

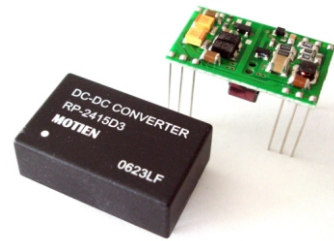
RP-6W Series

6W 4:1 Regulated Single & Dual output



Features

- Wide 4:1 Input Range
- Full SMD Technology
- 1500 VDC Isolation, Up to 3500 VDC
- Continuous Short Circuit Protection
- Efficiency up to 82%
- -25 ~ 85°C Operating Temperature
- Plastic Case Standard, Optional Metal Case



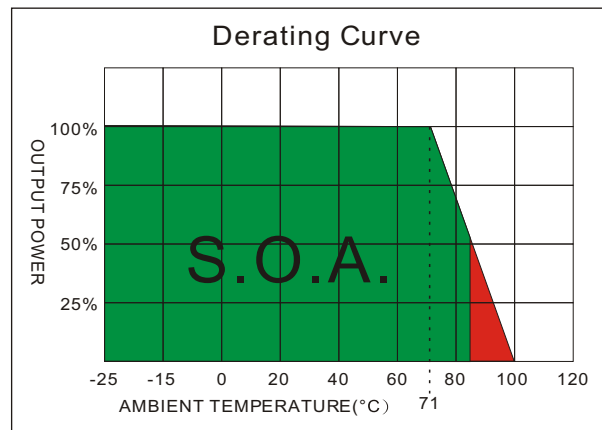
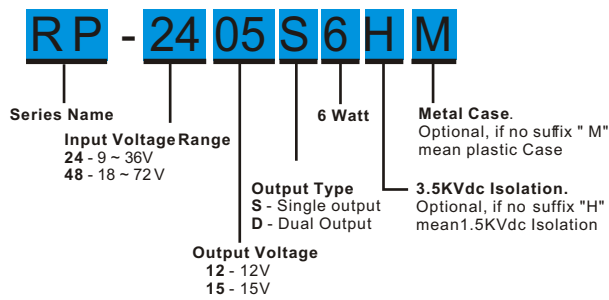
The RP series is a family of cost effective 6W single & dual output DC-DC converters. These converters combine Plastic case in a 24-pin DIL package with high performance features such as 1500 VDC ~ 3500VDC input/output isolation voltage, continuous short circuit protection with automatic restart and tight line / load regulation. Devices are encapsulated using flame retardant resin. Input voltages of 24 and 48 with output voltage of 12, 15, ± 12 and ± 15 Vdc. High performance features include high efficiency operation up to 82% and output voltage accuracy of $\pm 1\%$ maximum.

All specifications typical at $T_a = 25^\circ\text{C}$, nominal input voltage and full load unless otherwise specified

OUTPUT SPECIFICATIONS		PHYSICAL SPECIFICATIONS	
Voltage accuracy	$\pm 1\%$	Case Material	Non-conductive Black Plastic(UL94V-0 rated)
Line regulation	$\pm 0.5\%$		Nickel-coated Copper
Load regulation	$\pm 0.5\%$	Base Material	Non-conductive Black Plastic(UL94V-0 rated)
Ripple & noise(20 MHz bandwidth)(1)	60mV pk-pk	Pin Material	$\varnothing 0.5\text{mm}$ Brass Solder-coated
Short circuit protection	Continuous	Potting Material	Epoxy (UL94V-0 rated)
Temperature coefficient	$\pm 0.02\%/^\circ\text{C}$	Weight	12.5g(Plastic Case)/15.0g(Metal Case)
Capacitor load(2)	See table	Dimensions	1.25"x0.8"x0.4"
INPUT SPECIFICATIONS		ENVIRONMENT SPECIFICATIONS	
Voltage Range	See table	Operating Temperature	-25°C~85°C(See Derating Curve)
Max. Input Current	See table		-25°C~71°C(For 100% load)
No-Load Input Current	See table	Maximum Case Temperature	100°C
Input Filter	PI Type	Storage Temperature	-40°C~125°C
Input Reflected Ripple Current(3)	35mA pk-pk	Cooling	Nature Convection
GENERAL SPECIFICATIONS		ABSOLUTE MAXIMUM RATINGS(4)	
Efficiency	See table, typ	These are stress ratings. Exposure of devices to any of these conditions may adversely affect long-term reliability.	
I/O Isolation Voltage(3 sec)		Input Voltage(100mS)	
Input/Output	1500~3500Vdc	24 Modes	-0.7~40 Vdc
Metal Case/Input & Output	1000Vdc	48 Modes	-0.7~80 Vdc
I/O Isolation Capacitance	500 pF Typ.	Soldering Temperature	260°C
I/O Isolation Resistance	1000M Ohm	(1.5mm from case 10sec.)	
Switching Frequency	100~400kHz		
Humidity	95% rel H		
Reliability Calculated MTBF(MIL-HDBK-217 F)	>2.199 Mhrs		
Safety Standard : (designed to meet)	IEC 60950-1		

RP - 6W 4:1 Regulated Single & Dual output

PARTNUMBER STRUCTURE



MODEL SELECTION GUIDE

MODEL NUMBER	INPUT Voltage Range (Vdc)	INPUT Current		OUTPUT Voltage (Vdc)	OUTPUT Current		EFFICIENCY @FL(%)	Capacitor Load(uF)
		No-Load (mA)	Full Load (mA)		Min. load (mA)	Full load (mA)		
RP-2412S6	9-36	20	305	12	125	500	82	470
RP-2415S6	9-36	20	313	15	100	400	80	330
RP-2412D6	9-36	20	309	±12	±63	±250	81	±100
RP-2415D6	9-36	20	313	±15	±50	±200	80	±68
RP-4812S6	18-72	15	161	12	125	500	78	470
RP-4815S6	18-72	15	161	15	100	400	78	330
RP-4812D6	18-72	15	161	±12	±63	±250	78	±100
RP-4815D6	18-72	15	167	±15	±50	±200	75	±68

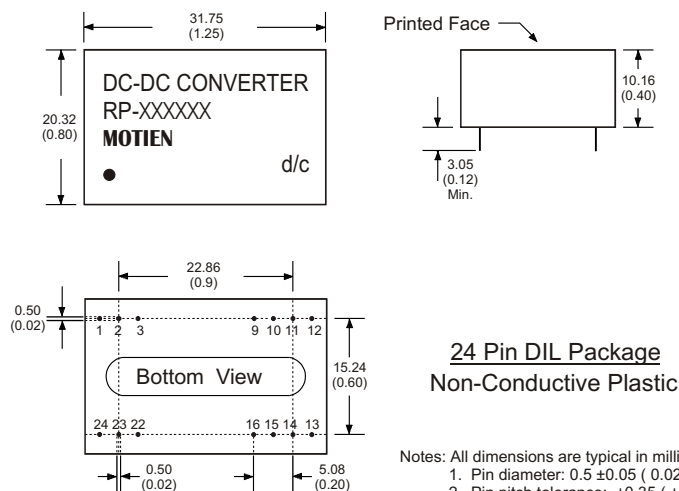
Suffix "H" means 3.5KVdc isolation

Suffix "M" means Metal Case instead of standard Plastic case

NOTE

1. Typical value at nominal input voltage and full load.
2. Test by nominal input voltage and constant resistor load.
3. Measured Input reflected ripple current with a simulated source inductance of 12uH.
4. Exceeding the absolute ratings of the unit could cause damage. It is not allowed for continuous operating.
5. Operation under no-load conditions will not damage these devices, however they may not meet all listed specifications.
6. It's necessary to add minimum capacitor in output for some models, please check single model datasheet for detail value.

MECHANICAL SPECIFICATIONS FOR HIGH ISOLATION MODEL



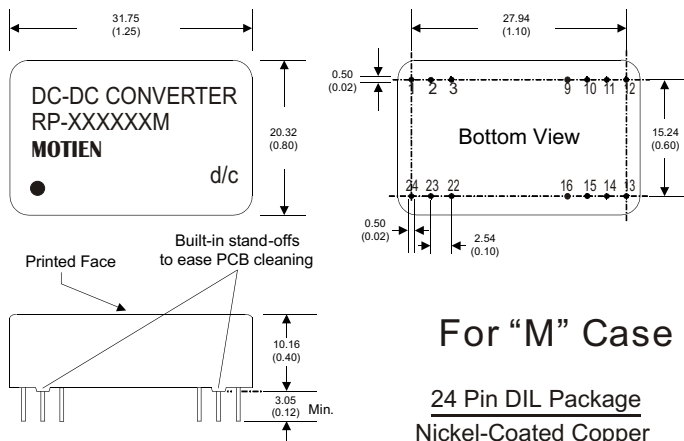
Notes: All dimensions are typical in millimeters (inches).
 1. Pin diameter: 0.5 ±0.05 (0.02 ±0.002)
 2. Pin pitch tolerance: ±0.35 (±0.014)
 3. Case Tolerance: ±0.5 (±0.02)

PIN CONNECTIONS				
PIN NUMBER	SINGLE	DUAL	SINGLE-H	DUAL-H
1	+V Input	+V Input	N.P.	N.P.
2	N.C.	-V Output	-V Input	-V Input
3	N.C.	Common	-V Input	-V Input
9	N.P.	N.P.	N.P.	Common
10	-V Output	Common	N.P.	N.P.
11	+V Output	+V Output	N.C.	-V Output
12	-V Input	-V Input	N.P.	N.P.
13	-V Input	-V Input	N.P.	N.P.
14	+V Output	+V Output	+V Output	+V Output
15	-V Output	Common	N.P.	N.P.
16	N.P.	N.P.	-V Output	Common
22	N.C.	Common	+V Input	+V Input
23	N.C.	-V Output	+V Input	+V Input
24	+V Input	+V Input	N.P.	N.P.

The models listed above is just for standard type. If you need the special specification product, please contact our service member by telephone presented in shortform cover or e-mail to : sales@motien.com.tw

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MECHANICAL SPECIFICATIONS



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 1. Pin diameter: 0.5 ± 0.05 (0.02 ± 0.002)
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 3. Case Tolerance: ± 0.5 (± 0.02)

PIN CONNECTIONS				
PIN NUMBER	SINGLE	DUAL	SINGLE-H	DUAL-H
1	+V Input	+V Input	N.P.	N.P.
2	N.C.	-V Output	-V Input	-V Input
3	N.C.	Common	-V Input	-V Input
9	N.P.	N.P.	N.P.	Common
10	-V Output	Common	N.P.	N.P.
11	+V Output	+V Output	N.C.	-V Output
12	-V Input	-V Input	N.P.	N.P.
13	-V Input	-V Input	N.P.	N.P.
14	+V Output	+V Output	+V Output	+V Output
15	-V Output	Common	N.P.	N.P.
16	N.P.	N.P.	-V Output	Common
22	N.C.	Common	+V Input	+V Input
23	N.C.	-V Output	+V Input	+V Input
24	+V Input	+V Input	N.P.	N.P.