

## 35 WATTS

### SRP-30/35 SERIES

### OUTPUT SPECIFICATIONS

#### Features

- Universal 85-264 VAC Input
- High Efficiency
- Advanced SMT Design
- Compact 3.0" X 6.0" X 2.0" Size
- Class B Emissions Per EN 55022/11
- EMC to EN 61000-6-2 & EN 60601-1-2
- 2 Year Warranty
- UL Listed
- One to Four Outputs
- EN 60950 ITE Certification
- EN 60601-1 Medical Certification







|  |   |
|--|---|
| Total Output Power                       | 28-35 W (20W, 1001) Medical Dependent   |
| Output Voltage Centering                 | Output 1: +/-0.25%<br>Output 2: +/-5.00%<br>Output 3: +/-3.00%<br>Output 4: +/-3.00%<br>(All outputs at 50% rated load)   |
| Source Regulation                        | Outputs 1-4: 0.5% (Local Sense)   |
| Load Regulation                          | Output 1: 7% (0-100% Load Change)<br>(1001) 10.0% (0-100% Load Change)<br>(4001) 12.0% (0-100% Load Change)<br>(Remote Sense) 0.5% (0-100% Load Change)<br>Output 2: 5.0% (30-100% Load Change)<br>(4001,3 & 4) 10.0% (30-100% Load Change)<br>(2003, 4002) 12.0% (30-100% Load Change)<br>Output 3: 1.0% (0-100% Load Change)<br>Output 4: 1.0% (0-100% Load Change) |
| Cross Regulation                         | Output 2: 5.0%<br>Output 3: 0.5%<br>Output 4: 0.5%<br>(Output 1 load varied 50-100%)  |
| Output Voltage Adjust Range              | Output 1: 95% to 105%   |
| Output Noise                             | Outputs 1-4: 1%   |
| Turn On Overshoot                        | None  |
| Transient Response                       | Outputs 1-4   |
| Volt. Deviation                          | 5%  |
| Recovery Time                            | 2 mS  |
| Load Change                              | 50% To 100%   |
| Output Overvoltage Protection (Optional) | Output 1: 110% to 150%  |
| Output Overpower Protection              | Output 1&2 110% Min.<br>Outputs cycle on/off, auto recovery   |
| Output Overcurrent Protection            | Output 3&4 110% Min.  |
| Hold Up Time                             | 12 mS Min, 28-35 W Output<br>120 V Input  |
| Start Up Time                            | 1 Second  |

#### INPUT SPECIFICATIONS

|                 |                             |
|-----------------|-----------------------------|
| Source Voltage  | 85-264 Voltage AC           |
| Frequency Range | 47-63 Hz                    |
| Source Current  |                             |
| True RMS        | 1A At 85V Input             |
| Peak Inrush     | 30A                         |
| Efficiency      | .66 - .80 (Varies by model) |

#### ENVIRONMENTAL SPECIFICATIONS

|                                     |   |
|-------------------------------------|---|
| Ambient Operating Temperature Range | 0°C to +70°C Derating: See Power Rating Chart |
| Ambient Storage Temperature Range   | -40°C to +85°C                                |
| Temperature Coefficient             | Outputs 1-4: 0.02%/°C                         |

| SAFETY SPECIFICATIONS   |  |      | GENERAL SPECIFICATIONS                              |  |  |
|---|--|------|---|--|--|
| General   | Protection Class:  | I    | Dielectric Strength                                 | Reinforced Insulation 5656 VDC, Primary to Secondary, 1 Sec.                   |  |
|   | Oversvoltage Category:   | II   |   | Basic Insulation 2121 VDC, Primary to Ground, 1 Sec.                           |  |
|   | Pollution Degree:  | 2    | Operational Insulation                              | 707 VDC, Secondary to Ground, 1 Sec.   |  |
|   | Ingress Protection   | IP30 | Leakage Current                                     | <300 ÅµA Earth Leakage Current   |  |
|  Underwriters Laboratories File E137708      | UL 60950, Third Edition<br>UL 2601 - 1 Second Edition<br>CB Report Per IEC 950 (1991)<br>Second Edition A1, A2, A3, A4<br>All EN 60950 Deviations<br>CB Report Per IEC 601-1-1988<br>First Edition, A1, A2 |      | Mean Time Between Failures                          | 100,000 Hours min., MIL-HDBK-217F, 25°C, GB                                    |  |
|  UL Recognition Mark for Canada File E137708 | UL 60950 Third Edition<br>CAN/CSA-C22.2 No. 60950-00<br>CAN/CSA-C22.2 No. 601-1-M90  |      | Weight  | 1.6 Lbs.   |  |
|  TUV   | EN 60950:2000<br>EN 60601-1/A2: 1995   |      | <b>ELECTROMAGNETIC COMPATIBILITY SPECIFICATIONS</b> |  |  |
|    | Low Voltage Directive  |      | Electrostatic Discharge                             | EN 61000-4-2 +/-8kV Contact Discharge<br>+/-8kVAir Discharge                   |  |
|   |  |      | Radiated Electro-magnetic Field                     | EN 61000-4-3 80MHz-2.5GHz, 10V/m, 80% AM                                       |  |
|   |  |      | EFT/Bursts  | EN 61000-4-4 +/-2kV  |  |
|   |  |      | Surges  | EN 61000-4-5 +/-1 kV Differential Mode<br>+/-2 kV Common Mode                  |  |
|   |  |      | Conducted Immunity                                  | EN 61000-4-6 .15-80MHz., 10V, 80% AM   |  |
|   |  |      | Voltage Dips and Intuptions                         | EN 61000-4-11 30% Reduction<br>95% Reduction<br>60% Reduction<br>95% Reduction |  |
|   |  |      | Radiated Emissions                                  | EN 55011/22 Class B  |  |
|   |  |      | Conducted Emissions                                 | EN 55011/22 Class B  |  |

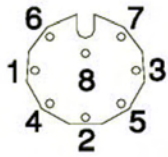
### Notes

Consult factory for alternate output configuration. Consult factory for positive, negative or floating output 2 or 3.  
Refer to Application Information for complete output power ratings.  
All specifications are maximum at 25C unless otherwise stated and are subjected to change without notice.  
Specify optional chassis nad cover when ordering.

### MODEL LISTING

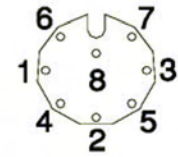
| Model        | Output 1  | Output 2  | Output 3  | Output 4  | Output5 |
|--------------|-----------|-----------|-----------|-----------|---------|
| SRP-30A-4001 | +3.3V/3A  | +5V/2A    | +12V/.35A | -12V/.35A | 28W     |
| SRP-30A-4002 | +5V/3A    | +3.3V/2A  | +12V/.35A | -12V/.35A | 30W     |
| SRP-30A-4003 | +5V/3A    | -5V/2A    | +12V/.35A | -12V/.35A | 30W     |
| SRP-30A-4004 | +5V/3A    | -5V/2A    | +15V/.35A | -15V/.35A | 30W     |
| SRP-30A-4005 | +5V/3A    | +24V/.75A | +12V/.35A | -12V/.35A | 30W     |
| SRP-30A-4006 | +5V/3A    | +24V/.75A | +15V/.35A | -15V/.35A | 30W     |
| SRP-30A-3001 | +5V/3A    | +12V/1.5A | -12V/.5A  |           | 30W     |
| SRP-30A-3002 | +5V/3A    | +15V/1.5A | -15V/.5A  |           | 30W     |
| SRP-30A-2001 | +5V/3A    | +24V/.75A |           |           | 30W     |
| SRP-30A-2002 | +5V/3A    | +12V/1.5A |           |           | 30W     |
| SRP-30A-2003 | +5V/3A    | -5V/3A    |           |           | 30W     |
| SRP-30A-2004 | +12V/1.5A | -12V/1.5A |           |           | 30W     |
| SRP-30A-2005 | +15V/1.5A | -15V/1.5A |           |           | 30W     |
| SRP-30A-1001 | 3.3V/9A   |           |           |           | 30W     |
| SRP-35A-1002 | 5V/7A     |           |           |           | 35W     |
| SRP-35A-1003 | 12V/2.9A  |           |           |           | 35W     |
| SRP-35A-1004 | 15V/2.3A  |           |           |           | 35W     |
| SRP-35A-1005 | 24V/1.45A |           |           |           | 35W     |
| SRP-35A-1006 | 48V/.73A  |           |           |           | 35W     |

**DETAIL A**  
**SINGLE OUTPUT**  
**8 PIN DIN**

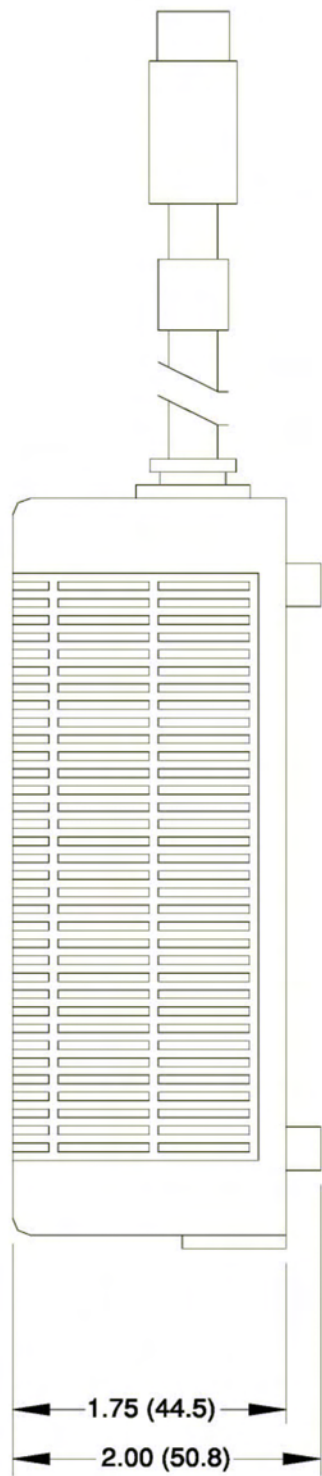


|   |     |          |
|---|-----|----------|
| 8 | (+) | SENSE    |
| 7 | (+) | OUTPUT 1 |
| 6 | (+) | OUTPUT 1 |
| 5 | (+) | OUTPUT 1 |
| 4 | (-) | OUTPUT 1 |
| 3 | (-) | OUTPUT 1 |
| 2 | (-) | OUTPUT 1 |
| 1 | (-) | SENSE    |

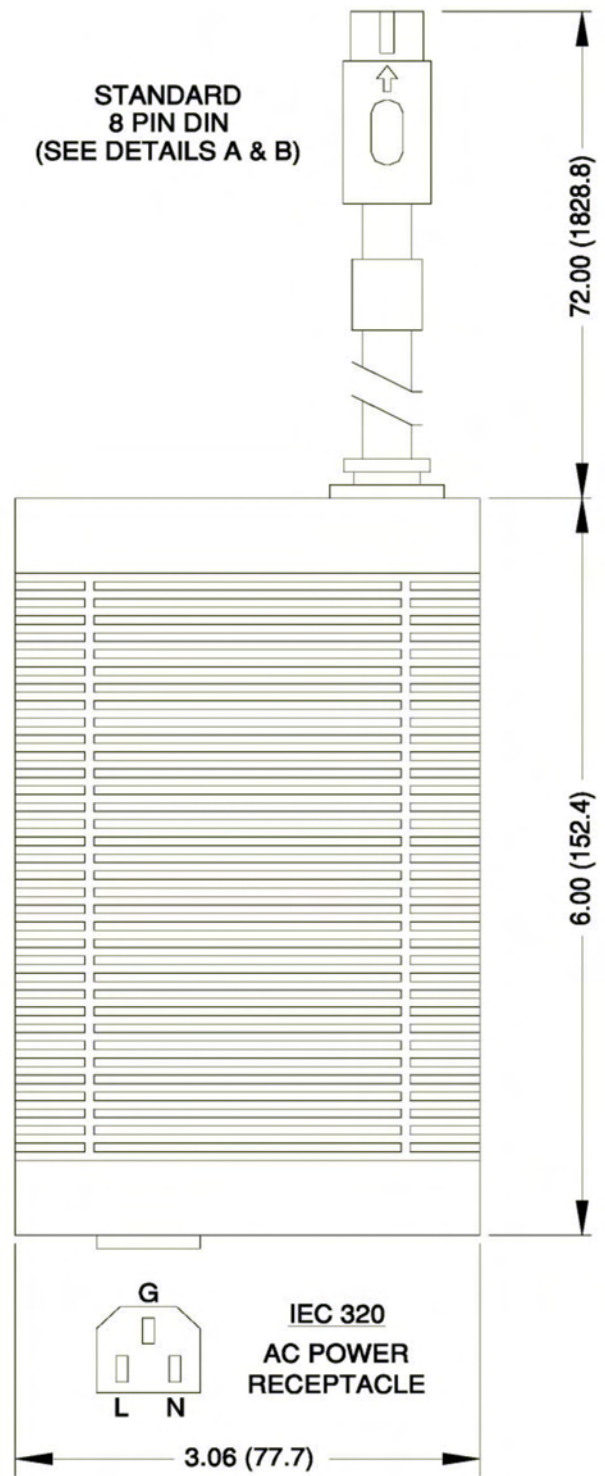
**DETAIL B**  
**MULTIPLE OUTPUT**  
**8 PIN DIN**



|   |     |          |
|---|-----|----------|
| 8 | (-) | OUTPUT 1 |
| 7 | (+) | OUTPUT 1 |
| 6 | (-) | OUTPUT 2 |
| 5 | (+) | OUTPUT 2 |
| 4 | (-) | OUTPUT 3 |
| 3 | (+) | OUTPUT 3 |
| 2 | (-) | OUTPUT 4 |
| 1 | (+) | OUTPUT 4 |



STANDARD  
8 PIN DIN  
(SEE DETAILS A & B)

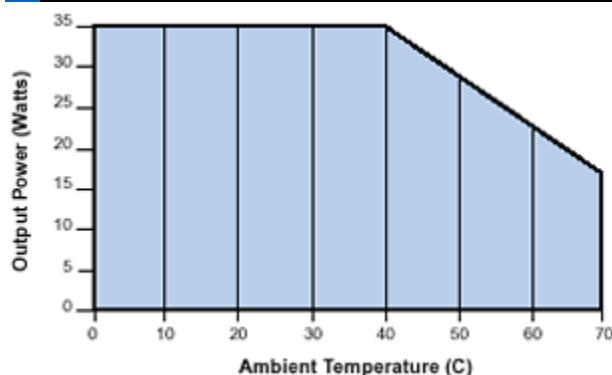


ALL DIMENSIONS: INCHES (MM)

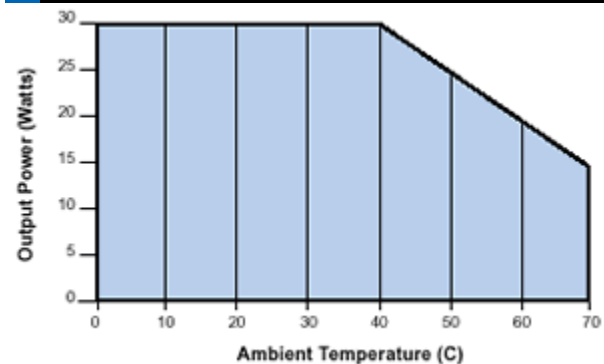
## APPLICATIONS INFORMATION

1. Each output can deliver its rated current but total output power must not exceed 28-35 watts depending on model.
2. Sufficient area must be provided around convection cooled power supplies to allow natural movement of air to develop.
3. A minimum load of 10% is required on output one to insure proper regulation of remaining outputs.
4. Remote sense terminals may be used to compensate for cable losses up to 250mV. The use of a twisted pair is recommended as well as a decoupling capacitor (0.1 0 10 $\mu$ F) and a capacitor of 100 $\mu$ F/amp connected across the load.
5. Peak to peak output ripple and noise is measured directly across a 1 $\mu$ F ceramic capacitor at the output terminals of the power supply cord, without the use of the probe ground lead or retractable tip, 20 MHz bandwidth.
6. This product was type tested and safety certificated using the the dielectric strength test voltages listed in Table V of UL 60601-1. In consideration of clause 20.4g, care must be taken to insure the voltage applied to a reinforced insulation does not over stress basic insulation. Secondary to ground capacitors may need to be removed prior to performing a dielectric strength type test on the end product. It is highly recommended that the DC test voltages listed in DVB.1. Annex DVB are not exceeded during a production-line dielectric strength test of the assembled end product. Please consult factory for further information.
7. This power supply has been safety approved and final tested using a DC dielectric strength test. Please consult factory before performing AC dielectric strength test.

### Maximum Output Power vs. Ambient Temperature(30 W)



### Maximum Output Power vs. Ambient Temperature(35 W)



## CONNECTOR SPECIFICATION

AC Input IEC 320 AC Power Receptacle  
DC 8 pin connector mates with Power  
Output Dynamics 8 pin din socket #DS-048