

TDK-Lambda HWS600/1000L BAT Series

36V & 60V Battery Charger Power Supplies

Features

- ◆ Low Profile
- ◆ Active Power Factor Correction
- ◆ Universal Input (85 - 265VAC)
- ◆ Low acoustical noise
- ◆ Medical certifications (HWS1000L)
- ◆ Adjustable current limit
- ◆ Constant current style limit



Key Market Segments & Applications



| Specifications | | HWS600L | HWS1000L |
|--------------------------------|-----|--|--|
| Model | | HWS600L | HWS1000L |
| Input Voltage range | V | 85 - 265VAC (47 - 63Hz) or 120 - 350VDC | |
| Inrush Current (115 / 230VAC) | A | 20 / 40 | |
| Power Factor | - | Meets EN61000-3-2 Class A | |
| Input Current (100/200VAC) | A | 7.1 / 3.6 | 12 / 6 |
| Temperature Coefficient | - | <0.02%/°C | |
| Constant Current Set Accuracy | - | ±10% | |
| Overvoltage Protection | V | 36V: 45 - 52.2V; 60V: 69 - 81V | |
| Overtemperature Protection | - | Yes, cycle AC or Remote On/Off to reset | |
| Hold Up Time (Typ) | ms | 20ms at 115/230VAC | |
| Leakage Current (max) | mA | <0.75mA | 100uA at 115VAC 60Hz ⁽¹⁾ |
| Remote Sense | - | Yes | |
| Parallel Connection | - | Yes | |
| Remote On/Off (CNT) | - | Yes | |
| Voltage Programming | - | Yes, 1-6V adjusts output (see manual for limits) | |
| DC Good & Fan Fail Signal | - | Yes, open collector output | |
| Auxiliary Output | - | 12V 0.1A | |
| LED Indicator | - | Green LED = On | |
| Operating Temperature | °C | -40°C start up. -20 to 74°C, derating linearly to 50% load above 50°C | |
| Storage Temperature | °C | -40 to +85°C | |
| Humidity (non condensing) | RH | 20 - 90% RH operating, 10 - 95%RH non operating | |
| Cooling | - | Variable speed internal fan | |
| Withstand Voltage (One minute) | - | Input to Ground 2kVAC, Input to Output 3kVAC, Output to Ground 500VAC, Output to CNT 100VA | Input to Ground 2kVAC, Input to Output 4kVAC, Output to Ground, 500VAC, Output to CNT 100VAC |
| Isolation Resistance | - | >50M at 25°C & 70%RH, Output to Ground 500VDC | |
| Vibration (non operating) | - | MIL-STD-810F 514.5 Cat. 4, 10 | |
| Shock | - | MIL-STD-810F 516.5 Procedure I, VI | |
| Immunity | - | EN61000-4-2 (Iv2, 3), -3 (Iv1 3), -4 Iv1 (3), -5 (Iv1 3, 4), -6 (Iv1 3), -8 (Iv1 4), -11 | |
| Safety Agency Certifications | - | UL, CSA, EN60950-1, UL, CSA, EN60601-1 (1000W only), EN50178, CE Mark | |
| Conducted & Radiated EMI | - | EN55011 / EN55022-B, FCC Class B | |
| Weight (Typ) | g | 1600 | 2300 |
| Size (WxHxD) | In | 2.4 x 4.72 x 7.48" | 2.4 x 5.91 x 9.45" |
| Warranty | yrs | Five Years | |

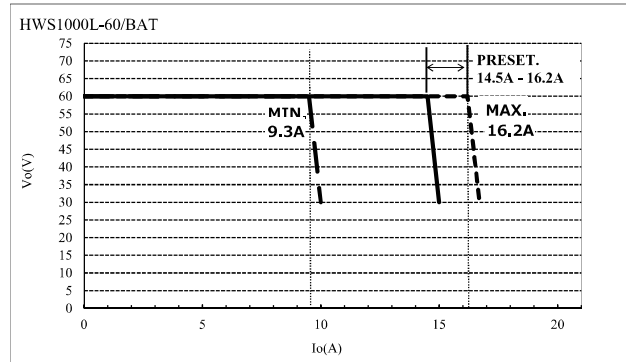
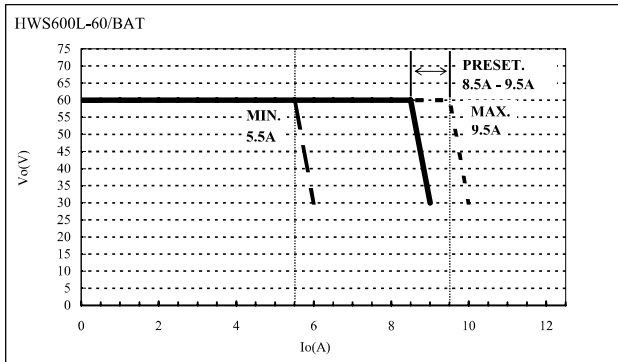
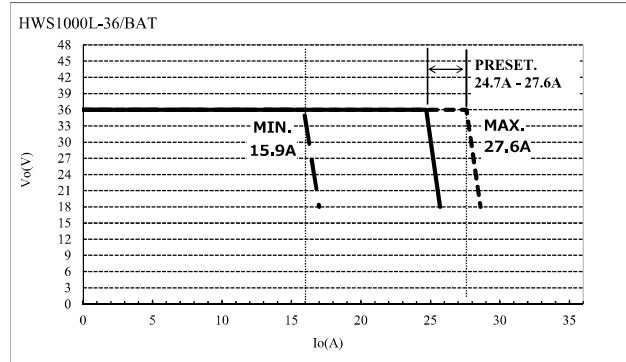
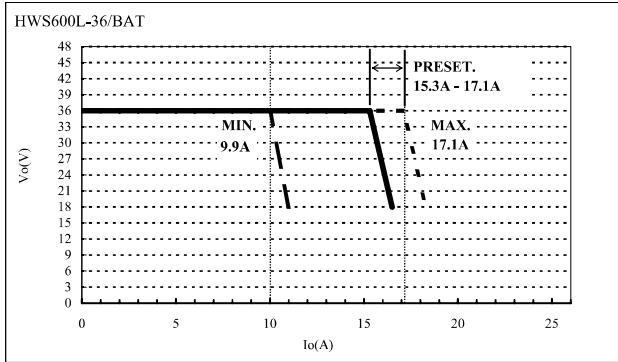
(1) 300uA worse case, 265VAC 63Hz

Model Selector

| Model | Voltage | Voltage Adjust Range | Current Limit Adjust Range | Load Reg (mV) | Line Reg (mV) | Ripple Noise (mV) | Efficiency Typical (%) ⁽²⁾ |
|-----------------|---------|----------------------|----------------------------|---------------|---------------|-------------------|---------------------------------------|
| HWS600L-36/BAT | 36V | 28 - 36V | 9.9 - 18A | 216 | 144 | 200 | 82 / 84 |
| HWS1000L-36/BAT | 36V | 28 - 36V | 15.9 - 29A | 216 | 144 | 200 | 84 / 86 |
| HWS600L-60/BAT | 60V | 48 - 60V | 5.5 - 10A | 360 | 240 | 200 | 82 / 84 |
| HWS1000L-60/BAT | 60V | 48 - 60V | 9.3 - 17A | 360 | 240 | 200 | 84 / 86 |

Notes: (2) 115 / 230VAC

Output Current Limit Curves



Other Industrial Products

| | |
|---------------|--|
| SWS | 50 - 1000W Single output |
| HWS | 15 - 1800W Single output, high reliability |
| ZWS | 5 - 240W pcb style single output |
| DLP, DPP, DSP | 10 - 480W DIN Rail mount |
| LS | 25 - 200W Single output, low cost |

For Additional Information, please visit
<https://product.tdk.com/info/en/products/power/index.html>



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