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TDK·Lambda RWS1000/1500-B Series

1000W to 1500W Single Output General Purpose Power Supplies

https://product.tdk.com/en/power/rws-b
www.emea.lambda.tdk.com/rws-b



Industrial | Test | COMM | LED | Broadcast | Semi-Fab

The RWS1000/1500-B are 1000W and 1500W rated AC-DC power supplies, designed to provide solid performance at an economical price. The series accepts a wide range 85 to 265Vac input with output voltages from 12V to 48V. They are certified to IEC62368-1 and EN62477-1 (OVC III). These 7-year warranty (1) products meet both class B radiated and conducted EMI standards. Option model features include an isolated 5V 1A standby voltage, remote on/off and an output-low/fan-fail isolated signal. Up to five units can be connected in parallel for additional power.

Features	Benefits
• Seven Year Warranty (1)	• Low Cost of Ownership
• Conservative Electrolytic Capacitor Ratings	• Long Service Life
• Class B Conducted and Radiated EMI	• Easier System EMC Compliance
• Configurable Output Screw Terminal Block Orientation	• Simplified Cable Connections
• Compact, Enclosed Construction	• Space Saving in End Equipment

Model Selector

Model	Voltage (V)	Adjustable Range (V)	Max Current (A)	Max Output Power (W)	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Efficiency (typ at 115/230Vac) (%)
RWS1000B-12	12V	10.2-13.8V	84	1008	96	48	150	82 / 85
RWS1500B-12	12V	10.2-14.4V	125	1500	96	48	150	81 / 85
RWS1000B-15	15V	12.8-17.2V	67	1005	120	60	150	82 / 85
RWS1500B-15	15V	12.8-18.0V	100	1500	120	60	150	82 / 85
RWS1000B-24	24V	20.4-28.8V	42	1008	144	96	180	85 / 88
RWS1500B-24	24V	20.4-28.8V	63	1512	144	96	180	85 / 88
RWS1000B-36	36V	30.6-41.4V	28	1008	216	144	250	85 / 88
RWS1500B-36	36V	30.6-43.2V	42	1512	216	144	250	85 / 88
RWS1000B-48	48V	40.8-57.6V	21	1008	288	192	300	85 / 88
RWS1500B-48	48V	40.8-57.6V	32	1536	288	192	300	85 / 88

RWS1000B-	12	/	S

Output voltage 12, 15, 24, 36, 48

blank	Air enters over input/output terminals
/R	Remote On/Off
/FO	PF signal and parallel
/RFO	Remote ON/OFF, Power Fail signal and parallel operation
/RF	Reverse Fan, air exits over input/output terminals
/CO2	Conformal coating
/S	Standby 5V

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Specifications

Model		RWS1000/1500-B
Input		
Input Voltage Range (Operating)	Vac	85 - 265 (2)
Nominal Input Voltage Range	Vac	100 - 240 (Note: Safety certified for 90-264Vac)
Input Frequency	Hz	47 - 63 (Note: Safety certified for 50-60Hz only)
DC Input Voltage Range	Vdc	120 - 340 (Note: Safety certified for AC input only)
Input Current (110/230Vac)	A	RWS1000B: 13 / 7, RWS1500B: 19 / 10
Inrush Current at 100/200Vac (Cold Start)	A	60 / 60
Leakage Current	mA	< 1.2
Power Factor (100/200Vac)	-	0.98 / 0.95
Harmonic Compliance	-	Meets IEC61000-3-2
Hold Up Time	ms	20
Efficiency	-	See model selector table
Conducted & Radiated EMI	-	EN55011 / EN55032-B, FCC Class B, VCCI-B
Immunity	-	See immunity table
Safety Certifications and Markings	-	IEC/UL/CSA/EN62368-1, 60950-1, CE Mark and UKCA Mark

Immunity

Test	Standard	Test Level	Criteria	Notes: See IEC61000 immunity test report on website for further details
ESD	EN61000-4-2	Air ± 8kV and contact ± 4kV	B	
Radiated Susceptibility	EN61000-4-3	80M -1GHz: 10V/m 1.4 - 2.0GHz: 3V/m 2.0 - 2.7GHz: 1V/m	A	
Electrical Fast Transient Burst	EN61000-4-4	± 2kV	B	
Surge	EN61000-4-5	Normal ± 2kV Common ± 4kV	B	
Conducted Susceptibility	EN61000-4-6	10Vrms	A	
Magnetic Fields	EN61000-4-8	30A/m	A	
Voltage Dips	EN61000-4-11	30% 500ms 60% 10ms 100% 20ms 100% 5000ms	B B A B	
Voltage Dips	EN60601-1-2 Ed.4	30% 500ms 100% 10ms 100% 20ms 100% 5000ms	B A A B	
SEMI F47 Line Dip	SEMI F47			At input voltages > 200Vac

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Specifications

Model		RWS1000/1500-B
Output		
Switching Frequency	kHz	RWS1000B; 95, RWS1500B; 85, PFC converter 65
Line Regulation	-	See model selector table
Load Regulation	-	See model selector table
External Load Capacitance	uF	100,000
Ripple & Noise	-	See model selector table
Temperature Coefficient	%/°C	0.02
Minimum Load	-	No minimum load required
Overcurrent Protection	%	>105. Constant current mode with automatic recovery. A prolonged overload of more than 5s will cause unit to shutdown
Overvoltage Protection	-	Latching (unit shutdown), cycle AC input to reset
Overtemperature Protection		Latching (unit shutdown), cycle AC input to reset
Remote Sense		Yes
Remote On/Off	-	Optional, See Part Numbering Scheme. ON when the external voltage is applied, OFF when open
DC Good / Fan Alarm	-	See options section
Standby Voltage	-	5V 1A (always on). See Part Numbering Scheme
Indicators	-	Green LED indicates DC is OK
Parallel Operation	-	Optional, See Part Numbering Scheme
Series Operation	-	Possible

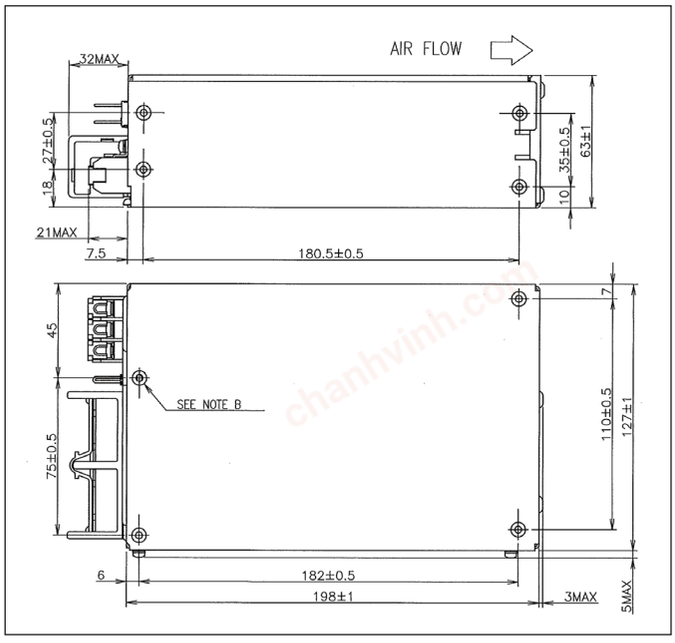
Specifications

Model		RWS1000/1500-B
Environmental		
Operating Temperature	°C	-20 to +60, derate linearly to 60% load from 50 to 60 Reverse air (/RF): -20 to +70, derate linearly to 50% load from 50 to 70
Operating Humidity	%RH	Operating: 20 - 90, Storage: 10 - 90
Storage Temperature	°C	-30 to +75
Humidity (non condensing)	%RH	10 - 90 (Operating & Storage)
Cooling	-	Forced air. Optional reverse fan direction
Altitude	m	3000
Withstand Voltage (For 1 minute)	Vac	Input to ground 2,000, Input to output 4,000, Output to ground 1,500 for 1 minute
Vibration (Non operating)	-	10-55Hz (Sweep for 1min.) 19.6m/s^2 Constant X,Y,Z 1 hour each
Shock (Non operating)	-	Less than 196m/s^2, 11ms, ±X, ±Y, ±Z 3 times each
Other		
Weight (Typ)	g	RWS1000B: 2000, RWS1500B: 3000
Size (WxHxD)	mm	RWS1000B; 127 x 63 x 198, RWS1500B; 127 x 63 x 261
Size (WxHxD)	Inches	RWS1000B; 5 x 2.48 x 7.8, RWS1500B; 5 x 2.48 x 10.28
Connectors	-	Screw terminal input and output. Signal connectors JST S12B-PHDSS
MTBF - Telcordia SR-332 issue 3**	Hours	1,222,361
Warranty	yrs	7 (1)

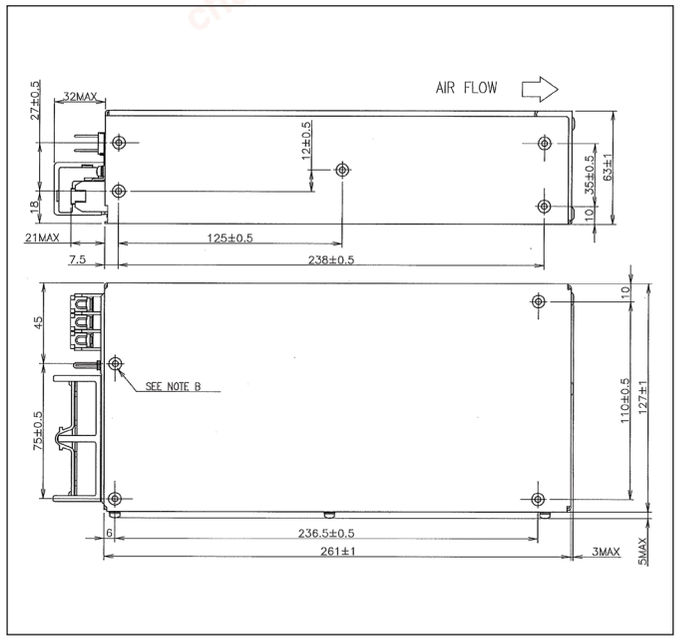
See website for detailed specifications, test methods and installation manual
(1) The Americas and EMEA regions: 7 years. Other regions: 5 years. See applicable regional terms of sale.
(2) Derate linearly to 80% load from 90 to 85Vac input
*Safety certified for AC input only
**RWS1500B-24 model, 25°C ambient, full load, 24Vdc output

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Outline Drawing RWS1000B



Outline Drawing RWS1500B



Note B:
8-M4 BR & Countersink are for cutomer's chassis mounting (screw penetration depth 5mm max.)

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TDK-Lambda France SAS
Tel: +33 1 60 12 71 65
tlf.fr-powersolutions@tdk.com
www.emea.lambda.tdk.com/fr



Italy Sales Office
Tel +39 02 61 29 38 63
tlf.it-powersolutions@tdk.com
www.emea.lambda.tdk.com/it



Netherlands
tlf.nl-powersolutions@tdk.com
www.emea.lambda.tdk.com/nl



TDK-Lambda Europe GmbH
Tel: +49 7841 666 0
tlg.powersolutions@tdk.com
www.emea.lambda.tdk.com/de



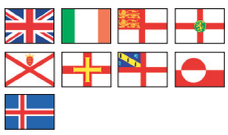
Austria Sales Office
Tel: +43 2256 655 84
tlg.at-powersolutions@tdk.com
www.emea.lambda.tdk.com/at



Switzerland Sales Office
Tel: +41 44 850 53 53
tlg.ch-powersolutions@tdk.com
www.emea.lambda.tdk.com/ch



TDK-Lambda Europe GmbH
Tel: Tel. +45 3222 8086
tlg.dk-powersolutions@tdk.com
www.emea.lambda.tdk.com/dk



TDK-Lambda UK Ltd.
Tel: +44 (0) 12 71 85 66 66
tlu.powersolutions@tdk.com
www.emea.lambda.tdk.com/uk



TDK-Lambda Ltd.
Tel: +9 723 902 4333
tli.powersolutions@tdk.com
www.emea.lambda.tdk.com/il-en



TDK-Lambda Americas
Tel: +1 800-LAMBDA-4 or 1-800-526-2324
tla.powersolutions@tdk.com
www.us.lambda.tdk.com



TDK Electronics do Brasil Ltda
Tel: +55 11 3289-9599
sales.br@tdk-electronics.tdk.com
www.tdk-electronics.tdk.com/en



TDK-Lambda Corporation
Tel: +81-3-6778-1113
www.jp.lambda.tdk.com



TDK-Lambda (China) Electronics Co. Ltd.
Tel: +86 21 6485-0777
tlc.powersolutions@tdk.com
www.lambda.tdk.com.cn



TDK-Lambda Singapore Pte Ltd.
Tel: +65 6251 7211
tls.marketing@tdk.com
www.sg.lambda.tdk.com



TDK India Private Limited, Power Supply Division
Tel: +91 80 4039-0660
mathew.philip@tdk.com
www.sg.lambda.tdk.com

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https://product.tdk.com/en/power/