

POWERLINE - DC/DC-Converter

EW-Series, 10 Watt, 1.6 kV Isolation & 4:1 Input Range (Single & Dual Output)

RECOM

Features

- Delivers 10 Watts at 71°C Ambient Temperature
- Small Package, 50.8 mm x 25.4 mm x 9.5 mm
- 4:1 Wide Range Input Voltage
- Short Circuit Protection with Autorecovery
- Six-Sided Shield
- Pi Input Filter
- MTBF 5.112 x 10⁵ Hours
- Operating Temperature Range -25°C to +71°C
- Short Circuit Protection Continuous
- Switching Frequency 300kHz, typ.
- 2 Year Warranty
- Option to „M2“ Operating Temperature -40°C to +71°C



Selection Guide 24V and 48V Input Types

Part Number	Input Range	Output Voltage	Output Current	Efficiency (%)
RP10-2405SEW	9-36 VDC	5 VDC	2000 mA	79
RP10-2412SEW	9-36 VDC	12 VDC	830 mA	82
RP10-2415SEW	9-36 VDC	15 VDC	670 mA	82
RP10-2405DEW	9-36 VDC	±5 VDC	±1000 mA	78
RP10-2412DEW	9-36 VDC	±12 VDC	±416 mA	80
RP10-2415DEW	9-36 VDC	±15 VDC	±333 mA	80
RP10-4805SEW	18-75 VDC	5 VDC	2000 mA	80
RP10-4812SEW	18-75 VDC	12 VDC	830 mA	84
RP10-4815SEW	18-75 VDC	15 VDC	670 mA	84
RP10-4805DEW	18-75 VDC	±5 VDC	±1000 mA	78
RP10-4812DEW	18-75 VDC	±12 VDC	±416 mA	82
RP10-4815DEW	18-75 VDC	±15 VDC	±333 mA	82

Maximum Capacitive Load

RP10-xx05SEW	4700µF
RP10-xx12SEW	690µF
RP10-xx15SAW	470µF
RP10-xx05DAW	±680µF
RP10-xx12DAW	±330µF
RP10-xx15DAW	±110mF

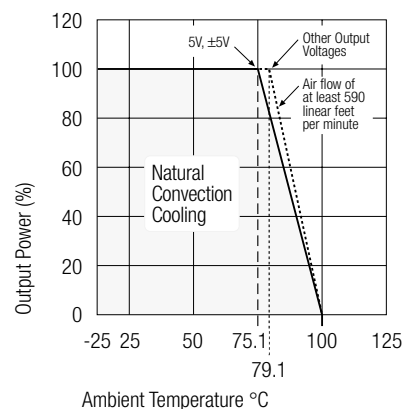
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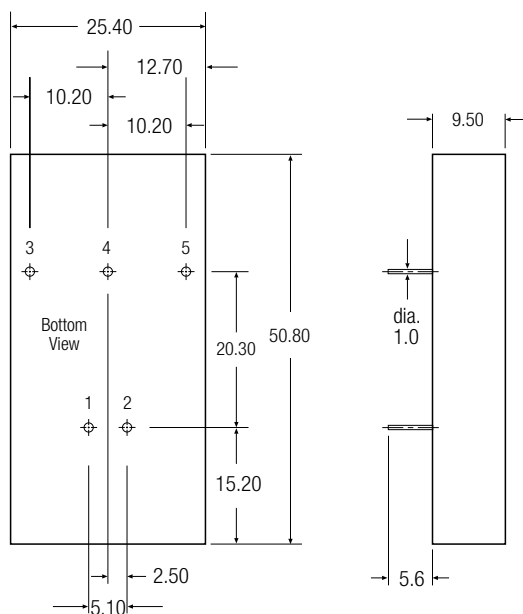
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Specifications (typical at nominal input and 25°C unless otherwise noted)

Input Voltage Range	24V types nominal	9-36V
	48V types nominal	18-75V
Input Filter	Pi Type	
Voltage Accuracy,	±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:	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, min	
Isolation Resistance	10 ⁹ Ω	
Operating Temperature Range	-25°C to +71°C	
Alternative Operating Temperature Suffix "M2"	-40°C to +71°C (see graph)	
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)	5.112 x 10 ⁵ 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