

POWERLINE - DC/DC-Converter

E-Series, 5 Watt, 1.6 kV Isolation, Regulated & Wide Input Range (Single & Dual Output)

RECOM

Features

- 2:1 Input Range
- Include 3.3VDC Output
- Short Circuit Protection With Autorecovery
- Efficiency up to 80%
- Six-Sided Shield
- 300kHz Switching Frequency
- Operating Temperature Range -25°C to +71°C
- Low Profile, 9.5mm Height
- Pi Input Filter
- MTBF 1.186 x 10⁶ Hours
- 2 Year Warranty
- 1600 VDC Isolation Voltage
- Option to „M1“ Operating Temperature -40°C to +85°C
- International Safety Standard Approvals
- UL 1950 Component Recognised



Selection Guide 12V, 24V, 48V Input Types

Part Number	Input Range	Output Voltage	Output Current	Efficiency (%)
RP05-1233SE	9-18 VDC	3.3 VDC	1000 mA	73
RP05-1205SE	9-18 VDC	5 VDC	1000 mA	73
RP05-1212SE	9-18 VDC	12 VDC	470 mA	80
RP05-1215SE	9-18 VDC	15 VDC	400 mA	80
RP05-1205DE	9-18 VDC	±5 VDC	±500 mA	74
RP05-1212DE	9-18 VDC	±12 VDC	±230 mA	80
RP05-1215DE	9-18 VDC	±15 VDC	±190 mA	80
RP05-2433SE	18-36 VDC	3.3 VDC	1000 mA	74
RP05-2405SE	18-36 VDC	5 VDC	1000 mA	74
RP05-2412SE	18-36 VDC	12 VDC	470 mA	82
RP05-2415SE	18-36 VDC	15 VDC	400 mA	82
RP05-2405DE	18-36 VDC	±5 VDC	±500 mA	74
RP05-2412DE	18-36 VDC	±12 VDC	±230 mA	82
RP05-2415DE	18-36 VDC	±15 VDC	±190 mA	82
RP05-4833SE	36-75 VDC	3.3 VDC	1000 mA	75
RP05-4805SE	36-75 VDC	5 VDC	1000 mA	75
RP05-4812SE	36-75 VDC	12 VDC	470 mA	81
RP05-4815SE	36-75 VDC	15 VDC	400 mA	81
RP05-4805DE	36-75 VDC	±5 VDC	±500 mA	74
RP05-4812DE	36-75 VDC	±12 VDC	±230 mA	81
RP05-4815DE	36-75 VDC	±15 VDC	±190 mA	81

Maximum Capacitive Load

RP05-xxS33	3700µF
RP05-xxS05	1700µF
RP05-xxS12	290µF
RP05-xxS15	188µF
RP05-xxD05	±850µF
RP05-xxD12	±140µF

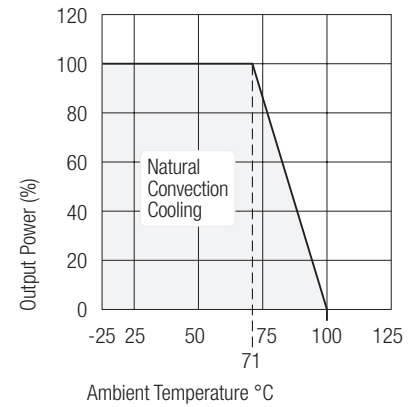
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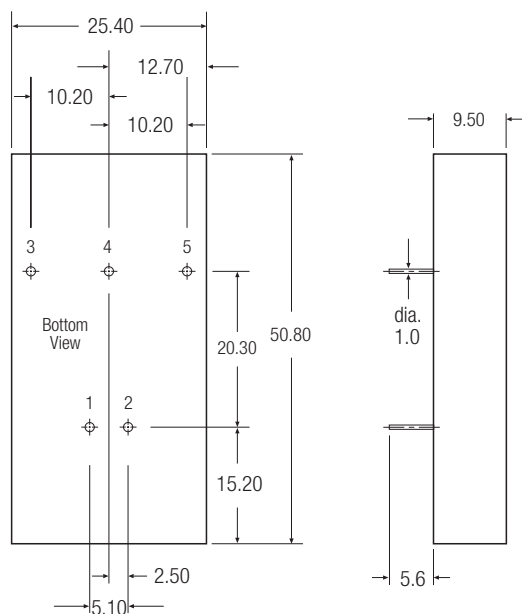
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Specifications (typical at nominal input and 25°C unless otherwise noted)

Input Voltage Range	12V types nominal	9-18V
	24V types nominal	18-36V
	48V types nominal	36-75V
Input Filter	Pi Type	
Voltage Accuracy	Single Output ±2%	
	Dual Output ±2%	
Volatge Balance, Dual Outputs	±1.0%	
Ripple and Noise, 20MHz BW	75mVp-p	
	10mV RMS	
Line Regulation, HL-LL	±0.2%	
Load Regulation, FL-1/4FL	Single Output ±0.2%	
	Dual Output ±1%	
Temperature Coefficient	±0.02%/°C	
Short Circuit Protection	Indefinite	
Transient Response Recovery Time, Single, 25% Load Step Change	200µsec	
Dual, FL-1/2FL±1%Error Band	200µsec	
Switching Frequency	300kHz, typ.	
Isolation Voltage	1600VDC	
Isolation Resistance	10 ⁹ Ω	
Operating Temperature Range	-25°C to +71°C	
Alternative Operating Temperature Suffix "M1"	-40°C to +85°C	
Storage Temperature Range	-55°C to +125°C	
Cooling	Free-air Convection	
EMI/RFI	Six-sided Continuous 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)	1.186 x 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

Pin Pitch Tolerance ±0.5 mm