

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

Model:GTM96180-18VV-T2

April 9, 2020

GTM96180-18VV-T2

Information

Model Number

GTM96180-18VV-T2

Description

GTM96180-18VV-T2, 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/C8 AC Inlet connector, Class II, Non-Earth Ground (aka "Figure-8"), Output Rating: 18 Watts, Power rating with convection cooling (W) , 5-48V in 0.1V increments, Approvals: IP42; CB 62368; CB 60950; LPS 62368; 230V CoC Tier 2; EAC; cETLus 60601-1 3rd; CE; China RoHS; Level VI; LPS 60950; RoHS; Ukraine; VCCI; WEEE; FCC; CAN ICES-3; CB 61558-2-16; RCM; S-Mark 60950; ETL; Double Insulation; CCC; CE; CB 60335; cETLus UL1310; Fuse 60335; Fuse 60335; PSE; PSE; PSE; CB 60601-1;

Model Picture



Agency Documents

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

CE EC-Declaration

https://www.globtek.com/pdf/ec_declaration/a0Oa000000Olz12EAD

RoHS/RoHS2 Declaration

https://www.globtek.com/pdf/rohs_cert/a0Oa000000Olz12EAD

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

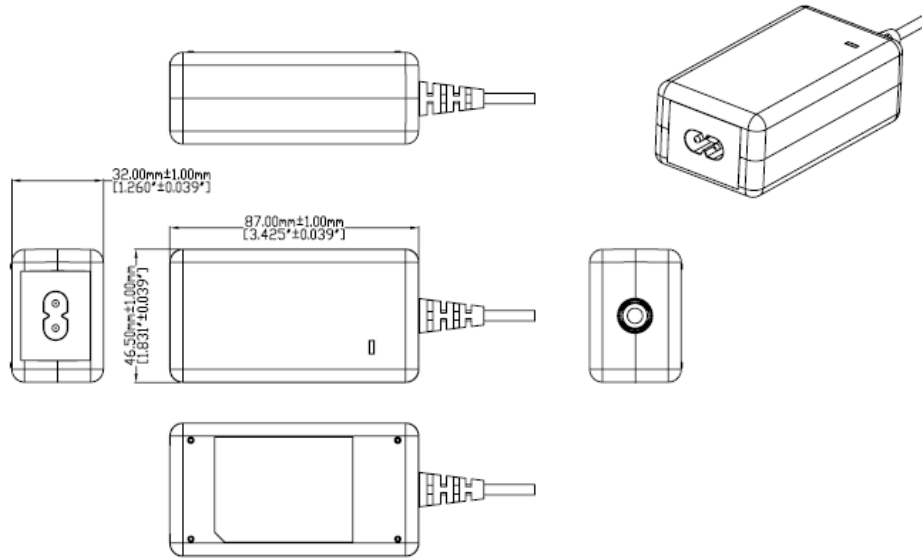
| | |
|--------------------|---|
| Type | Desktop/External |
| Technology | Regulated Switchmode AC-DC Power Supply AC Adaptor |
| Category | ITE / Medical Power Supply/Class 2/Household Power Supply |
| Input Voltage | 100-240V~, 50-60 Hz |
| I/P Amps (A) | 0.6 A |
| Wattage (W) | 18.0 |
| Vout Range (V) | 5-48 |
| Efficiency Level | USA DOE Level VI / Eco-design Directive 2009/125/EC, (EU) 2019/1782 |
| Ingress Protection | IP42 |
| Size (mm) | (L)87x(W)47x(H)32mm |

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ENCLOSURE



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RATING TABLE

| Model Number | Voltage | Amps(A) | Watts(W) | RFQ |
|------------------------|---------|---------|----------|---------------------|
| GTM96180-1607-2.0-T2 | 5 V | 3.2 | 16.00 | RFQ |
| GTM96180-1007-2.0-T2 | 5 V | 2 | 10.00 | RFQ |
| GTM96180-1307-2.0-T2 | 5 V | 2.5 | 12.50 | RFQ |
| GTM96180-1807-1.05-T2 | 5.95 V | 3 | 17.85 | RFQ |
| GTM96180-1811-2.0-T2 | 9 V | 2 | 18.00 | RFQ |
| GTM96180-1817.9-7.9-T2 | 10 V | 1.8 | 18.00 | RFQ |
| GTM96180-1117.9-5.9-T2 | 12 V | 0.916 | 10.99 | RFQ |
| GTM96180-1817.9-5.9-T2 | 12 V | 1.5 | 18.00 | RFQ |
| GTM96180-1817.9-2.9-T2 | 15 V | 1.2 | 18.00 | RFQ |
| GTM96180-1830-12.0-T2 | 18 V | 1 | 18.00 | RFQ |
| GTM96180-1830-11.0-T2 | 19 V | 0.94 | 17.86 | RFQ |
| GTM96180-1830-10.0-T2 | 20 V | 0.9 | 18.00 | RFQ |
| GTM96180-1830-6.0-T2 | 24 V | 0.75 | 18.00 | RFQ |
| GTM96180-1830-T2 | 30 V | 0.6 | 18.00 | RFQ |
| GTM96180-1838-5.0-T2 | 33 V | 0.545 | 17.99 | RFQ |
| GTM96180-1848-T2 | 48 V | 0.375 | 18.00 | RFQ |

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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
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, 4th edition
- Emissions, per EN 55032, EN 61000-6-3, EN 61000-6-4
- 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

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<http://en.globtek.com/datasheet/id/a0Oa000000lZ12>

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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.
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: -20°C to 40°C ambient temperature, 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. Ingress Protection: IP40 standard, IP52 available as special option
07. 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

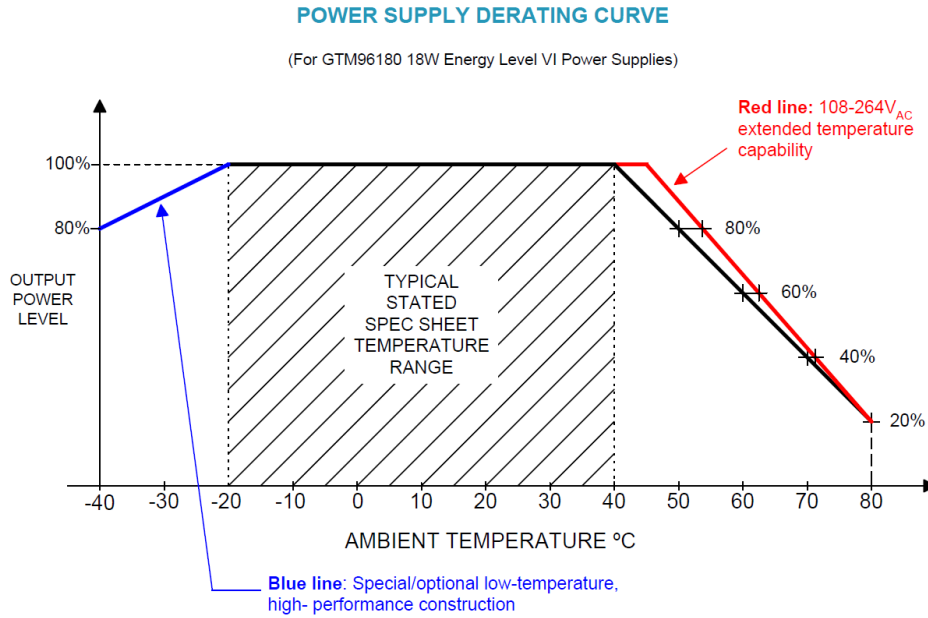
01. Cost reduction, removal of LED
 02. Custom Cordsets, various cordage types, and connector types*
 03. Custom Markings
 04. Short term Output Surge Capability
 05. Reduced Leakage Current versions (10uA max), for CF medical applications, and AC noise sensitive equipment, 15W or less, 5V to 24V output 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 Lead-Acid Battery Charger Applications
- * 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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DERATING CURVE



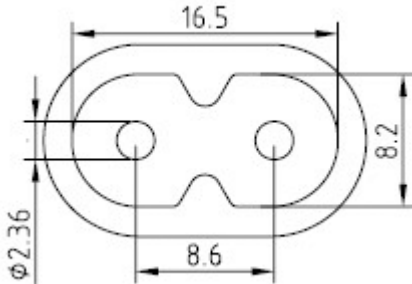
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INPUT CONFIGURATION

Description IEC 60320/C8 AC Inlet connector, Class II, Non-Earth Ground (aka "Figure-8")



Mates with IEC 60320/C7 Plug

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.

Standard International IEC 320/C7 Cordsets

| | | | |
|----------------------------------|--|---------------|--------------------------------|
| 2094112M703(R) | Argentina (Type I) | IRAM 2063 | IEC 320/C7 ²⁰⁰⁰⁷ |
| 5014112M703A(R) | Australian (Type I) | AS 3112 | IEC 320/C7 ²⁰⁰⁰⁷ |
| 207B4111M8703(R) | Brazil (Type N) | NBR14136 | IEC 320/C7 ¹⁸⁰⁰⁶ |
| 4533501M8703(R) | China (Type A) | GB 2099.1 | IEC 320/C7 ¹⁸³⁰⁶ |
| 2074112M703A(R) | European (Type C) | CEE 7/16 | IEC 320/C7 ²⁰⁰⁰⁷ |
| 2084111M8703(R) | India (Type M) | BS 546 | IEC 320/C7 ¹⁸⁰⁰⁶ |
| 451J3401M8703(R) | Japan (Type A) | JIS 8303 | IEC 320/C7 ¹⁸³⁰⁶ |
| 2044112M703A(R) | Korea (Type C) | KS C8305 | IEC 320/C7 ²⁰⁰⁰⁷ |
| 4511116F703A(R) | N. American (Type A) | NEMA 1-15P | IEC 320/C7 ¹⁸³⁰⁶ |
| 4033401M8703A(R) | Taiwan (Type A) | CNS690 | IEC 320/C7 ¹⁸³⁰⁶ |
| 6104112M703A(R) | UK, Hong Kong, Singapore, Gulf States (Type G) | BS1363 | IEC 320/C7 ²⁰⁰⁰⁷ |

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OUTPUT CONFIGURATION

Common output connector options:



L Type (Coaxial 5.5x2.5mm plug)



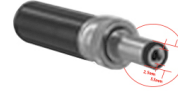
C Type (Coaxial 5.5x2.1mm plug)



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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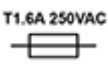


Approvals

| Logo | Description |
|---|---|
| No Logo Applicable | EU 230V CoC Tier 2, 278/2009, Mar 2014 |
|  | Book 60335 up to 36 Volts |
| 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 | CB for IEC 62368-1:2014 (Second Edition) |
| No Logo Applicable | CB report to IEC 61558-2-16_2009 + A1_2013 IEC 61558-1_2005 2nd Edition + A1_2009 EN 61558-1-16_2009 EN 61558-1_2005 + A1_2009.pdf |
|  | CCC to GB4943. 1-2011; GB9254-2008; GB17625. 1-2012 with Tropical and Altitude up to 5000 m approval. |
| No Logo Applicable | IEC 60335-1:2010 (Fifth Edition) incl. Corr. 1:2010 and Corr. 2:2011 + A1:2013 |
|  | 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 |
|  | 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. |

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| | |
|---|---|
|  Intertek Class 2 Power Unit | cETLus-Cert 4007497 UL1310 Recognized Component up to 36 volts |
|  | 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: 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 |
|  | 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 |
| CAN ICES-3(B)/NMB-3(B) | 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 |
|  GlobTek, Inc. | JAPAN TUV R-PSE, Cert. No. JD 50316221, to J60950-1(H26) , J55022(H22),[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/ |

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| | |
|--|--|
|  GlobTek, Inc. | JAPAN TUV R-PSE, Cert. No. JD 50316221, to J60950-1(H26) , J55022(H22),[15V?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 50316221, to J60950-1(H26) , J55022(H22),[30V?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/ |
| 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) |
| LPS | Limited Power Source 60950 |
| LPS | Limited Power Source 62368 |
|  | Morocco SDoC declaration http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/ |
|  | RCM certificate SAA-161679-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 |
|  Intertek | S-Mark Certificate EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011+A2:2013 http://www.intertek.com/marks/s/ |
|  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 (|

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http://ec.europa.eu/environment/waste/weee/index_en.htm

Mark is on the label or Molded in the case