

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

Model:GTM96180-18VV-T3A

August 17, 2019

## GTM96180-18VV-T3A

### Information

Model Number GTM96180-18VV-T3A

Description GTM96180-18VV-T3A, ITE / Medical Power Supply/Class 2/Household 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/C6 AC Inlet Connector, Class I, Earth Ground ( aka "Mickey Mouse"), Output Rating: 18 Watts, Power rating with convection cooling (W) , 5-48V in 0.1V increments, Approvals: IP42; CB 62368; CB 60950; IRAM; Class I; 230V CoC Tier 2; cULus; EAC; Taiwan BSMI; cETLus 60601-1 3rd; CE; China RoHS; Level VI; LPS; RoHS; Ukraine; VCCI; WEEE; PSE; PSE; FCC; CAN ICES-3; cETLus; ETL; CB 60601-1; RCM; S-Mark 60950; CCC; CE; CB 60335; cETLus UL1310; Fuse 60335; Fuse 60335;

Model Picture



Agency Documents <http://www.globtek.info/certs/GTM96180-TZ/>

CE EC-Declaration [https://www.globtek.com/pdf/ec\\_declaration/a0Oa000000jSVYEA3](https://www.globtek.com/pdf/ec_declaration/a0Oa000000jSVYEA3)

RoHS/RoHS2 Declaration [https://www.globtek.com/pdf/rohs\\_cert/a0Oa000000jSVYEA3](https://www.globtek.com/pdf/rohs_cert/a0Oa000000jSVYEA3)

REACH Declaration [https://www.globtek.com/pdf/iso\\_certificates/REACH.pdf](https://www.globtek.com/pdf/iso_certificates/REACH.pdf)

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

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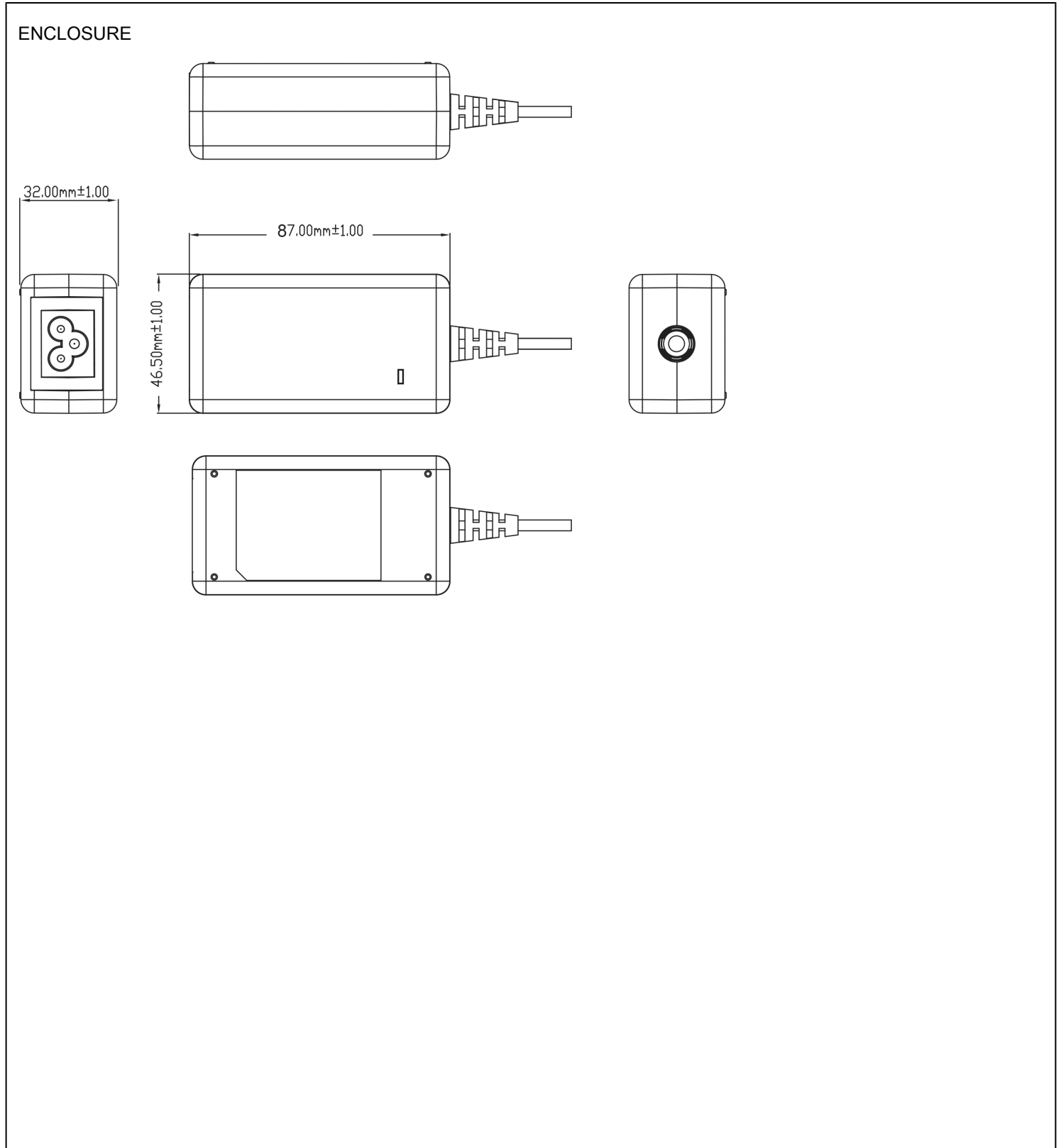
**Model Parameters**

Type	Desktop/External
Technology	Regulated Switchmode AC-DC Power Supply AC Adaptor
Category	ITE / Medical Power Supply/Class 2/Household Power Supply
Input Voltage	100-240V~, 50-60 Hz
I/P Amps (A)	0.6 A
Wattage (W)	18.0
Vout Range (V)	5-48
Efficiency Level	VI
Ingress Protection	IP42
Size (mm)	(L)87x(W)47x(H)32mm

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**RATING TABLE**

Model Number	Voltage	Amps(A)	Watts(W)	RFQ
GTM96180-1607-2.0-T3A	5 V	3.2	16.00	<a href="#">RFQ</a>
GTM96180-1807-1.05-T3A	5.95 V	3	17.85	<a href="#">RFQ</a>
GTM96180-1811-2.0-T3A	9 V	2	18.00	<a href="#">RFQ</a>
GTM96180-1817.9-5.9-T3A	12 V	1.5	18.00	<a href="#">RFQ</a>
GTM96180-1817.9-2.9-T3A	15 V	1.2	18.00	<a href="#">RFQ</a>
GTM96180-1830-12.0-T3A	18 V	1	18.00	<a href="#">RFQ</a>
GTM96180-1830-10.0-T3A	20 V	0.9	18.00	<a href="#">RFQ</a>
GTM96180-1830-6.0-T3A	24 V	0.75	18.00	<a href="#">RFQ</a>
GTM96180-1830-T3A	30 V	0.6	18.00	<a href="#">RFQ</a>
GTM96180-1848-T3A	48 V	0.375	18.00	<a href="#">RFQ</a>

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**SPECIFICATIONS****A) ELECTRICAL SPECIFICATIONS:**

01. Input Voltage: Specified 90-264 Vac, Nameplate rated: 100-240Vac
  - 90-264 Vac range @ 100% of rated load current
  - 85-264 Vac range @ 85% of rated load current
  - 110-370 VDC range @ 100% of rated load current
02. Input Frequency: Specified 47-63 Hz, Nameplate rated 50-60Hz
03. Output Regulation: +/- 5% measured at the output connector
04. Line Voltage Regulation: +/- 0.5% typical measured at full load
05. Green Power On Indicator LED
06. Output Ripple (Vp-p): 1% or 100 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
07. Turn-ON/OFF Overshoot: 5% maximum, 1 mS typical recovery time for 40% to 70% step load
08. Turn-ON Delay: 1 second maximum @ full load, nominal line
09. Hold-Up Time: 8 mS typical @ nominal input voltage and full load
10. Inrush Current: 30A/60A maximum cold start @ 115/230Vac input
11. Efficiency: Compliant with Efficiency Level VI and CoC Tier 2 standards
12. No Load Standby Power: <0.075 W @ 230Vac

**B) PROTECTION**

01. Input Protection: Input line fusing and 300Vac MOV
02. Short Circuit/ Overload: Electronically Protected unit will auto recover upon removal of fault
  - Output Current Limit: 110% to 160% of rated output current  
(upper end of current limit range is determined by normal output power rating, not derated output power level)
03. Output Over-Voltage: 110% to 130% of nominal output voltage

**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 < 75uA  
(special < 10uA option available, see SPECIAL OPTIONS section below)
04. Output Floating or Earthed option for Class I desktop models.  
See [Output Isolation Options](#) for details
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. Compliant Standards: See listings at end of this drawing for specifics

**D) EMC**

- EN 60601-1-2, 4<sup>th</sup> 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

- Immunity, per EN 55024, EN 61000-6-1, EN 61000-6-2  
Static Discharge Immunity EN61000-4-2, 10kV Contact Discharge, 20kV air discharge  
Radiated RF Immunity EN61000-4-3, 10V/m 80-1000MHz, 3V/m 1-2.7GHz, 80% 1KHz AM.

**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/a00a000000jSVY>

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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. GTM96180 Family: -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 available as custom option
03. Operating Humidity: 0% to 95% relative humidity, non-condensing
04. Storage Temperature: -30°C to 80°C
05. Operating Altitude: 5000 Meters
06. ROHS: Compliant with latest regulations, see approvals section below

## F) ENCLOSURE

01. Housing: High impact plastic, 94V0 polycarbonate, non-vented
02. Markings: Label or Laser Printed
03. AC Input mechanical options: Class II Wall Plug-in, Changeable Blades  
Desktop Option, extended housing: C6, C8, C14 or C18 IEC Inlet.

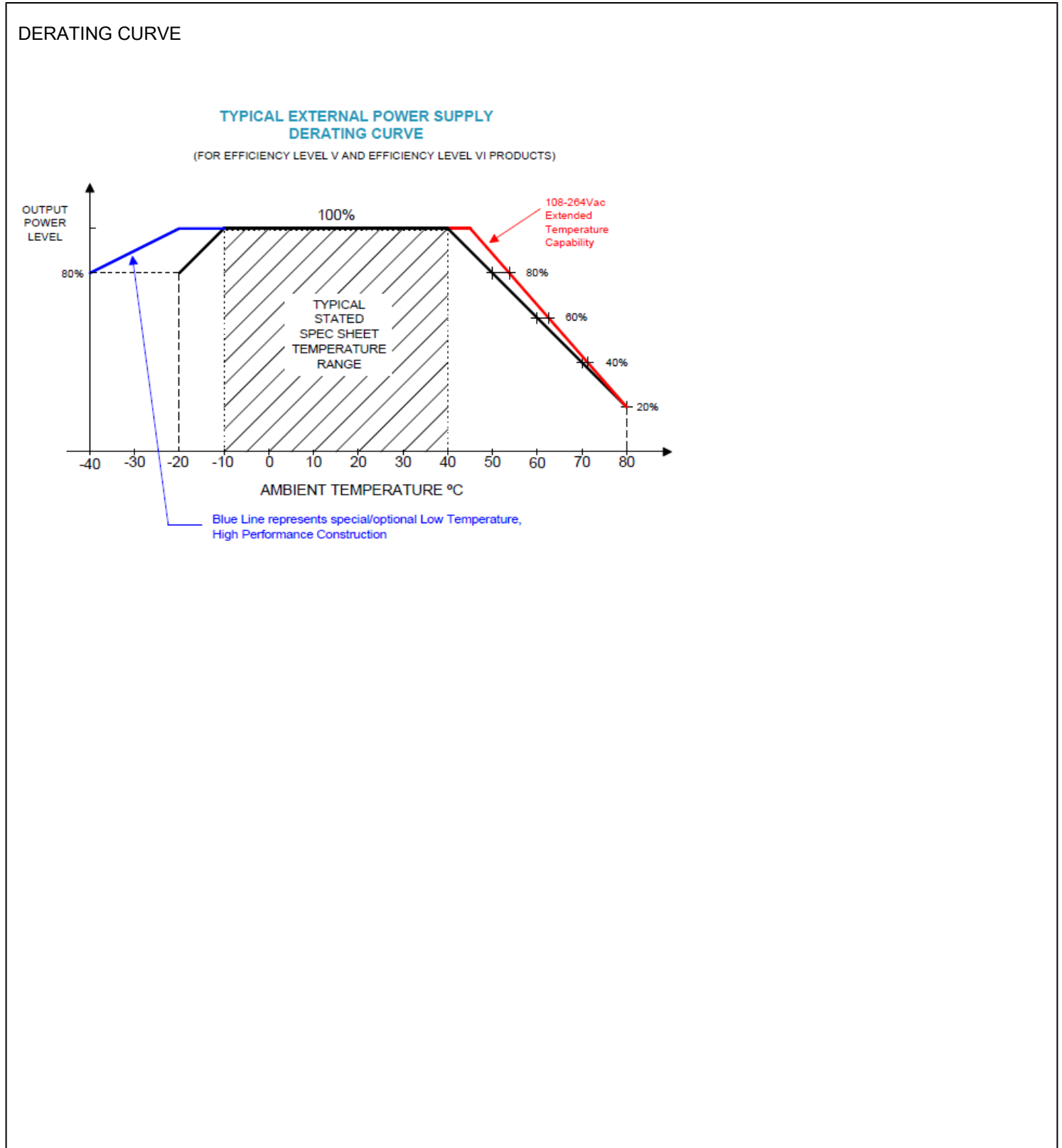
## G) SPECIAL OPTIONS

01. Cost reduction, removal of LED
  02. Custom Cordsets, various cordage types, and connector types\*
  03. Custom Markings
  04. Short term Output Surge Capability
  05. Reduced Leakage Current versions (10uA max), for CF medical applications, and AC noise sensitive equipment, 15W or less, 5V to 24V output voltage range.
  06. Tightened output voltage tolerance
  07. Reduced output ripple level
  08. Reduced output power rating marking
  09. High Rel PCB laminate with Plated through Holes for IPC610 Class 2 Compliance
  10. Special Housing Colors and Cordset Colors
  11. Quasi Constant Current Output, for Battery Charger Applications
  12. Tamper proof, AC Wall Plug-in blade assembly. Requires a special tool to remove the AC Wall Plug-in blade assembly.
  13. Back EMF applications, custom solutions. For unusual motor load aps and other high inductance reverse energy flow requirements.
  14. Improved Ingress Protection Rating
- \* 5Vdc USB output connector power supplies, which use the Micro-B or C-type style connector, have a max output voltage regulation specification of +/-8% (4.6V to 5.4V range).

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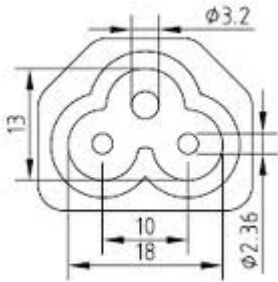
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**Input Configuration**

Description IEC 60320/C6 AC Inlet Connector, Class I, Earth Ground ( aka "Mickey Mouse")



Mates with IEC 60320/C5 Plug

**Standard International IEC 320/C5 Cordsets**

Below are standard cordsets which are "not included" (unless stated above); these can be purchased separately or package with the power supply. 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	Connector	Length (mm)	Length (ft)
<a href="#">3021066F712(R)</a>	N. American (Type B)	NEMA 5-15P	IEC 320/C5	1880	6
<a href="#">1191068F0712(R)</a>	N. American (Type B)	NEMA 5-15P Hospital	IEC 320/C5	2459	8
<a href="#">2194262M0712(R)</a>	Argentina (Type I)	IRAM 2073	IEC320/C5	2050	6.7
<a href="#">2064262M0712(R)</a>	Australian (Type I)	AS3112 / 3 PRONG	IEC 320/C5	2000	6.6
<a href="#">204B4262M0712(R)</a>	Brazil (Type N)	BRAZIL	IEC 320/C5	2000	6.6
<a href="#">6023592M5712(R)</a>	China (Type I)	CCC GR2099	IEC 320/C5	2500	8
<a href="#">23144262M0712(R)</a>	Europe (Type E)	CEE 7/7	IEC 320/C5	2050	6.6
<a href="#">2313K3432M0712(R)</a>	Korea (Type F)	KS C 8305	IEC 320/C5	2000	6.6
		India IS 1293 (also known			



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<a href="#">205IN4262M0712(R)</a>	India (Type D) as IA16A3 or BS546)	IEC320/C5 2000	6.6
<a href="#">377C4262M0712(R)</a>	Israel (Type H) ISL	IEC320/C5 2050	6.7
<a href="#">23024262M0712(R)</a>	Italy (Type L) CEI 23-16/VII	IEC 320/C5 2000	6.6
<a href="#">3003316F0712(R)</a>	Japan (Type B) JIS 8303 / 3 PINS	IEC 320/C5 1830	6
<a href="#">3021066F0712ULPSE(R)</a>	Japan / USA (Type B) JIS 8303 / 3 PINS + NEMA 5-15P	IEC 320/C5 1830	6
<a href="#">2054262M0712(R)</a>	S. Africa (Type D) South Africa SABS164-1 (6A type plug)	IEC320/C5 2050	6.7
<a href="#">2084262M0712(R)</a>	S.Africa (Type M) South Africa SABS164-1 (16A type plug)	IEC 320/C5 2000	6.6
<a href="#">23214262M0712(R)</a>	Switzerland (Type J) SEV 1011 ( EL 203)	IEC 320/C5 2000	6.6
<a href="#">3003316F0712(R)</a>	Taiwan (Type B) BSMI	IEC 320/C5 2000	6.6
<a href="#">6104262M0712(R)</a>	UK, Hong Kong, Singapore, Gulf States (Type G) BS1363	IEC 320/C5 2000	6.6

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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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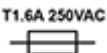
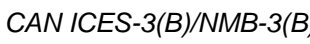






## Approvals

Logo	Description
No Logo Applicable	EU 230V CoC Tier 2, 278/2009, Mar 2014
	Book 60335 up to 36 Volts
 R32282 RoHS	BSMI Taiwan GTM96180-18VV-T3(A) (5V, 6V, 7.5, 9V, 12, 15V, 18, 19V, 20V, 24V, 30, 48V) CN13438, CN14336 <a href="http://www.bsmi.gov.tw/wSite/ct?xItem=4072&amp;ctNode=8167=2">http://www.bsmi.gov.tw/wSite/ct?xItem=4072&amp;ctNode=8167=2</a>
No Logo Applicable	IEC 60601-1:2005 (Third Edition) + CORR. 1 (2006) + CORR. 2 (2007) + AM1 (2012) or IEC 60601-1 (2012 reprint) (Ed 3.1)
No Logo Applicable	CB for IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
No Logo Applicable	IEC 60335-1:2010 (Fifth Edition) incl. Corr. 1:2010 and Corr. 2:2011 + A1:2013
No Logo Applicable	CB for IEC 62368-1:2014 (Second Edition)
	CCC to GB4943. 1-2011; GB9254-2008; GB17625. 1-2012 with Tropical and Altitude up to 5000 m approval.
	CE Mark: tested to comply with EN 55032:2012+AC:2013, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 55024:2010, EN 60601-1-2:2015
	CE Certification CE Mark: tested to comply with EN 55032.2012+AC.2013 EN 61000-3-2.2014 EN 61000-3-3.2013 EN 60601-1-2.2015 EN 55024.2010
 Intertek	Information Technology Equipment Safety Part 1: General Requirements (UL 60950-1 Issued: 2007/03/27, Ed: 2 Rev: 2014/10/14) Information Technology Equipment Safety Part 1: General Requirements (CSA C22.2 No. 60950-1 Issued: 2007/03/27 Ed: 2 (R2012) Amd.
<small>Conforms to ANSI/UL Std. 60950-1 Cert. to CAN/CSA Std. C22.2 NO. 60950-1</small>	Conforms to ANSI/UL Std. 60950-1 2nd Edition Cert. to CAN/CSA Std.C22.2 NO.60950-1 2nd Edition
 Intertek	cETLus-Cert 4007497 UL1310 Recognized Component up to 36 volts
Class 2 Power Unit	
 Intertek 4807497	AAMI ES60601-1 Issued: 2012/08/20 Medical Electrical Equipment - Part 1: CAN/CSA-C22.2 No.60601-1:14, Third Edition Issued: 2014/03/01 - Medical Electrical Equipment - Part 1: IEC 60601-1-11 Issued: 2015/01/20 Ed. 2 Medical Elec. Equip.- Part 1-11:
	CHINA SJ/T 11364-2014, China RoHS Chart: <a href="http://en.globtek.com/globtek-rohs.php">http://en.globtek.com/globtek-rohs.php</a>

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	UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements) 9V only
	Declaration ДС № EAЭC N RU Д-US.KA01.B.10453_19 Custom Union of Russia, Belarus and Kazakhstan <a href="http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration">http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration</a>
	Energy verified for GTM96180-1811-2.0-T3A
	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.
	Fuse 60335 T1.6A 250VAC Up to 36 volts
	Compliance of this PSU with Industry Canada, Class B demonstrated with a standard output load. The ICES law stipulates that system-level testing is required to demonstrate compliance with the ICES-3 emission limits with the actual system load.
	Indoor Use Only - Mark is on the label or Molded in the case
IP42	Ingress Protection: ?IP42 to IEC60529:2001 Protection against granular foreign bodies - Protected against direct sprays up to 15o from the vertical Optional
	IRAM certificate DC-E-G71-002.8 to IEC 60950-1:2005 + A1:2009 +A2:2013 for 5-48V
PRECAUCION: PARA USO EN EQUIPOS ELECTRONICOS SOLAMENTE	
	JAPAN TUV R-PSE, Cert. No. JD 50314327, to J60950-1(H26) , J55022(H22),J3000(H25)[15V or less]. Please reference the following website for guidelines on PSE regulations: <a href="http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/">http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/</a>
	JAPAN TUV R-PSE, Cert. No. JD 50314327, to J60950-1(H26) , J55022(H22),J3000(H25)[DC15?30V]. Please reference the following website for guidelines on PSE regulations: <a href="http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/">http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/</a>
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)
LPS	Limited Power Source
	RCM certificate SAA-161679-EA; Australia and New Zealand Regulatory Compliance, Mark ( <a href="http://rcm.standards.org.au/rcmfaq/rcmfaq.htm">http://rcm.standards.org.au/rcmfaq/rcmfaq.htm</a>
RoHS	Specifications of directive 2011/65/EU Annex VI (ROHS-2) with amendment 2015/863-EU (ROHS-3) <a href="http://www.ce-mark.com/Rohs%20final.pdf">http://www.ce-mark.com/Rohs%20final.pdf</a>
	S-Mark Certificate EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011+A2:2013 ( <a href="http://www.intertek.com/marks/s/">http://www.intertek.com/marks/s/</a> )

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Ukraine UKRSepr (Document: [www.globtek.com/html/iso\\_certificates/GT\\_Ukraine.pdf](http://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](http://ec.europa.eu/environment/waste/wEEE/index_en.htm))

Mark is on the label or Molded in the case