

POWERLINE - DC/DC-Converter

RECOM

EW-Ser., 5W, 1.6 kV Isolation, 4:1 Wide Input Range & Regulated (Single & Dual Output)

Features

- 4:1 Input Range
- Pi Input Filter
- Short Circuit Protection with Autorecovery
- Efficiency up to 81%
- Six-Sided Shield
- Operating Temperature Range -25°C to +71°C
- 200kHz Switching Frequency
- Low Profile, 9.5mm Height
- 1600 VDC Isolation Voltage
- MTBF 1.011 x 10⁶ Hours
- 2 Year Warranty
- Option to „M2“ Operating Temperature -40°C to +71°C
- International Safety Standard Approvals
- UL 1950 Component Recognised



Selection Guide 24V and 48V Input Types

Part Number	Input Range	Output Voltage	Output Current	Efficiency (%)
RP05-2405SEW	9-36 VDC	5 VDC	1000 mA	75
RP05-2412SEW	9-36 VDC	12 VDC	470 mA	80
RP05-2415SEW	9-36 VDC	15 VDC	400 mA	80
RP05-2405DEW	9-36 VDC	±5V DC	±500 mA	74
RP05-2412DEW	9-36 VDC	±12 VDC	±230 mA	80
RP05-2415DEW	9-36 VDC	±15 VDC	±190 mA	80
RP05-4805SEW	18-75 VDC	5 VDC	1000 mA	74
RP05-4812SEW	18-75 VDC	12 VDC	470 mA	81
RP05-4815SEW	18-75 VDC	15 VDC	400 mA	81
RP05-4805DEW	18-75 VDC	±5 VDC	±500 mA	74
RP05-4812DEW	18-75 VDC	±12 VDC	±230 mA	78
RP05-4815DEW	18-75 VDC	±15 VDC	±190 mA	79
Specials				
RP05-BD36	9-32 VDC	±5 VDC	1.5 A	-
RP05-4824DE	8-40 VDC	±5 VDC	1.5 A	-

Maximum Capacitive Load

RP05-xx05SEW	1700µF
RP05-xx12SEW	290µF
RP05-xx15SAW	188µF
RP05-xx05DAW	±850µF
RP05-xx12DAW	±140µF
RP05-xx15DAW	±47µF

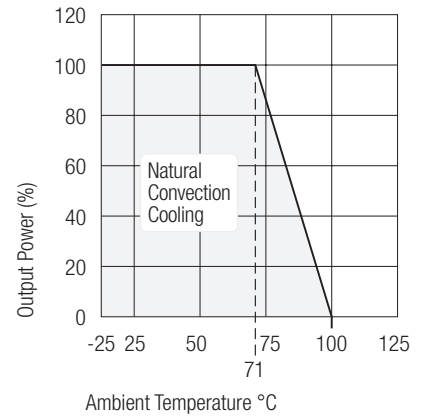
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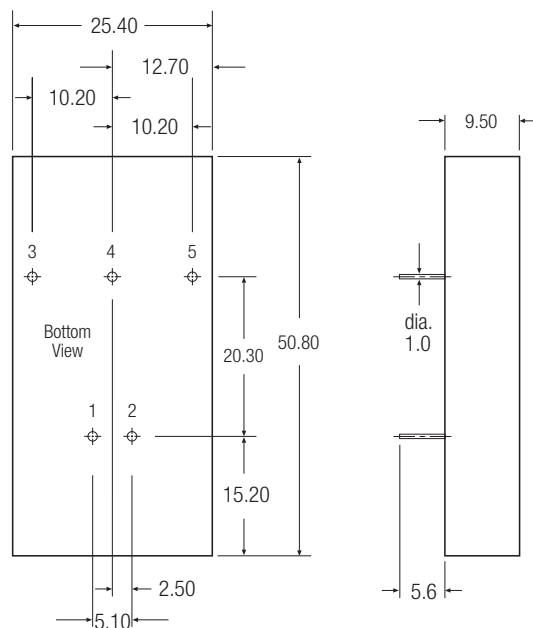
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Specifications (typical at nominal input and 25°C unless otherwise noted)

Input Voltage Range	24V types nominal	9-36V
	48V types nominal	18-75V
Input Filter		Pi Type
Voltage Accuracy		Single Output $\pm 2\%$ Dual Output $\pm 2\%$
Voltage Balance, Dual Outputs		$\pm 1.0\%$
Ripple and Noise, 20MHz BW		75mVp-p 10mV RMS
Line Regulation, HL-LL		$\pm 0.2\%$
Load Regulation, FL-1/4FL	Single Output	± 0.2 (Single)
	Dual Output	± 1.0 % (Dual)
Temperature Coefficient		$\pm 0.02\%/^{\circ}\text{C}$
Short Circuit Protection		Indefinite
Transient Response Recovery Time, Single, 25% Load Step Change		200 μsec
Transient Response Recovery Time, Dual, FL-1/2 FL $\pm 1\%$ Error Band		200 μsec
Switching Frequency		200kHz, typ.
Isolation Voltage		1600VDC
Isolation Resistance		$10^9 \Omega$
Operating Temperature Range		-25°C to +71°C
Alternative Operating Temperature Suffix "M2"		-40°C to +71°C
Cooling		Free-air Convection
EMI/RFI		Six-sided Shield
Case Material		Nickel-Coated Copper with Non-Conductive Base
Dimensions		50.8 x 25.4 x 9.5 mm
MTBF (MIL-HDBK-217F TA = 25°C full load)		1.011×10^6 Hours



Package Style and Pinning (mm)



Pin Connections

Pin #	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	No Pin	Common
5	-Vout	-Vout

NC = No Connection

Pin Pitch Tolerance ± 0.35 mm