

# POWERLINE - DC/DC-Converter

D-Series, 3 Watt, DIP24, Regulated & 4:1 Wide Input Range (Single & Dual Output)

RECOM

### Features

- 3 Watts in DIP24 Package
- 9-36V and 18-75V Input
- Typical Efficiency up to 77%
- Regulated Outputs
- Low Profile, 10.2 mm Height
- No Derating to 71°C
- No other Components required
- MTBF 1.214 x 10<sup>6</sup> Hours
- Over Current Protection, Continuous
- Five-Sided EMI Shield
- 2 Year Warranty
- Standard and SMT-Pinning
- International Safety Standard Approvals
- UL 1950 Component Recognised



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

Part Number	Input Range	Output Voltage	Output Current	Efficiency (%)
RP03-2405SD	9-36 VDC	5 VDC	500 mA	76
RP03-2412SD	9-36 VDC	12 VDC	250 mA	79
RP03-2415SD	9-36 VDC	15 VDC	200 mA	79
RP03-2405DD	9-36 VDC	±5 VDC	±250 mA	74
RP03-2412DD	9-36 VDC	±12 VDC	±125 mA	79
RP03-2415DD	9-36 VDC	±15 VDC	±100 mA	79
RP03-4805SD	18-75 VDC	5 VDC	500 mA	75
RP03-4812SD	18-75 VDC	12 VDC	250 mA	79
RP03-4815SD	18-75 VDC	15 VDC	200 mA	77
RP03-4805DD	18-75 VDC	±5 VDC	±250 mA	74
RP03-4812DD	18-75 VDC	±12 VDC	±125 mA	76
RP03-4815DD	18-75 VDC	±15 VDC	±100 mA	78

### Maximum Capacitive Load

RP03-xx05SD	1000µF
RP03-xx12SD	170µF
RP03-xx15SD	110µF
RP03-xx05DD	±500µF
RP03-xx12DD	±96µF
RP03-xx15DD	±47µF

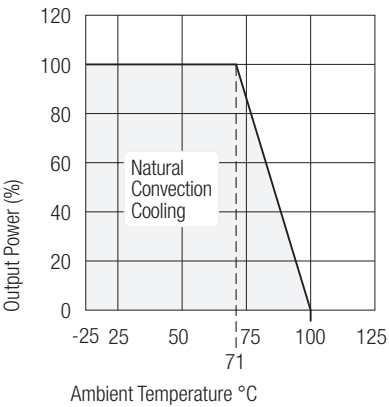
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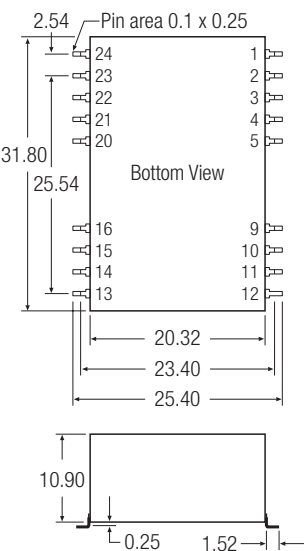
### Specifications (typical at nominal input and 25°C unless otherwise noted)

Input Voltage Range	24V types nominal	9 -36V
	48V types nominal	18-75V
Start Voltage	≥10V	
Input Filter	Pi Type	
Voltage Accuracy	±2%	
Voltage Balance, Dual Outputs	±2%	
Ripple and Noise, 20MHz BW	50mVp-p	
Line Regulation	Single Output	±0.2%
	Dual Output	±0.2%
Load Regulation, FL-1/4FL	Single Output	±0.2%
	Dual Output	±1%
Temperature Coefficient	±0.02%/°C	
Over Current Protection	Continuous	
Control Voltage Referenced to Negative(-)Input Compatability	CMOS, TTL	
ON-Control	4.8V min, or Open	
OFF-Control	0.4V max. or Short	
Switching Frequency	300kHz, typ.	
Isolation Voltage	500VDC	
Isolation Resistance	10 <sup>9</sup> Ω	
Isolation Capacitance	300pF max.	
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	Five-sided Shield	
Case Material	Nickel-Coated Copper with Non-Conductive Base	
Dimensions	31.8 x 20.3 x 10.2 mm	
MTBF (MIL-HDBK-217F TA = 25°C full load)	1.214 x 10 <sup>6</sup> Hours	

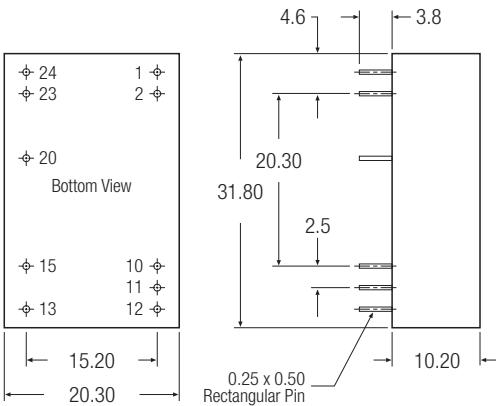


### Package Style and Pinning (mm)

SMD Package Style



DIP24 Package Style



Pin Connections		
Pin #	Single	Dual
1	+Vin	+Vin
2	+Vin	+Vin
10	NC	Common
11	NC	Common
12	-Vout	NC
13	+Vout	-Vout
15	NC	+Vout
20	Ctrl	Ctrl
23	-Vin	-Vin
24	-Vin	-Vin

NC = No Connection  
Ctrl = Remote On/Off Control

Pin Pitch Tolerance ±0.35 mm