

# SPU21B series

20W Desk Top Type  
I.T.E. Power Supplies

## Features:

- Wide Operating Voltage 90 to 264 VAC, 47 to 63 Hz
- IEC-320-C8 Input Inlet
- Optional Output Connector (See page appendix)
- Single Output
- Class II
- Energy Star 2.0, Efficiency level V
- 2 year warranty



## Electrical Characteristics:

|       |  |  |  |
|-------|--|--|--|
| Vin   | Safety Approvals Input Voltage Range                     |  | 100~240VAC   |
|       | Operate Voltage Range                                    |  | 90~264VAC  |
| fin   | Input Frequency  |  | 47~63Hz  |
| Po    | Output Power Range                                       |  | See rating chart                                       |
| Vo    | Output Voltage Range                                     |  | See rating chart                                       |
| Io    | Output Current Range                                     |  | See rating chart                                       |
| Iil   | Input Current (Low Line)                                 | Io=Full load, Vin=100VAC                   | 0.5A (max.)  |
| Iih   | Input Current (High Line)                                | Io=Full load, Vin=240VAC                   | 0.3A (max.)  |
| Ir    | Low Line Inrush Current                                  | Io=Full load, 25°C, Cool start, Vin=115VAC | 25~50A   |
|       | High Line Inrush Current                                 | Io=Full load, 25°C, Cool start, Vin=230VAC | 50~100A  |
| Eff   | Efficiency   | Io=Full Load, Vin=230VAC                   | 76~85%   |
| REG-i | Line Regulation  | Io=Full Load                               | 0.5~1%   |
| REG-o | Load Regulation  | Vin=230VAC                                 | 3~5%   |
| OVP   | Over Voltage Protection                                  |  | Nil  |
| OCP   | Over Current Protection                                  |  | Nil. But, Output protected to short circuit conditions |
| Ttr   | Time of Transient Response                               | Io=Full Load to Half Load, Vin=100VAC      | 4mS (max.)   |
| Th    | Hold-Up Time   | Io=Full Load, Vin=110VAC                   | 8mS (min.)   |
| Ts    | Start Up Time  | Io=Full Load, Vin=100VAC                   | 3S (max.)  |
| Vp-p  | Ripple & Noise(Peak to Peak)                             | Full Load, Vin=90VAC                       | 2% (max.)  |
| Ilk   | Leakage Current  | Vin=240VAC/60Hz                            | 0.25mA (max.)  |
| TC    | Temperature Coefficient                                  | All output                                 | ±0.04%/°C  |
| Pno   | No-Load Power Consumption                                | No load, Vin=230VAC                        | See rating chart                                       |
| Vps   | Dielectric Withstanding Voltage for Primary to secondary | Primary to secondary                       | 4242VDC (min.)   |
| Ris   | Isolation Resistance                                     | Test Voltage=500VDC                        | 50MΩ (min.)  |

## Environmental

|      |   |                    |
|------|---|--------------------|
| To   | Operating Temperature                                       | See derating curve |
| Ts   | Storage Temperature   | -40~85°C           |
| Ho   | Operating Humidity  | 0~95%              |
| Hr   | Storage Humidity  | 0~95%              |
| MTBF | Operating Temperature at 25°C, Calculated per MIL-HDBK-217F | 0.1M Hrs (min.)    |
| Pd   | Derate linearly from 100% load at 40°C to 50% load at 70°C  |                    |

## Application:

- POS System
- AV Equipment
- Industrial PC
- Note PC
- Charger
- LED Lighting

## Safety Approvals:



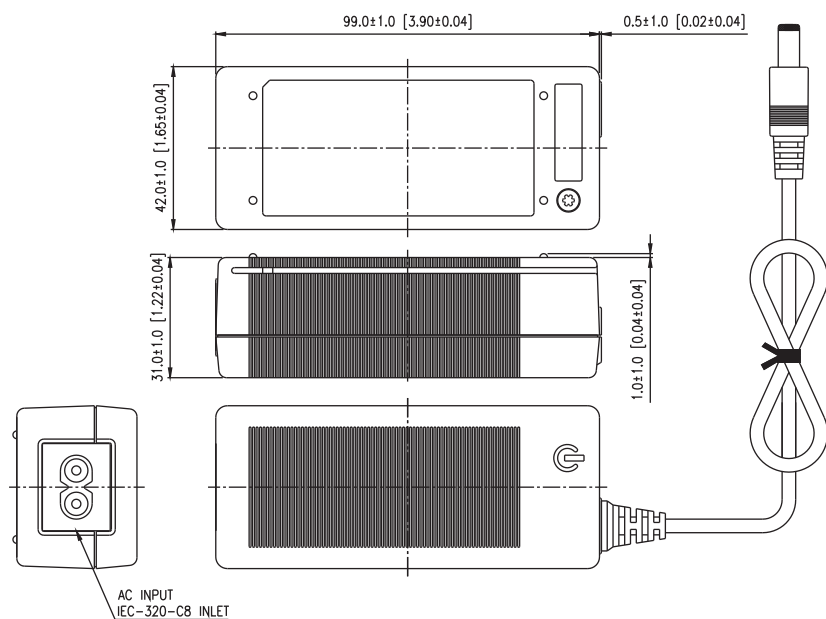
UL/c-UL (UL 60950-1:2nd Edition)  
TUV/GS (EN 60950-1:2nd Edition)



## Output Voltage And Current Rating Chart ( Single Output ) :

| Model Number | Output Voltage | Output Current | Total Regulation | Max. Output Power | Pno (max.) |
|--------------|----------------|----------------|------------------|-------------------|------------|
| SPU21B-102   | 5 ~ 6 VDC      | 3.00 ~ 2.50 A  | 5%               | 15W               | 0.3W       |
| SPU21B-103   | 6 ~ 8 VDC      | 2.50 ~ 1.87 A  | 5%               | 15W               | 0.3W       |
| SPU21B-104   | 8 ~ 11 VDC     | 2.50 ~ 1.81 A  | 5%               | 20W               | 0.3W       |
| SPU21B-105   | 11 ~ 13 VDC    | 1.81 ~ 1.53 A  | 5%               | 20W               | 0.3W       |
| SPU21B-106   | 13 ~ 16 VDC    | 1.53 ~ 1.25 A  | 4%               | 20W               | 0.3W       |
| SPU21B-107   | 16 ~ 21 VDC    | 1.25 ~ 0.95 A  | 4%               | 20W               | 0.3W       |
| SPU21B-108   | 21 ~ 27 VDC    | 0.95 ~ 0.74 A  | 4%               | 20W               | 0.3W       |
| SPU21B-109   | 27 ~ 33 VDC    | 0.74 ~ 0.60 A  | 3%               | 20W               | 0.3W       |
| SPU21B-110   | 33 ~ 40 VDC    | 0.60 ~ 0.50 A  | 3%               | 20W               | 0.3W       |
| SPU21B-111   | 40 ~ 50 VDC    | 0.50 ~ 0.40 A  | 3%               | 20W               | 0.3W       |

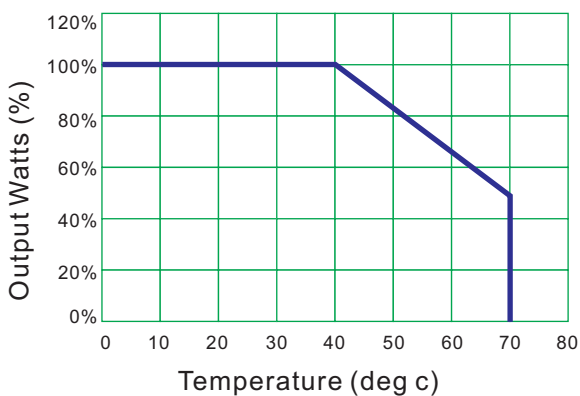
## Mechanical Specifications:



### Note:

1. Dimensions are shown in mm.
2. Weight: 170gs approx.
3. Optional output connector: See page Appendix.

## Derating Curve :



1. Operating Temperature: 0 to 70°C
2. Derate linearly from 100% load at 40°C to 50% load at 70°C