Data sheets, technical solutions, documentation and samples are intellectual property of the company SPEED Elektronik GmbH. It is permitted to use these documents for information and approval matters only. Passing on to third party or a usage to other matters is strictly forbidden.

Pay attention to protection notes of DIN 34.

### 1.0 INTRODUCTION

This document specifies a switching power supply with a output of +12V, and electronic process. The switching power supply will provide power for technology equipments including electrical business equipment.

### 2.0 INPUT REQUIREMENTS

2.1 Input Voltage Range: 100VAC(-10%) to 240VAC(+10%)

2.2 Input Frequency Range: 47 Hz to 63 Hz

2.3 Input In-rush Current: 50A Max (Actual test result is 16.8A )

2.4 Input Current: 0.60A Max

### 3.0 OUTPUT REQUIREMENTS

3.1 Output Voltage: +12V

3.2 Output Regulation: 11.4V~12.6V

3.3 Output Load Range: 0~1.5A

3.4 Output Ripple & Noise: 120mV Max @20MHz BANDWITH

### 4.0 EFFICIENCY: 75% @ FULL LOAD & 120 VAC INPUT

### 5.0 DIELECTRIC STRENGTH (Hi-Pot) TEST

5.1 Finished product withstands AC 3.0KV, for 2 second,4mAxmax primary to secondary.

5.2 Transformer withstands AC 3.0KVrms, 60Hz for 1 minute, primary to secondary.

5.3 Transformer withstands AC 3.0KV, 60Hz for 1 minute, primary to core.

### 6.0 INSULATION RESISTANCE

Primary to secondary: 50MOHM to 500VDC.

### 7.0 PROTECTION

7.1 Input Protection

The switching power supply has a 2 amps inner current fuse to protect itself.

7.2 Output Protection

7.2.1 Output Current:

Overload conditions shall decrease the output current. Removal of an output Overload shall provide automatic recovery for the output voltage.

7.2.2 Short Circuit Protection: Auto Recovery.

7.2.3 Over Voltage Protection: 14V±1V

### 8.0 ENVIRONMENTAL CONDITIONS

The switching power supply can withstand the following environmental conditions:

8.1 Storage Temperature:-20℃ ~ +70 ℃

Relative Humidity: 10% ~ 95%

8.2 Operation Temperature:0°C~40°C

Relative Humidity: 10%~95%

### 9.0 EMI / EMC

The switching power supply has approved by the following standards:

(1)EN55022(EN61000-3-2. EN61000-3-3)

(2)EN55024(IEC61000-4-2. IEC61000-4-3. IEC61000-4-4. IEC61000-4-6. IEC61000-4-8. IEC61000-4-11.)

### 10.0 RELIABILITY AND QUALITY CONTROL

10.1 Burn-in

The burn-in test will be performed at least 2 hours at 40 centigrade degrees under full load condition.

10.2 MTBF

When the operation is compling with this specification, the switching power supply s MTBF will be 50,000 hours at 25 centigrade degrees.

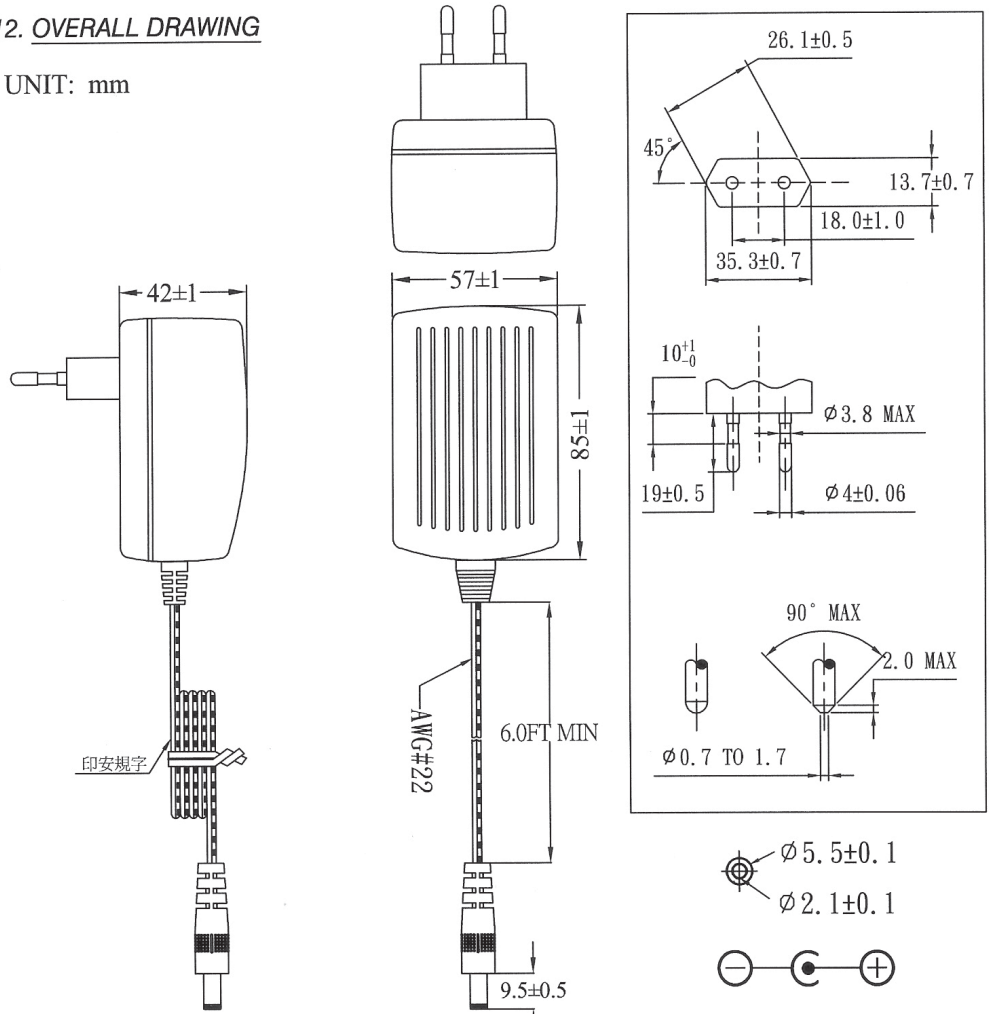
### 11.0 SAFETY

The switching power supply has approved by the following safety standards:

IEC60950: 1999, EN60950: 2000

### 12. OVERALL DRAWING

UNIT: mm




# DATA SHEET

| | | | |
|---|---|---|---|
| **Description:** | **Switching power supply 12V 1,5A** | | |
| **Part-no. SPEED:** | **--** | **Part-no. customer:** | **--** |
| **Project-no. SPEED:** | **N-IN20Ha3** | **Project-no. customer:** | **--** |
| **Data sheet-no.:** | **DBLKS1359** | **Designed:** | **Frank Hesseler** |
| **Index:** | **0** | **Checked:** | |
| **Date:** | **21.04.2004** | **Page:** | **1 of 2** |

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