	Remark
1	5V	0A ~60mA	150mVp-p	4.75	5.0	5.25	

b. PSON signal is H (measured at steady state)

No.	Symbol	Output Current (A)			Ripple & Noise	Min.(V)	Typ. (V)	Max.(V)	Remark
		Min	Typ	Max					
1	5V	0.06	2.0	2.5	150mVp-p	4.75	5.0	5.25	
2	12V	0.2	2.2	2.5	360mVp-p	11.4	12.0	12.6	
3	24Vaud	0	0.85	1.2	720mVp-p	22.8	24	25.2	
4	24V	0.5	7.5	8.0	720mVp-p	22.8	24	25.2	

Note: Output Voltage Ripple and Noise:
(0.1uF Ceramic Cap and 47uF Aluminum Cap. Paralleled between the end of output cable, BW=20M Hz)

- 120Vac
- Minimum load and maximum load

2.2 +5V Turn-On Delay Time:

Applied the AC input voltage is 120Vac and output load is Full load, output voltage shall remain regulation.

≤ 1Sec.

2.3 Power ON/OFF signal (PWR-ON: P201- pin13)

Power ON/OFF signal is L (<0.7V)
Power ON/OFF signal is H (3.3V~5.0V)

5V output Only

5V, 12V, 24Vaud and 24V output

2.4 Hold Up time:

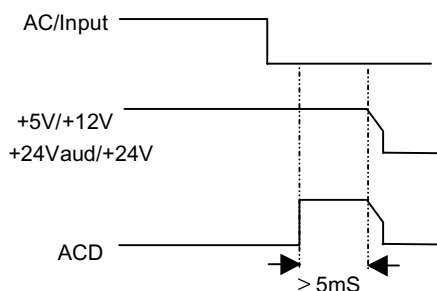
Applied the AC input voltage is 120Vac and output load is typical load, output voltage shall remain regulation.

≥ 5mS

2.5 ACD signal timing

Test condition:
Vin: 120Vac
Output load: typical load

≥ 5mS



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Electrical Specification

3. Protection Characteristics:

ITEM	CONDITION	SPECIFICATION
3.1 Short Circuit Protection:	When an internal fault occurs, or an external fault is applied to the power supply, such that an overload or short circuit is applied to the output, the power supply shall shut down and enter auto-recovery or latch mode.	Shutdown and no damage.
3.2 Over-Voltage Protection	The output voltage will enter into shut down that means no output on output, while over voltage happened at output terminal that caused by internal fault. The power supply shall shut down and enter auto-recovery or latch mode.	+5V: 6.2V ~ 9V +12V: 13V ~ 16V +24Vaud, +24V: 26V ~ 32V
3.3 Over Current Protection:	When an internal fault occurs, or an external fault is applied to the power supply, such that an overload or short circuit is applied to the output, the power supply shall shut down and enter auto-recovery or latch mode.	Shutdown and no damage

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Electrical Specification

4. Environmental Characteristics:

ITEM	CONDITION	SPECIFICATION
4.1 Electric Fast Transients: Refer to EN61000-4-4	Impulse: $\pm 1\text{KV}$ applied to AC line, pulse duration 50nS period 5 min.	Normal operation shall be continued.
4.2 Lightning Surge: Refer to EN61000-4-5	$\pm 1\text{kV}$ applied differential mode, pulse rise time 1.2uS and duty time 50uS, 5 times for each one. $\pm 2\text{kV}$ applied common mode, pulse rise time 1.2uS and duty time 50uS, 5 times for each one.	Normal operation shall be continued. Normal operation shall be continued.
4.3 Electron Static Discharge: (Refer to IEC1000-4-2 Energy Storage Capacitor 150pF; Discharge Resistor 330 Ω)	Air Discharge: $\pm 8\text{KV}$. Contact Discharge: $\pm 6\text{KV}$. (Note: combine with customer's system.)	Normal operation shall be continued.
4.4 Cooling	Natural air cooling	
4.5 EMI: AC power supply comply with the following national standards: EMI Conducted Emission EMI Radiated Emission	The AC power supply internal filter to meet, combine with customer's system.	FCC CLASS B
4.6 Safety conforming:	Regulated by customer	
4.7 Leakage Current	120Vac / 60Hz	$\leq 0.2\text{mA}$
4.8 Dielectric Strength: (Hi-Pot)	Between AC input and secondary applied AC 3.0KV / test time 1 minute / cut off current shall be less than 10mA	
4.9 Temperature:	Operating Storage	0 to 50°C -20 to +85°C
4.10 Humidity:	Operating Storage	20% ~ 90% 5% ~ 95%

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Electrical Specification

5. Mechanical Characteristics:

ITEM	CONDITION	SPECIFICATION														
5.1 Dimension (Length x Width x Height)		245x135x28 mm														
5.2 Input AC connector type		A3963WV2-A3P or equivalent														
SC101																
Pin assignment																
Pin No.	1	2	3													
Signal Name	Line	NC	Neutral													
5.3 Output DC connector																
P201																
Pin assignment																
Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Signal Name	GND		+24Vaud		GND			+12V		+5V		GND	PWR-ON	ACD	# DIM	# INV
P202																
Pin assignment																
Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Signal Name	+24V					GND					# DIM (via J201)	# INV	# DIM (via J202)			
P203																
Pin assignment																
Pin No.	1	2	3	4	5	6	7	8	9	10	11	12				
Signal Name	+24V					GND					N.C	N.C				