

Single Output Medical Power Supplies



- ◆ 5 Year Warranty
- ◆ Medical Approvals
- ◆ Universal Input (85 - 265VAC)
- ◆ High Efficiency
- ◆ RoHS Compliant design

HWS Features and Benefits

Feature	Benefit
◆ 5 Year Warranty	◆ Lower Cost of Ownership
◆ Medical Approvals	◆ Reduces system approval times
◆ Wide range AC Input	◆ Supports global use

Specifications

ITEMS		MODELS	HWS30	HWS50	HWS100	HWS150	HWS300	HWS600
Input Voltage range			85 - 265VAC (47 - 63Hz) or 120 - 370VDC (330VDC max for HWS300 & 600)					
Input Current (Typ)		(1) A	0.8 / 0.4	0.7 / 0.35	1.3 / 0.65	1.9 / 0.95	4.1 / 2.1	8.1 / 3.9
Inrush Current		(1) A	14 / 28				20 / 40	
Power Factor / Flicker			Meets EN61000-3-2, EN61000-3-3					
Temperature Coefficient		-	<0.02%/°C					
Overcurrent Protection		-	>104%					
Overvoltage Protection		V	Yes (See table on page 2)					
Hold Up Time (Typ)		ms	20					
Leakage Current (60Hz)		mA	<0.5mA					
Remote Sense		-	No		Yes			
Indicator		-	Green LED = ON					
Remote On/Off		-	No				Yes (Isolated from output)	
Parallel operation		-	No				Single wire conn. (5 units max)	
DC Good		-	No				Yes	
Operating Temperature and Derating		-	HWS30-150: -10°C to +70°C, (-10 - +50°C: 100%, +60°C: 60%, +70°C: 20%) HWS300-600: -10°C to +70°C, (-10 - +50°C: 100%, derate linearly to 50% load from +50 to +70°C)					
Storage Temperature		°C	-30 to +85°C					
Humidity (non condensing)		-	Operating: 30 - 90%RH (10 -90% on HWS300 & 600), Non operating 10 - 95%RH					
Cooling		-	Convection				Internal fan	
Withstand Voltage (3)		-	Input to Ground 2kVAC, Input to Output 3kVAC, Output to Ground 500VAC for 1 min.					
Isolation Resistance		-	>100M at 25C & 70%RH, Output to Ground 500VDC, >10M Output to remote on/off 100VDC					
Vibration (non operating)		-	10 - 55Hz (1 min sweep), 19.6m/s ² constant, X, Y, Z axis, one hour each					
Shock (in packaging)		-	< 196.1m/s ²					
Safety Agency Approvals		-	UL60601-1, EN60601, CSA-C22.2 No6011-M90 (basic insulation), CE Mark					
Line Dip		-	Complies with SEMI F47 (200VAC line only)					
Conducted & Radiated EMI		-	EN55011 / EN55022-B, FCC-B, VCCI-B (HWS600 Class A)					
Immunity		-	IEC61000-4-2 (Level 2), -3, -4, -6, (Level 3), -5, -8 (Level 4), -11					
Weight (Typ)		g	220	280	450	500	1000	1600
Size (WxHxD)		in	1.04x3.23x3.74	1.04x3.23x4.72	1.1x3.23x6.3	1.46x3.23x6.3	2.4x3.23x6.5	3.94x3.23x6.5
Warranty		yrs	Five Years					

(1) 100/200VAC input

(2) See clause 19.5DV.2 of UL60601 for equipment in proximity of patient

(3) HWS300-600 2.5kVAC Input to ground



HWS30-600/ME

Output Ratings

Model	Voltage	Adjust Range	Max Curr(A) ⁴	Max Power(W)	Load Reg(mV)	Line Reg(mV)	Ripple Noise(mV)	Overvoltage (V)	Efficiency (typ)% ¹
HWS30-5/ME	5V	4.0 - 6.0	6	30	40	20	120	6.25 - 7.25	77/80
HWS50-5/ME	5V	4.0 - 6.0	10	50	40	20	120	6.25 - 7.25	82/84
HWS100-5/ME	5V	4.0 - 6.0	20	100	40	20	120	6.25 - 7.25	83/86
HWS150-5/ME	5V	4.0 - 6.0	30	150	40	20	120	6.25 - 7.25	83/86
HWS30-12/ME	12V	9.6 - 14.4	2.5	30	96	48	150	15 - 17.4	81/83
HWS50-12/ME	12V	9.6 - 14.4	4.3	51.6	96	48	150	15 - 17.4	81/83
HWS100-12/ME	12V	9.6 - 14.4	8.5	102	96	48	150	15 - 17.4	83/86
HWS150-12/ME	12V	9.6 - 14.4	13	156	96	48	150	15 - 17.4	83/86
HWS300-12/ME	12V	9.6 - 14.4	27	324	72	48	150	15 - 17.4	80/83
HWS30-15/ME	15V	12.0 - 18.0	2	30	120	60	150	18.8 - 21.8	81/83
HWS50-15/ME	15V	12.0 - 18.0	3.5	52.5	120	60	150	18.8 - 21.8	81/83
HWS100-15/ME	15V	12.0 - 18.0	7	105	120	60	150	18.8 - 21.8	83/86
HWS150-15/ME	15V	12.0 - 18.0	10	150	120	60	150	18.8 - 21.8	83/86
HWS300-15/ME ⁵	15V	12.0 - 18.0	22	330	90	60	150	18.8 - 21.8	82/85
HWS30-24/ME	24V	19.2 - 28.8	1.3	31.2	192	96	200	30 - 34.8	83/86
HWS50-24/ME	24V	19.2 - 28.8	2.2	52.8	192	96	150	30 - 34.8	82/84
HWS100-24/ME	24V	19.2 - 28.8	4.5	108	192	96	150	30 - 34.8	84/87
HWS150-24/ME	24V	19.2 - 28.8	6.5	156	192	96	150	30 - 34.8	85/88
HWS300-24/ME	24V	19.2 - 28.8	14 (16.5 pk)	336	144	96	150	30 - 34.8	82/85
HWS600-24/ME	24V	19.2 - 28.8	27 (31 pk)	648	144	96	150	30 - 34.8	82/85
HWS30-48/ME	48V	38.4 - 52.8	0.65	31.2	384	192	200	55.2 - 64.8	82/83
HWS50-48/ME	48V	38.4 - 52.8	1.1	52.8	384	192	200	55.2 - 64.8	83/85
HWS100-48/ME	48V	38.4 - 52.8	2.1	100.8	384	192	200	55.2 - 64.8	84/87
HWS150-48/ME	48V	38.4 - 52.8	3.3	158.4	384	192	200	55.2 - 64.8	85/88
HWS300-48/ME ⁵	48V	38.4 - 52.8	7	336	288	192	350	55.2 - 64.8	82/85

Options

Suffix	Description
Blank	No Cover (HWS30-150 Only) HWS300-1500 the cover is fitted as standard
/A	The cover option for HWS30-150 is NOT available on /ME series HWS300-1500 the cover is fitted as standard

- (4) Peak load for 10s maximum on time, 35% duty cycle
(5) Safety agency in progress - contact factory for status.

Other Lambda Medical Products

NV Series	175 to 350W single & multiple output
Vega Series	450 to 900W single & multiple output
Alpha Series	1000W single and multiple output

For Additional Information, please visit
www.lambdapower.com/products/hws-series.htm