RLH Industries, Inc.

### USER GUIDE

### The leader in rugged fiber optic technology.

U-023 2017A-0508

# AC/DC Dual Output Switching Power Supply

DIN MOUNTED HOUSING WITH 48VDC & 12VDC OUTPUT POWER

### Description

The AC/DC Dual Output DIN rail mounted power supply is a compact switching supply designed to convert AC power (115VAC) to regulated 48VDC and 12VDC output to power a wide range of industrial equipment.

Each internal regulated power supply section is separate and independent of the other power section, allowing for maximum efficiency and operation. A power indicator is located to the right side of each output terminal section so the performance and operation may be quickly assessed.

It has low output ripple along with short circuit, over-voltage, and overload protection. The fanless convection cooled design, and wide operating temperature range with high efficiency makes this a perfect solution for industrial and critical applications.

The rugged AC/DC Dual Output Power Supply is proudly made in the U.S.A., and features a tough aluminum alloy frame with powder coated galvanized steel housing for superior corrosion resistance.



AC/DC Dual Output Power Supply

#### **Standard Features**

Short circuit, overload, over-voltage & temp. protection

48VDC & 12VDC output terminals

Built in active PFC function

Cooling by free air convection

May be installed on DIN rail TS-35 or wall mounted

Individual LED power indicators for each output

100% full load burn-in test

Convenient screw down terminals

Made in the U.S.A

## Connection Terminals and Voltage Adjustment

12VDC Output

8 9 10 11

CAUTION Severe shock hazard. Outputs are energized when input

8+12

#### Input / Output Terminals

48VDC Output

4 5 6 7

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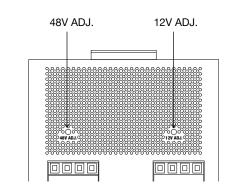
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888

1 2 3 AC Input

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#### **Output Voltage Adjustment**



**Top View** 

**Front View** 

#### AC Terminals - Input

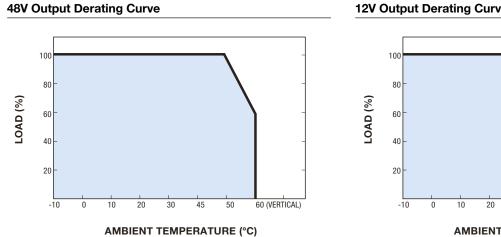
No.	Description
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DC Termi	nals - Output

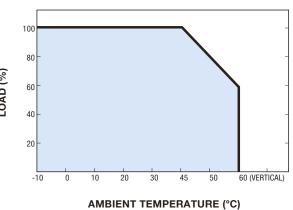
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n	No.	Description
	4, 5	DC Output +48V
	6, 7	DC Output -48V
	8, 9	DC Output +12V
	10, 11	DC Output -12V

# **Output Derating Curves**



#### **12V Output Derating Curve**



## Specifications

		12VDC OUTPUT	48V DC OUTPUT		
DC OUTPUT	DC VOLTAGE	12V	48V		
	RATED CURRENT	6.3A	2.5A		
	CURRENT RANGE	0 ~ 6.3A	0 ~ 2.5A		
	RATED POWER	76W	120W		
	RIPPLE & NOISE (max.) Note 1	100mVp-p	100mVp-p		
	VOLTAGE ADJ. RANGE	12 ~ 14V	48~53V		
	VOLTAGE TOLERANCE Note 2	±2.0%	±1.0%		
	LINE REGULATION	±0.5%	±0.5%		
	LOAD REGULATION	±1%	±1%		
	SETUP, RISE TIME	1800ms, 60ms/115VAC at full load	500ms, 70ms/115VAC at full load		
	HOLD UP TIME (Typ.)	12ms/115VAC at full load	32ms/115VAC at full load		
INPUT	VOLTAGE RANGE	100~120VAC			
	FREQUENCY RANGE	50~60Hz			
	EFFICIENCY (Typ.)	76%	85%		
	AC CURRENT (Typ.)	5.3A/115V			
	INRUSH CURRENT (Typ.)	Cold Start 20A/115VAC			
	LEAKAGE CURRENT	<3.5mA			
PROTECTION		105 ~ 150% rated output power			
	OVERLOAD	Protection type : Constant current limiting, recovers automatically after fault condition is removed			
		15~16.5V	58~65V		
	OVER VOLTAGE	Protection type : Shut down o/p voltage, re-power on to recover			
		$85^{\circ}C \pm 5^{\circ}C$ (TSW1) detect on heat sink of power transistor			
OVER TEMPERATURE		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down			
ENVIRONMENT	DIMENSIONS	5.0" H x 5.8" W x 3.7" D (127mm x 147mm x 94mm)			
	WORKING TEMP.	$-10^{\circ}C \sim +60^{\circ}C$ (Refer to output load derating curve)			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-20°C ~ +85°C, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)			
SAFETY	WITHSTAND VOLTAGE	I/P-O/P:3KVAC, I/P-FG:1.5KVAC, O/P-FG:0.5KVAC			
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC			

Note

Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
Tolerance : includes set up tolerance, line regulation and load regulation.
The power supply is considered a component which will be installed into a final equipment.

## Ordering Information

Description	AC Input	DC Output 1	DC Output 2	Part Number
AC/DC Dual Output Switching Power Supply	100-120VAC, 5.3A	48VDC, 2.5A	12VDC, 6.3A	RLH-D-ACDC-4812-2

> Please contact your RLH sales representative for pricing and delivery information

## **Technical Support**

Normal technical support:	Local (714) 532-1672
(Mon - Fri 6am - 6pm PST)	Toll Free (800) 877-1672
	Toll Free (866) DO-FIBER
24/7 Technical support:	(714) 396-8982
	(714) 457-5740

## **Contact Information**

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Specifications subject to change without notice.