

## Single Output 150 - 200W General Purpose Power Supplies



- ◆ Very low cost
- ◆ Small Size
- ◆ Wide Range AC Input
- ◆ Convection or Fan Cooled
- ◆ Three year warranty
- ◆ 1.6" high (For 1U racking)

**RoHS**

### Key Market Segments & Applications

Light Industrial	Test & Measurement
Automated Service	Kiosks

### Specifications

MODEL		LS200 (Enclosed style with internal fan)	LS200/L (U channel style - no internal fan)
ITEMS			
AC Input Voltage (300VAC for 5s)	VAC	85 - 264VAC	85 - 264VAC (3)
Input Frequency	Hz		47 - 63Hz
DC Input Voltage	VDC		120 - 373VDC
Inrush Current (230VAC, cold start)	A		60
Power Factor	-	Meets EN61000-3-2, -3 (Typical PF 0.98/0.95)(1)	
Input Current (115/230VAC)	A	3.5 / 1.7 (typical)	
Temperature Coefficient	-	<0.02%/°C (0 - 50°C)	
Overcurrent Protection	-	>105% of nominal or peak. Constant current style	
Overvoltage Protection (2)	V	3.3V: 3.8 - 4.45V, 5V: 5.75 - 6.75V, 7.5V: 8.6 - 10.1V, 12V: 15.1 - 17.75V 15V: 17.25 - 20.25V, 24V: 30.25 - 35.5V, 36V: 41.4 - 48.6V, 48V: 60 - 69.6V	
Overtemperature Protection (2)	-	Yes	
Hold Up Time (115/230V input)	ms	20ms	
Leakage Current (230VAC 60Hz)	mA	<1mA	
Remote Sense	-	Yes	
Remote On/Off	-	On: 0 - 0.8V; Off: 3 - 12V	
LED Indicator	-	Green LED = On	
Operating Temperature	-	Fan or forced air rating: -25 to +70°C. Derate linearly to 60% load from +50 to +70°C	
Storage Temperature	°C	-40 to +85°C	
Operating Humidity	-	20 - 90% RH (non condensing)	
Storage Humidity	-	10 - 95% RH (non condensing)	
Cooling	-	Internal Fan (air exhausts from fan end)	Convection or customer supplied airflow
Withstand Voltage	-	Input to Ground 1.5kVAC, 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: 19.6m/s <sup>2</sup> constant sweep 1 min X, Y, Z for 1 hour	
Shock	-	< 196.1 m/s <sup>2</sup> (20G)	
Immunity	-	IEC61000-4-2, -3, -4, -5, -6, -8, -11	
Safety Agency Approvals	-	UL60950-1, CSA60950-1 (cUL), IEC60950-1 2nd Edition, CE Mark	
Conducted & Radiated EMI	-	EN55011/EN55022-B, FCC--B	
Weight (Typ)	g	700	600
Size (LxWxH)	in	7.8 x 3.9 x 1.61"	
Warranty	yrs	Three Years	

(1) 115 / 230VAC input

(2) Recycle AC to reset

(3) (Derate linearly to 65% load from 115VAC to 85VAC)

# LS200 Series

## Model Selector

Model	Adjust Range Voltage	Max Current (V)	Max Current Forced Air(A)(4)	Max Current Convect.(A)(5)	Peak Current (A)	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Efficiency (typ) %(1)
LS200-3.3	3.3V	3.0 - 3.6	40.0	N/A	-	40	16	80	67 / 68
LS200-5	5V	4.75 - 5.5	40.0	N/A	-	40	20	80	72 / 75
LS200-7.5	7.5V	6.8 - 8.2	26.7	N/A	-	40	20	80	74 / 77
LS200-12	12V	10.8 - 14.4	16.7	N/A	-	96	48	120	76 / 79
LS200-15	15V	13.5 - 16.5	13.4	N/A	-	120	60	120	80 / 83
LS200-24	24V	22 - 28.8	8.4	N/A	10.4	192	96	120	82 / 84
LS200-36	36V	32 - 40	5.6	N/A	6.9	288	144	150	82 / 85
LS200-48	48V	42 - 57.6	4.2	N/A	-	384	192	200	82 / 85
LS200-3.3/L	3.3V	3.0 - 3.6	40.0	32.0	-	40	16	80	67 / 68
LS200-5/L	5V	4.75 - 5.5	40.0	32.0	-	40	20	80	72 / 75
LS200-7.5/L	7.5V	6.8 - 8.2	26.7	21.36	-	40	20	80	74 / 77
LS200-12/L	12V	10.8 - 14.4	16.7	15.0	-	96	48	120	76 / 79
LS200-15/L	15V	13.5 - 16.5	13.4	12.0	-	120	60	120	80 / 83
LS200-24/L	24V	22 - 28.8	8.4	7.5	10.4	192	96	120	82 / 84
LS200-36/L	36V	32 - 40	5.6	5.0	6.9	288	144	150	82 / 85
LS200-48/L	48V	42 - 57.6	4.2	3.78	-	384	192	200	82 / 85

(4) With internal fan version LS200-xx or LS200-xx/L version with external airflow.

(5) See Installation manual for derating curve.

## Outline Drawing

**SIGNAL CONNECTOR INFORMATION**

SBB-PHDSS (LF)(SN)

1. +V <sub>o</sub>
2. +S
3. -V <sub>o</sub>
4. -S
5. NC
6. NC
7. CNT+
8. CNT-

**SIGNAL CONNECTOR USED**

PART DESCRIPTION	PART NAME	MANUFACT
PIN HEADER	S10B-PHDSS(LF)(SN) (CN2)	JST

**MATCHING HOUSINGS, PIN & TOOL**

PART DESCRIPTION	PART NAME	MANUFACT
SOCKET HOUSING	PHDR-10VS (CN2)	JST
TERMINAL PINS	SPHD-002T-P05(AWG28-24) SPHD-001T-P05(AWG26-22)	JST
HAND CRIMPING TOOL	YRS-620/SPHD-002T-P0.5 YC-610R/SPHD-001T-P0.5	JST

==ACCESSORIES==

\* SHORT PIECE ——— 1

SHORTING +V<sub>o</sub> — +S, -V<sub>o</sub> — -S, CNT+ — CNT- (ATTACHED ON CN2 AT SHIPMENT)

**NAME PLATE**

SEE NOTE A

**NOTES**

A. MODEL NAME NOMINAL OUTPUT VOLTAGE AND MAXIMUM OUTPUT CURRENT ARE SHOWN IN THE NAME PLATE IN ACCORDANCE WITH THE SPECIFICATION.

B. M4 COUNTERSUNK & EMBOSSED HOLES (2) FOR CUSTOMER CHASSIS MOUNTING SCREW MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 5mm.

C. M4 COUNTERSUNK & EMBOSSED HOLES (8) FOR CUSTOMER CHASSIS MOUNTING SCREW MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 6mm.

Labels in drawing: AC(L), AC(N), (FG), -V, -V, +V, +V, LED, VOLTAGE ADJUSTMENT, CN2, NAME PLATE.

Dimensions: 199.0±1.0, 70.0, 65.0±0.3, 18.1±0.3, 98.0±1.0, 49.0±0.3, 117.0±0.3, 25.0, 11.0 (MAX), 15.0, 20.0±0.3, 8.0, 4.0±0.10.

SEE NOTE B, SEE NOTE C.

## Other Related Products

LS25 - 150	25W to 150W low cost
HWS15 - 1800	15W to 1800W limited lifetime warranty
SWS300 - 1000	300 to 1000W single output

## Options

Suffix	Description
/L	No cover or fan (U channel)
Blank	Cover and fan

For Additional Information, please visit [us.tdk-lambda.com/lp/products/ls-series.htm](http://us.tdk-lambda.com/lp/products/ls-series.htm)