VNRM65 Series

65 Watts

Single Output Medical Approved Switching Power Supply

Features:

* International Medical Safety Approvals & CE Mark
* Industry Standard 2 x 4" Open Frame Package
* UL Class I / UL Class II Approvals (No Safety Ground Required)
* New Component Technologies for Improved Reliability and costs
* Meets Creepage and Clearance requirements per EN60601-1
* Low Leakage Current of $<300\mu$A maximum @ 264 VAC
* Dual Fused Input Protection
* High Efficiency Operation - Up to 84%
* Universal AC Input (47-63 Hz)
* 100,000 hours MTBF (25°C Full Load Operation)
* Class B Emissions
* 3 Year Warranty

Input Specifications:

Input Range	Universal VAC (90-264 VAC) & 120-370 VDC
Input Frequency	47-63 Hz or DC
Inrush Current	25A @ 115VAC / 50A @ 230VAC max (cold start)
Input Current	1700ma Maximum
Input Reflected Ripple	FCC 68 part 15 Class B
Efficiency	72-84% Typical (depending on output model)
Input Protection	Dual Fused (4 Amp / 250 V)
Hold-up Time	Half Cycle Minimum @ 120 VAC and 80% load
Leakage Current	$<300\mu$A maximum @ 264 VAC
Harmonics	EN61000-3-2 Class D

Electromagnetic Compatibility:

Electrostatic Discharge	EN61000-4-2, ±4KV Contact / ±8KV Air Discharge
Radiated Susceptibility	EN61000-4-3, 26-1000MHz, 10V/M, 80% AM
EFT / Bursts	EN61000-4-4, ± 2KV
Surges	EN61000-4-5, ±2KV Line-Earth, ±1KV Line-Line
Conducted Immunity	EN61000-4-6, 0.15 - 800MHz, 10V, 80% AM
Voltage Dips	EN61000-4-11, 95% Dip & 10ms, 30% Dip & 500ms
Voltage Interruptions	EN61000-4-11, 95% Reduction, 5s
Radiated Emissions	FCC 68 part 15 Class B
Conducted Emissions	FCC 68 part 15 Class B
Harmonic Current	EN61000-3-2 Class D
Fluctuations & Flicker	EN61000-3-3

Output Specifications:

Adjustment Range	Fixed at Factory
Minimum Load	None
Regulation	±3% maximum (line, load & temperature)
Ripple / Noise	± 1% pk-pk max (20MHz)
Transient Response	+/- 5% Deviation / < 1msec recovery
Set-Point Accuracy	±2%
Short Circuit Protection	Continuous
Over Load Protection	125-150%, automatic recovery
Over Voltage Protection	120-150%, latched shutdown

Environmental Specifications:

Operating Temp	0 ~ +50°C (De-Rate 2.5%/1°C Rise To +70°C)
Storage Temp	-20 ~ +85°C
Cooling	10 cfm airflow required for full load or derate 25%
Temp Co-Efficient	0.05% per degrees celsius
Humidity	5 to 95% RH Non-Condensing
Vibration	3 Axes 1 Oct/min, 5 min at 4 Res. 0.75G Pk, 5-500Hz
Shock	20G Peak Acceleration
Reliability	>100k hours MTBF (Full Load and 25°C Operation)

Emissions Standards

FCC Part 15J, Part 2	Within Class B Limits
EN55011 / CISPR11	Within Class B Limits

International Safety Approvals

Standards	UL60601-1 (2nd Edition), File # E201073
	CSA22.2 No. 60601-1
	CB Report (IEC 60601-1) File # E201073-A1-CB-1
	CE Mark (LVD)

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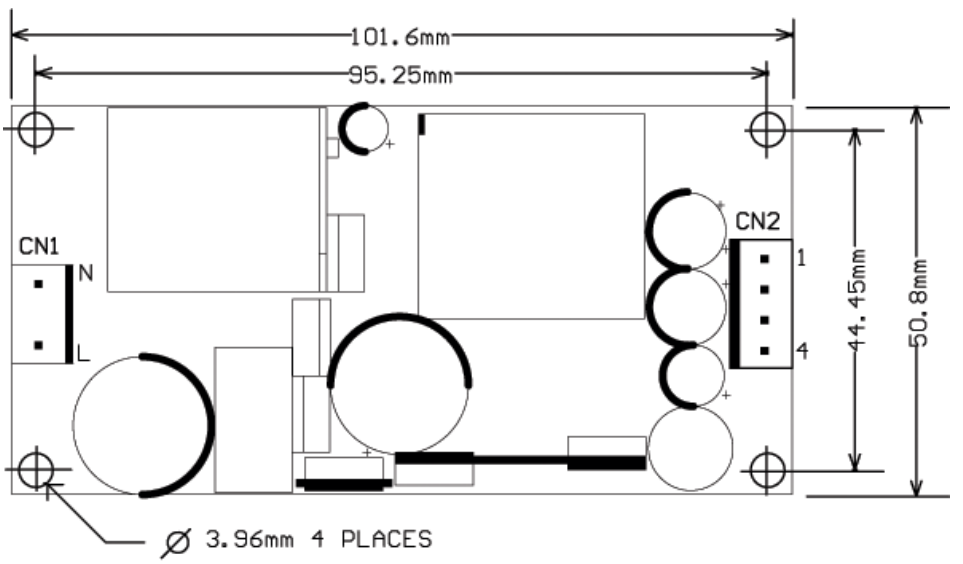
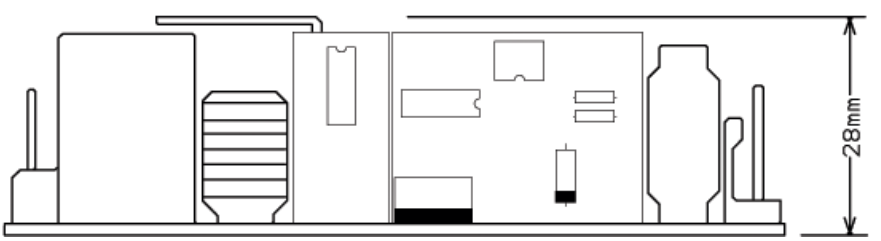
Output Table:

Model Number	Max Power	V1	Io Min	Io Max	Efficiency
VNRM65-3.3V	33 Watts	3.3 VDC	n/a	10 Amps	72% (typical)
VNRM65-5V	50 Watts	5.0 VDC	n/a	10 Amps	78% (typical)
VNRM65-12V	65 Watts	12 VDC	n/a	5.5 Amps	81% (typical)
VNRM65-24V	65 Watts	24 VDC	n/a	2.7 Amps	83% (typical)
VNRM65-48V	65 Watts	48 VDC	n/a	1.35 Amps	84% (typical)

Mechanical Specifications: Construction: Open Frame Weight: 0.385 lb / 0.174 kg.





Output Pin Assignmnets:

CN2-1	V1
CN2-2	V1
CN2-3	RETURN
CN2-4	RETURN

Mating Connectors:

CN1 (AC Input) Mating Connector:
Molex 09-50-2030 (3-1) (2139 series)

CN2 (DC Output) Mating Connector:
Molex 09-50-2040 (2139 series)

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