

# 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 <sup>(1)</sup>
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	

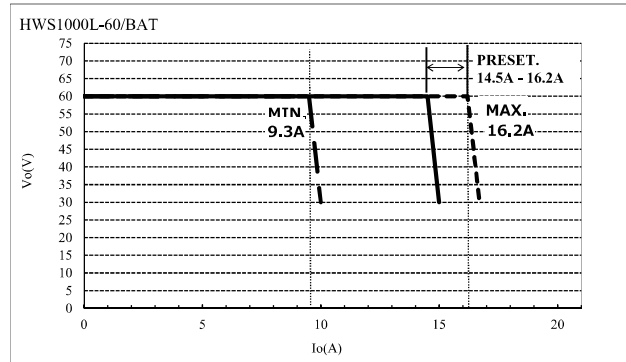
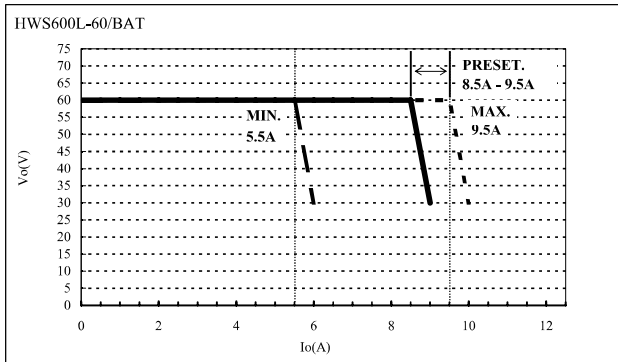
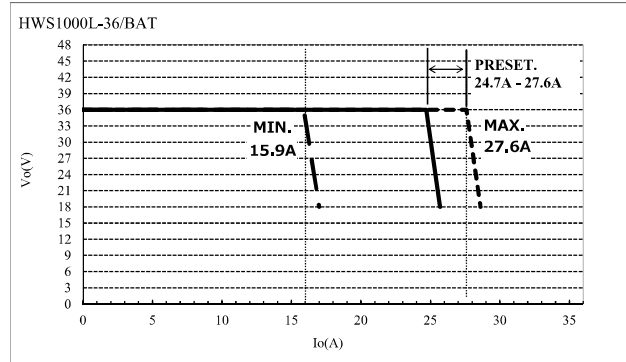
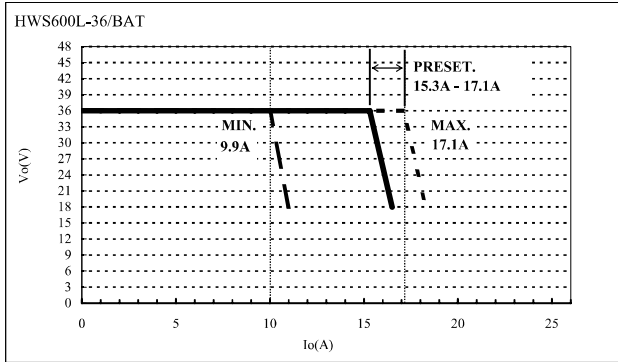
(1) 300uA worse case, 265VAC 63Hz

## Model Selector

Model	Voltage	Voltage Adjust Range	Current Limit Adjust Range	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Efficiency Typical (%) <sup>(2)</sup>
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>

