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Model:GTM965500P-BP-WWWVV-XX

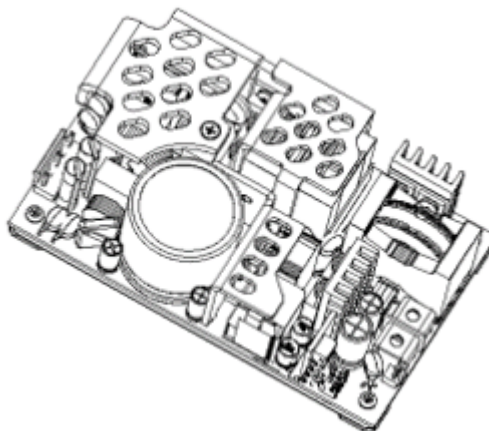
May 20, 2024

GTM965500P-BP-WWWVV-XX

Information

Model Number	GTM965500P-BP-WWWVV-XX
Description	GTM965500P-BP-WWWVV-XX, ICT / ITE / Medical Power Supply, 60601-1-4th Ed. , Open Frame/Internal, Regulated Switchmode AC-DC Power Supply AC Adaptor, Forced airflow for full rated power (CFM): 10, Input Rating: 100-240V~, 50-60 Hz , Output Rating: 550 Watts, Power rating with convection cooling (W) 300, 12-54V in 0.1V increments, Approvals:

Model Picture



Agency Documents

CE EC-Declaration	https://www.globtek.com/pdf/ec_declaration/a0O3a00000MNV3VEAT
RoHS/RoHS2 Declaration	https://www.globtek.com/pdf/rohs_cert/a0O3a00000MNV3VEAT
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)	550.0
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 34.3 (H)

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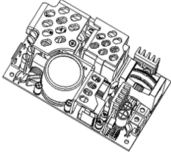
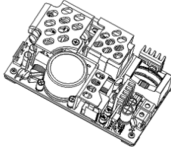
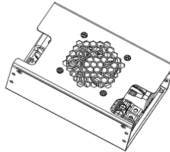
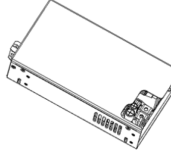
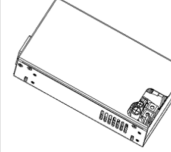
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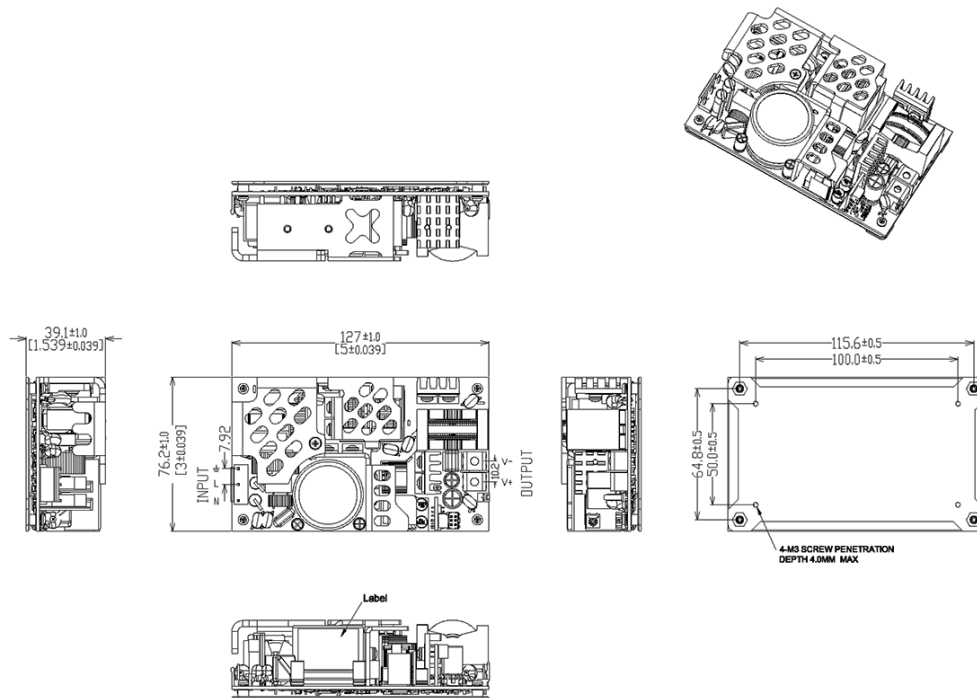
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ENCLOSURE

Open-Frame (No suffix)	Open-Frame with Baseplate (-BP)	Enclosed with Top-Fan (-TF)	Enclosed with End-Fan & TE/AMP Input Connector (-EF)	Enclosed with End-Fan & IEC60320 C14 Inlet (-EFI)
				



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RATING TABLE

Model Number	Voltage	Amps(A)	Watts(W)	RFQ
GTM965500P-BP-55012-F4	12 V			RFQ
GTM965500P-BP-55019-F4	19 V			RFQ
GTM965500P-BP-55024-F4	24 V			RFQ
GTM965500P-BP-55036-F4	36 V			RFQ
GTM965500P-BP-55048-F4	48 V			RFQ
GTM965500P-BP-55054-F4	54 V			RFQ

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SPECIFICATIONS

Features

- High power density 3" x 5" format
- Full power rating at 50°C ambient and 90VAC
- Auxiliary +12V fan and +5V standby outputs
- Power-good, remote-off, & remote-sense
- Output voltage fine adjustment
- 20ms min. holdup time for full power range
- Available with earthed output or floating output (with functional earth)
- ITE/ICT and medical (2 x MOPP) certified

Input

Input Voltage:	90 - 264VAC (Nameplate: 100 - 240VAC)
Input Frequency:	47 - 63Hz (Nameplate: 50 - 60Hz)
Input Current:	6.5A max. @ 100VAC, 5.2A typ. @ 115VAC, 2.5A typ. @ 240VAC (full load)
No Load Input Power:	< 500mW, 240VAC
Inrush Current:	< 35A @ 115VAC , < 70A @ 240VAC (cold start @ 25°C)
Efficiency:	92 - 95% typ.
Power Factor:	> 0.95 @ 115Vac, > 0.90 @ 240VAC (full load)

Main Output

Total Output Power	550W (with forced air cooling)
(Main + Standby + Fan Output):	300W (natural convection cooling)
Turn-on Delay:	< 2 seconds @ 115VAC
Output Voltage Regulation:	± 2.5% (set point tolerance + load/line regulation, measured at output connector)
Load Regulation:	± 1.0% (measured at output connector)
Line Regulation:	± 0.5% (measured at output connector)
Ripple:	< 1% pk-pk (using a 47µF low-ESR cap + 0.1µF ceramic capacitor, measured @ 20MHz BW)
Transient Response:	± 5% deviation max. (with 50% load step), recovery to within ±1% within 1ms
Startup Overshoot:	< 5%
Hold-up Time:	20ms min. (100VAC, full load)
Power-Good (PG):	Signal typically goes low ~10ms ahead of AC power failure or entering of protection state 5V logic level, $V_H = 4.90V$ typ. @ $I_{PG} = 100\mu A$
Remote-Off (RO):	Pull 'Remote Off' to COM to disable main output; leave floating or connect to +5V _{SB} otherwise $I_{RO} = 2mA$ typ. during disabled/off state

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Remote-Sense:	Up to 500mV total cable-drop compensation, reverse and short circuit protected
Output Voltage Fine Adjustment:	Via potentiometer, $\pm 5\%$ adjustment range

Standby Output

Output Voltage:	5V
Output Current:	1A
Output Voltage Regulation:	$\pm 5.0\%$ (set point tolerance + load/line/cross regulation)
Ripple:	2% pk-pk (using a 47 μ F low-ESR cap + 0.1 μ F ceramic capacitor, measured @ 20MHz BW)
Hold-Up Time:	20ms min.
Always On?	Yes

Fan Output

Output Voltage:	12V
Output Current:	0.5A
Output Voltage Regulation:	$\pm 15.0\%$ (set point tolerance + load/line/cross regulation)
Ripple:	1% pk-pk (using a 47 μ F low-ESR cap + 0.1 μ F ceramic capacitor, measured @ 20MHz BW)
Always On?	Follows 'Remote-Off' signal (i.e. Fan is off when RO is pulled low.)

Protections

Input Protection:	MOV transient suppressor, dual high breaking capacity fuses
Over-Voltage Protection:	110-150%, latching, cycle AC power to reset
Over-Current Protection:	105-150%, non-latching with auto-recovery
Short Circuit Protection:	Non-latching with auto-recovery
Over-Temperature Protection:	Latching, cycle AC power to reset

Environmental

MTBF:	1,500,000 hours @ 25°C ambient, full load (Telcordia SR-332, Issue 3)
Operating Temperature:	-20°C to 50°C (full output power), -20°C to 70°C (with derating)
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

Certifications:	IEC60601-1 IEC62368-1
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	IEC60335-1
Dielectric Withstand Voltage:	4000VAC (primary-to-secondary) 1500VAC (primary-to-earth) 1500VAC (secondary-to-earth) [Functional earth option only]
Output Touch Current:	NC: <100µA SFC: <500µA
Earth Leakage Current:	NC: <200µA SFC: <1.0mA
Means of Protection:	2 x MOPP (primary-to-secondary) 1 x MOPP (primary-to-earth) 1 x MOPP (secondary-to-earth) [Functional earth option only]
EMC	
Certifications:	IEC60601-1-2 EN55032 (CISPR32) EN55035 (CISPR35)
Conducted Emissions:	Class B, FCC Part 15 (with resistive load)
Radiated Emissions:	Class B, FCC Part 15 (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, output, or control connector)
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-mode, 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
Mechanical	
Dimensions (nom.) Open-Frame (GTM965500P):	127.0 x 76.2 x 33.4mm (5.00" x 3.00" x 1.31") [Height measurement is PCB thickness + tallest component]
Dimensions (nom.) Open-Frame with baseplate (GTM965500P-BP):	127.0 x 76.2 x 39.1mm (5.00" x 3.00" x 1.54")
Dimensions (nom.) Enclosed with top fan (GTM965500P-TF):	138.0 x 88.0 x 57.4mm (5.43" x 3.47" x 2.26")
Dimensions (nom.) Enclosed with end fan (GTM965500P-EF/-EFI):	161.0 x 88.0 x 43.0mm (6.34" x 3.47" x 1.69")
Fan Audible Noise: Enclosed with top fan (GTM965500P-TF):	28.5dBA typ.
Fan Audible Noise: Enclosed with end fan	27.5dBA typ.

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(GTM965500P-EF/-EFI):

Mounting to end-application enclosure: Refer to the mechanical drawing for the maximum/recommended penetration depths of mounting screws used to secure the power supply to the end-application enclosure. Failure to adhere to the specified depths may pose a safety risk.

Input/Output Connectors

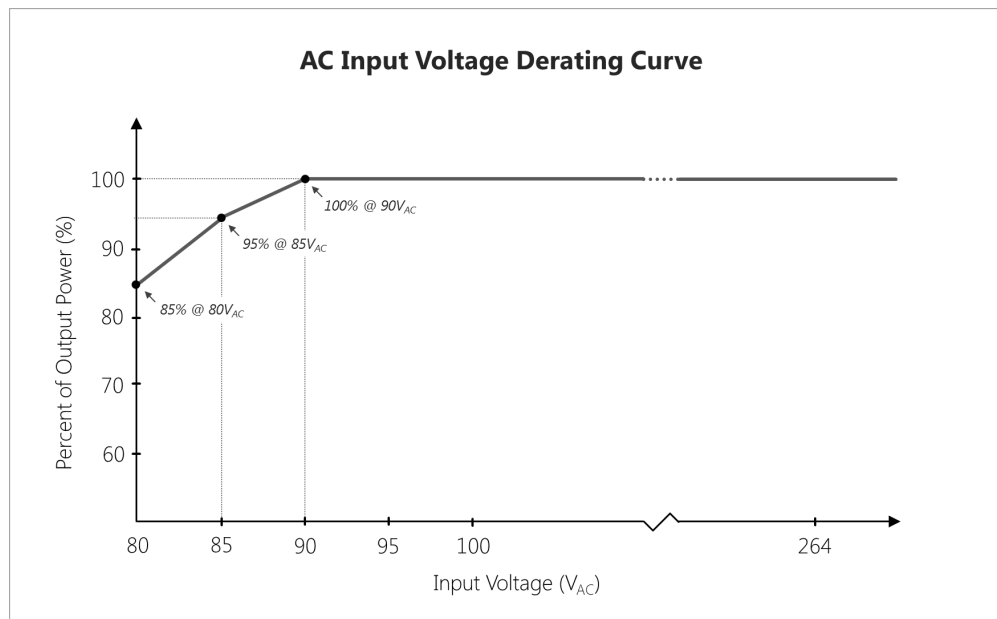
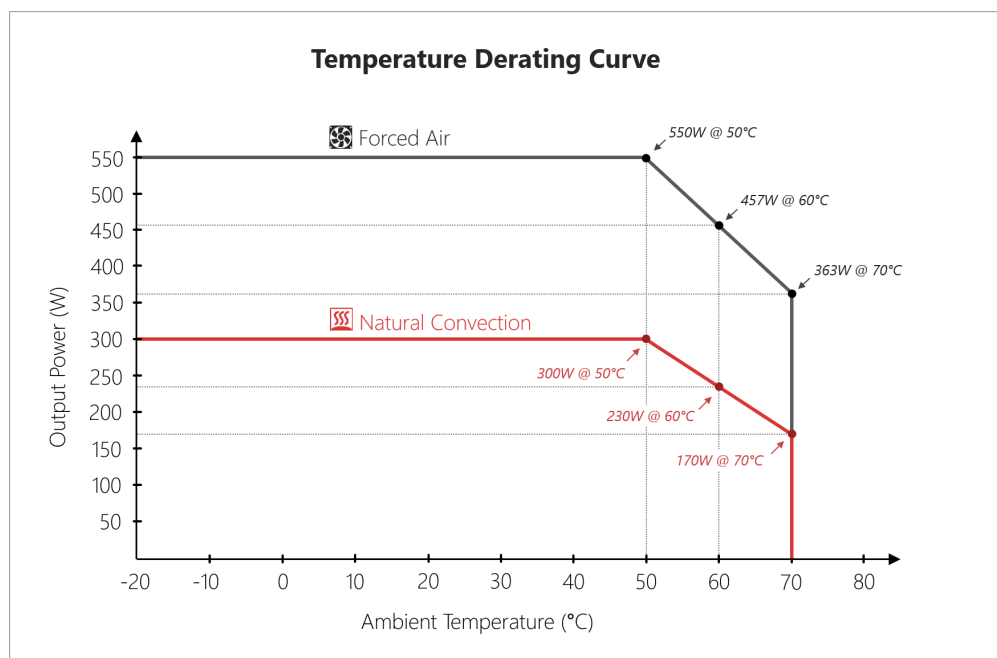
Input Connector for Open-Frame, -BP, and -TF (J1):	Connector on PCB: JST B3P5-VH Recommended mate: JST VHR-5N Pinout: 1: Neutral 2: Line 3: Earth
Input Connector for -EF:	Connector on enclosure: TE/AMP 350767-1 Recommended mate: TE/AMP 350766-1 Pinout: 1: Line 2: Neutral 3: Earth
Input Connector for -EFI:	Connector on enclosure: IEC60320 C14 inlet Recommended mate: IEC60320 C13 power cord
Main Output Connectors for -M4 Suffix (J2A, J2B):	Connector on PCB: M4 PCB terminal Recommended mate: M4 or #8 ring terminal (brass or copper) Recommended mounting torque: 1.2Nm Pinout: J2A: V+ J2B: V-
Main Output Connector for -CN Suffix [≤24A only] (J2):	Connector on PCB: Molex 0039288080 Recommended mate: Molex 0039012085 Pinout: 1, 2, 5, 6: V+ 3, 4, 7, 8: V-
Standby Output + Signal Connector (J3):	Connector on PCB: Amphenol 98414-G06-06LF Recommended mate: Amphenol 10073599-006LF Pinout: A01: Remote Off A02: SNS+ A03: SNS- B01: Power Good B02: COM B03: +5V _{SB}
Fan Output Connector (J4):	Connector on PCB: Molex 22-04-1021 Recommended mate: Molex 22-01-1022 Pinout: 1: +FAN 2: -FAN
Negative/common connection:	V- (J2) and COM (J3) are separated by 2.2Ω to prevent main output current from returning through J3. V- and COM may be connected together at the end-system PCB. Connect four M3 mounting holes to earth. (Mounting to a metal plate is recommended) Connect pin 3 of J1 to earth.
Earth connection:	Care must be taken to ensure adequate creepage/clearance to earth. Check relevant safety standards for specific requirements. Note: Heatsinks are live and not connected to earth. When the end-system enclosure is non-conductive, using the baseplate (-BP) or enclosed versions (-TF, -EF) is recommended as a convenient way to connect all four holes to earth.

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DERATING CURVE



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INPUT CONFIGURATION

Description



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Approvals

Logo	
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