

## Single Output 250 & 500W Power Supplies



GWS500 Shown

- ◆ High Efficiency, up to 93%
- ◆ 1.6" high (For 1U racking)
- ◆ Wide Range AC Input
- ◆ 250W Convection Cooled
- ◆ Five year warranty

**RoHS**

### Key Market Segments & Applications

|                                       |                              |
|---------------------------------------|------------------------------|
| Light Industrial<br>Automated Service | Test & Measurement<br>Kiosks |
|---------------------------------------|------------------------------|

| SPECIFICATIONS                   |       | GWS250   | GWS500   |
|----------------------------------|-------|--|--|
| ITEMS                            | MODEL |  |  |
| AC Input Voltage (300VAC for 5s) | VAC   | 85 - 264VAC  |  |
| Input Frequency                  | Hz    | 47 - 63Hz  |  |
| DC Input Voltage                 | VDC   | 120 - 373VDC   |  |
| Inrush Current (cold start)      | A     | 20A at 115VAC, 40A at 230VAC   |  |
| Power Factor (1)                 | -     | Meets EN61000-3-2 (Typical PF 0.98/0.95)   |  |
| Input Current (115/230VAC)       | A     | 3.0 / 1.4  | 5.5 / 2.7 (4.5 / 2.3 for 5V model)                           |
| Temperature Coefficient          | °C    | <0.02%/°C (0 - 50°C)   |  |
| Overcurrent Protection           | -     | >105% of nominal or >101% of peak. 5V-12V hiccup style, 24V-48V Constant current style                       |  |
| Overvoltage Protection (2)       | V     | 5V: 5.75 - 6.75V, 7.5V: 8.6 - 10.1V, 12V: 13.8 - 16.2V/24V: 30.3 - 35.5V, 36V: 41.4 - 48.6V, 48V: 60 - 69.6V |  |
| Overtemperature Protection (2)   | -     | Yes  |  |
| Hold Up Time (115 / 230V input)  | ms    | 16ms   |  |
| Leakage Current (240VAC 60Hz)    | mA    | <0.75mA  |  |
| Remote Sense                     | -     | No   | Yes  |
| Remote On/Off                    | -     | Active Low   |  |
| Standby Input Power Draw         | W     | <0.5W  |  |
| 5V Standby (always on)           | -     | 5V 0.3A  |  |
| DC Good                          | -     | DC Good, open collector signal, High on Fail   |  |
| LED Indicator                    | -     | Green LED = On   |  |
| Output Remote Programming        | -     | See installation manual for details  |  |
| Operating Temperature            | °C    | -25 to +70°C. Derate linearly to 50% load from +50 to +70°C  | -25 to +70°C. Derate linearly to TBD% load from +50 to +70°C |
| Storage Temperature              | °C    | -30 to +85°C   |  |
| Operating Humidity               | -     | 30 - 90% RH (non condensing)   |  |
| Storage Humidity                 | -     | 10 - 95% RH (non condensing)   |  |
| Cooling                          | -     | Convection   | Internal fan   |
| Withstand Voltage                | -     | Input to Ground 1.5kVAC, Input to Output 3kVAC, Output to Ground 500VAC for 1 min.                           |  |
| Isolation Resistance             | -     | >100M at 25°C & 70%RH, Output to Ground 500VDC   |  |
| Vibration (non operating)        | -     | 10 - 55Hz: 19.6m/s <sup>2</sup> constant sweep 1 min X, Y, Z for 1 hour                                      |  |
| Shock                            | -     | < 196.1 m/s <sup>2</sup> (20G)   |  |
| Immunity                         | -     | IEC61000-4-2 (lv 2, 3), -3 (lv3), -4 (lv 3), -5 (lv 4), -6 (lv 3), -8 (lv 4), -11                            |  |
| Safety Agency Approvals          | -     | UL60950-1, CSA C22.2 No 60950-1-07 (cUL), EN60950-1 2nd Edition, IEC60950-1, CE Mark                         |  |
| Conducted & Radiated EMI         | -     | EN55022-B, FCC-B   |  |
| Weight (Typ)                     | g     | 850  | 1020   |
| Size (LxWxH)                     | in    | 7.8 x 4.1 x 1.61"  | 8.6 x 4.1 x 1.61"  |
| Warranty                         | yrs   | Five Years   |  |

(1) 115 / 230VAC input

(2) Recycle AC, or use remote on/off to reset

Note: Green shade = preliminary

## Model Selector

| Model      | Voltage (V) | Adjust Range (V) | Max Current (A) | Peak Curr. <10s, <35% DC (A) | Load Reg. (mV) | Line Reg. (mV) | Ripple Noise (mV) | Efficiency (typ) % (230VAC) |
|------------|-------------|------------------|-----------------|------------------------------|----------------|----------------|-------------------|-----------------------------|
| GWS500-5   | 5V          | 4.75 - 5.5       | 80              | -                            | 50             | 25             | 150               | 85                          |
| GWS500-7.5 | 7.5V        | 6.75 - 8.25      | 67.2            | -                            | 70             | 35             | 150               | 88                          |
| GWS250-12  | 12V         | 10.8 - 13.2      | 21              | -                            | 96             | 48             | 150               | 92                          |
| GWS500-12  | 12V         | 10.8 - 13.2      | 42              | -                            | 96             | 48             | 150               | 90                          |
| GWS250-24  | 24V         | 22 - 28.8        | 10.5            | 12.5                         | 192            | 96             | 240               | 92                          |
| GWS500-24  | 24V         | 22 - 28.8        | 21              | 25.0                         | 192            | 96             | 240               | 91                          |
| GWS250-36  | 36V         | 32 - 40          | 7               | 8.4                          | 288            | 144            | 360               | 93                          |
| GWS500-36  | 36V         | 32 - 40          | 14              | 16.7                         | 288            | 144            | 360               | 91                          |
| GWS250-48  | 48V         | 42 - 57.6        | 5.3             | -                            | 384            | 192            | 480               | 93                          |
| GWS500-48  | 48V         | 42 - 57.6        | 10.5            | -                            | 384            | 192            | 480               | 91                          |

## GWS500 Outline Drawing

**SIGNAL CONNECTOR INFORMATION**

**CN201 PIN ASSIGN**

**SIGNAL CONNECTOR USED**

| PART DESCRIPTION | PART NAME                  | MANUFACT |
|------------------|----------------------------|----------|
| PIN HEADER       | S10B-PHDSS(LF)(SN) (CN201) | JST      |

**MATCHING HOUSINGS, PIN & TOOL**

| PART DESCRIPTION   | PART NAME  | MANUFACT |
|--------------------|--|----------|
| SOCKET HOUSING     | PHDR-10VS (CN201)                                  | JST      |
| TERMINAL PINS      | SPHD-002T-P05(AWG28-24)<br>SPHD-001T-P05(AWG26-22) | JST      |
| HAND CRIMPING TOOL | YRS-620(SPHD-002T-P0.5)<br>YC-610R(SPHD-001T-P0.5) | JST      |

**ACCESSORIES**

\* SHORT PIECE -----1  
SHORTING +V --- +S, -V --- -S, CNT+ --- CNT-  
(ATTACHED ON CN201 AT SHIPMENT)

**NAME PLATE:**

SEE NOTE A

**NOTES**

A. MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT & COUNTRY OF MANUFACTURE ARE SHOWN IN ACCORDANCE WITH THE SPECIFICATION.

B. M4 TAPPED, EMBOSSED & COUNTERSUNK HOLES (8) FOR CUSTOMER CHASSIS MOUNTING. SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 5mm.

## Other Industrial Products

|               |  |
|---------------|--|
| LS25 - 200    | 25W to 200W low cost                   |
| HWS15 - 1800  | 15W to 1800W limited lifetime warranty |
| SWS300 - 1000 | 300W to 1000W single output            |
| CSS500        | 360W to 500W medical                   |

For Additional Information, please visit  
[us.tdk-lambda.com/lp/products/gws-series.htm](http://us.tdk-lambda.com/lp/products/gws-series.htm)