



- Quiet Temperature Controlled Fan
- Low Cost
- Low Profile
- Wide Operating Temperature Range
- Active Power Factor Correction
- Medical Approvals (SWS1000L)

## SWS600/1000L Series

600W and 1000W Low Profile Single Output Power Supplies

### SWS600/1000L Features and Benefits

#### Features

- Temperature Controlled Fan
- Global safety Approvals
- Wide Temperature Range
- Level B EMI

#### Benefits

- Low Acoustic Noise
- Supports Global Use
- Suitable for Outdoor Temperature Extremes
- Assists System Compliance

### Specifications

ITEMS	MODEL	SWS600L	SWS1000L
Input Voltage range	-	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 (3.3V : 5/2.5)	12/6 (3.3V : 8/4)
Temperature Coefficient	-	<0.02%/°C	
Overcurrent Protection	-	>105%, Constant current style	
Overvoltage Protection	V	125% -145%	
Over temperature 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	<0.3mA (1)
Remote Sense	-	Yes	
Parallel Connection	-	Yes	
Remote On/Off (CNT)	-	Yes	
Voltage Programming	-	Yes, 1-6V adjusts output from 20 - 120% of nominal	
DC Good & Fan Fail Signal	-	Yes, open collector output	
Auxiliary Output	-	12V 0.1A	
LED Indicator	-	Green LED = On	
Operating Temperature	-	-40°C start up. -20°C to 74°C, derating linearly to 50% load above 50°C	
Storage Temperature	-	-40°C to +85°C	
Humidity (non condensing)	-	20 - 90% RH operating, 10 - 95%RH non operating	
Cooling	-	Internal fan	
Withstand Voltage(One minute)	-	Input to Ground 2kVAC, Input to Output 3kVAC, Output to Ground 500VAC, Output to CNT 100VAC	Input to Ground 2kVAC, Input to Output 4kVAC**, Output to Ground 500VAC, Output to CNT 100VAC
Isolation Resistance	-	>50MΩ at 25°C & 70%RH, Output to Ground 500VDC	
Vibration (non operating)	-	MIL-STD-810F 514.5 CAT. 4, 10	
Shock (in packaging)	-	MIL-STD-810F 516.5 Procedure 1, V1	
Immunity	-	EN61000-4-2, -3, -4, -5, -6, -8, -11	
Safety Agency Approvals	-	UL/CSA/EN 62368-1, UL/CSA/EN 60950-1, UL/CSA/IEC/EN 60601-1 & ANSI/AAMI ES60601-1, (1000W only), IEC61010-1 (600W only), EN50178, CE Mark	
Conducted & Radiated EMI	-	EN55011 / EN55022-B, FCC Class B	
Weight (Typ)	g	1600	2300
Size (WxHxD)	mm	61 x 120 x 190	61 x 150 x 240
MTBF (2)	hrs	1,444,923	1,348,293
Warranty	yrs	3	

Notes: (1) Worst case: <300μA at 264Vac, 63Hz (Normal condition); <500μA (Single Fault Condition).

(2) According to Telcordia document SR-332, issue 3, "Reliability Prediction Procedure for Electronic Equipment" Conditions: ambient temp. 25°C, 230Vac input, full load (figures shown for 24V models)

\*Safety certified for AC input only \*\*2 x MOPP, IEC60601-1 (3rd edition)

**Note:** (Numbers in brackets indicate peak current and power available at 170 - 265VAC Input, 10s max, 35% duty cycle)

Model Selector								
Model	Voltage (V)	Adjust Range (via Trim Pot)	Max Curr. (A)	Max Pwr (W)	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Eff. <sup>(3)</sup> (typ)%
SWS600L-3	3.3V	2.64 - 3.96V	120	396	30	20	120	70 / 72
SWS1000L-3	3.3V	2.64 - 3.96V	200	660	30	20	120	74 / 76
SWS600L-5	5V	4 - 6V	120	600	30	20	120	75 / 77
SWS1000L-5	5V	4 - 6V	200	1000	30	20	120	79 / 81
SWS600L-12	12V	9.6 - 14.4V	53	636	72	48	150	79 / 82
SWS1000L-12	12V	9.6 - 14.4V	88	1056	72	48	150	82 / 84
SWS600L-15	15V	12 - 19.5V	43	645	90	60	150	79 / 82
SWS1000L-15	15V	12 - 19.5V	70	1050	90	60	150	82 / 84
SWS600L-24	24V	19.2 - 28.8V	27 <b>(31)</b>	648 <b>(744)</b>	144	96	150	81 / 84
SWS1000L-24	24V	19.2 - 28.8V	44 <b>(51)</b>	1056 <b>(1224)</b>	144	96	150	84 / 86
SWS600L-36	36V	28.8 - 43.2V	18	648	216	144	200	82 / 84
SWS1000L-36	36V	28.8 - 43.2V	29	1044	216	144	200	84 / 86
SWS600L-48	48V	38.4 - 56V	13 <b>(15)</b>	624 <b>(720)</b>	288	192	200	82 / 84
SWS1000L-48	48V	38.4 - 56V	22 <b>(25)</b>	1056 <b>(1200)</b>	288	192	200	84 / 86
SWS600L-60	60V	48 - 66V	10	600	360	240	200	82 / 84
SWS1000L-60	60V	48 - 66V	17	1020	360	240	200	84 / 86

**Note:** <sup>(3)</sup> 115 / 230Vac

## Outline Drawing SWS600L Series

**SIGNAL CONNECTOR INFORMATION**

PIN CONFIGURATION AND FUNCTIONS OF CN1,CN2

PIN No.	FUNCTION
1	+V <sub>m</sub> : +OUTPUT VOLTAGE MONITOR
2	+S : +SENSING
3	-V <sub>m</sub> : -OUTPUT VOLTAGE MONITOR
4	-S : -SENSING
5	N.C. : NO CONNECTION
6	PC : CURRENT BALANCE
7	PV : ADJUSTMENT OF OUTPUT VOLTAGE
8	COM : GROUND FOR PC AND PV SIGNAL
9	CNT2 : REMOTE ON/OFF
10	TOG : REMOTE ON/OFF GROUND

PIN CONFIGURATION AND FUNCTIONS OF CN3

PIN No.	FUNCTION
1	COM : GROUND FOR PC AND PV SIGNAL
2	COM : GROUND FOR PC AND PV SIGNAL
3	AUX1 : AUXILIARY OUTPUT (12V 0.1A)
4	CNT1 : REMOTE ON/OFF
5	G2 : GROUND FOR AUX AND CNT1
6	G2 : GROUND FOR AUX AND CNT1
7	ALLM : ALARM
8	G1 : ALARM GROUND

**NOTE:**

- MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, NOMINAL OUTPUT CURRENT AND PEAK OUTPUT CURRENT ARE SHOWN ON THE NAME PLATE IN ACCORDANCE WITH THE SPECIFICATIONS
- COUNTRY OF MANUFACTURE IS SHOWN ON THE NAME PLATE IN ACCORDANCE WITH THE SPECIFICATIONS
- M4 TAPPED HOLES (12) FOR CUSTOMER CHASSIS MOUNTING (SCREW PENETRATION DEPTH 6m/m MAX.)
- RECOMMENDED SCREW TORQUE OUTPUT TERMINAL(M5 SCREW) = 2.5N·m  
INPUT TERMINAL(M4 SCREW) = 1.27N·m

**SIGNAL CONNECTOR USED**

PART DESCRIPTION	PART NAME	MANUFACT
PIN HEADER	S10B-PHDS5 (CN1,CN2) S8B-PHDS5 (CN3)	JST

**MATCHING HOUSINGS, PIN & TOOL**

PART DESCRIPTION	PART NAME	MANUFACT
SOCKET HOUSING	PHDR-10VS (CN1,CN2) PHDR-8VS (CN3)	JST
TERMINAL PINS	SPHD-002T-P05(AWG28~24) SPHD-001T-P05(AWG26~24)	JST
HAND CRIMPING TOOL	YRS-620(SPHD-002T-P0.5) YC-610R(SPHD-001T-P0.5)	JST

## Outline Drawing SWS1000L Series

**SIGNAL CONNECTOR INFORMATION**

**CN1,CN2 PIN ASSIGNMENT**

**CN3 PIN ASSIGNMENT**

**== ACCESSORIES ==**

- SHORT PIECE -----1
- SHORTING +V<sub>m</sub>-+S, -V<sub>m</sub>--S (ATTACHED ON CN1 AT SHIPMENT)

**== SIGNAL CONNECTOR USED ==**

PART DESCRIPTION	PART NAME	MANUFACT
PIN HEADER (CN1 & CN2)	S10B-PHDS5	JST
PIN HEADER (CN3)	S8B-PHDS5	JST

**== MATCHING HOUSINGS, PINS & TOOL ==**

PART DESCRIPTION	PART NAME	MANUFACT
SOCKET HOUSING (CN1 & CN2)	PHDR-10VS	JST
SOCKET HOUSING (CN3)	PHDR-8VS	JST
TERMINAL PINS	SPHD-002T-P0.5(AWG28~24) SPHD-001T-P0.5(AWG26~22)	JST
HAND CRIMPING TOOL	YRS-620(SPHD-002T-P0.5) YC-610R(SPHD-001T-P0.5)	JST

**== NOTES ==**

- MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, NOMINAL OUTPUT CURRENT AND PEAK OUTPUT CURRENT ARE ON NAME PLATE IN ACCORDANCE WITH THE SPECIFICATIONS.
- COUNTRY OF MANUFACTURE IS SHOWN HERE.
- M4 TAPPED HOLES (12) FOR CUSTOMER CHASSIS MOUNTING. (SCREW PENETRATION DEPTH 6m/m MAX.)

**== NAME PLATE ==**

SEE NOTE A: SWS1000L-24, INPUT: 100-240VAC ~43.0A, 50/60Hz, OUTPUT: 24V ~4.4A (PEAK: 61A), MADE IN CHINA

SEE NOTE B: SWS1000L-24, TDK-LAMBDA

SEE NOTE C: (BOTTOM SIDE)

SEE NOTE C: (BOTH SIDES)

**MODEL: SWS1000L**  
**DIEMER-LAMBDA**  
PARTS-02-014



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