

SMPS-40W

ZPO40SXX00WN-XXX Series AC-DC Power Module

FEATURES

- PCB mounted switching power module
- AC input voltage range:85VAC-305VAC
- DC input voltage range: 100VDC-430VDC
- Compact size, easy installation
- Ambient temperature range: -40°C ~ 85°C
- Low standby power consumption, green environmental protection function
- Built-in output over current protection, over-voltage protection, short circuit protection
- Isolation voltage: I/P-O/P 4200VAC
- Class II Construction
- OVC III (2000m) according to EN IEC 61558



MODEL LIST

Model No.	Output Power	DC Voltage	Rated Current	Efficiency 230VAC, % Typ.	Ripple & Noise (max)	Ambient TEMP(°C)	Weight	Certificate		
								UL	TUV	CB
ZPO40S1200WN	40W	12Vdc	3330mA	89%	< 150mV	50	110g	●	●	●
ZPO40S1500WN	40W	15Vdc	2666mA	89%	< 150mV	50	110g		●	
ZPO40S1800WN	40W	18Vdc	2222mA	89%	< 150mV	50	110g		●	
ZPO40S2400WN	40W	24Vdc	1670mA	89%	< 150mV	50	110g		●	
ZPO40S4800WN	40W	48Vdc	833mA	88%	< 150mV	50	110g		●	

GENERAL DATA

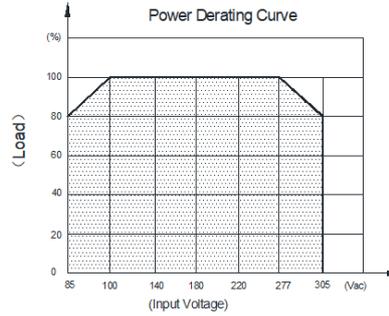
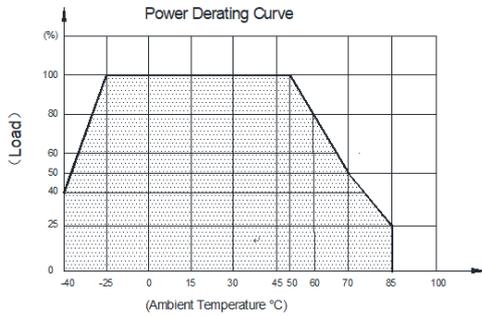
Input 输入参数	Rated Voltage / 额定电压	100-277VAC	
	Voltage Range / 输入电压范围	85-305VAC or 100-430VDC	
	Frequency (Hz) / 输入频率范围	47-63 Hz	
	Current (Full load) / 输入电流	115VAC	230VAC
		1000mA	600mA
	Inrush Current (<500us) / 冲击电流	40A	80A
	No Load Loss / 待机功耗	0.3W Typ. @230VAC	
HOT PLUG / 热拔插	Unavailable		
Output 输出参数	Voltage (V) / 输出电压	Refer to "Model List"	
	Current (mA) max. / 输出额定电流	Refer to "Model List"	
	Voltage Accuracy / 输出电压精度	±2% (typical)	
	Line Regulation / 线性调节率	±0.5%	
	Load Regulation / 负载调节率	±1%	
	Minimum Load (mA) / 最小负载	0	
	Ripple & Noise / 输出纹波	< 150mV	
	Efficiency (typ.) / 工作效率	Refer to "Model List"	
	Start-up Time / 开机延迟时间	3s max	
Hold up Time / 掉电保持时间(典型值)	50ms/230VAC , 5ms min/115VAC		
Protection 保护特性	Over Current Protection / 过流保护	Hiccup mode	
	Short Circuit Protection / 短路保护	Hiccup mode	

ZETTLER

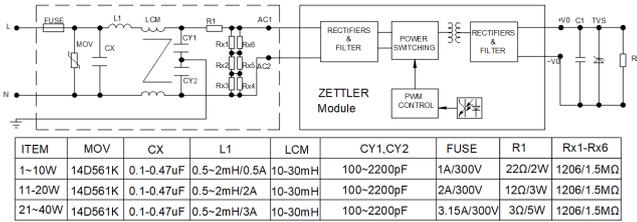
SMPS-40W

GENERAL DATA

Environment 环境	Operating Temperature / 工作温度	-40°C...+85°C (refer to the Power Derating Curve)		
	Operating Humidity / 工作湿度	20~90% RH (No Condensing) at full load		
	Storage Temperature / 存储温度	-40°C~85°C		
	Storage Humidity / 存储湿度	10~95% RH		
	Temperature Coefficient/温度漂移系数	±0.05%/°C (0~50°C)		
	Operating Altitude/工作海拔	EN IEC 61558	2000m (OVC III)	
Physical 外观结构	Case Material / 外壳材质	Plastic (UL 94V-0)		
	Weight / 产品净重	110g (ref.)		
Safety & EMC 安全认证及电磁兼容	Dielectric Strength / 绝缘强度	I/P-O/P: 4200VAC		
	Protection against electric shock	Class II construction		
	Safety Standards / 安全标准	Compliance with UL/EN62368-1, EN61558-2-16		
	EMI / 电磁兼容	Compliance with EN55032 CLASS B, EN61000-3-2, EN61000-3-3	Need to add external EMC component	
	EMS (Noise Immunity)/ 电磁抗干扰	Compliance With EN55035		
Over Voltage Category/过电压类别	EN IEC 61558	OVC III		
	EN IEC 62368	OVC II		
Reliability Requirement 可靠性要求	MTBF/平均故障间隔时间	500Khrs Min MIL-HDBK-217F (25°C)		
	Burn-In Test/ 老化测试	The unit shall be burned in for 2~4 hours under 277Vac with full load at 25°C.		



TYPICAL APPLICATION SCHEMATIC



Note: External circuit components are only recommendations, customers should choose their own components and values according to their specific system application requirements.

ORDERING DATA

ZPO 40 S 15 00 W N

"N"=Enclosure code

Input AC Voltage Range: W= Wide Voltage

Second Output Voltage:00 = No second output

First Output Voltage: 15 = 15V

Output Type: S = Single Output

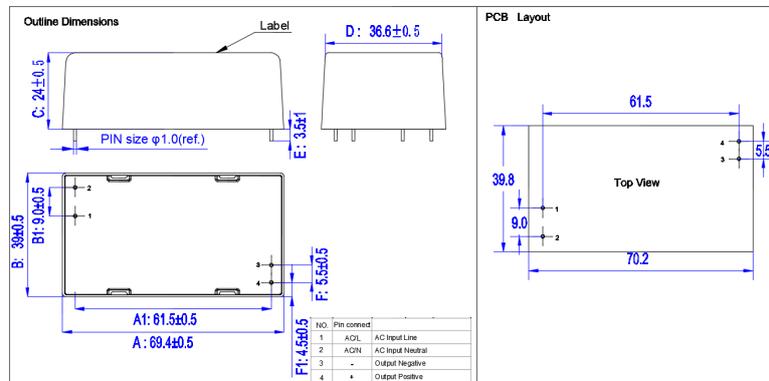
Output Power (W): 40= 40W

ZPO=Zettler product series

ZETTLER

www.ZETTLER-group.com

PCB FOOTPRINT



SMPS-40W

NOTES

General

1. All values in this datasheet are at reference temperature of 23°C (73°F) unless stated otherwise.
2. Evaluate the component's performance and operating conditions under the worst-case conditions of the actual application.
3. The datasheet and the component's specifications are subject to change without notice.

Storage, handling, and environmental guidelines

4. Protect SMPS from exposure to corrosive gases. Corrosion of Internal magnetic device and electronics to fail.
5. For automated dual wave soldering process we recommend preheating with 120°C (248°F) for max. 120 seconds and a soldering temperature of 260 ±5°C (500 ±9°F) for max. 10 seconds soldering time (max. 5 seconds per wave). For manual soldering we recommend 350°C (662°F) max. temperature for max. 5 seconds. Do not apply force to SMPS terminals during soldering.
6. Non-sealed SMPS must not be washed, immersion cleaned or conformal coated as substances may enter the case and cause corrosion or seizure of Internal magnetic device and electronics to fail.
7. During operation, storage and transport, ambient temperature should be within the specified operating temperature range. Humidity should be in the range of 5% to 85% RH. Icing and condensation must be avoided.

Design guidelines

8. The input voltage must be within the rated voltage range. Otherwise irreversible damage may be caused.
9. The load must be within the rated range and refer to the product characteristic curve, otherwise the electrical parameters may exceed the specification range.
10. The operating temperature range must be within the rated range
11. The peripheral EMC circuit can refer to the recommended circuit diagram.

SMPS-40W

DISCLAIMER

This product specification is to be used in conjunction with the application notes which can be downloaded from the regional ZETTLER magnetic websites. The specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.

ZETTLER GROUP

Building on a foundation of more than a century of expertise in German precision engineering, ZETTLER Group is a world-class enterprise, engaged in the design, manufacturing, sales and distribution of electronic components. Our industry leadership is based on a unique combination of engineering competence and global scale.

For more information on other ZETTLER Group companies, please visit zettler-group.com. For support on this product or other ZETTLER magnetics products, please visit one of the group sites below.

SITES FOR ZETTLER MAGNETICS

NORTH AMERICA

Zettler Magnetics, Inc.
www.zettlermagnetics.com
sales@zettlermagnetics.com

EUROPE

Zettler Electronics, GmbH
www.zettlerelectronics.com
office@zettlerelectronics.com

Zettler Electronics, Poland
www.zettlerelectronics.pl
office@zettlerelectronics.pl

CHINA

Zettler Group, China
www.zettlercn.com
relay@zettlercn.com

ASIA PACIFIC

Zettler Electronics (HK) Ltd.
www.zettlerhk.com
sales@zettlerhk.com

