

Delivering leading edge, innovative power solutions for more than 30 years....

Model:GTM964500PWWWVV.V-F

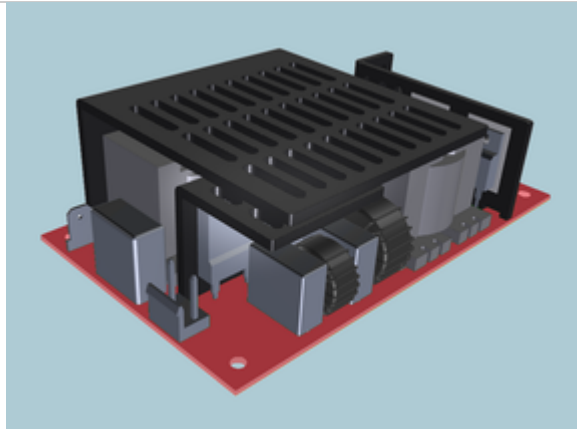
July 28, 2021

GTM964500PWWWVV.V-F

Information

Model Number	GTM964500PWWWVV.V-F
Description	GTM964500PWWWVV.V-F, ICT / ITE / Medical Power Supply, Open Frame/Internal, Regulated Switchmode AC-DC Power Supply AC Adaptor, Forced airflow for full rated power (CFM): 10CFM, Input Rating: 100-240V~, 50-60 Hz, , Output Rating: 450 Watts, Power rating with convection cooling (W) 250W, 12-54V in 0.1V increments, Approvals:

Model Picture



Agency Documents

CE EC-Declaration	https://www.globtek.com/pdf/ec_declaration/a003a00000Ly9m5EAB
RoHS/RoHS2 Declaration	https://www.globtek.com/pdf/rohs_cert/a003a00000Ly9m5EAB
REACH Declaration	https://www.globtek.com/pdf/iso_certificates/REACH.pdf
Conflict Minerals Declaration	https://www.globtek.com/pdf/conflict-minerals.pdf

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MODEL PARAMETERS

Type	Open Frame/Internal
Technology	Regulated Switchmode AC-DC Power Supply AC Adaptor
Category	ICT / ITE / Medical Power Supply
Input Voltage	100-240V~, 50-60 Hz
I/P Amps (A)	6A
Wattage (W)	450.0
Vout Range (V)	12-54
Efficiency Level	USA DOE Level VI / Eco-design Directive 2009/125/EC, (EU) 2019/1782
Ingress Protection	N/A
Size (mm)	127.0 (L) x 76.2 (W) x 38.5 (H)

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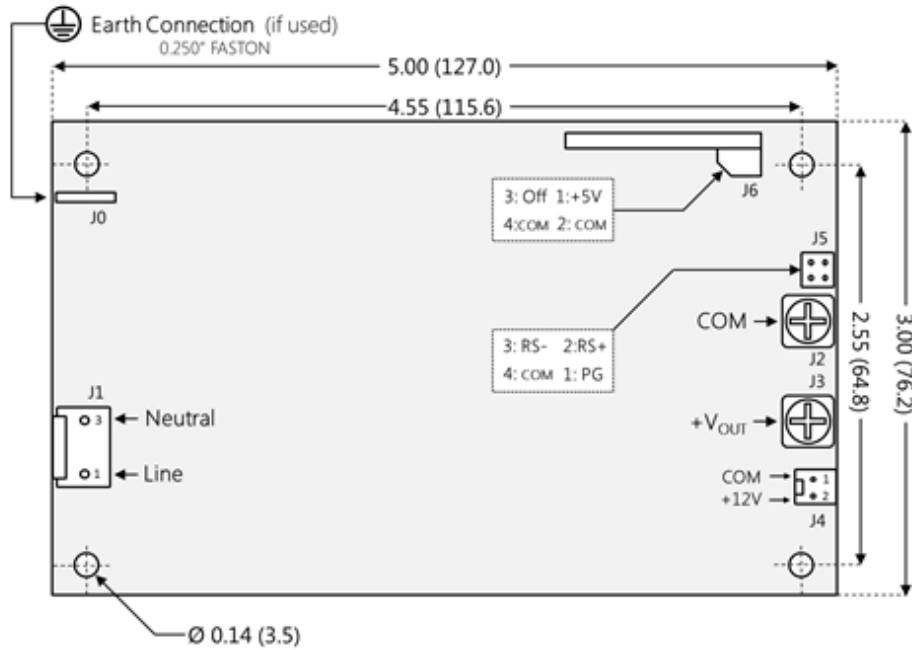
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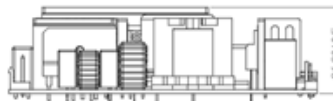
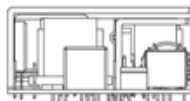
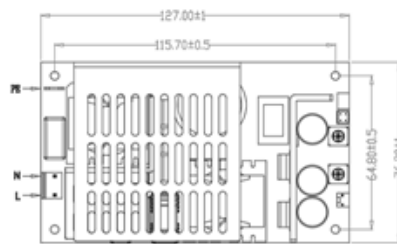
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ENCLOSURE



Customer may need to provide EMI shielding if not in metal chassis



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RATING TABLE

Model Number	Voltage	Amps(A)	Watts(W)	RFQ
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SPECIFICATIONS

Features

- High power density 3" x 5" format
- Auxiliary +12V fan output
- Auxiliary +5V standby output
- Power-good, remote-off, & remote-sense
- Class I, Class II, or Class II with Functional Earth input configurations
- ITE/ICT and medical (2 x MOPP) certified

Input

Input Voltage:	Specified: 90-264VAC, Nameplate: 100-240VAC
Input Frequency:	Specified: 47-63Hz, Nameplate: 50-60Hz
Input Current:	5.8A typ. @ 90VAC, 2.3A typ. @ 230VAC (full load)
No Load Input Power:	<150mW
Inrush Current:	<35A @ @ 100VAC , <70A @ 230VAC (cold start @ 25°C)
Efficiency:	85 - 95% typ. (full load)
Power Factor:	>0.95 @ 115VAC, >0.90 @ 230VAC (full load)

Output

Output Power:	For 12-18.9V output: 400W (25CFM forced air), 225W (convection), inclusive of fan/aux power For 19-54.0V output: 450W (25CFM forced air), 250W (convection), inclusive of fan/aux power
Turn-on Delay:	< 3 seconds @ 90VAC, < 2 seconds @ 115VAC
Output Voltage Tolerance:	± 2.0% (worst case, set point + load/line regulation)
Load Regulation:	± 0.5% (measured at connector)
Line Regulation:	± 0.2% (measured at connector)
Ripple:	1% pk-pk (using a 47µF low-ESR cap + 0.1µF ceramic capacitor, measured @ 20MHz BW)
Transient Response:	<5% deviation (with 25% load step), recovery to within 1% in 1ms
Startup Overshoot:	<5% (full load)
Hold-up Time:	8ms typ. (full load)
+12V Fan Output:	800mA (max)
+5V Standby Output:	1A (max)

Protections

Input Protection:	MOV transient suppressor, dual fuses (line + neutral)
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July 28, 2021

Over-Voltage Protection:	110-150%. Latched-off, cycle AC to reset
Over-Current Protection:	105-150% typ. Non-latched with auto-recovery
Short Circuit Protection:	Non-latched with auto-recovery
Over-Temperature Protection:	Latched-off, cycle AC to reset

Environmental

MTBF:	200,000 hours @ 25°C ambient
Operating Temperature:	-20°C to 40°C (Full output power), -40°C to 80°C (Derated)
Storage Temperature:	-40°C to 85°C
Humidity:	0% to 95% relative humidity, non-condensing
Altitude:	5000m max.
Vibration:	Conforms to EN60068-2-6

Safety

Dielectric Withstand Voltage:	4000VAC or 5656VDC from input to output 3000VAC or 4242VDC from input to earth
Intended Medical Application:	Type-B or Type-BF
Touch Current:	NC: <100µA SFC: <500µA
Earth Leakage Current	NC: <0.5mA SFC: <1.0mA
Means of Protection:	2 x MOPP
Primary-Secondary Bridging Capacitance:	Two IEC60384-14 Y1 capacitors in series

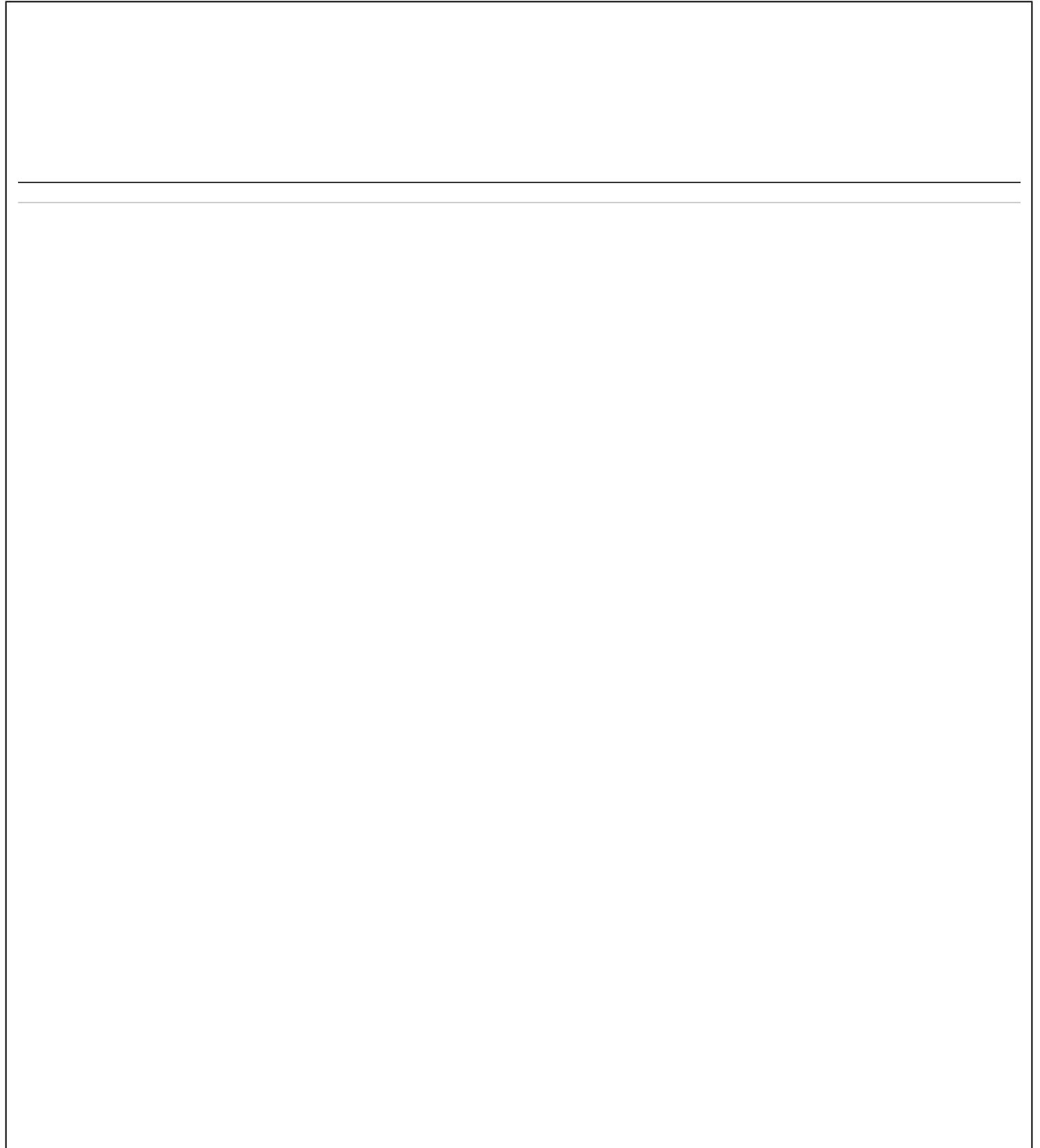
EMC

Applicable Standards:	Medical: EN60601-1-2, 4th edition Emissions: EN55032, EN 55011, EN61000-6-3, EN61000-6-4, CISPR11/CISPR22 Immunity: EN55024, EN61000-6-1, EN61000-6-2
Conducted Emissions:	Class B, FCC Part 15, Class B (with resistive load)
Radiated Emissions:	Class B, FCC Part 15, Class B (with resistive load)
Harmonic Current Voltage Distortion:	EN61000-3-2, Class A
Voltage Fluctuations/Flicker:	EN61000-3-3
Electrostatic Discharge (ESD) Immunity:	EN61000-4-2, 10KV contact Discharge, 20KV air discharge (applied to input or output terminals)
Radiated RF Immunity:	EN61000-4-3, 10V/m 80-2700MHz, 80% 1KHz AM.
EFT/Burst Immunity:	EN61000-4-4, 4KV/100kHz.
Line Surge Immunity:	EN61000-4-5, 2KV differential, 4KV common-mode
Conducted RF Immunity:	EN61000-4-6, 3VRMS, 80% 1KHz AM
Power Frequency Magnetic Field Immunity:	EN61000-4-8, 30A/m
Voltage Dip Immunity:	EN61000-4-11

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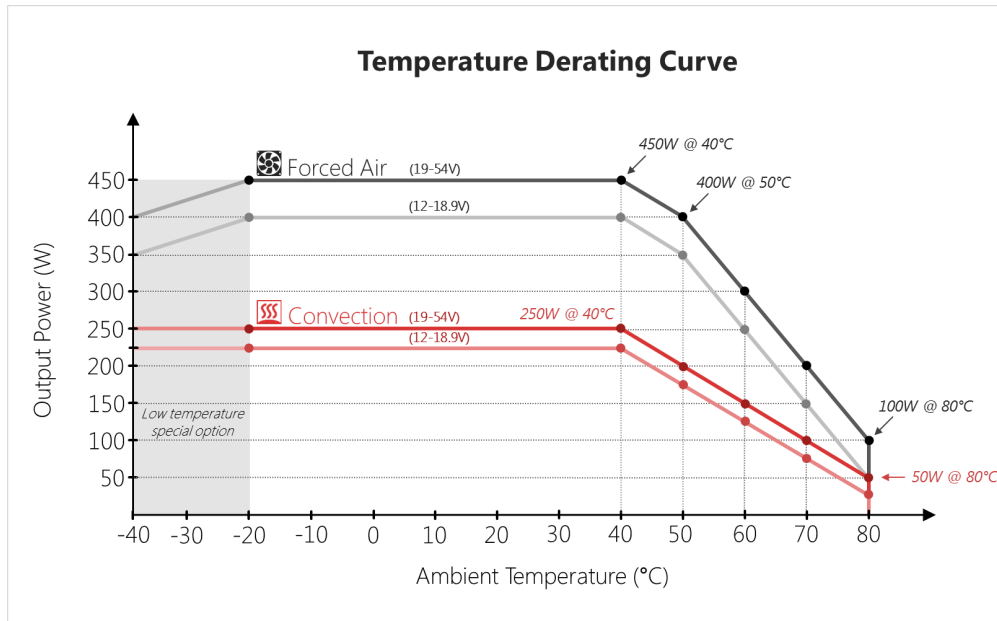
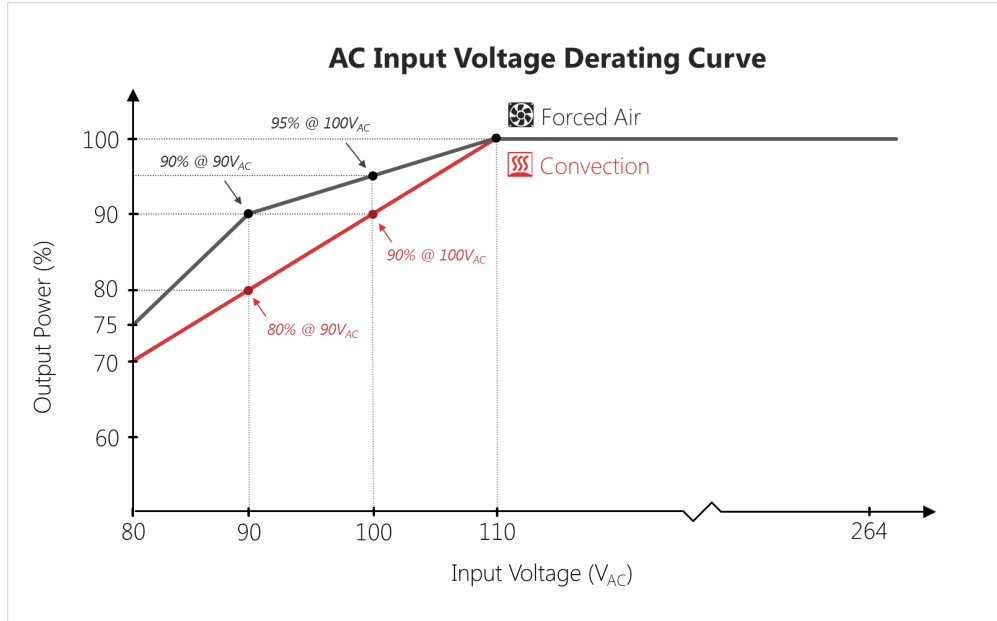
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DERATING CURVE



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INPUT CONFIGURATION

Description



Optional Input Wiring Kits are available:

PN/Ordering No	Length	End A	End B
C810070M6VAR2(R)	60	IEC 60320 C8	JST VAR-2
C1410070M6VAR2(R)	60	IEC 60320 C13	JST VAR-2
VAR2210070M7VAR2(R)	73	JST VAR-2	JST VAR-2



Custom lengths, construction, cable types, ferrites, filters, and termination available upon request.

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Approvals

Logo	Description
Conforms to UL STD. 62368-1 Certified to CSA STD C22.2 NO.62368-1	Conforms to UL STD. 62368-1 Certified to CSA STD C22.2 NO.62368-1
	Morocco SDoC declaration http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/
	UKCA Certification