

Power Supplies

RDL Series

DC Input
Single Output, Long Life

FEATURES

- These single output power supplies use DC.9 to 16V input.
- These switching power supplies are designed for high reliability and long operational life.
- Remote ON-OFF, remote sensing, adjustable output voltage, operation indicator LED.

PART NUMBERS AND RATINGS

Output voltage(V)	30W type		50W type	
	Current(A)	Part No.	Current(A)	Part No.
3	6	RDL03-6R0	10	RDL03-10R
5	6	RDL05-6R0	10	RDL05-10R
12	2.5	RDL12-2R5	4.2	RDL12-4R2
15	2	RDL15-2R0	3.4	RDL15-3R4
24	1.3	RDL24-1R3	2.1	RDL24-2R1



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SPECIFICATIONS

30W TYPE

Part No.			RDL03-6R0	RDL05-6R0	RDL12-2R5	RDL15-2R0	RDL24-1R3
Output voltage, current* ¹			3V • 6A	5V • 6A	12V • 2.5A	15V • 2A	24V • 1.3A
Maximum output power		W	18	30	30	30	31.2
Input requirements							
Input voltage Edc		V	9 to 16[Rating:12]				
Input current		A	Output 3V:3.5max./2.8max.[9/12V], 5 to 24V:5max./3.8max.[9/12V]				
Fuse rating		A	6.3[Internal]				
Surge current		A	150typ.[12V]				
Efficiency		%	72typ.	77typ.	79typ.	80typ.	82typ.
Output characteristics							
Output voltage		V	3	5	12	15	24
Voltage variable range		V	2.7 to 3.3	4 to 5.5	8.4 to 13.2	12 to 16.5	16.8 to 26.4
Maximum output current* ¹		A	6	6	2.5	2	1.3
Overvoltage threshold		V	3.8 to 4.6	6 to 6.9	13.7 to 15.7	17 to 19.5	27 to 30.5
Overcurrent threshold		A	6.6 to 7.8	6.6 to 7.8	2.75 to 3.25	2.2 to 2.6	1.43 to 1.63
Voltage stability	Input variation	%	0.8max.(0.2typ.)[Within the input voltage range]			Total variation	
	Load variation	%	1max.(0.3typ.)[0 to 100% load]			±2max.(±1typ.)	
	Temperature variation	%	1.5max.(0.8typ.)[−10 to +50°C] 3V:3max.(1.5typ.)			3V:4max.(2typ.)	
	Drift	%	0.5max.(0.1typ.)[25°C, after input voltage ON for 30min to 8h]				
	Dynamic load	%/ms	±4max./1max.[50 to 100% sudden load change]				
Ripple* ² Ep-p		mV	50max.	50max.	80max.	80max.	100max.
Ripple noise* ² Ep-p		mV	100max.	100max.	170max.	200max.	290max.
Accessory equipment							
Operation indicator			LED(green) illuminates when voltage output is ON.				
Overvoltage protection			Voltage shielding type, recovers upon reset(interval approx. 5s).				
Overcurrent protection			Fixed current and voltage threshold type, automatic recovery, set value fixed.				
Remote ON-OFF			Yes(Floating)				
Remote sensing			Yes				
Output voltage external variable function			Yes				
Standards							
Safety standards			UL1950, CSA C22.2 No.234 approved.				
External dimensions H×W×L		mm	95×35×130				
Weight		g	400max.				
Mounting method			Can be attached to 3 sides.				
Case material			Aluminum				

*¹ Current rating(maximum output current) is determined for −10 to +50°C. Derating is required when used outside this temperature range.*² Ripple and ripple noise were determined for standard input, 10 to 100% load, and 0 to +71°C temperature environment. These values should be multiplied by 1.5 for a −10 to 0°C temperature range.

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DC Input

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SPECIFICATIONS

50W TYPE

Part No.		RDL03-10R	RDL05-10R	RDL12-4R2	RDL15-3R4	RDL24-2R1	
Output voltage, current* ¹		3V • 10A	5V • 10A	12V • 4.2A	15V • 3.4A	24V • 2.1A	
Maximum output power	W	30	50	50.4	51	50.4	
Input requirements							
Input voltage E _{dc}	V	9 to 16[Rating:12]					
Input current	A	Output 3V:6max./4max.[9/12V], 5 to 24V:8max./6max.[9/12V]					
Fuse rating	A	10[Internal]					
Surge current	A	150typ.[12V]					
Efficiency	%	70typ.	76typ.	77typ.	80typ.	81typ.	
Output characteristics							
Output voltage	V	3	5	12	15	24	
Voltage variable range	V	2.7 to 3.3	4 to 5.5	8.4 to 13.2	12 to 16.5	16.8 to 26.4	
Maximum output current* ¹	A	10	10	4.2	3.4	2.1	
Overvoltage threshold	V	3.8 to 4.6	6 to 6.9	13.7 to 15.7	17 to 19.5	27 to 30.5	
Overcurrent threshold	A	11 to 13	11 to 13	4.62 to 5.46	3.74 to 4.42	2.31 to 2.73	
Voltage stability	Input variation	%	0.8max.(±0.2typ.)(Within the input voltage range]			Total variation	
	Load variation	%	1max.(0.3typ.)(0 to 100% load]			±2max.(±1typ.)	
	Temperature variation	%	1.5max.(±0.8typ.)(-10 to +50°C] 3V:3max.(1.5typ.)			3V:4max.(2typ.)	
	Drift	%	0.5max.(0.1typ.)(25°C, after input voltage ON for 30min to 8h]				
	Dynamic load	%/ms	±4max./1max.[50 to 100% sudden load change]				
Ripple* ² Ep-p	mV	50max.	50max.	80max.	80max.	100max.	
Ripple noise* ² Ep-p	mV	100max.	100max.	170max.	200max.	290max.	
Accessory equipment							
Operation indicator		LED(green) illuminates when voltage output is ON.					
Overvoltage protection		Voltage shielding type, recovers upon reset(interval approx. 5s).					
Overcurrent protection		Fixed current and voltage threshold type, automatic recovery, set value fixed.					
Remote ON-OFF		Yes(Floating)					
Remote sensing		Yes					
Output voltage external variable function		Yes					
Standards							
Safety standards		UL1950, CSA C22.2 No.234 approved.					
External dimensions H×W×L		mm	95×43×160				
Weight		g	550max.				
Mounting method		Can be attached to 3 sides.					
Case material		Aluminum					

*1 Current rating(maximum output current) is determined for -10 to +50°C. Derating is required when used outside this temperature range.

*2 Ripple and ripple noise were determined for standard input, 10 to 100% load, and 0 to +71°C temperature environment. These values should be multiplied by 1.5 for a -10 to 0°C temperature range.

Power Supplies

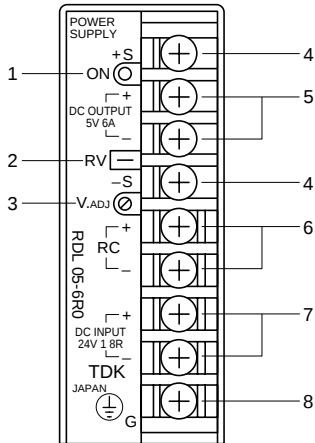
RDL Series

DC Input

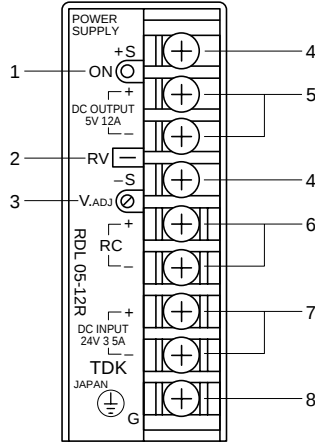
Single Output, Long Life

TERMINAL DESIGNATIONS AND FUNCTIONS

30W TYPE



50W TYPE



Terminal No. 1: Operation indicator LED(ON)

Terminal No. 2: Output voltage adjustment terminal(RV)

Terminal No. 3: Output voltage adjustment trim(V.ADJ)

Terminal No. 4: Remote sensing terminals(+S, -S)

Terminal No. 5: DC output terminals(DC OUTPUT +, -)

Terminal No. 6: Remote ON-OFF terminals(+RC, -RC)

Terminal No. 7: AC input terminals(L, N)

Terminal No. 8: Frame ground terminal(G)

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