

# Statronics Power Supplies

Rifala Pty Ltd, ACN 002612473

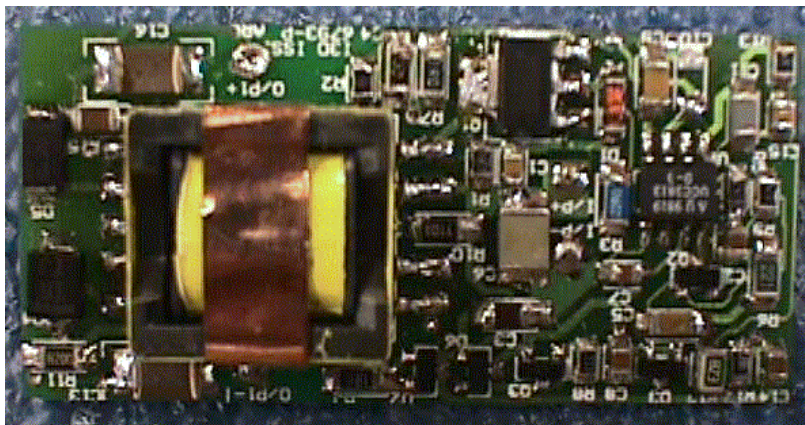


ISO 9001

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## R3 SERIES INDUSTRY- STANDARD FOOTPRINT VERY WIDE INPUT RANGE, DUAL AND SINGLE 3WATT, HIGH-ISOLATION DC-DC-CONVERTERS



R3 SERIES are compact, efficient, economical, 3 watt, isolated DC-DC converters with single or dual outputs, suitable for mounting as a through hole component on printed circuit boards.

**1 Converter for 4 nominal input voltages !!!!**

### Dimensions:

Width: 25 mm, 1 inches  
Height: < 10 mm, <0.4 inches  
Length: 51 mm, 2 inches

### Features and performance

- Cool - over 70% efficient.
- User friendly - NO external components necessary.
- Overload protected - can be shorted indefinitely.
- **VERY wide input range** - 30V to 175Vdc (200Vdc surge, 200mS)  
- Suitable for 48V, 72V or 120V DC Nominal Inputs.
- Compact, low profile outline - less than 10mm total height above motherboard.
- Simple mounting - standard footprint, replace 2 or 3 models with just one!
- Very High reliability - 100% SMD  
- MTBF > 800,000 Hrs (MIL-HDBK 217F G.B.)
- Low input noise - CISPR22-A with one 1µF external ceramic capacitor.
- Good regulation - post regulation usually not necessary.
- Soft Start and no overshoot - no "bad habits".  
- will drive most capacitive and non-linear loads.
- High Isolation - meets many telecommunications and industrial standards.
- Reliable in hot environment - continuously rated to 65°C, natural convection cooling.
- Serviceable - Open construction = repairable after the 5-year warranty.



See also, i3 series, 9V to 72V DC, for 12V, 24V, 32V or 48V nominal input.

**This series** is especially suitable for High Reliability Telecommunications, Industrial Process Control, Information Technology Equipment, Distributed Power Systems, etc., **particularly** where a **very wide input range** is required, such as when the DC power source is an "unknown quantity".

# SPECIFICATIONS

<b>DC Outputs: (See Table)</b>	One or two, both regulated, common zero.
<b>DC Output Power:</b>	3 Watts maximum (continuous)
<b>Ripple And Noise: (See Table)</b>	Typically <70mV RMS, <200mV P-P (24V O/P)
<b>Minimum Load:</b>	0 A. No minimum load is required for normal performance.
<b>Load Regulation: (See curves)</b>	< 2% For all loads from 10% to full load
<b>Line Regulation: (See curves)</b>	< 0.02% For all input voltages from 36 to 150 V DC
<b>Line Regulation: (See curves)</b>	< 0.03% For all input voltages from 30 to 175 V DC
<b>Voltage Setting accuracy:</b>	< ± 2% at 48V input, full load.
<b>Temperature Coefficient:</b>	< 0.1% per °C after 1 Hr. Any change in output voltage due to warm-up drift and temperature does not exceed regulation limits.
<b>Isolation, Input to Output</b>	20MΩ, 3,500V DC, 2500V RMS. Capacitance: < 57pF
<b>Short Circuit and Over Current protection:</b>	100% to 120% of full power, indefinite short circuit period.
<b>Reverse Input Protection:</b>	Reversed Input Polarity Blows external input fuse (1/2A SF)
<b>Operating Temperature:</b>	-35°C to 65°C, no de-rating, Relative Humidity: 5% to 95%
<b>Shipping and Storage:</b>	-35°C to 105°C , Relative Humidity: 5% to 95%
<b>Withstand Vibration :</b>	5.2G, 3 axes to 400Hz Under operation
<b>Withstand Shock:</b>	28G 3 axes Under operation
<b>Standards, Safety:</b>	IEC 950, AS 3260, UL 1950, CSA22.2 No. 950
<b>Standards, EMI:</b>	CISPR 22, AS 3548, FCC, VDE 0871, all Class A conducted (with a single 1μF X7R external input capacitor).
<b>Input Ripple Current</b>	< 50mA P-P (140kHz) at 48V input
<b>Efficiency: (See Curves)</b>	No Load dissipation < 600mW at 48V input
<b>Step Load Response:</b>	10% to 70% step load < 6% peak or dip, Settling Time < 1ms

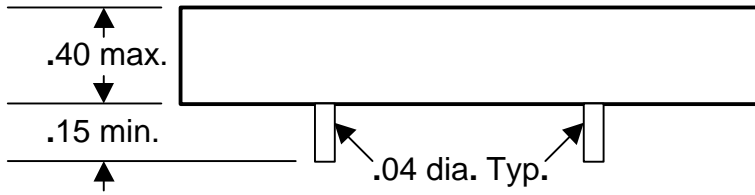
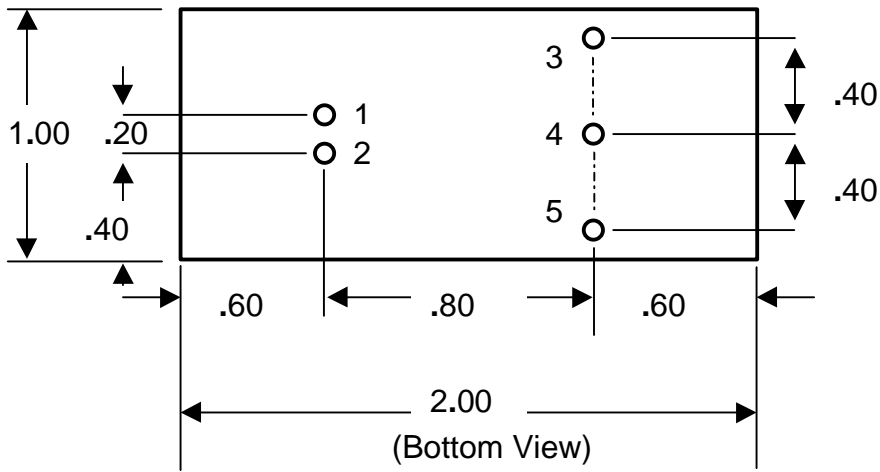
## Common Mode Noise Filtering:

For efficient reduction of common-mode noise, a 1000pF Y-rated capacitor may be connected, if required, between one pole of the input and the output common. For best results, tracking on the motherboard should be short to minimize stray inductance.

## Selector Guide -

Output	Model	Max. Load (either O/P) <sup>1</sup>	Ripple (RMS, P-P) <sup>2</sup>	Notes:
± 5V	R3D05	600 mA	75mV	<p>1. On <b>dual</b> models, up to the full power may be drawn from <b>either</b> output, but the <b>total power</b> should not exceed <b>3 watts</b>.</p> <p>2. <b>Output Ripple</b> is specified at worst-case input voltage, <b>full load</b> and for <b>dual</b> models, at a load of <b>1.5 watts on each output</b>. Ripple is better than approximately linearly related to load current where the dual loads are unbalanced.</p> <p>3. These <b>dual</b> models can be used as 24V, 30V, 48V or 56V <b>single</b> output by removing the center output pin (if desired).</p>
± 6V	R3D07	430 mA	100mV	
± 12V <sup>3</sup>	R3D12	250 mA	120mV	
± 15V <sup>3</sup>	R3D15 <sup>3</sup>	200 mA	150mV	
± 24V <sup>3</sup>	R3D24 <sup>3</sup>	125 mA	200mV	
± 28V <sup>3</sup>	R3D28 <sup>3</sup>	107 mA	200mV	
3.3V	R3S03	910 mA	75mV	
5V	R3S05	600 mA	75mV	
6V	R3S07	430 mA	100mV	
12V	R3S12	250 mA	120mV	
15V	R3S15	200 mA	150mV	
24V	R3S24	125 mA	200mV	

**DIMENSIONS (inches)**



**PIN ASSIGNMENTS**

**SINGLE OUTPUT**

- 1. + V in
- 2. - V in
- 3. + V out
- 4. No Pin
- 5. - V out

**DUAL OUTPUT**

- 1. + V in
- 2. - V in
- 3. + V out
- 4. out COM
- 5. - V out

Suggested holes size: .05 (1.27mm)