

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

Model:GTM961800PWWWV.V-T2A

October 7, 2022

GTM961800PWWWV.V-T2A

Information

Model Number	GTM961800PWWWV.V-T2A
Description	160 W, DoE Level VI & CoC Tier 2 Efficiency, Two Prong (C18) Inlet, Desktop Adapter, Ac-Dc Power Supply

Model Picture



Agency Documents	http://www.globtek.info/certs/GTM961800P/
CE EC-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

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MODEL PARAMETERS

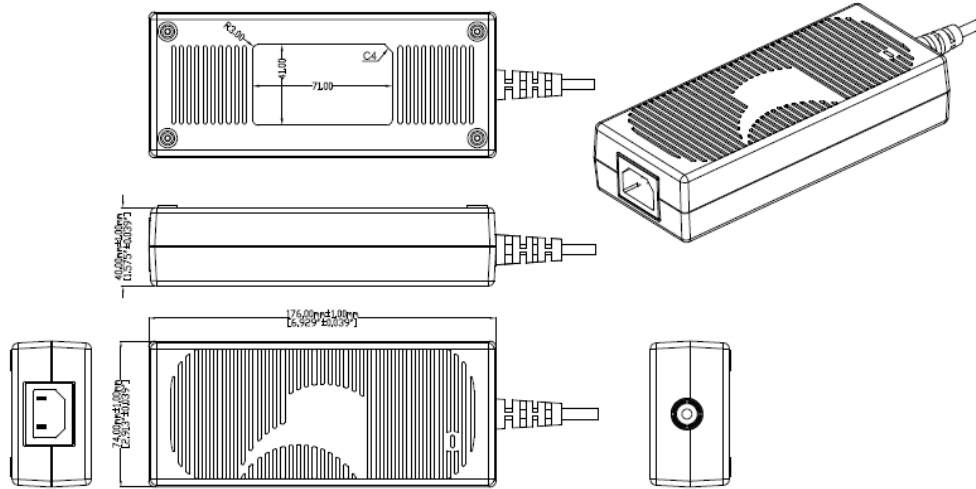
Type	Desktop/External
Technology	Regulated Switchmode AC-DC Power Supply AC Adaptor
Category	Medical/ICT/ITE/Household use Power Supply
Input Voltage	100-240V~, 50-60 Hz
I/P Amps (A)	2.2A
Wattage (W)	180.0
Vout Range (V)	12-54
Efficiency Level	USA DOE Level VI / Eco-design Directive 2009/125/EC, (EU) 2019/1782
Ingress Protection	IP41
Size (mm)	176.5*74*40

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ENCLOSURE



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RATING TABLE

Model Number	Voltage	Amps(A)	Watts(W)	RFQ
GTM961800P16012-T2A	12 V	13.33	159.96	RFQ
GTM961800P17015-T2A	15 V	11.33	169.95	RFQ
GTM961800P17018-T2A	18 V	9.44	169.92	RFQ
GTM961800P18019-T2A	19 V	9.47	179.93	RFQ
GTM961800P18024-T2A	24 V	7.5	180.00	RFQ
GTM961800P18030-T2A	30 V	6	180.00	RFQ
GTM961800P18036-T2A	36 V	5	180.00	RFQ
GTM961800P18048-T2A	48 V	3.75	180.00	RFQ
GTM961800P18054-T2A	54 V	3.333	179.98	RFQ

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SPECIFICATIONS

Input

Input Voltage:	Specified: 90-264VAC, Nameplate: 100-240VAC 100% rated load current for 90-264VAC 90% rated load current for 85-264VAC
Input Frequency:	Specified: 47-63Hz, Nameplate: 50-60Hz
Power Factor:	0.90 (min.) @ 230VAC, 0.97 (min.) @ 115VAC
No Load Input Power:	<150mW @ 230VAC (EU CoC Tier 2 compliant)
Inrush Current:	30A/60A max. (cold start @ 115V/230VAC)
Efficiency:	DoE Level VI and EU CoC Tier 2 compliant

Output

Turn-on Delay:	1 second typ. @ 115VAC and full load
Output Regulation:	± 4% (measured at output connector)
Line Regulation:	± 0.5% typ. (measured at output connector, full load)
Ripple:	1% or 200mV, whichever is greater (using a 47µF low-ESR cap + 0.1µF ceramic capacitor, measured @ 20MHz BW, at output connector)
Turn-On Overshoot:	5% max.
Transient Response:	5% max. deviation, 1ms recovery time (with 25% to 50% load step)
Hold-up Time:	20ms min.
Switching Frequency:	25 - 125KHz, depending on model and load condition
Power Indicator:	Green LED

Protections

Input Protection:	MOV transient suppressor, dual input line fusing
Over-Current Protection:	105 - 140% of rated output current, auto-restart
Short-Circuit Protection:	Auto-restart
Over-Voltage Protection:	110 - 135% (60V max. for output voltage ≥ 45V), latched off, cycle AC to reset

Environmental

MTBF:	1,500,000 hours @ 25°C ambient, full load (Telcordia SR-332, Issue 3)
Operating Temperature:	-10°C to 40°C (full load)
Storage Temperature:	-30°C to 80°C
Humidity:	0% to 95% relative humidity, non-condensing
Altitude:	5000m
Cooling:	Convection

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RoHS:	Complies with EU 2011/65/EU and China SJ/T 11363-2006
Note 1:	Regarding operating temperature a. See below de-rating table for output power capability at alternate temperature b. Extended low-end temperature range available as a custom option

Safety

Dielectric Withstand Voltage:	4000VAC or 5656VDC from input to output 3000VAC or 4242VDC from input to earth (Class I models only)
Touch Current:	Standard models (No suffix): Class I: 20µA max. Class II: 70µA max. Class II with Functional Earth (F2): 20µA max. Low-leakage models (-CF suffix): Class II with Functional Earth (F2): 10µA max.
Note 2:	Standard models are designed for use in Type-B/BF medical applications. Low-leakage models are designed for use in Type-CF medical applications. (See IEC60601-1, Clause 16.6.1)
Earth Leakage Current	Class I: 300µA max. Class II: N/A
Means of Protection:	2 x MOPP
Output Isolation Options:	Class I: C6 or C14 inlet (output negative tied to Earth contact) Class II: C8 or C18 inlet Class II FE: C6 or C14 inlet (output isolated from Earth contact) Review isolation options by reading our white paper PSU Isolation and Identity .
Earth Continuity Test:	< 0.1Ω between earth pin (on AC inlet) and PCB termination point (Class I models only)
Compliant Standards:	See listing at end of this datasheet for specific standards

EMC

Applicable Standards:	Medical: EN60601-1-2, 4th edition Emissions: EN55032, 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, 18KV air discharge
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, 3A/m

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Voltage Dip Immunity:	EN61000-4-11
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Enclosure

Material/Construction:	High impact plastic, 94V0 polycarbonate, non-vented
Size:	176.5 * 74.0 * 40.0mm (±1.0mm)
AC Input Mechanical Options:	Desktop: C6, C7, C14, or C18 inlet
Markings:	Label and/or pad printed and/or laser-etched into case

Special Options

1. Custom cordsets, cord types, and connector types
2. Custom markings
3. Custom housing and cordset colors
4. Constant current/constant voltage (CC/CV) output behavior, with compliance voltage between (75% * Vout) and (100% * Vout)
5. Short term output surge power capability, for motor applications and short term intermittent high power applications. (Up to 300W for 1 second.)
6. IEC61000-3-2 Class C line harmonics for LED lighting applications
7. "Back EMF" upgrade, for motor loads and other high inductance applications with reverse energy flow requirements
8. Reduced touch/leakage current for IEC60601-1 Type-CF applications. (Available in models with -CF suffix.)
9. High reliability PCB laminate with plated through-holes for IPC610 Class 2 compliance
10. Tightened output voltage tolerance
11. Reduced output ripple level
12. Reduced output power rating
13. Improved ingress protection (IP) rating

Output Connectors

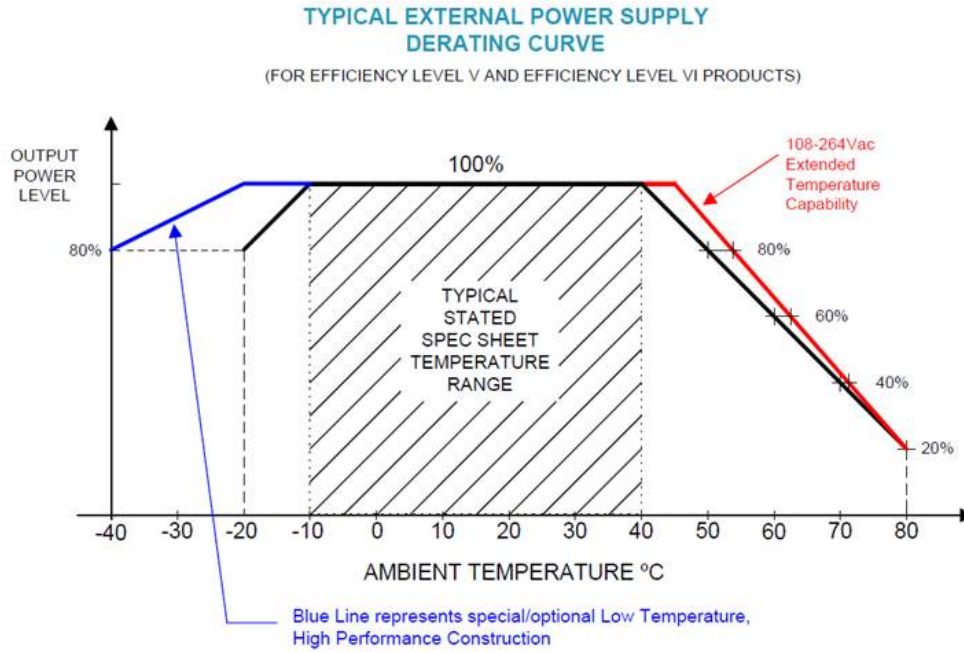
- Several output connector options are available with various output current ratings. GlobTek can supply 10A rated 2.1mm and 2.5mm style DC Power Jacks, to complement our 10A output rated 2.1mm and 2.5mm DC power plugs used on our output cordsets.
- Please visit our real-time listing of mating connector product offering:
<https://en.globtek.com/news/high-current-coaxial-barrel-plug-jacks-for-high-wattage-power-supplies>

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DERATING CURVE



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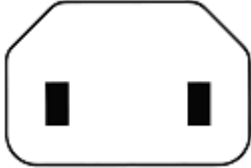
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INPUT CONFIGURATION

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 supply. Please 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	6.6
5014112M071A(R)	Australia (Type I)	AS3112	IEC 320/C17	2000	6
204B4062M071(R)	Brazil (Type N)	NRR 14136	IEC320/C17	2000	6.6
4533502M071(R)	China (Type A)	GB 2099.1	IEC320/C17	2000	6.6
2074232M071C(R)	Europe (2.5A, Type C)	CEE 7/7	IEC 320/C17	2000	6.6
489C4232M071A(R)	Europe (10A)	CEE 7/17	IEC320/C17	2000	6.6
208A41111M8071A(R)	India (Type D)	IS 1293	IEC 320/C17	1800	6
451J3322M071A	Japan (Type A)	JIS 8303	IEC320/C17	2000	6.6
401P1086F071A(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
	UK, Hong				

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<https://www.globtek.com/datasheet/w70395>

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6104232M071A(R)	Kong, Singapore, Gulf States (Type G)	BS1363 (Fuse 3A)	IEC 320/C17	2000	6.6	
6303742M571A(R)	Thailand (Type C)	TIS 166-2549	IEC 320/C17	2500	8	

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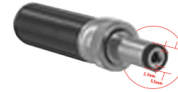
OUTPUT CONFIGURATION

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.

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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
No Logo Applicable	CB for IEC 62368-1:2014 (Second Edition)
	CCC Altitude up to 5000 m GB17625.1-2012, GB4943.1-2011, GB/T9254-2008
	CE Certification
	Audio/Video, Information And Communication Technology Equipment - Part 1: Safety Requirements [UL 62368-1:2014 Ed.2] Audio/Video, Information And Communication Technology Equipment - Part 1: Safety Requirements [CSA C22.2#62368-1:2014 Ed.2]
Conforms to ANSUL Std. 90950-1 Cert. to CAN/CSA Std. C22.2 NO. 60950-1	Conforms to ANSI/UL Std. 60950-1 2nd Edition Cert. to CAN/CSA Std.C22.2 NO.60950-1 2nd Edition
	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

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	cETLus-Cert-60950-1 4007497 Listed
	CHINA SJ/T 11364-2014, China RoHS Chart: http://en.globtek.com/globtek-rohs.php
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
	
	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
	Compliance of this power supply with FCC Part 15, Class B has been demonstrated with a standard output load. The FCC law stipulates that system-level testing is required to demonstrate compliance with the FCC emission limits with the actual system load.
 L00599A	Hong Kong Safety Mark License IEC62368-1:2018
	Indoor Use Only - Mark is on the label or Molded in the case
IP41	Ingress Protection: ?IP41 to IEC60529:2001 Protection against granular foreign bodies - Protected against vertically falling drops of water
 DC-E-G71-007.2 PRECAUCION: PARA USO EN EQUIPOS ELECTRONICOS SOLAMENTE	IRAM certificate DC-E-G71-007.2 to IEC 62368-1:2014
	JAPAN TUV R-PSE, Cert. No. JD 50313287, to J60950-1(H26) ,

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 GlobTek, Inc.	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/
 GlobTek, Inc.	JAPAN TUV R-PSE, Cert. No. JD 50469658, to J62368-1(H30) , J55032(H29),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/
EFFICIENCY LEVEL 	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)
	Morocco SDoC declaration http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/
	RCM certificate SAA-200887-EA; Australia and New Zealand Regulatory Compliance, Mark (http://rcm.standards.org.au/rcmfaq/rcmfaq.htm)
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
	S-Mark Certificate EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011+A2:2013 (http://www.intertek.com/marks/s/)
	UKCA Certification

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 10276	Ukraine UKRSepr (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