

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

Model:GTM961800PWWWWV.V-T2A

September 19, 2019

GTM961800PWWWWV.V-T2A

Information

Model Number GTM961800PWWWWV.V-T2A

Description GTM961800PWWWWV.V-T2A, Medical/ITE/Household use Power Supply, 60601-1-4th Ed. , Desktop/External, Regulated Switchmode AC-DC Power Supply AC Adaptor, , Input Rating: 100-240V~, 50-60 Hz, IEC 60320/C18 AC Inlet connector, Class II, Non-Earth Ground, Output Rating: 180 Watts, Power rating with convection cooling (W) , 12-54V in 0.1V increments, Approvals: CB 60335; CB 60950; CE; China RoHS; Double Insulation; EAC; PSE; PSE; PSE; Level VI; RoHS; Ukraine; VCCI; WEEE; IP41; cETLus; CB 60601-1-11; CB 60601-1; S-Mark IEC/EN 60601-1; cETLus; cETLus 60601-1 3rd;

Model Picture



Agency Documents <http://www.globtek.info/certs/GTM961800P/>

CE Declaration https://www.globtek.com/pdf/ec_declaration/a000c00000QC1QBEA1

RoHS/RoHS2 Declaration https://www.globtek.com/pdf/rohs_cert/a000c00000QC1QBEA1

REACH Declaration https://www.globtek.com/pdf/iso_certificates/REACH.pdf

Conflict Minerals Declaration <https://www.globtek.com/pdf/conflict-minerals.pdf>

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

Model:GTM961800PWWVV.V-T2A

September 19, 2019

Model Parameters

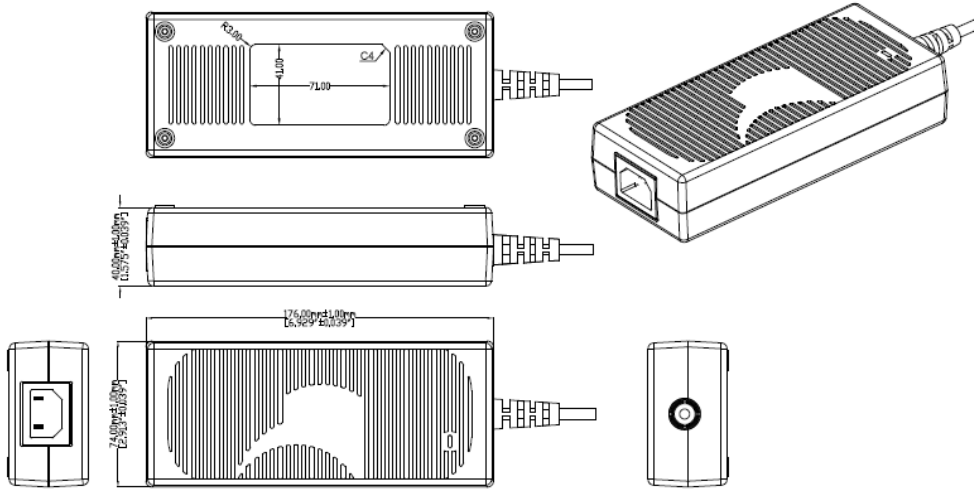
Type	Desktop/External
Technology	Regulated Switchmode AC-DC Power Supply AC Adaptor
Category	Medical/ITE/Household use Power Supply
Input Voltage	100-240V~, 50-60 Hz
I/P Amps (A)	2.2A
Wattage (W)	180.0
Vout Range (V)	12-54
Efficiency Level	VI
Ingress Protection	IP41
Size (mm)	176.5*74*40

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

Model:GTM961800PWWVV.V-T2A

September 19, 2019

ENCLOSURE



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

Model:GTM961800PWWVV.V-T2A

September 19, 2019

RATING TABLE

Model Number	Voltage	Amps(A)	Watts(W)	RFQ
GTM961800P16012-T2A12 V	12	13.33	159.96	RFQ
GTM961800P17015-T2A15 V	15	11.33	169.95	RFQ
GTM961800P17018-T2A18 V	18	9.44	169.92	RFQ
GTM961800P18019-T2A19 V	19	9.47	179.93	RFQ
GTM961800P18024-T2A24 V	24	7.5	180.00	RFQ
GTM961800P18030-T2A30 V	30	6	180.00	RFQ
GTM961800P18036-T2A36 V	36	5	180.00	RFQ
GTM961800P18048-T2A48 V	48	3.75	180.00	RFQ
GTM961800P18054-T2A54 V	54	3.333	179.98	RFQ

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

Model:GTM961800PWWVV.V-T2A

September 19, 2019

SPECIFICATIONS**A) ELECTRICAL SPECIFICATIONS:**

01. Input Voltage: Specified 90-264 Vac, Nameplate rated: 100-240Vac
90-264Vac range @ 100% of rated load current
85-264 Vac range @ 90% of rated load current
02. Input Frequency: Specified 47-63 Hz, Nameplate rated 50/60Hz
03. Power Factor: 0.90 minimum @ 230Vac, 0.97 minimum @ 115Vac
04. Output Regulation: +/- 4% measured at the output connector
05. Line Voltage Regulation: +/- 0.5% typical measured at full load
06. Green Power On Indicator LED
07. Output Ripple (Vp-p): 1% or 200 mV whichever is greater, measured at 20 MHz bandwidth with 0.1 uF ceramic capacitor in parallel with a low impedance 47 uF electrolytic capacitor connected at the end of the output connector at nominal line
08. Turn-ON/OFF Overshoot: 5% maximum, 1 mS typical recovery time for 25% to 50% step load
09. Turn-ON Delay: 1 second typical
10. Hold-Up Time: 20 mS minimum
11. Inrush Current: 30A maximum at 115Vac input and 60A maximum at 230Vac input
12. Switching Frequency: Varies from 25KHz to 125KHz
13. Efficiency: Compliant with DoE Efficiency Level VI standard and CoC Tier 2
14. No Load Standby Power: <0.15 W @ 230Vac

B) PROTECTION

01. Input Protection: Input line fusing and 300Vac rated MOV
02. Short Circuit/ Overload: Electronically Protected unit will auto recover upon removal of fault
Output Current Limit: Current limited to less than 240W / Vnom and 18A for low voltage models
(Vnom = nominal rated output voltage)
03. Over-Temperature: Latching Electronic Overtemperature protection. Cycle AC OFF to reset.
04. Output Over-Voltage: 110% to 135% of nominal output voltage under full load condition, and less than 60V max. Latching protection, cycle AC OFF to reset.

C) SAFETY

01. Dielectric Withstand Voltage: 4000Vac or 5656Vdc from input to output, On Class I models, 3000Vac or 4242Vdc from input to earth
02. Earth Leakage Current: Class I models < 300uA, N/A for Class II models
03. Touch Current: Class I models < 20uA, Class II models < 70uA
04. Output Isolation Options:
 - a) C8 or C18 Inlet, Class II
 - b) C6 or C14 Inlet, Class II FE, Output Isolated from Earth contact
 - c) C6 or C14 Inlet, Class I, Output negative directly attached to Earth contact
05. Earth Continuity Test: < 0.1 Ohm between Earth Pin at AC input and PCB termination point (Class I models only)
06. Means of Protection: 2 x MOPP
07. Primary to Secondary Bridging Capacitance: Two IEC60384-14 certified Y1 type capacitors in series
08. Compliant Standards: See listings at end of this drawing for specifics

D) EMC

- EN 60601-1-2, 4th edition
Emissions, per EN 55032, EN 61000-6-3, EN 61000-6-4, CISPR11 and CISPR22
Conducted Emissions: Class B, FCC Part 15, Class B
Radiated Emissions: Class B, FCC Part 15, Class B
Line Frequency Harmonics EN61000-3-2, Class A
Voltage Fluctuations/Flicker EN61000-3-3

PROPRIETARY INFORMATION

PROPRIETARY OF GLOBTEK, INC. ANY REPRODUCTION, DISCLOSURE OR USE OF THIS DRAWING, IN WHOLE OR IN PART, IS HEREBY PROHIBITED EXCEPT AS SPECIFIED IN WRITING BY GLOBTEK, INC.

<http://en.globtek.com/datasheet/id/a000c00000QC1QE>

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

Model:GTM961800PWWVV.V-T2A

September 19, 2019

Immunity, per EN 55024, EN 61000-6-1, EN 61000-6-2

Static Discharge Immunity EN61000-4-2, 10kV Contact Discharge, 18kV air discharge

Radiated RF Immunity EN61000-4-3, 10V/m 80-2.7GHz, 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, 3A/m

Voltage Dip Immunity EN61000-4-11, Criteria

E) OTHER:

01. MTBF: 1,000,000 Hours @ 40°C ambient temperature, Full Load

02. Operating Temperature: -10°C to 40°C ambient temperature with full load

Regarding Operating Temperature,

a- See below derating table for output power capability at alternate temperature

b- Extended low end temperature range down to -40°C available as a custom option

03. Humidity: 0% to 95% relative humidity, non-condensing

04. Storage Temperature: -30°C to 80°C

05. Cooling: Convection

06. ROHS: Compliant with latest regulations, see approvals section below

07. Operational Altitude: 5000M

F) DESKTOP STYLE ENCLOSURE

01. Housing: High impact plastic, 94V0 polycarbonate, non-vented

02. Size: 176.5 x 74 x 40 +/-1.0 mm

03. Markings: Label or Laser printed

04. AC Input mechanical options: Desktop C6, C8, C14 or C18 IEC Inlet.

G) SPECIAL OPTIONS

01. Custom Cordsets, various cordage types, and connector types

02. Custom Markings

03. Short term Output Surge Power Capability, for motor applications, and short term intermittent high power need applications. 300W for 1 second is available, as a special design variant.

04. Reduced Leakage Current version, medical CF leakage current compliance

05. Tightened output voltage tolerance

06. Reduced Output Ripple Level

08. Reduced output power marking/rating

09. High Rel PCB laminate with Plated through Holes for IPC610 Class 2 Compliance

10. Special Housing Colors and Cordset Colors

11. LED Lighting Applications, Class C Line Harmonics

12. Constant Current output, for V_{nom} to $0.75 \times V_{nom}$. Add "-CC" suffix to model number. Current level is custom selectable.

13. Back EMF applications, custom solutions. For unusual motor load apps and other high inductance reverse energy flow requirements

14. Improved Ingress Protection Rating

H) OUTPUT CONNECTORS

Several output connector options are available with various output current ratings.

GlobTek can supply 10A rated 2.1mm and 2.5mm style DC Power Jacks, to complement our

10A output rated 2.1mm and 2.5mm DC power plugs used on our output cordsets.

Please visit <https://en.globtek.com/news/high-current-coaxial-barrel-plug-jacks-for-high-wattage-power-supplies> for a real time product offering of mating connectors.

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

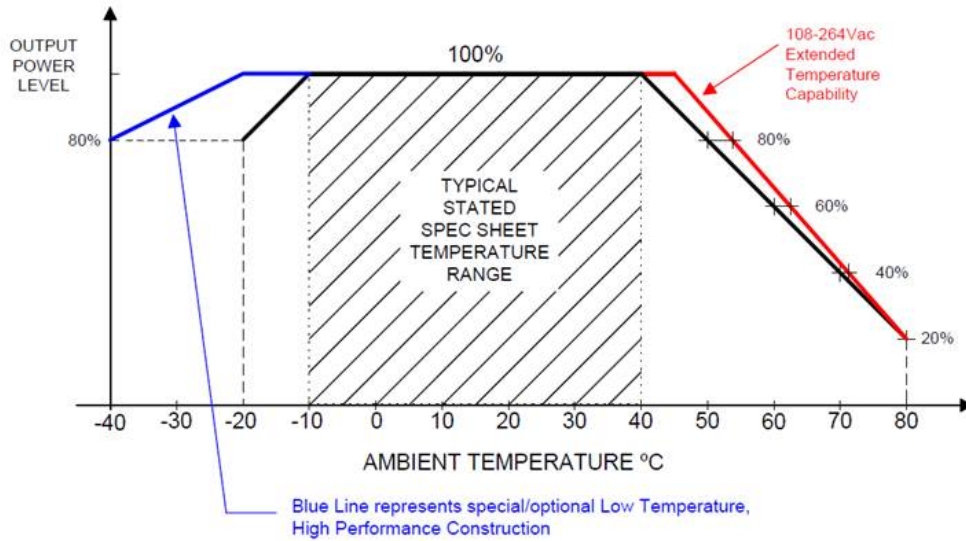
Model:GTM961800PWWVV.V-T2A

September 19, 2019

DERATING CURVE

**TYPICAL EXTERNAL POWER SUPPLY
DERATING CURVE**

(FOR EFFICIENCY LEVEL V AND EFFICIENCY LEVEL VI PRODUCTS)



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

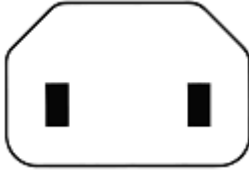
Model:GTM961800PWWVV.V-T2A

September 19, 2019

Input Configuration

Description IEC 60320/C18 AC Inlet connector, Class II, Non-Earth Ground

Mates with IEC 60320/C17 Plug


[Standard International IEC 320/C17 Cordsets](#)

Below are standard cordsets which are "not included" (unless stated above); these may be purchased separately or packaged with the power contact your Sales Engineer if the style required is not shown below. Many more available in different lengths, colors or cable material.

Part Number/ Link	Country	Plug	Termination	Length (mm)	Length (ft)
209A4062M071(R)	Argentina (Type I)	IRAM 2063	IEC320/C17	2000	6.56
5014112M071A(R)	Australia (Type I)	AS3112	IEC 320/C17	2000	6.56
204B4062M071(R)	Brazil (Type N)	NRR 14136	IEC320/C17	2000	6.56
4533502M071A(R)	China (Type A)	GB 2099.1	IEC320/C17	2000	6.56
2074232M071C(R)	Europe (2.5A, Type C)	CEE 7/7	IEC 320/C17	2000	6.56
489C4232M071A(R)	Europe (10A)	CEE 7/17	IEC320/C17	2000	6.56

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

Model:GTM961800PWWVV.V-T2A

September 19, 2019

208A41111M8071A(R)	India (Type D)	IS 1293	IEC 320/C17	1800	6
451J3322M071A(R)	Japan (Type A)	JIS 8303	IEC320/C17	2000	6
401P1086F071A(R) 401P1086F071C(R)	North America (Type A)	NEMA 1-15P	IEC 320/C17	1828	6
401P1219F71A	North America (Type A)	NEMA 1-15P	IEC 320/C17	2743	9
4033321M8071(R)	Taiwan (Type A)	CNS10917	IEC 320/C17	1800	6
6104232M071A(R)	UK, Hong Kong, Singapore, Gulf States (Type G)	BS1363 (Fuse 3A)	IEC 320/C17	2000	6

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

Model:GTM961800PWWVV.V-T2A

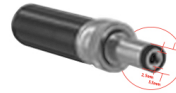
September 19, 2019

Output Configuration

Common output connector options:


 L Type (Coaxial
5.5x2.5mm plug)

 C Type (Coaxial
5.5x2.1mm plug)

 K Type (Coaxial
3.5x1.3mm plug)

 LL Type (5.5x2.5mm
Locking 760k type)

 CL Type (5.5x2.1mm
Locking S761k type)

 ML2 Type (Molex
housing 43025-0200)


YL3 Type (KPPX-3P)



YL4 Type (KPPX-4P)


 EJ1/2/3/4/5 (EIAJ
RC-5320A type
connectors)


MSB Type (Micro USB)


 USBC Type (USB Type
C)

 Inquire for custom
design

 For a comprehensive list of options, [click here](#)

Contact GlobTek for your specific requirements or custom solutions.

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

Model:GTM961800PWWVV.V-T2A

September 19, 2019

Approvals

Logo	Description
No Logo Applicable	IEC 60601-1-11:2015
No Logo Applicable	IEC 60601-1: 2005 + C1 + C2 + A1
No Logo Applicable	CB for 60335-1:2010/COR1:2010/COR2:2010 /AMD1:2013/COR1:2014/AMD2:2016/COR1:2016
No Logo Applicable	IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
	CE Certification Conforms to ANSI/UL Std. 60950-1 2nd Edition Cert. to CAN/CSA Std.C22.2 NO.60950-1 2nd Edition
 Intertek 4007497	cETLus-Cert-4007497 ANSI/AAMI ES60601-1:2005 with AMD C1: 2009, AMD C2: 2010 and CAN/CSA-C22.2 No. 60601-1 2008 with COR 2:2011+ANSI/AAMI HA60601-1-11 Ed:1
 Intertek 4007497	cETLus-Cert-60950-1 4007497 Listed
	CHINA SJ/T 11364-2014, China RoHS Chart: http://en.globtek.com/globtek-rohs.php
	Declaration ДС № EAЭC N RU Д-US.KA01.B.10453_19 Custom Union of Russia, Belarus and Kazakhstan http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration
 IP41	Indoor Use Only - Mark is on the label or Molded in the case Ingress Protection: ?IP41 to IEC60529:2001 Protection against granular foreign bodies - Protected against vertically falling drops of water
 GlobTek, Inc.	JAPAN TUV R-PSE, Cert. No. JD 50313287, to J60950-1(H26) , J55022(H22),J3000(H25)[15V or less]. Please reference the following website for guidelines on PSE regulations: http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/
 GlobTek, Inc.	JAPAN TUV R-PSE, Cert. No. JD 50313287, to J60950-1(H26) , J55022(H22),J3000(H25)[DC15?30V]. Please reference the following website for guidelines on PSE regulations: http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/
 GlobTek, Inc.	JAPAN TUV R-PSE, Cert. No. JD 50313287, to J60950-1(H26) , J55022(H22),J3000(H25)[DC30?60V]. Please reference the following website for guidelines on PSE regulations: http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/

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

Model:GTM961800PWWVV.V-T2A

September 19, 2019

EFFICIENCY LEVEL VI Efficiency: complies to section 301 of Energy Independence and Security Act (EISA) complies with Energy Star tier 2 (North America), ECP tier 2 (China), MEPS tier 2 (Australia), Code of Conduct (Europe)

RoHS



Specifications of directive 2011/65/EU Annex VI (ROHS-2) with amendment 2015/863-EU (ROHS-3)
<http://www.ce-mark.com/Rohs%20final.pdf>

EN 60601-1:2006 + A1:2013 + A12:2014
EN 60601-1-11:2015



Ukraine UKRSevro (Document: www.globtek.com/html/iso_certificates/GT_Ukraine.pdf)



Japan: Voluntary Control Council for Interference (VCCI)

WEEE: Complies with EU 2012/19/EU (http://ec.europa.eu/environment/waste/weee/index_en.htm)
Mark is on the label or Molded in the case