

# SPU30 SERIES

## 30W Desk Top Switching Power Supplies For I.T.E.

### Description:

The SPU30 series of AC/DC switching mode power supplies provide 30 Watts of continuous output power. All supplies are UL 94V-1 min compliant, include IEC-320-C14 input for worldwide applications. All models meet FCC Part-15 class B and CISPR-22 class B emission Limits and are designed to comply with UL/c-UL(UL 60950-1) and new CE requirements. All units are 100% burned in and tested.



### Features:

- Wide Input Voltage 90 to 264 VAC, 47 to 63 Hz
- IEC-320-C14 Input Inlet
- Single Output
- Output Voltage Available From 3 VDC Thru 50 VDC
- Optional Output Connector (See appendix)
- Input Surge Current, Over Voltage and Over Load protection
- Splash proof
- Class I Insulation
- Two Years Warranty

### Safety Approvals:



### Electrical Characteristics:

| Sym.  | Parameter                     | Test Conditions                            | Min.             | Typ. | Max. | Unit |
|-------|-------------------------------|--|------------------|------|------|------|
| Vin   | Input Voltage                 | Operating Voltage                          | 90               |      | 264  | VAC  |
| Fin   | Input Frequency               |  | 47               |      | 63   | Hz   |
| Wo    | Output Power Range            | Vin=90 to 264VAC                           | 0                |      | 30   | W    |
| Vo    | Output Voltage Range          |  | See rating chart |      |      | V    |
| Io    | Output Current Range          |  | See rating chart |      |      | A    |
| Iil   | Input Current (Low Line)      | Io=Full load, Vin=115VAC                   |                  |      | 0.8  | A    |
| Iih   | Input Current (High Line)     | Io=Full load, Vin=230VAC                   |                  |      | 0.5  | A    |
| Irl   | Low Line Inrush Current       | Io=Full load, 25 c, Cool start, Vin=115VAC |                  | 12   | 15   | A    |
| Irh   | High Line Inrush Current      | Io=Full load, 25 c, Cool start, Vin=230VAC |                  | 26   | 30   | A    |
| Eff   | Efficiency                    | Io=Full Load, Vin=230VAC                   | 65               | 75   | 85   | %    |
| REG-i | Line Regulation               | Io=Full Load                               |                  | 0.5  | 1    | %    |
| REG-o | Load Regulation               | Vin=230VAC                                 |                  | 3    | 7    | %    |
| OVP   | Over Voltage Protection       |  | 112              |      | 132  | %    |
| OCP   | Over Current Protection       |  | 110              |      | 150  | %    |
| Ttr   | Transient Response            | Io=Full Load to Half Load, Vin=100VAC      |                  |      | 4    | mS   |
| Thold | Hold-Up Time                  | Io=Full Load, Vin=110VAC                   | 12               |      |      | mS   |
| Ts    | Start Up Time                 | Io=Full Load, Vin=100VAC                   | 0.3              | 1    | 2    | S    |
| Vrn   | Ripple & Noise (Peak to Peak) | Full Load, Vin=90VAC                       |                  | 1    | 2    | %    |
| Ilk   | Safety Ground Leakage Current | Io=Full Load, Vin=240VAC                   |                  | 0.5  | 0.75 | mA   |
| Tc    | Temperature Coefficient       | All output                                 | -0.04            |      | 0.04 | %/ c |

### Environmental :

| Sym.  | Parameter  | Test Conditions | Min. | Typ. | Max. | Unit |
|-------|--|-----------------|------|------|------|------|
| Toper | Operating Temperature                                      |                 | 0    |      | 70   | °C   |
| Tstg  | Storage Temperature  |                 | -40  |      | 85   | °C   |
| Hr    | Relative Humidity  |                 | 5    |      | 95   | %    |
| Pd    | Derate linearly from 100% load at 40°C to 50% load at 70°C |                 |      |      |      |      |

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### Safety Specifications:

| Sym.  | Parameter  | Test Conditions      | Min. | Typ. | Max. | Unit  |
|-------|--|----------------------|------|------|------|-------|
| Vps   | Dielectric Withstanding Voltage for Primary to secondary | Primary to secondary | 4242 |      |      | VDC   |
| Vpg   | Dielectric Withstanding Voltage for Primary to Ground    | Primary to ground    | 2121 |      |      | VDC   |
| Ri    | Isolation Resistance                                     | Test Voltage=500VDC  | 50   |      |      | M Ω   |
| CISPR | EMI requirements for CISPR-22                            | Vin=220VAC           | B    |      |      | CLASS |
| FCC   | EMI requirements for FCC PART-15                         | Vin=110VAC           | B    |      |      | CLASS |

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

| Model Number | Output Voltage | Output Current | Total Regulation | Maximum Output Power |
|--------------|----------------|----------------|------------------|----------------------|
| SPU30-101    | 3 ~ 5 VDC      | 5.00 A max     | 7%               | 20W                  |
| SPU30-102    | 5 ~ 6 VDC      | 5.00 ~ 4.16 A  | 5%               | 25W                  |
| SPU30-103    | 6 ~ 8 VDC      | 4.16 ~ 3.12 A  | 5%               | 25W                  |
| SPU30-104    | 8 ~ 11 VDC     | 3.75 ~ 2.72 A  | 5%               | 30W                  |
| SPU30-105    | 11 ~ 13 VDC    | 2.72 ~ 2.30 A  | 5%               | 30W                  |
| SPU30-106    | 13 ~ 16 VDC    | 2.30 ~ 1.87 A  | 5%               | 30W                  |
| SPU30-107    | 16 ~ 21 VDC    | 1.87 ~ 1.42 A  | 5%               | 30W                  |
| SPU30-108    | 21 ~ 27 VDC    | 1.42 ~ 1.11 A  | 5%               | 30W                  |
| SPU30-109    | 27 ~ 33 VDC    | 1.11 ~ 0.90 A  | 5%               | 30W                  |
| SPU30-110    | 33 ~ 40 VDC    | 0.90 ~ 0.75 A  | 3%               | 30W                  |
| SPU30-111    | 40 ~ 50 VDC    | 0.75 ~ 0.60 A  | 3%               | 30W                  |

### Mechanical Specifications :

#### Note:

1. Dimensions are shown in mm.
2. Weight: 230gs approx.
3. Optional output connector:  
See page Appendix.

