

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 ² constant sweep 1 min X, Y, Z for 1 hour	
Shock	-	< 196.1 m/s ² (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)

Model Selector

Model	Adjust Voltage	Adjust Range (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) Internal fan version or customer supplied airflow

(5) See Installation manual for derating curve.

Outline Drawing

SIGNAL CONNECTOR INFORMATION

SBB-PHDSS (LF)(SN)

1. +V _o	1. +V _o
2. +S	2. +S
3. -V _o	3. -V _o
4. -S	4. -S
5. NC	5. NC
6. NC	6. NC
7. CNT+	7. CNT+
8. 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_o — +S, -V_o — -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.

AC(L)
AC(N)
(FG)
-V_o
-V_o
+V_o
+V_o

LED
VOLTAGE ADJUSTMENT
CN2

NAME PLATE

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