



- 5 Year Warranty
- UL508 Approved
- SEMI F47 Compliant (high line AC)
- Universal Input (85 - 265VAC)
- High Efficiency
- RoHS Compliant Design

HWS300/600 Series

Single Output Industrial Power Supplies

Key Market Segments & Applications

Factory Automation:
 Test & Measurement:
 Automated Service

HWS300/600 Features and Benefits

Features

- 5 Year Warranty
- High Efficiency
- Wide Range AC Input

Benefits

- Lower Cost of Ownership
- Easier System Cooling
- Supports Global Use

Specifications

ITEMS	MODEL		HWS300	HWS600
Input Voltage range	-		85 - 265VAC (47 - 63Hz) or 120 - 330VDC	
Input Current (Typ)	(1)	A	5V: 3.8/1.9; 12-48V: 4.2/2.1	5V: 7.5/3.6; 12-48V: 8.1/3.9
Inrush Current	(1)	A	20 / 40	
Power Factor	-		Meets EN61000-3-2	
Temperature Coefficient	-		<0.02%/°C	
Overcurrent Protection	-		>105% (>101% of peak current for 24V output models)	
Overvoltage Protection	V		3.3V: 125-150%, 5V to 24V: 125-145%, 48V: 115-135% (Recycle AC or remote on/off to reset)	
Hold Up Time (Typ)		ms	20	
Leakage Current (230VAC, 50Hz)		mA	<0.75mA	
Remote Sense	-		Yes	
Indicator	-		Green LED = ON	
Remote on/off	-		Yes (Isolated from output)	
Parallel operation	-		Single wire connection (up to 5 units)	
DC Good	-		Yes	
Remote Adjust (PV) Option	-		1-6V external adjusts output 20-120% of nominal (20-110% 48V model)	
Operating Temperature	°C		-10°C to +70°C, derate linearly to 50% load from 50°C to 70°C	
Storage Temperature	°C		-30 to +85°C	
Humidity (non condensing)	-		Operating: 10 - 90%RH, Non operating 10 - 95%RH	
Cooling	-		Internal fan	
Withstand Voltage	-		Input to Ground 2.5kVAC, 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 (1 minute sweep), 19.6m/s ² constant X, Y, Z 1 hour	
Shock	-		< 196.1 m/s ²	
Safety Agency Approvals	(2)		UL60950-1, CSA60950-1, EN60950-1, EN50178, UL508 (HIS300-24, 600-24 only), CE Mark	
Line Dip	-		Complies with SEMI F47 (200VAC line only)	
Conducted & Radiated EMI	-		EN55011 / EN55022, FCC VCCI Class B	
Recommended EMI Filter	-		MC1206	MC1210
Immunity	-		IEC61000-4-2, -3, -4, -6 (Level 3), -5, -8 (Level 4), -11	
Weight (Typ)		g	1,000	1,600
Size (WxHxD)		mm	61 x 82 x 165	100 x 82 x 165
Warranty		yrs	Five Years	

Notes: 1. 100/200VAC
 2. For EN60601-1 see options

Models

Model	Voltage	Adjust Range	Max Curr. A	Peak Curr. A ²	Load Reg mV	Line Reg mV	Ripple Noise mV	Eff. typ % ¹
HWS300-3	3.3V	2.64 - 3.96	60	-	30	20	120	74/77
HWS600-3	3.3V	2.64 - 3.96	120	-	30	20	120	74/77
HWS300-5	5V	4 - 6V	60	-	30	20	120	79/82
HWS600-5	5V	4 - 6V	120	-	30	20	120	80/83
HWS300-12	12V	9.6 - 14.4	27	-	72	48	150	80/83
HWS600-12	12V	9.6 - 14.4	53	-	72	48	150	80/83
HWS300-15	15V	12 - 18.0	22	-	96	60	150	80/83
HWS600-15	15V	12 - 18.0	43	-	96	60	150	80/83
HWS300-24	24V	19.2 - 28.8	14	16.5	144	96	150	82/85
HWS600-24	24V	19.2 - 28.8	27	31	144	96	150	82/85
HWS300-48	48V	38.4 - 52.8	7	-	288	192	350	82/85
HWS600-48	48V	38.4 - 52.8	13	-	288	192	350	82/85

Notes

(1) 100/200VAC

(2) 200-265VAC Input, 10s maximum on time with 35% duty cycle

Options

Suffix	Description
/PV	HWS300, 600 (standard on HWS1500): 1-6V program voltage input to adjust output 20-120% of nominal (20-110% for 48V) (12V-48V models only)
/HD	See HWS50-1500/HD Datasheet for details. -40 to +71 (74)°C operation, conformally coated PCBs
/ME	See HWS30-600/ME Datasheet for details of UL60601-1, EN60601-1 medically approved models

HWS300 Outline Drawing

SIGNAL CONNECTOR INFORMATION

CN1, CN2 PIN ASSIGN

512B-PH05S (50)

1. +Vm
2. -S
3. -In
4. -Vn
5. PC
6. COM
7. NC
8. GND
9. CNT
10. TOC
11. PF
12. TOC

== ACCESSORIES ==

- * COVER FOR BARRIER TERMINAL STRIP -----1 (ATTACHED ON TERMINAL AT SHIPMENT)
- * SHORT PIECE -----1 (SHORTING +Vm ---+S, -Vm ---S, CNT ---TOC (ATTACHED ON CN1 AT SHIPMENT))

== SIGNAL CONNECTOR USED ==

PART DESCRIPTION	PART NAME	MANUFACT
PIN HEADER	512B-PH05S	JST

== MATCHING HOUSINGS, PINS & TOOL ==

PART DESCRIPTION	PART NAME	MANUFACT
SOCKET HOUSING	PH0R-12NS	JST
TERMINAL PINS	SPHD-0021-PO.5(AWG28-24) SPHD-0011-PO.5(AWG28-22)	JST
HAND CRIMPING TOOL	YIS-620(SPHD-0021-PO.5) YC-610R(SPHD-0011-PO.5)	JST

== OPTIONAL MODELS ==

MODEL	COATING
HWS300-*	---
HWS300-*/CO	○

NAME PLATE DETAILS

HWS300-3-15.4B HWS300-*/CO

INPUT: 100-240VAC 50/60Hz
OUTPUT: 5V-1.5A
MAX. CODE

OPTION CODE

COUNTRY OF MANUFACTURE WILL BE SHOWN HERE

HWS300-24

INPUT: 100-240VAC 50/60Hz
OUTPUT: 5V-1.5A
MAX. CODE

OPTION CODE

COUNTRY OF MANUFACTURE WILL BE SHOWN HERE

== NOTES ==

A: MODEL, NAME, NOMINAL OUTPUT VOLTAGE AND MAXIMUM OUTPUT CURRENT ARE SHOWN IN THE NAME PLATE IN ACCORDANCE WITH THE SPECIFICATIONS

B: M4 TAPPED HOLES (B) FOR CUSTOMER CHASSIS MOUNTING. (SCREW PENETRATION DEPTH 6m/m MAX.)

(unit : mm)

MODEL HWS300

DENSEI-LAMBDA

A231-02-01C

HWS600 Outline Drawing

SIGNAL CONNECTOR INFORMATION

CN1, CN2 PIN ASSIGN

512B-PH05S (50)

1. +Vm
2. -S
3. -In
4. -Vn
5. PC
6. COM
7. NC
8. GND
9. CNT
10. TOC
11. PF
12. TOC

== ACCESSORIES ==

- * COVER FOR BARRIER TERMINAL STRIP -----1 (ATTACHED ON TERMINAL AT SHIPMENT)
- * SHORT PIECE -----1 (SHORTING +Vm ---+S, -Vm ---S, CNT ---TOC (ATTACHED ON CN1 AT SHIPMENT))

== SIGNAL CONNECTOR USED ==

PART DESCRIPTION	PART NAME	MANUFACT
PIN HEADER	512B-PH05S	JST

== MATCHING HOUSINGS, PINS & TOOL ==

PART DESCRIPTION	PART NAME	MANUFACT
SOCKET HOUSING	PH0R-12NS	JST
TERMINAL PINS	SPHD-0021-PO.5(AWG28-24) SPHD-0011-PO.5(AWG28-22)	JST
HAND CRIMPING TOOL	YIS-620(SPHD-0021-PO.5) YC-610R(SPHD-0011-PO.5)	JST

== OPTIONAL MODELS ==

MODEL	COATING
HWS600-*	---
HWS600-*/CO	○

NAME PLATE DETAILS

** HWS600-3-15.4B HWS600-*/CO **

INPUT: 100-240VAC 50/60Hz
OUTPUT: 5V-1.5A
MAX. CODE

OPTION CODE

COUNTRY OF MANUFACTURE WILL BE SHOWN HERE

** HWS600-24 ONLY **

INPUT: 100-240VAC 50/60Hz
OUTPUT: 5V-1.5A
MAX. CODE

OPTION CODE

COUNTRY OF MANUFACTURE WILL BE SHOWN HERE

== NOTES ==

A: MODEL, NAME, NOMINAL OUTPUT VOLTAGE AND MAXIMUM OUTPUT CURRENT ARE SHOWN IN THE NAME PLATE IN ACCORDANCE WITH THE SPECIFICATIONS

B: M4 TAPPED HOLES (B) FOR CUSTOMER CHASSIS MOUNTING. (SCREW PENETRATION DEPTH 6m/m MAX.)

(unit : mm)

MODEL HWS600

DENSEI-LAMBDA

A232-02-01B

LAMBDA EUROPE

AUSTRIA

LAMBDA ELECTRONICS GmbH
Aredstraße 22
A-2544 Leobersdorf

Telephone: +43 (0) 2256 655 84
Facsimile: +43 (0) 2256 645 12
www.lambda-austria.com

FRANCE

LAMBDA SAS
ZAC des Delaches, BP1077 - Gometz le Chatel
91940 Les Ulis

Telephone: +33 (0) 1 60 12 71 65
Facsimile: +33 (0) 1 60 12 71 66
Web: www.lambda-f.com

GERMANY

LAMBDA GmbH
Karl-Bold-Straße 40
D-77855 Achern

Telephone: +49 (0) 78 41 666 0
Facsimile: +49 (0) 78 41 5000
Web: www.lambda-germany.com

ISRAEL

NEMIC LAMBDA LTD
Kibbutz Givat
Hashlosa 48800

Telephone: +972 (0) 3 902 4333
Facsimile: +972 (0) 3 902 4777
Web: www.nemic.co.il

ITALY

LAMBDA s.r.l.
Via dei Laboratori 128/130,
20092, Cinisello Balsamo (Mi)

Telephone: +39 (0) 02 61 29 38 63
Facsimile: +39 (0) 02 61 29 09 00
Web: www.lambda-italy.com

SWEDEN

LAMBDA SCANDINAVIA
PO Box 546, Rallarvägen 41
SE-184 25. Akersberga

Telephone: +46 (0) 8 598 94 090
Facsimile: +46 (0) 8 540 66 096
Web: www.lambda-scandinavia.com

UK

LAMBDA UK
Kingsley Avenue
Ilfracombe Devon EX34 8ES

Telephone: +44 (0) 1271 856666
Facsimile: +44 (0) 1271 864894
Web: www.lambda-gb.com

LAMBDA NORTH AMERICA

visit www.lambdapower.com for a list of Lambda offices and distributors

LAMBDA ASIA

visit www.densei-lambda.com for a list of Lambda offices and distributors

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