MEAN WELL RID-125 Series 125W Dual Output Switching Power Supply User Guide

Contents

MEAN WELL RID-125 Series 125W Dual Output Switching Power Supply

Features

- Isolated output &GND for CH1,CH2
- AC input range selectable by switch
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit/Overload/ Over voltage
- All using 105C long life electrolytic capacitors
- Withstand 5G vibration test
- LED indicator for power on
- 100% full load burn-in test
- High realibility
- 3 years warranty

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

SPECIFICATION

MODEL		**RID-125-1224**		**RID-125-1248**		**RID-125-2448**	
	OUTPUT NUMBER	CH1	CH2	CH1	CH2	CH1	CH2
	DC VOLTAGE	12V	24V	12V	48V	24V	48V
	RATED CURRENT	3.7A	3.7A	2.3A	2.3A	2A	2A
	CURRENT RANGE Note.3	0 ~ 7A	0 ~ 5A	0~ 7A	0 ~ 2.5A	0 ~ 4A	0 ~ 2.5A

OUTPUT	RATED POWER Note.6	133.2W		138W		144W	
	RIPPLE & NOISE (max.) Note.2	120mVp-p	200mVp-p	120mVp-p	240mVp-p	200mVp-p	240mVp-p
	VOLTAGE ADJ. RANGE	CH1: 11.4 ~ 13.2V		CH1: 11.4 ~ 13.2V		CH1: 22.8 ~ 26.4V	
	VOLTAGE TOLERANCE Note.3	±2.0%	±8.0%	±2.0%	±8.0%	±1.0%	±6.0%
	LINE REGULATION Note.4	±0.5%	±1.0%	±0.5%	±1.0%	±0.5%	±1.0%
	LOAD REGULATION Note.5	±1.0%	±5.0%	±1.0%	±5.0%	±1.0%	±5.0%
	SETUP, RISE TIME	500ms, 20ms/230VAC 1200ms, 30ms/115VAC at full load					
	HOLD UP TIME (Typ.)	36ms/230VAC 30ms/115VAC at full load					
INPUT	VOLTAGE RANGE	88 ~ 132VAC / 176 ~ 264VAC selected by switch 248 ~ 373VDC(300VAC peak 5sec. No damage)					
	FREQUENCY RANGE	47 ~ 63Hz					
	EFFICIENCY(Typ.)	85%		85%		86%	
	AC CURRENT (Typ.)	3A/115VAC 2A/230VAC					
	INRUSH CURRENT (Typ.)	COLD START 50A/230VAC					
	LEAKAGE CURRENT	<2mA / 240VAC					
PROTECTION	OVERLOAD	110 ~ 150% rated output power					
		Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	OVER VOLTAGE	CH1: 13.8 ~ 16.2V		CH1: 13.8 ~ 16.2V		CH1: 27.6 ~ 32.4V	
		Protection type : Hiccup mode, recovers automatically after fault condition is removed					
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to “Derating Curve”)					
	WORKING HUMIDITY	20 ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)on CH1 output					

	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes
SAFETY & EMC (Note 7)	**SAFETY STANDARDS**	UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 approved
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, BS EN/EN61000-6-2 (BS EN/EN50082-2), heavy industry level, EAC TP TC 020
OTHERS	**MTBF**	2755.4K hrs min. Telcordia SR-332 (Bellcore) ; 425.8K hrs min. MIL-HDBK-217F (25°C)
	DIMENSION	199*98*38mm (L*W*H)
	PACKING	0.7Kg; 20pcs/15Kg/0.85CUFT
NOTE	1. All parameters NOT SpECially mentioned are measured at 230VAC Input, rated load and 25 of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12″ twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation.(In order to meet tolerance, it is recommended that CH1 load > 5% rated current.) 4. Line regulation is measured from low line to high line at rated load. 5. Load regulation is measured from 20% to 100% rated load, and other output at 60% rated load. 6. Each output can work within current range. But total output power can't exceed rated output power. 7. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com) 8. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time. 9. The ambient temperature derating of 3.5 C/1000m with fanless models and of 5C/1000m with fan models for operating altitude higher than 2000m(6500ft) Product Liability Disclaimer: For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx	

Features

- Isolated output & GND for CH1,CH2
- AC input range selectable by switch

- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit/ Overload /Over voltage
- 170 % peak load for CH1
- All using 105C long life electrolytic capacitors
- Withstand 5G vibration test
- LED indicator for power on
- 100% full load burn-in test
- High realibility
- 3 years warranty

GTIN CODE

MW Search: **https://www.meanwel.com/service.G TIN.aspx**

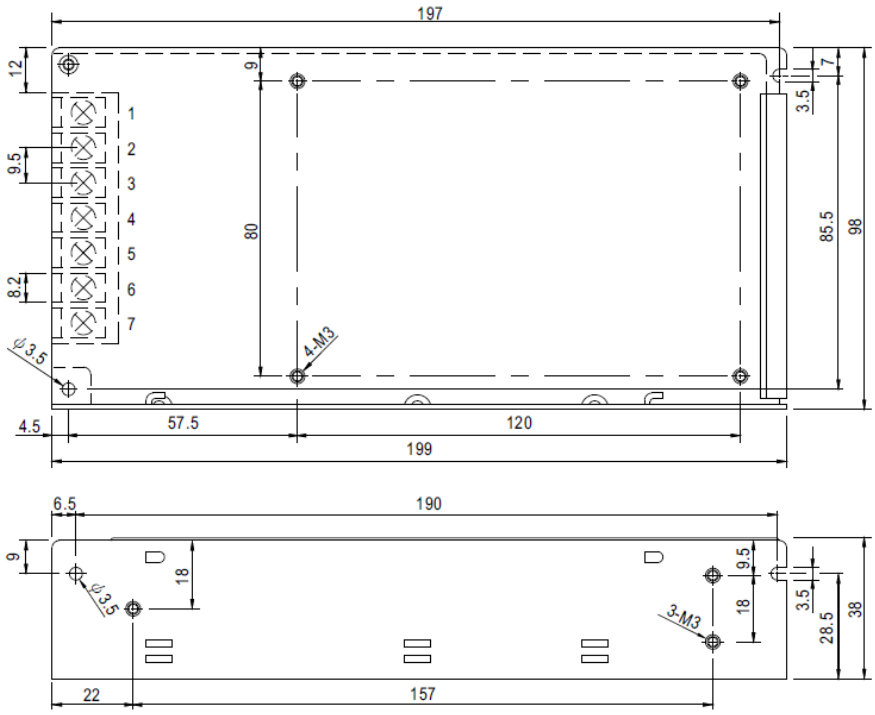
SPECIFICATION

MODEL		RID-125-1205		RID-125-2405	
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH1	CH2
	DC VOLTAGE	12V	5V	24V	5V
	RATED CURRENT	9.2A	3A	4.6A	3A
	CURRENT RANGE Note.6	0 ~ 10.5A	0 ~ 3A	0 ~ 5.3A	0 ~ 3A
	PEAK LOAD Note.9	15.6A	3A	7.8A	3A
	RATED POWER	125.4W		125.4W	
	RIPPLE & NOISE (max.) Note.2	120mVp-p	80mVp-p	120mVp-p	80mVp-p
	VOLTAGE ADJ. RANGE	CH1: 11.4 ~ 13.2V		CH1: 22.8 ~ 26.4V	
	VOLTAGE TOLERANCE Note.3	±2.0%	±3.0%	±2.0%	±3.0%
	LINE REGULATION Note.4	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION Note.5	±1.0%	±2.0%	±1.0%	±2.0%
	SETUP, RISE TIME	500ms, 20ms/230VAC 1200ms, 30ms/115VAC at full load			
	HOLD UP TIME (Typ.)	35ms/230VAC 30ms/115VAC at full load			

INPUT	**VOLTAGE RANGE**	88 ~ 132VAC / 176 ~ 264VAC selected by switch 248 ~ 373VDC(300VAC peak 5sec., no damage)	
	FREQUENCY RANGE	47 ~ 63Hz	
	EFFICIENCY(Typ.)	80%	83%
	AC CURRENT (Typ.)	3A/115VAC 2A/230VAC	
	INRUSH CURRENT (Typ.)	COLD START 50A/230VAC	
	LEAKAGE CURRENT	<2mA / 240VAC	
PROTECTION	**OVERLOAD**	>165% rated output power	
		Protection type : Hiccup mode, recovers automatically after fault condition is removed	
	OVER VOLTAGE	CH1: 13.8 ~ 16.2V	CH1: 27.6 ~ 32.4V
		Protection type : Hiccup mode, recovers automatically after fault condition is removed	
ENVIRONMENT	**WORKING TEMP.**	-25 ~ +70℃ (Refer to “Derating Curve”)	
	WORKING HUMIDITY	20 ~ 90% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)on CH1 output	
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes	
SAFETY & EMC (Note 7)	**SAFETY STANDARDS**	UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 approved	
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC	
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH	
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020	
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, BS EN/EN61000-6-2 (BS EN/EN50082-2), heavy industry level, EAC TP TC 020	
OTHERS	**MTBF**	218.2Khrs min. MIL-HDBK-217F (25℃)	
	DIMENSION	199*98*38mm (L*W*H)	
	PACKING	0.7Kg; 20pcs/15Kg/0.85CUFT	

NOTE	1. All parameters NOT SpECially mentioned are measured at 230VAC Input, rated load and 25 of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12″ twisted pair-wire terminated wit h a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation.(In order to meet tolerance, it is recommended that CH1 load > 5% rated current.) 4. Line regulation is measured from low line to high line at rated load. 5. Load regulation is measured from 20% to 100% rated load, and other output at 60% rated load. 6. Each output can work within current range. But total output power can't exceed rated output power. 7. The power supply is considered a component which will be installed into a final equipment. All the E MC tests are been executed by mounting the unit on a 360mm360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available o n **http://www.meanwell.com**) 8. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time. 9. The ambient temperature derating of 3.5 C/1000m with fanless models and of 5C/1000m with fan m odels for operating altitude higher than 2000m(6500ft) Product Liability Disclaimer: For detailed information, please refer to **https://www.meanwell.com/serviceDisclaimer.aspx**

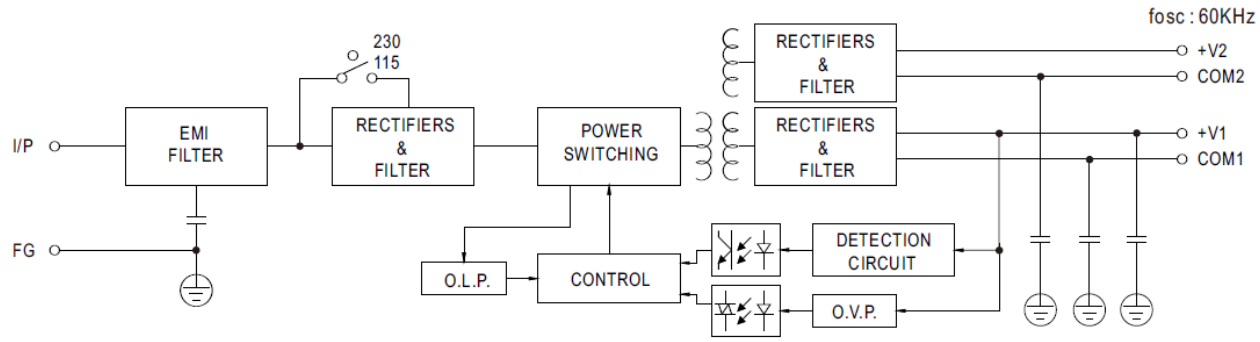
Mechanical Specification



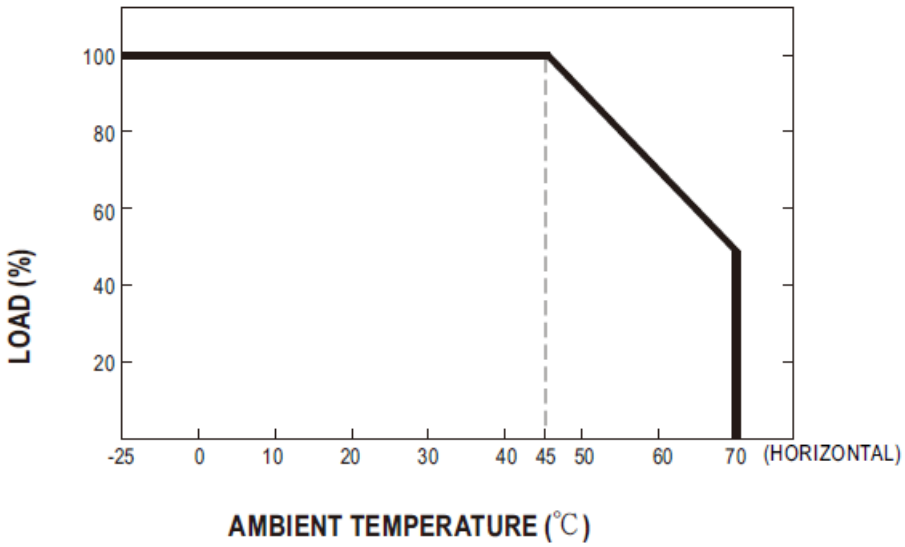
Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	5	DC OUTPUT +V2
2	AC/N	6	DC OUTPUT COM1
3	FG ⏚	7	DC OUTPUT +V1
4	DC OUTPUT COM2		

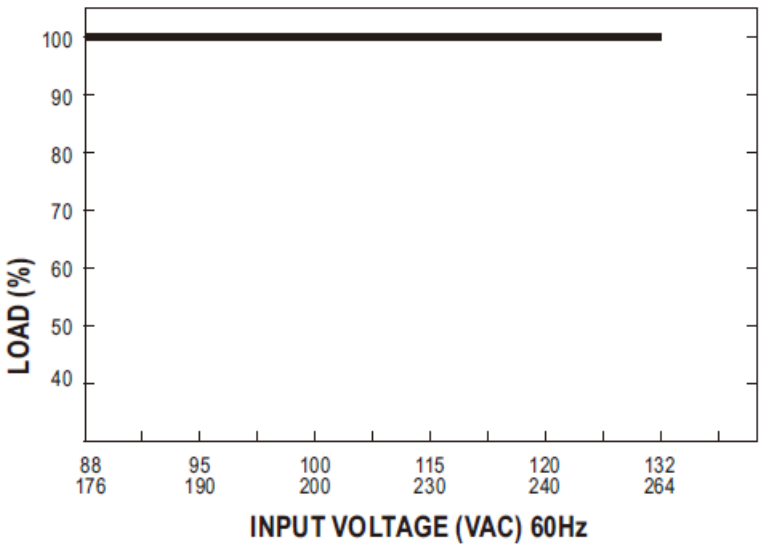
Block Diagram



Derating Curve



Static Characteristics



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Documents / Resources

	MEAN WELL RID-125 Series 125W Dual Output Switching Power Supply [pdf] User Guide RID-125 Series, 125W Dual Output Switching Power Supply, RID-125 Series 125W Dual Output Switching Power Supply, Dual Output Switching Power Supply, Output Switching Power Supply, Switching Power Supply, Power Supply

References

- TÜV Rheinland - Home | US | TÜV Rheinland
- MEAN WELL Switching Power Supply Manufacturer
- Product Liability Disclaimer-MEAN WELL Switching Power Supply Manufacturer