

Features

Regulated Converters

Rev. 1

- 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

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

*add suffix "-E" for extended temperature range, e.g. RAC15-05SB-E

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

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

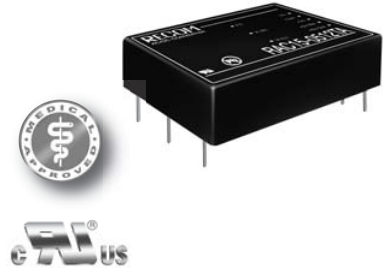
Input Voltage Range	90-264VAC or 100-370VDC
Rated Power	15 Watts max.
Input Frequency Range (for AC Input)	47-440Hz
Input Current (full load)	220mA max. (115VAC) / 118mA max. (230VAC)
Inrush Current (<2ms)	10A max. (115VAC) / 20A max. (230VAC)
Leakage Current	100µA max. (115VAC) / 200µA max. (230VAC)
Output Voltage Accuracy (Full load)	Single and Dual ±2% max. Triple ±2%/±3% max.
Line Voltage Regulation (low line, high line at full load) - See Note 1	±0.5% max.
Load Voltage Regulation (10% to 100% symmetric load) - See Note 2	±1% max.
Output Ripple and Noise - See Note 3	1% Vout max.
Operating Frequency	132kHz typ.
Efficiency at Full Load	see table
Isolation Voltage (input to output)	4000VAC min.
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 (free air convection, with derating)	-25°C to +70°C
Storage Temperature Range	-40°C to +100°C
Humidity	95% RH max.
Case Material	Epoxy with Fibreglass (UL94V-0)
Package Weight	120g
EMC	EN 55011 Class B / EN60601-1-2
MTBF (+25°C)	using MIL-HDBK-217F 200~400 x 10 ³ hours

POWERLINE

AC/DC-Converter

RAC15-S_D_TB Series

15 Watt Single, Dual & Triple Output



UL-60601-1 Certified

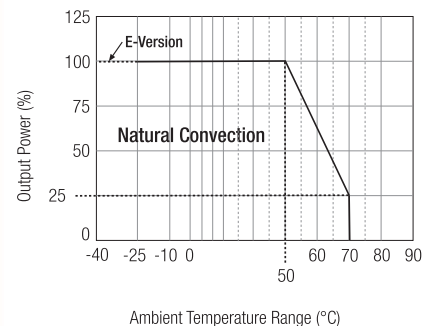
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Description

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

Derating Graph

(Ambient Temperature)



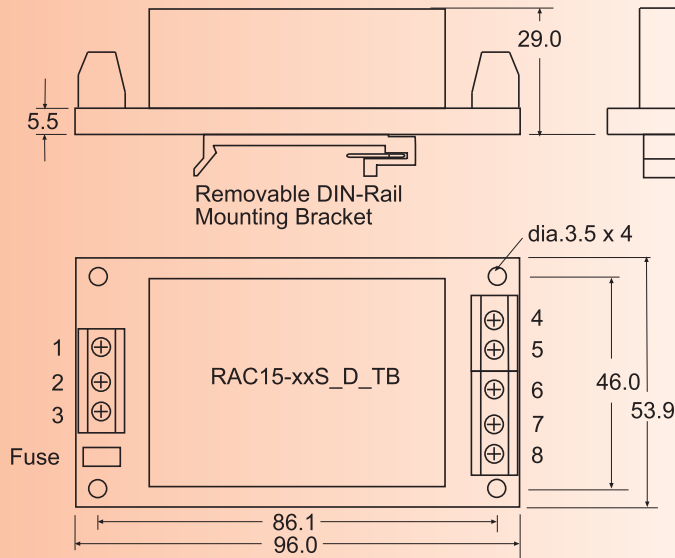
POWERLINE

AC/DC-Converter

RAC15-S_D_TB Series

Screw Terminal Module Option (suffix -ST)

3rd angle projection 

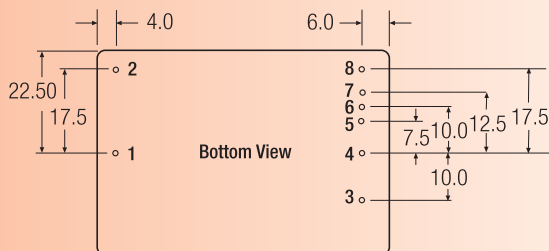
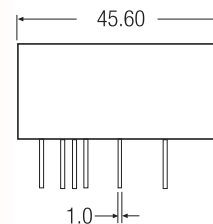
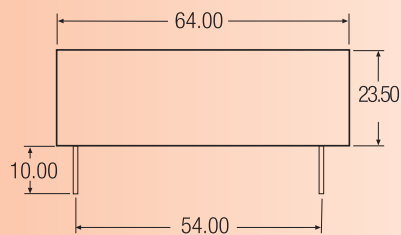


Pin Connections

Pin #	Single Out	Dual Out	Triple Out
1	NC	NC	NC
2	VAC in (L)	VAC in (L)	VAC in (L)
3	VAC in (N)	VAC in (N)	VAC in (N)
4	NC	NC	+5V Ret.
5	-VDC Out	-VDC Out	+5V Out
6	NC	Com	-VDC out
7	+VDC out	+VDC out	Com
8	NC	NC	+VDC out

NC = No Connection

Package Style and Pinning



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

XX.X ± 0.5 mm
XX.XX ± 0.25 mm

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.