

TDK-Lambda

RWS-B Series Datasheets



RWS50-600B Series

Pages 1 – 2



RWS1000/1500-B Series

Pages 3 – 4

50-600W Single Output General Purpose Power Supplies

Features

- ◆ Low Cost
- ◆ Wide Range AC Input 85 - 265VAC (300VAC for 5s)
- ◆ UL508 Certification on Select Models
- ◆ Enclosed Construction
- ◆ Compact Size
- ◆ 7 Year Warranty



Key Market Segments & Applications



Specifications						
Model		RWS50B	RWS100B	RWS150B	RWS300B	RWS600B
AC Input Voltage range (1)	VAC	85 - 265VAC (47 - 63Hz), 300VAC for 5 seconds				
DC Input Voltage range	VDC	120 - 370VDC (330VDC for RWS600B)*				
Inrush Current (100 / 200VAC)	A	18 / 36	15 / 30	16 / 32	17 / 34	20 / 40
Power Factor (100 / 200VAC)	-	Meets EN61000-3-2 (0.95 / 0.9)				
Input Current (115/230VAC) (Typ)	A	1.0 / 0.65	1.2 / 0.6 (5V: 0.9/0.45)	1.8 / 0.9 (5V: 1.3/0.7)	3.6 / 1.9 (5V: 3.1/1.6)	6.6 / 3.6 (5V: 6.2/3.2)
Temperature Coefficient	-	<0.02%/°C				
Regulation	-	See sheet 2				
Overcurrent Protection	-	>105%, Constant Current Style				
Overvoltage Protection	V	115-140%, Cycle AC line to reset				
Hold Up Time (Typ at 100% load)	ms	20ms (RWS50B: 15ms at 100VAC input)				
Leakage Current (max)	uA	750uA maximum, typically 175uA at 115VAC, 63Hz				
Remote Sense	-	No				
Operating Temperature	-	-20 to +70°C, see note (3) and instruction manual for low temperature derating				
Storage Temperature	-	-30 to +75°C				
Operating Humidity (non condensing)	%RH	30 - 90%RH				
Storage Humidity (non condensing)	%RH	10 - 90%RH				
Cooling	-	Convection			Internal Fan	
Withstand Voltage	-	Input to Ground 2kVAC, 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 (sweep 1 min) X, Y, Z for 1 hour				
Shock	-	< 196.1 m/s ²				
Safety Agency Approvals (2)	-	IEC/EN/UL/CSA60950-1, IEC/EN/UL/CSA62368-1, UL508 and CE Mark				
Conducted & Radiated EMI	-	EN55011 / EN55022-B, FCC Class B, VCCI-B				
Line Dips	-	SEMI-F47 (200VAC input)				
Immunity	-	IEC61000-4-2, -3, -4, -5, -6, -8, -11, IEC61000-6-2				
Weight (Typ)	g	230	400	480	900	1600
Size (WxHxD)	mm	82 x 34 x 81.5	94 x 39 x 108	94 x 41 x 128	102 x 41 x 170	120 x 61 x 190
	In	3.23 x 1.34 x 3.2	3.7 x 1.54 x 4.25	3.7 x 1.61 x 5.04	4.02 x 1.61 x 6.7	4.72 x 2.4 x 7.48
MTBF - Telcordia SR-332 issue 3**	Hours	4,170,949	1,978,533	2,235,743	2,027,824	2,157,340
Warranty	Yrs	Seven Years				

*Safety certified for AC input only ** 24V output model, 25°C ambient, full load, 230VAC input

Notes: (1) See instruction manual for derating below 115VAC input

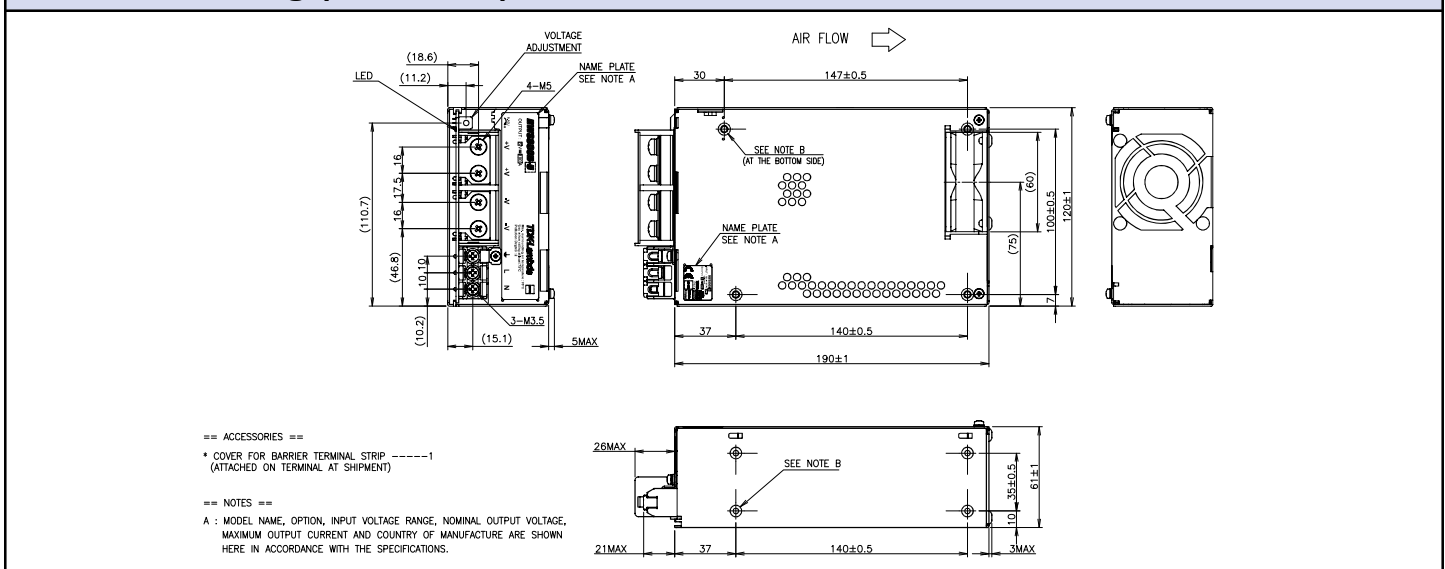
(2) UL508 & CSA C22.2 No.107.1-01 on RWS50B-5, -12, -24, RWS100B-5, -12, -24, RWS150B-5, -12, -24, RWS300B-12, -15, -24, -36 & -48 RWS600B-24 only

(3) RWS50-100B derates linearly above 45°C to 20% load at 70°C, 150B derates above 40°C and 300-600B derates above 50°C to 50% load at 70°C

Output Ratings

Model	Voltage	Adjust Range (V)	Max Current (A)	Max Output Power	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Efficiency (typ) % 115/230VAC
RWS50B-5	5V	4.5-5.75V	10	50	40	20	120	78 / 79
RWS100B-5	5V	4.5-5.75V	14	70	40	20	120	77.5 / 79
RWS150B-5	5V	4.5-5.75V	21	105	40	20	120	77.5 / 79.5
RWS300B-5	5V	4.5-5.75V	50	250	40	20	120	75 / 78.5
RWS600B-5	5V	4.5-5.75V	100	500	70	20	120	74 / 77.5
RWS50B-12	12V	10.8-13.8V	4.3	51.6	96	48	150	83 / 84
RWS100B-12	12V	10.8-13.8V	8.5	102	96	48	150	83 / 84
RWS150B-12	12V	10.8-13.8V	13	156	96	48	150	84.5 / 87.5
RWS300B-12	12V	10.8-13.8V	25	300	96	48	150	79.5 / 82.5
RWS600B-12	12V	10.8-13.8V	50	600	96	48	150	82 / 84.5
RWS100B-15	15V	13.5-17.25V	6.8	102	120	60	150	84 / 85
RWS150B-15	15V	13.5-17.25V	10	150	120	60	150	84.5 / 87.5
RWS300B-15	15V	13.5-17.2V	20	300	120	60	150	81.5 / 84.5
RWS600B-15	15V	13.5-17.2V	40	600	120	60	150	82 / 84.5
RWS50B-24	24V	21.6-27.6V	2.2	52.8	192	96	150	86 / 87
RWS100B-24	24V	21.6-27.6V	4.5	108	192	96	150	86 / 87.5
RWS150B-24	24V	21.6-27.6V	6.5	156	192	96	150	86.5 / 89.5
RWS300B-24	24V	21.6-27.6V	12.5	300	192	96	150	85 / 88
RWS600B-24	24V	21.6-27.6V	25	600	192	96	150	85 / 88.5
RWS150B-28	28V	25.2-32.2V	5.4	151.2	224	112	180	86.5 / 89.5
RWS300B-36	36V	32.4-41.4	8.4	302.4	288	144	200	85 / 88
RWS600B-36	36V	32.4-41.4	16.7	601.2	288	144	200	84 / 88.5
RWS50B-48	48V	43.2-52.8	1.1	52.8	384	192	200	87 / 88
RWS100B-48	48V	43.2-52.8	2.1	100.8	384	192	200	86 / 87
RWS150B-48	48V	43.2-52.8	3.3	158.4	384	192	200	86.5 / 89.5
RWS300B-48	48V	43.2-52.8	6.3	302.4	384	192	200	85 / 88
RWS600B-48	48V	43.2-52.8	12.5	600	384	192	200	85 / 88.5

Outline Drawing (RWS600B)



Options

Suffix	Description
/CO2	Double Sided Board Coating
/R	Remote On/Off (RWS300B only)
/RFO	Remote On/Off, Remote Sense, Parallel Operation, DC Good Signal (RWS600B only)

Other TDK-Lambda Industrial Products

HWS	15W to 1500W Single output
LS	25W to 200W Single output low cost
RWS1000/1500B	1000W to 1500W Single output (including medical /ME)

For Additional Information, please visit
<https://product.tdk.com/info/en/products/power/index.html>



1000W to 1500W Single Output General Purpose Power Supplies

Features

- ◆ Cost Effective
- ◆ Wide Range AC Input 85 - 265VAC
- ◆ Enclosed Construction
- ◆ Compact Sizes
- ◆ SEMI F47 Line Dips
- ◆ 7 Year Warranty



Key Market Segments & Applications



Specifications

Model		RWS1000B	RWS1500B
AC Input Voltage range (1)	VAC	85 - 265VAC (47 - 63Hz)	
DC Input Voltage range*	VDC	120 - 340VDC*	
Inrush Current (100 / 200VAC)	A	60 / 60A	
Power Factor (100 / 200VAC)	-	Meets EN61000-3-2 (0.98 / 0.95)	
Input Current (100/200VAC) (Typ)	A	13 / 7A	19 / 10A
Temperature Coefficient	%/°C	<0.02%/°C	
Regulation	-	See Model Selector	
Overcurrent Protection	-	>105%, Constant Current Style. After 5s unit will shutdown	
Overvoltage Protection (2)	V	Shuts down output, cycle AC line or remote on/off to reset	
Hold Up Time (Typ at 100% load)	ms	20ms	
Leakage Current (max)	mA	<1.2mA	
Standby Voltage (Vsb)	-	5V 1A (always on). See options table (/S suffix)	
Remote Sense	-	Yes	
Remote On/Off	-	See options table. Apply external voltage or Vsb to enable output voltage	
DC Good, Fan Alarm	-	See options table	
Parallel Operation	-	See options table	
Series Operation	-	Yes	
Operating Temperature	°C	-20 to +60°C, derate linearly to 60% load from 50 to 60°C Reverse air (/RF): -20 to +70°C, derate linearly to 50% load from 50 to 70°C	
Storage Temperature	°C	-30 to +75°C	
Operating Humidity (non condensing)	%RH	20 - 90%RH	
Storage Humidity (non condensing)	%RH	10 - 90%RH	
Cooling	-	Internal Fan, air intake from input/output terminals	
Withstand Voltage	VAC	Input to Ground 2kVAC, Input to Output 4kVAC, Output to Ground 1.5kVAC for 1 min.	
Isolation Resistance	MΩ	>100MΩ at 25°C & 70%RH, Output to Ground 500VDC	
Vibration (non operating)		10 - 55Hz: 19.6m/s ² (sweep 1 min) X, Y, Z for 1 hour	
Shock	-	< 196.1 m/s ²	
Safety Agency Certifications	-	IEC/UL/CSA/EN60950-1, IEC/UL/CSA/EN62368-1, CE Mark	
Line Dips	-	SEMI-F47 (200VAC input)	
Conducted & Radiated EMI	-	EN55011 / EN55032-B, FCC Class B, VCCI-B	
Immunity	-	IEC61000-4-2, -3, -4, -5, -6, -8, -11, IEC61000-6-2	
Weight (Typ)	g	2,000g	3,000g
Size (WxHxD)	mm	127 x 63 x 198mm	127 x 63 x 261mm
	In	5 x 2.48 x 7.8"	5 x 2.48 x 10.28"
MTBF - Telcordia SR-332 issue 3**	hours	1,834,313	1,222,361
Warranty	yrs	Seven Years	

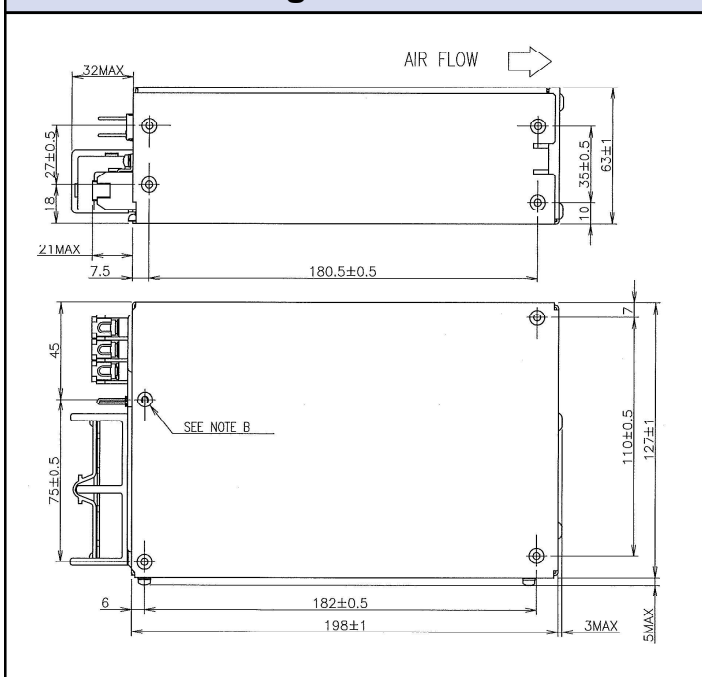
(1) Derate linearly to 80% load from 90 to 85VAC input *Safety certified for AC input only **24V output model, 25°C ambient, full load, 230VAC input

(2) See specifications on website for individual limits. Note the remote on/off function is an option - see options table

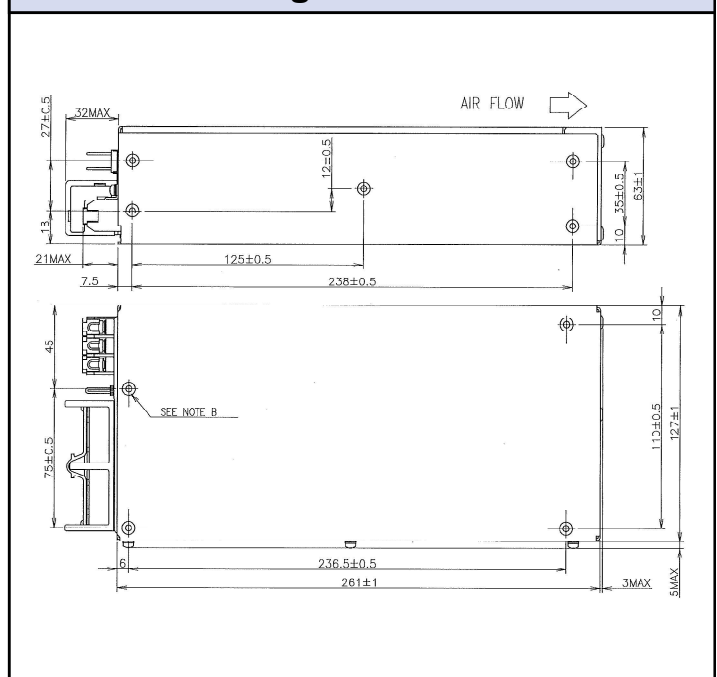
Output Ratings

Model	Voltage	Adjust Range (V)	Max Current (A)	Max Output Power (w)	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Efficiency (typ) % 115/230VAC
RWS1000B-12	12V	10.2-13.8V	84	1008	96	48	150	82 / 85
RWS1000B-12/S	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
RWS1500B-12/S	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
RWS1000B-15/S	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
RWS1500B-15/S	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
RWS1000B-24/S	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
RWS1500B-24/S	24V	20.4-28.8V	63	1512	144	96	180	85 / 88
RWS1000B-36	36V	30.6-41.4	28	1008	216	144	250	85 / 88
RWS1000B-36/S	36V	30.6-41.4	28	1008	216	144	250	85 / 88
RWS1500B-36	36V	30.6-43.2	42	1512	216	144	250	85 / 88
RWS1500B-36/S	36V	30.6-43.2	42	1512	216	144	250	85 / 88
RWS1000B-48	48V	40.8-57.6	21	1008	288	192	300	85 / 88
RWS1000B-48/S	48V	40.8-57.6	21	1008	288	192	300	85 / 88
RWS1500B-48	48V	40.8-57.6	32	1536	288	192	300	85 / 88
RWS1500B-48/S	48V	40.8-57.6	32	1536	288	192	300	85 / 88

Outline Drawing RWS 1000B



Outline Drawing RWS 1500B



Options

Suffix	Description
/CO2	Double Sided Board Coating
/FO	Parallel Operation, DC Good and Fan Alarm Signals
/R	Remote On/Off
/RF	Reverse Fan (Air exits over input/output terminals)
/RFO	Remote On/Off, Parallel Operation, DC Good and Fan Alarm Signals
/S	Remote On/Off, 5V 1A Standby Output

For Additional Information, please visit
<https://product.tdk.com/info/en/products/power/index.html>

