

# HWS1000 - 1500 SERIES

AC / DC Single Output: 1000 ~ 1500 Watts



## Features

- 5<sup>th</sup> Generation design
- Universal input 85 - 265VAC
- Wide output voltage adjustment
- Short circuit and OVP protection
- Harmonic correction EN61000-3-2 and PFC 0.98
- External output voltage control: 20% ~ 120% range.
- EMC EN55022, Immunity to EN61000-4
- International safety approvals EN60950, UL60950
- Low profile 2U height for both 1KW & 1.5KW models
- Medical grade option –**ME** Industrial grade option – **HD**
- **Not suitable for battery charging**

|                                |   |
|--------------------------------|---|
| <b>Input Voltage</b>           | 85 ~ 264VAC, 120 ~ 330VDC   |
| <b>Frequency</b>               | 47 ~ 63Hz   |
| <b>Output Voltage</b>          | 3.3 ~ 60VDC options   |
| <b>Output V Range</b>          | Typically ±10% via front panel trim pot.  |
| <b>Indicator</b>               | Led for DC OK   |
| <b>Output Power</b>            | 1000 ~ 1500 watts   |
| <b>Efficiency</b>              | Model Dependent 73 ~ 90%  |
| <b>Input Current</b>           | HWS1000: 13.5A / 7.0A ( 115 / 230VAC )<br>HWS1500: 19A / 10A ( 115 / 230VAC )                             |
| <b>Input Harmonics</b>         | IEC61000-3-2  |
| <b>Power Factor</b>            | >0.95   |
| <b>Ripple &amp; Noise</b>      | 3-5V @ 120mV. 6-15V @ 150mV<br>24-48V @ 200mV 60V @ 400mV   |
| <b>Load Regulation</b>         | Model dependant typically ± 0.8%  |
| <b>Line Regulation</b>         | ±0.4% over input range  |
| <b>Temp Coefficient</b>        | 0.02% per °C  |
| <b>Over current Protection</b> | Constant current set at 105 ~ 150%, shutdown after 5 secs.<br>Recycle AC power after >30 secs to restart. |
| <b>Over Voltage Protection</b> | OVP circuit will shutdown output. Recycle AC power after >30 secs to restart                              |
| <b>Hold-Up Time</b>            | 20 / 30ms @ 100 / 230VAC  |

|                                |  |
|--------------------------------|--|
| <b>Leakage Current</b>         | <1.5mA   |
| <b>Parallel Operation</b>      | YES with power share   |
| <b>Series Operation</b>        | YES  |
| <b>Remote Sense</b>            | YES  |
| <b>Remote ON/OFF</b>           | YES  |
| <b>Monitor Signal</b>          | Power Fail ( Open Collector output )   |
| <b>Alarm</b>                   | DC Fail Alarm Relay ( HWS1500-24/R Y )   |
| <b>Operating Temperature</b>   | -10°C to +50°C at 100% load.<br>Consult office for derating to +71°C                                   |
| <b>Humidity</b>                | 30 ~ 90% RH operating  |
| <b>Cooling</b>                 | Built-in fan   |
| <b>Isolation Voltage</b>       | Input – Output: 3000VAC<br>Input – Ground: 2000VAC<br>Output – Ground: 500VAC                          |
| <b>Safety</b>                  | UL1950, EN60950, UL508, UL50178  |
| <b>EMI</b>                     | EN55011 / EN55022 Lev B  |
| <b>Immunity</b>                | EN61000-4  |
| <b>Dimension ( W x H x D )</b> | HWS1000: 280 x 127 x 82mm 3.2kg<br>HWS1500: 330 x 127 x 82mm 3.8kg<br>( Includes extending terminals ) |

- Output A below is at 230VAC input.
- -24VRY models with Voltage Free relay-Alarm.

| Model        | Output |               | V Range      | Power W |
|--------------|--------|---------------|--------------|---------|
|              | V      | A             |              |         |
| HWS1000-3    | 3.3V   | 200A          | 2.6 – 3.9V   | 660W    |
| HWS1000-5    | 5V     | 200A          | 4.0 – 6.0V   | 1000W   |
| HWS1000-6    | 6V     | 167A          | 4.8 – 7.2V   | 1000W   |
| HWS1000-7    | 7V     | 134A / 160Apk | 6.0 – 9.0V   | 1005W   |
| HWS1000-12   | 12V    | 88A / 100Apk  | 9.6 – 14.4V  | 1056W   |
| HWS1000-15   | 15V    | 70A / 80A pk  | 12.0 – 18.0V | 1050W   |
| HWS1000-24RY | 24V    | 46A / 59Apk   | 19.2 – 28.8V | 1104W   |
| HWS1000-36   | 36V    | 30.7A / 39Apk | 28.8 – 43.2V | 1104W   |
| HWS1000-48   | 48V    | 23A / 29Apk   | 38.4 – 52.8V | 1104W   |
| HWS1000-60   | 60V    | 18.4A / 23Apk | 48.0 – 66.0V | 110W4   |

| Model        | Output |                | V Range      | Power W |
|--------------|--------|----------------|--------------|---------|
|              | V      | A              |              |         |
| HWS1500-3    | 3.3V   | 300A           | 2.64-3.96    | 990W    |
| HWS1500-5    | 5.0V   | 300A           | 4.0-6.0V     | 1500W   |
| HWS1500-6    | 6.0V   | 250A / 300A pk | 4.8-7.2V     | 1500W   |
| HWS1500-7    | 7.5V   | 200A / 240A pk | 6.0-9.0V     | 1500W   |
| HWS1500-12   | 12V    | 125A           | 9.6 – 14.4V  | 1500W   |
| HWS1500-15   | 15V    | 100A           | 12.0 – 18.0V | 1500W   |
| HWS1500-24RY | 24V    | 70A / 105A pk  | 19.2 – 28.8V | 1680W   |
| HWS1500-36   | 36V    | 46.5A / 70Apk  | 28.8 – 43.2V | 1674W   |
| HWS1500-48   | 48V    | 32A            | 38.4 – 52.8V | 1536W   |
| HWS1500-60   | 60V    | 28A / 42A pk   | 48.0-66.0V   | 1680W   |

