

# POWERLINE - DC/DC-Converter

E-Series, 10 Watt, 1.6 kV Isolation & Wide Input Range (Single & Dual Output)

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## Features

- Delivers 10 Watts at 71°C Ambient Temperature
- Small Package, 50.8 mm x 25.4 mm x 9.5 mm
- Include 3.3VDC Output
- 2:1 Input Range
- Short Circuit Protection with Autorecovery
- Six-Sided Shield
- MTBF 5.342 x 10<sup>5</sup> Hours
- Standard and SMT-Pinning



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

Part Number	Input Range	Output Voltage	Output Current	Efficiency (%)
RP10-1233SE	9-18 VDC	3.3 VDC	2000 mA	76
RP10-1205SE	9-18 VDC	5 VDC	2000 mA	79
RP10-1212SE	9-18 VDC	12 VDC	830 mA	82
RP10-1215SE	9-18 VDC	15 VDC	670 mA	82
RP10-1205DE	9-18 VDC	±5 VDC	±1000 mA	79
RP10-1212DE	9-18 VDC	±12 VDC	±416 mA	81
RP10-1215DE	9-18 VDC	±15 VDC	±333 mA	81
RP10-2433SE	18-36 VDC	3.3 VDC	2000 mA	78
RP10-2405SE	18-36 VDC	5 VDC	2000 mA	81
RP10-2412SE	18-36 VDC	12 VDC	830 mA	84
RP10-2415SE	18-36 VDC	15 VDC	670 mA	84
RP10-2405DE	18-36 VDC	±5 VDC	±1000 mA	80
RP10-2412DE	18-36 VDC	±12 VDC	±416 mA	82
RP10-2415DE	18-36 VDC	±15 VDC	±333 mA	82
RP10-4833SE	36-75 VDC	3.3 VDC	2000 mA	79
RP10-4805SE	36-75 VDC	5 VDC	2000 mA	82
RP10-4812SE	36-75 VDC	12 VDC	830 mA	86
RP10-4815SE	36-75 VDC	15 VDC	670 mA	86
RP10-4805DE	36-75 VDC	±5 VDC	±1000 mA	80
RP10-4812DE	36-75 VDC	±12 VDC	±416 mA	84
RP10-4815DE	36-75 VDC	±15 VDC	±333 mA	84

## Specials

RP10-2405SEE	18-36 VDC	5 VDC	1.5 A	3kVDC Isolation
RP10-2424SEE	18-36 VDC	24 VDC	416 mA	3kVDC Isolation

## Maximum Capacitive Load

RP10-xx33SE	6800µF
RP10-xx05SE	4700µF
RP10-xx12SE	690µF
RP10-xx15SE	470µF
RP10-xx05DE	±680µF
RP10-xx12DE	±330µF
RP10-xx15DE	±110µF

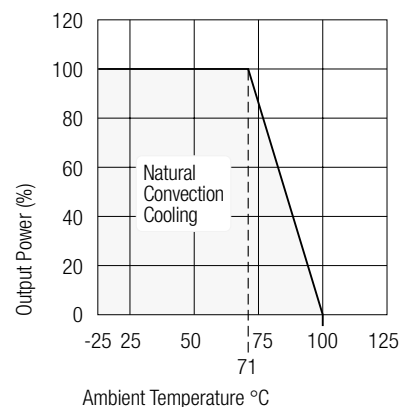
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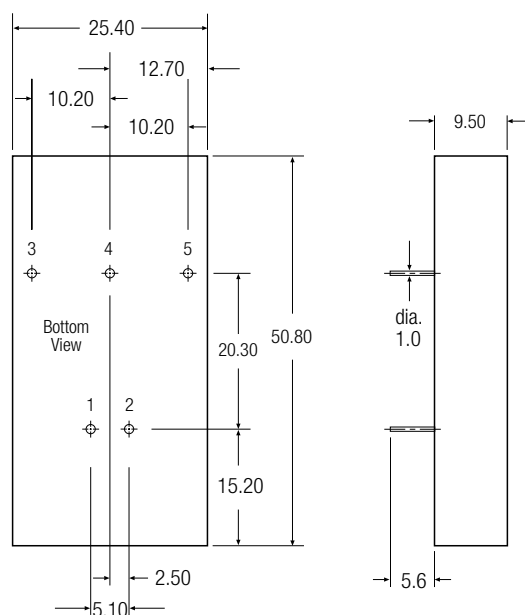
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## Specifications (typical at nominal input and 25°C unless otherwise noted)

Input Voltage Range	12V types nominal	9-18V
	24V types nominal	18-36V
	48V types nominal	36-75V
Input Filter	Pi Type	
Voltage Accuracy	±2%	
Ripple and Noise, 20MHz BW	Single Output 50mV p-p, 20mV RMS Dual Output 75mV p-p, 20mV RMS	
Line Regulation, HL-LL	±1.0% max.	
Load Regulation, 100% to 10%	±1.0 (Single) ±2.0 % (Dual)	
Temperature Coefficient	±0.02%/°C	
Short Circuit Protection	Continuous	
Overvoltage Protection Threshold:	3.3V Output	3.9V
	5V Output	6.2V
	12V Output	15V
	15V Output	18V
Transient Response Recovery Time, 25% Load Step Change	500µsec	
Switching Frequency	300kHz, typ.	
Isolation Voltage	1600VDC	
Isolation Resistance	10 <sup>9</sup> 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)	5.342 x 10 <sup>5</sup> 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