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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Input Voltage Range

# **Features**

# Regulated Converters

- Compact AC-DC Power Supply
- 15 Watt PCB Mount Package
- Universal Input Voltage Range
- 4000VAC Isolation
- Low Output Ripple and Noise
- Short Circuit Protected
- UL-60601 Certified for Medical Applications

### **Description**

 $Compact \ switching \ power \ module \ for \ PCB \ or \ DIN-rail \ mounting \ with \ medical \ certification \ UL-60601-1.$ 

Selection Guide				
Part Number	Input Range (VAC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
RAC15-3.3SB	85-264	3.3	3000	74
RAC15-05SB	85-264	5	3000	78
RAC15-09SB	85-264	9	1666	79
RAC15-12SB	85-264	12	1250	81
RAC15-15SB	85-264	15	1000	81
RAC15-24SB	85-264	24	625	83
RAC15-05DB	85-264	±5	±1500	78
RAC15-12DB	85-264	±12	±625	80
RAC15-15DB	85-264	±15	±500	81
RAC15-0512TB	85-264	5/±12	+2000/±200	78
RAC15-0515TB	85-264	5/±15	+2000/±150	78

<sup>\*</sup>add suffix "-E" for extended temperature range, e.g. RAC15-05SB-E

### Specifications (typical at 25°C and after warm up time unless otherwise specified)

1 0 0		
Rated Power		15 Watts max.
Input Frequency Range (for AC Input)		47-440Hz
Input Current (full load)	115VAC/230VAC	220mA / 118mA max.
No Load Power Consumption	115VAC/230VAC	590mW max.
Inrush Current (<2ms)	115VAC/230VAC	10A / 20A max.
Leakage Current	115VAC/230VAC	100μA/ 200μA max.
Output Voltage Accuracy (Full load)		Single and Dual $\pm 2\%$ max. Triple $\pm 2\%$ / $\pm 3\%$ max.
Line Voltage Regulation (low line, high lir	ne at full load) - See Note 1	±0.5% max.
Load Voltage Regulation (10% to 100%	±1% max.	
Output Ripple and Noise - See Note 3		1% Vout max.
Operating Frequency		132kHz typ.
Efficiency at Full Load		see table
RMS Isolation Voltage (input to output)		4kVAC / 1minute
Temperature Coefficient		±0.01%/°C typ.
Over-Current Protection		105% typ.
Short Circuit Protection		Continuous, Automatic Restart
Over-Voltage Protection		Zener Diode Clamp
Over-Temperature Protection		100°C
Operating Temperature Range	Standard	-25°C to +70°C
(free air convection, with derating)	Suffix -E	-40°C to +70°C
Storage Temperature Range		-40°C to +100°C

continued on next page

90-264VAC or 100-370VDC

# **POWERLINE**

AC/DC-Converter with 3 year Warranty



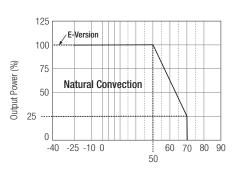
# 15 Watt Single/Dual & Triple Output





# **Derating Graph**

(Ambient Temperature)



Ambient Temperature Range (°C)

**Please Read Application Notes** 

www.recom-electronic.com

<sup>\*</sup>add suffix "-ST" for screw terminal module e.g. RAC15-05SB-ST, RAC15-05DB-ST, RAC15-0512TB-ST

# **POWERLINE**

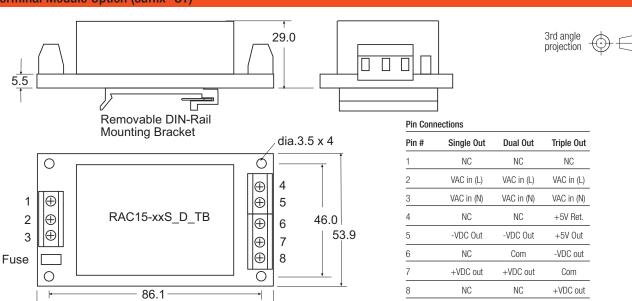
# AC/DC-Converter

# RAC15-S\_D\_TB Series

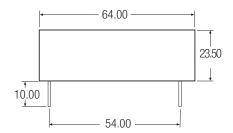
### **Specifications** continued

Case Material		Epoxy with Fibreglass (UL94V-0)
Package Weight		120g
Packing Quantity		5 pcs (-ST Version: 1 pc)
EMC		EN 55011 Class B / EN60601-1-2
MTBF (+25°C)	using MIL-HDBK-217F	200~400 x 10 <sup>3</sup> hours

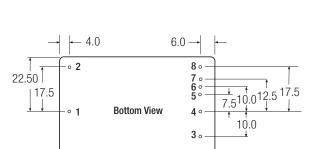
### **Screw Terminal Module Option (suffix -ST)**

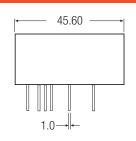


### **Package Style and Pinning**



96.0





NC = No Connection

3rd angle projection	0

### **Pin Connections**

Pin #	Single Out	Dual Out	Triple Out
1	VAC in (L)	VAC in (L)	VAC in (L)
2	VAC in (N)	VAC in (N)	VAC in (N)
3	-VDC out	-VDC out	+5V Ret.
4	No Pin	Com	-VDC out
5	No Pin	No Pin	+5V out
6	+VDC out	+VDC out	No Pin
7	No Pin	No Pin	Com
8	No Pin	No Pin	+VDC out

### **Notes**

- Note 1: Line Regulation = 2% max. for triple output +Vout and -Vout.
- Note 2: Load Regulation = 5% max. for triple output +Vout and -Vout.
- Note 3: Ripple & Noise measured with 20MHz BW probe and 0.1µF + 47µF capacitors in parallel across the outputs.
- Note 4: Suggested input fuse rating = 2A Slow Blow

 $\begin{array}{ll} \text{XX.X} & \pm \ 0.5 \ \text{mm} \\ \text{XX.XX} & \pm \ 0.25 \ \text{mm} \end{array}$