

2.Electrical Specifications 电气规格

2.1 Input Characteristics				
Item	Parameter	Technical Requirement	Unit	Remark
2.1.1	Rated input voltage 额定输入电压	100-240	Vac	
2.1.2	Input voltage range 输入电压范围	90-264	Vac	
2.1.3	Input voltage frequency 输入电压频率	47- 63	Hz	
2.1.4	Input power 输入功率	≤ 0.5	W	230Vac, No load 空载
2.1.5	Input power factor 输入功率因素	/		
2.1.6	Input current 输入电流	≤ 1.5	A	Vin=100Vac rated load 满载
2.1.7	Efficiency 效率	84.00%		Vin=230Vac rated load 满载
2.1.8	Inrush current 浪涌电流	≤ 100	A	230Vac cold start 冷启动

2.2 Output Characteristics 输出特性				
Item	Parameter	Technical Requirement	Unit	Remark
2.2.1	Rated output voltage 额定输出电压	15	Vdc	
2.2.2	Output voltage range 输出电压范围	14.25-15.75	Vdc	
2.2.3	Output current range 输出电流范围	0-3.0	A	
2.2.4	Rated output power 额定输出功率	45	W	
2.2.5	Voltage regulation 电压调整率	$\pm 5\%$		
2.2.6	Load regulation 负载调整率	$\pm 3\%$		
2.2.7	Turn-On/Off	$\leq 10\%$		

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	overshoot 开启/关闭过冲			
2.2.8	Ripple & Noise 波纹和噪音	≤ 200	mVp-p	Apply the cap 0.1uF and 10uF in parallel with output terminal for measurements. And set the oscilloscope bandwidth 20MHZ. 在输出端子上并联 0.1uF 和 10uF 的电容以进行测量。并将示波器带宽设置为 20MHZ。
2.2.9	Dynamic load response 动态负荷响应	$\pm 5\%$		30%-90%-30%, Frequency 50Hz to 1Khz, duty cycle 50%, current slope is 1A/uS 30%-90%-30%, 频率 50Hz 至 1Khz, 占空比 50%, 电流斜率为 1A / uS
2.2.10	Turn on delay time 开启延迟时间	≤ 3	s	At 100Vac with full load 100Vac 额定负载
2.2.11	Rise time 上升时间	≤ 20	ms	Output voltage rise from 10% to 90% and rated load, 230VAC 输出电压从 10% 升至 90%。
2.2.12	Hold up time 保持时间	≥ 10	ms	230VAC, 100% load

2.3 Protections 保护装置

Item	Parameter	Technical Requirement	Unit	Remark
2.3.1	Output over current protection 输出过电流保护	3.6-6.0	A	打嗝模式，故障移除，自动恢复
2.3.2	Output over voltage protection 输出过压保护	16.8~24V	Vdc	打嗝模式，故障移除，自动恢复
2.3.3	Over temperature Protection 过温保护	/	℃	/
2.3.4	Output short circuit protection 输出短路保护	When short circuit condition is occurred, the PSU shall be in hiccup mode and return to normal operation after the output short circuit condition is removed.		

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3. EMC Requirements EMC 要求

3.1 EMI Requirements 电磁干扰要求

Item	Regulations	Class level	Note
Conduction interference 传导干扰	EN55022	A	6dB 余量
Radiation interference 辐射干扰	EN55022	A	6dB 余量

3.2 EMS Requirements EMS 要求

Item	Regulations	Spec	Criterion level
ESD 静电	IEC-61000-4-2	IEC61000-4-2, 接触放电 6KV ; 空气放电 8KV	B
Surge 雷击	IEC-61000-4-5	DM ± 2 KV, CM ± 4 KV	B
EFT 快速脉冲群	IEC61000-4-4	Level 3, ± 2 KV	B

4. Safety Requirements 安全要求

Item	Parameter		Technical Requirement	Remark
4.1	Electric Strength Test 电气强度测试	L,N to DC output	3000Vac/10mA/1min	The PSU no flash over and insulation break down occurs during electric strength test.
		L,N to Earth	1500Vac/10mA/1min	
		DC output to Earth	500Vac/10mA/1min	
4.2	Insulation Resistance 绝缘电阻	L,N to DC Output	$\geq 100\text{M}\Omega @ 500\text{Vdc}$	Typical value (normal temperature and humidity)
		L,N to Earth	$\geq 100\text{M}\Omega @ 500\text{Vdc}$	
		DC Output to Earth	$\geq 100\text{M}\Omega @ 500\text{Vdc}$	
4.3	Leakage current 漏电流	$\leq 0.25\text{mA} @ 240\text{Vac}$		Input to Output
		$\leq 3.5\text{mA} @ 240\text{Vac}$		Input to Earth

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5.Environmental Requirements 环境要求

Item	Parameter	Technical Requirement	Unit	Remark
5.1	Operating temperature 工作温度	-10℃ ~ +55℃	℃	Typ. :25℃
5.2	Storage Temperature 存储温度	-20℃~+70℃	℃	Typ. :25℃
5.3	Operating humidity 操作湿度	5%-95%	RH	Non-condensing.
5.4	Storage humidity 存储湿度	5%~95%	RH	Non-condensing.
5.5	Altitude 高度	≤5000	M	
5.6	Vibration test 振动测试	10~500Hz,2G 10min./1cycle,period for60min.each along X,Y,Z axes		
5.7	MTBF 平均无故障时间	≥ 100,000	hours	MIL-HDBK-217F (25℃)
5.8	电解电容寿命	3	years	50℃ Full Load
5.9	三防漆	本产品要求涂刷三防漆工艺，具体涂刷位置请参照生产规格书		