

**SPECIFICATION**

*Customer/客户:*

*Customer's part number/客户料号:*

*Description/描述:* Input:100~240VAC 50/60Hz Output:19VDC 3.42A

*Our model no/机种型号:* B165-195

*Date/日期:* 2016-12-26

*Sample no./样品单号:*

*Ver1.0*

APPROVAL SIGNATURE/客户确认		
核准/APPROVED BY	审核/CHECKED BY	检测/TESTED BY

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## E. C. LIST

Rev.	Description of change		Changed date	ECN No.
	Before	After		
Ver0.	创建		2016-08-26	

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## 1、描述/SCOPE:

本规格书适应于 B165-195 型号的开关电源.

This specification is to specify the functional requirements of B165-195 switching power supply.

## 2、输入特性/INPUT CHARACTERISTICS:

### 2.1 输入电压/Input Voltage:

额定电压/Rated Voltage:100~240Vac

调整范围/Variation Range:90-264Vac

### 2.2 输入频率/Input Frequency:

额定频率/ Rated Frequency: 50/60Hz.

调整频率/Variation Frequency:47-63Hz

### 2.3 输入电流/Input Current:

当输入交流电压为额定值的下限电压负载满载时,最大输入交流电流 1.5A.

1.5Amps Max. input current at any input AC voltage and output full load.

### 2.4 浪涌电流/Inrush Current:

当输出为额定负载,环境温度为 25℃,输入 240Vac 冷态起机时的最大浪涌电流小于为 60A.

100 Amps Max. Cold start at 240Vac input, rated output load and 25℃ ambient.

### 2.5AC 漏电流/Ac Leakage Current:

当输入电压 240Vac 时,最大漏电流为 0.25mA.

0.25mA Max. at 240Vac input.

### 3、输出特性/OUTPUT CHARACTERISTICS:

#### 3.1 输出功率/Power output

电压 Voltage	最小负载 Min. Load	额定负载 Rated Load	峰值功率 Peak	输出功率 Output power
19Vdc	0A	3.42A		65W

#### 3.2 负载特性,调整率/Combined Load/Line Regulation

电压 Voltage	最小负载 Min. Load	额定负载 Rated Load	线性调整 Line Regulation	负载调整 Load Regulation
19Vdc	0A	3.42A	±2%	±5%

#### 3.3 纹波和噪音 Ripple and Noise:

测试条件:在额定电压及额定负载条件下,使用示波器带宽为 20MHz 连接到充电器的输出端,同时输出端并联一个 10uF 的电解电容和一个 0.1uF 的瓷片电容.

Under nominal voltage and nominal load, the ripple and noise are as follows when measure with Max. Bandwidth of 20MHz and parallel 10uF electrolysis capacitor and 0.1uF ceramic capacitor crossed connect at testing point.

电压	最大纹波/最大噪音
<u>Voltage</u>	<u>Ripple and Noise (Max.)</u>
+19dc	350Mv p-p

#### 3.4 启动延迟时间/Turn on delay time:

当输入 115Vac 和输出最大负载时,最大启动时间为 0.2S.  
0.2Second Max. at 115Vac input and output Max. load.

#### 3.5 上升时间/Rise time:

当输入 115Vac 和输出最大负载时最大时间为 40mS.  
40mS Max. at 115Vac input and output Max load.

#### 3.6 保持时间/Hold up time:

当输入 115Vac 和输出最大负载时,最小保持时间为 8mS.  
8mS Min. at 115Vac input and output Max. Load.

#### 3.7 效率/Efficiency:

当 115Vac 输入时,输出在 25%, 50%, 75%及满载情况下,平均效率需达到 88.0% (开机 30 分钟后测试) .

Average efficiency 88.0% minimum at 25%, 50%, 75% & 100% of full-loading and 115ac input (After warm up 30 minutes). The energy efficiency DOE VI.

空载输入功率≤0.21W/no load input watt≤0.21W

#### 3.8 过冲/Overshoot:

在电源开启或关闭的时候,最大 8%.

10% Max. When power supply at turn on or turn off.

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## 4、保护功能/PROTECTION REQUIREMENT:

### 4.1 短路电路保护/Short circuit protection:

电源适配器将会有自我限制保护功能防止短路或过载条件,在连续或断续的短路条件下电源将不会有任何损坏,短路故障排除后,电源将会自动恢复正常工作.

Power adapter shall have self-limiting protection to protect against short circuit or overload conditions.

No damage to the power adapter shall result from a continuous or intermittent short circuit condition. It will be auto-recovered when the failure is removed.

### 4.2 过流保护/Over current Protection:

在电源输出电流达到 4.0 -6.9A 时,过流保护将会动作,过流故障排除后,电源将自动恢复正常工作,

After output current of power supply reach 4.0-6.9A, the over current protection shall operate, the power supply will be auto recovered when over current faults remove,

## 5、环境要求/ENVIRONMENTAL REQUIREMET:

### 5.1 工作温度/Operating Temperature:

0°C-40°C,满载,正常工作/ 0°C to 40°C, Full load, Normal operation.

### 5.2 储藏温度/Storage Temperature: -40°C to 85°C

带外壳/With package

### 5.3 工作湿度/Relative Humidity:

5% (0°C) ~95% (30°C) ,72 小时,满载,正常工作.

5% (0°C) ~95% (30°C) RH, 72Hrs, Full load, Normal operating.

### 5.4 振动/Vibration:

#### 1. 测试标准:国际电工电子委员会

Operating: IEC 721-3-3 3M3

5~9Hz,A=1.5mm

加速度 (9~200Hz,Acceleration 5m / S)

#### 2. 运输/Transportation:

IEC 721-3-2 2M2

5-9Hz,A=3.5mm

9~200Hz,加速度 Acceleration=5m / S

200~500Hz,加速度 Acceleration=15m / S

#### 3. 轴向振动/Axes,10 cycles per axis.

在测试过程中不能出现永久性的损坏.

No permanent damage may occur during testing.

在电源开启和关闭后,样机能够恢复到最初条件.

The product has to restore to its original situation after power off / on.

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## 5.5 跌落试验/Dropping Packed:

以完整之产品作为样品，应实施三次，摔落到硬木表面上，其位置应在可能产生最不利的结果之处。

Samples should be finished products. Drop them freely to the surface of hardwood three times and the contact area should be the part easiest to get damaged.

76cm 高度，自由跌落于 20mm 厚的木板上，外观允许有磨损但不能有裂痕，输入插头不能松动、歪斜，各项功能均正常。

76cm height, free fall on the 20mm thick planks, the appearance allowed to wear but cannot crack, input plug is not loose, crooked, various functions were normal.

## 6. 可靠性要求/ Reliability Requirements

### 6.1. 老化/ Burn-in

产品至少要在 35°C±5°C 的环境及 80% 额定负载条件下煲机 2-4 小时

The power supply shall be burn-in for 2-4 Hours under normal input and 80% rated load at 35°C±5°C

### 6.2. 平均间隔故障时间估算/ MTBF Qualification

平均间隔故障时间: 30,000 小时, 25°C 环境及额定输入与满载条件下

The MTBF shall be 30,000 hours at 25°C, full load and nominal input condition

## 7、安全及 EMI 要求 / SAFETY AND EMI REQUIREMENT:

### 7.1 安全:符合标准 /Safety: accord with

certificate	国家/Country	standards	
<input type="checkbox"/> UL/CUL	美国/USA	UL60065	
<input checked="" type="checkbox"/> UL/CUL	美国/USA	UL60950	
<input type="checkbox"/> ETL/CUS	美国/USA	IEC/EN60950	
<input type="checkbox"/> TUV/GS	欧洲/Europe	EN60065	
<input type="checkbox"/> TUV/GS	欧洲/Europe	EN60950	
<input checked="" type="checkbox"/> FCC	美国/USA		
<input type="checkbox"/> CE	欧洲/Europe	EN60065	
<input checked="" type="checkbox"/> CE	欧洲/Europe	EN60950	
<input type="checkbox"/> IRAM	阿根廷/Argentina		
<input type="checkbox"/> MEPS	澳洲/Australia	AS/NZS 4665	
<input type="checkbox"/> SAA	澳洲/Australia	AS/NZS 60065	
<input type="checkbox"/> SAA	澳洲/Australia	AS/NZS 60950	
<input type="checkbox"/> CCC	中国/China	GB8898	
<input type="checkbox"/> CCC	中国/China	GB4943	
<input type="checkbox"/> PSE	日本/Japan		
<input type="checkbox"/> CB	欧洲/Europe	IEC60065	
<input checked="" type="checkbox"/> CB	欧洲/Europe	IEC60950	
<input type="checkbox"/> C-TICK	澳洲/Australia	AS/NZS CISPR13:2004	
<input type="checkbox"/> EK/KC	韩国/Korea	K60065	

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## 7.2 EMI 标准/EMI STANDARD

Meets the Limits of/测试符合

<1>.FCC Part 15 class B rules

<2>.EN55022, EN55013 class B rules

## 7.3 EMS 标准/EMS STANDARD

EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations & flicker
EN 61000-4-2	Electrostatic Discharge(ESD): 8kV air discharge, 4kV contact discharge
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
EN 61000-4-4	Electrical Fast Transient/Burst-EFT
EN 61000-4-5	Surge Immunity Test: AC Power Line: line to line 1kV
EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS
EN 61000-4-8	Power Frequency Magnetic Field Test
EN 61000-4-11	Voltage Dips

## 7.4 高压测试/ Hi-Pot Test

高压测试满足下表的要求，100% 在线产品执行此项测试，并每一项目至少保持 5 S 时间，无任何故障。

Hi-pot test shall meet with the following table test requirements, 100% production test must be performed for each test item and be maintained at that level for a minimum of 5 seconds without failure.

ITEM	SPECIFICATION	REMARK
输入—输出 Primary to Secondary	3000Vac/5mA/5s	无飞弧 No arcing
输入—地 Primary to P.G		无击穿 No broken
输出--地 Secondary to P.G		

## 7.5 绝缘阻抗/Insulation resistance

ITEM	SPECIFICATION	REMARK
输入—输出 Primary to Secondary	> 50MΩ; DC500V	
输入—地 Primary to P.G	> 50MΩ; DC500V	For class I power adapter



## 8、测试设备清单/Test Equipment List

项目	设备名称	制造	型号
1	变频电源	VI-mEAS	S7210
2	示波器	LW	L212CH
3	电子负载仪	TET	L100
4	万用表	UNI-T	UT5I
5	功率计	远方	PF9810
6	温度表	LUTRON	TW-902C
7	插头引线弯折试验机	联欣	LX-817
8	盐雾试验机	联欣	LX-8827B
9	震动台	精技实验	FZD-25
10	多功能测试仪	SOKON	PT8000
11	跌落测试台	自制	
12	数显卡尺	上海量具	0-150mm
13	RoHS 检测	天瑞仪器有限公司	EDX 1800B
14	智能电量测量仪	远方	PF9810

## 9、结构参数/MECHANICAL REQUIREMENT:

### 9.1 外壳/Enclosure:

外壳尺寸: L33.88x W28.2x H66.7mm;

The power supply size: L33.88x W28.2x H66.7mm;

### 9.2 输入线/Input Connector:

2 Pin 插脚/Two pin input plug.

### 9.3 产品外观图片/Photograph of the product



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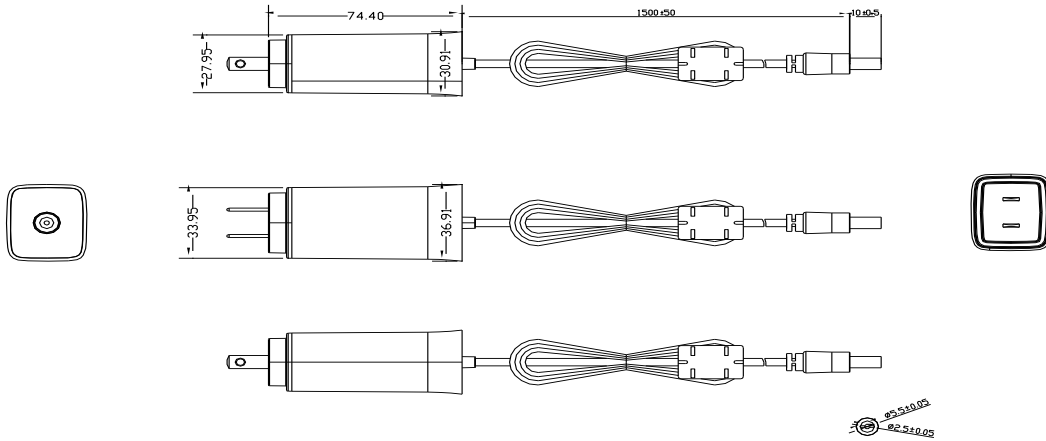
## 10、外形尺寸/OUTLINE DIMENSION:

输出线: UL1185 18AWG VW-1 80°C 300V,FT1 总长 1.5 米,DC 头尺寸为 5.5\*2.1\*10mm。

Out Cord: UL1185 18AWG VW-1 80°C 300V,FT1 Line with word on the cord; Length: 1.5M

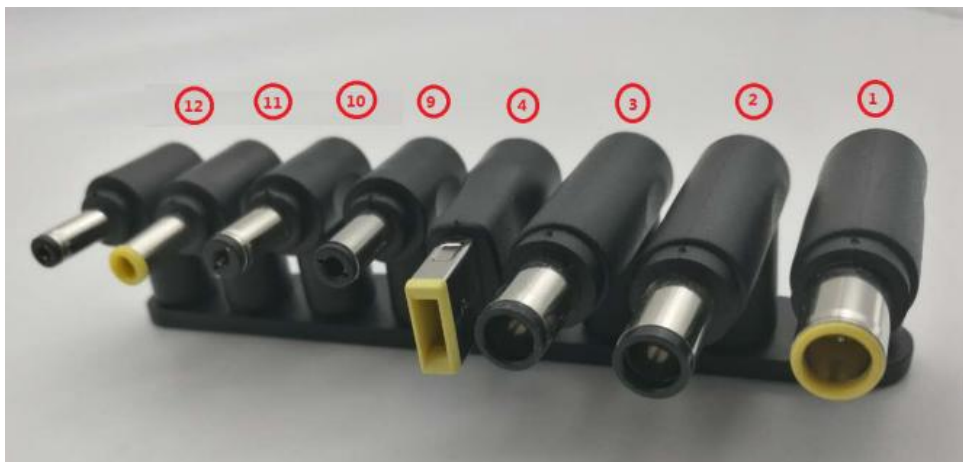
DC plug 5.5\*2.1\*10mm。

单位/ unit in: mm



## 11、DC 輸出接頭對照表/ DC OUTPUT TIP LIST:

預設 DC 輸出接頭配置/ Default DC output tip kits: (8 types)



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DC Connector Size	No.	Brand	Note
7.9 * 5.5mm	1	Lenovo (20V3.25A)	
7.4 * 5 mm	2	DELL (19.5V3.34A)	
7.4 * 5mm	3	HP(19.5V3.33A) Compaq	
11 * 4.5mm	4	thinkpad (20V3.25A)	90% square interface use this connector
4.5 * 2.7mm	5	DELL (19.5V3.34A)	
4.0 * 1.35mm	6	ASUS 19V Super notebook	
3.0 * 1.1mm	7	ASUS 19V ACER Fujitsu	
6.5 * 4.4 * 1.4 * 11mm	8	Fujitsu (16V3.75A) SONY (16V4A) (19.5V3.3A)	
5.5 * 2.5mm	9	ASUS (19V) LENOVO (20V3.25A) Toshiba (19V3.42A) LG(20.5V) Fujitsu (19V3.16A) Gateway (20.5V) NEC(15V4A) (19V3.42A) MSI(19V3.42A) Panasonic Sharp (20.5V)	
5.5 * 1.7mm	10	Acer (19V3.42A) packard Bell dell gateway(20.5V)	90% ACER use this DC connector
5 * 3mm	11	sumsung (19V3.16A)	All the sumsung 19V notebook use this connector
4.8 * 1.7mm	12	Sharp(18.5V3.5A) LG(19V4.74A)	90% HP yellow interface use this connector

## 11、铭牌/LABEL:

**DARFON**

Model: B165-195

Input: 100-240V~ 50/60Hz

0.8A Max

Output: 19V  $\equiv$  3.42A



尺寸: 27\*15MM

颜色: 银灰色877C

位置: 上下左右居中

## 12、包装说明/PACKING:

若客户未提出包装方式时，均使用本公司之包装方式。

Unless special requirement of customer, the packing style shall be performed according to Sunup company's style.

12.1 , Consumer package.

12.2 外包装/ Outer package

纸箱/ paper-box. 40\*30\*27cm 50PCS/箱

12.3 外包装箱标识/ Outer package notes include the information

客户、订单号、品名、数量、日期等信息

Customer Name, LOT Number, Model No., Date, and so on.