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Model:GTM96181-WWPD-T2

June 28, 2022

## USB Adaptive Power Delivery (PD), 36W, Desktop 2 Prong IEC60320 c8 inlet, USB Type C connector

### Information

Model Number	GTM96181-WWPD-T2
Description	GTM96181-WWPD-T2, USB Adaptive Power Source ICT/ITE/Medical Power supply, Desktop/External, USB Adaptive 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: 36 Watts, Power rating with convection cooling (W) , 3.6-20V in 0.1V increments, Approvals:

### Model Picture



### Agency Documents

CE EC-Declaration	<a href="https://www.globtek.com/pdf/ec_declaration/a003a00000M3yu5EAB">https://www.globtek.com/pdf/ec_declaration/a003a00000M3yu5EAB</a>
RoHS/RoHS2 Declaration	<a href="https://www.globtek.com/pdf/rohs_cert/a003a00000M3yu5EAB">https://www.globtek.com/pdf/rohs_cert/a003a00000M3yu5EAB</a>
REACH Declaration	<a href="https://www.globtek.com/pdf/iso_certificates/REACH.pdf">https://www.globtek.com/pdf/iso_certificates/REACH.pdf</a>
Conflict Minerals Declaration	<a href="https://www.globtek.com/pdf/conflict-minerals.pdf">https://www.globtek.com/pdf/conflict-minerals.pdf</a>

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**MODEL PARAMETERS**

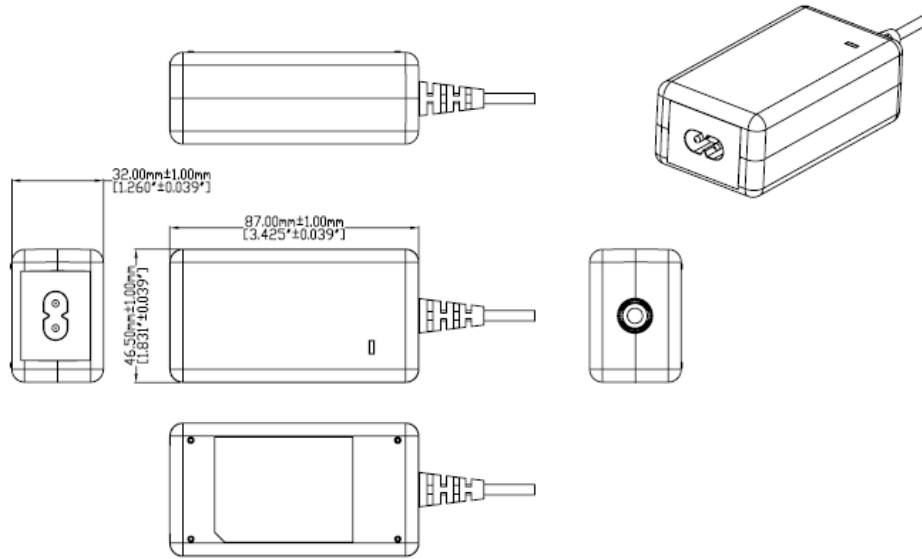
Type	Desktop/External
Technology	USB Adaptive Power Supply AC Adaptor
Category	USB Adaptive Power Source ICT/ITE/Medical Power supply
Input Voltage	100-240V~, 50-60 Hz
I/P Amps (A)	1.2A
Wattage (W)	36.0
Vout Range (V)	3.6-20
Efficiency Level	USA DOE Level VI / Eco-design Directive 2009/125/EC, (EU) 2019/1782
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
GTM96181-18PD-T2	V			<a href="#">RFQ</a>
GTM96181-36PD-T2	V			<a href="#">RFQ</a>
GTM96181-18PD-PPS-T2	V			<a href="#">RFQ</a>
GTM96181-36PD-PPS-T2	V			<a href="#">RFQ</a>

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## SPECIFICATIONS

### USB Power Delivery Capabilities

Protocol supported:	USB Power Delivery (PD) 2.0/3.0 + PPS
Advertised Power Data Objects (PDOs/APDOs):	Standard option: 5V, 5.8V, 9V, 12V, 15V, 15.1V, 20V PPS option (18W): 5V, 9V, 12V, 15V, 15.1V, 20V, PPS (5-21V) PPS option (36W): 5V, 9V, 15V, 20V, PPS (5-11V), PPS (5-16V), PPS (5-21V)
Note 1:	Custom fixed PDOs available upon request. PDO1 must be 5V. PDO2 through PDO7 may be set to any custom voltage from 5V to 20V, with a step size of 100mV.
Note 2:	In critical applications, the use of a non-authorized USB PD power supply may pose a substantial risk. Power supply authorization may be implemented using USB PD Vendor Defined Messages (VDMs) to prevent system operation with non-authorized power sources. Please see our article <a href="#">Product Security and Risk Mitigation for USB Power Delivery (PD) Based Systems</a> for additional information.

### Input

Input Voltage:	Specified: 90-264VAC, Nameplate: 100-240VAC 100% rated load current for 90-264VAC 85% rated load current for 85-264VAC 100% rated load current for 110-370VDC
Input Frequency:	Specified: 47-63Hz, Nameplate: 50-60Hz
No Load Input Power:	< 75mW @ 230VAC (EU CoC Tier 2 compliant)
Inrush Current:	< 30A @ 115VAC, < 60A @ 230VAC (cold start)
Efficiency:	DoE Efficiency Level VI and CoC Tier 2 compliant (tested according to DoE 10 CFR Part 430, Subpart B, Appendix Z)

### Output

Turn-on Delay:	< 1 second @ 115VAC and full load
Output Regulation	± 4% max. (measured at the end of a 1m long output cord)
Line Regulation:	± 0.5% typ. (measured at the end of a 1m long output cord)
Ripple:	100mV max. (using a 47µF low-ESR electrolytic cap + 0.1µF ceramic cap, measured @ 20MHz BW, at the output connector)
Transient Response:	5% max. deviation, 1ms max. recovery time (with 25% load step),
Hold-up Time:	8ms min. (100VAC and full load)
Power Indicator:	Green LED

### Protections

Input Protection:	MOV transient suppressor, input line fusing
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Over-Voltage Protection:	Level 1: 110-130%, Auto-recovery, adaptive to selected PDO Level 2: 24-28V, Latched off, cycle AC to reset
Over-Current Protection:	110-130%, Auto-recovery, adaptive to selected PDO
Short-Circuit Protection:	Auto-recovery
Over-Temperature Protection:	Auto-recovery

## 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:	-40°C to 80°C
Humidity:	0% to 95% relative humidity, non-condensing
Altitude	5000m
Cooling:	Convection
RoHS:	Complies with EU 2011/65/EU and China SJ/T 11363-2006

## Safety

Dielectric Withstand Voltage:	4000VAC or 5656VDC from input to output 10mA, 1 minute
Touch Current:	NC: 80µA max. SFC: 400µA max.
Earth Leakage Current	300µA max. NC/SFC (N/A for 2-conductor input models)
Means of Protection:	2 x MOPP
Output Isolation Options:	-Q suffix: Class II 2-conductor (interchangeable blades) -T2 suffix: Class II 2-conductor -T3 suffix: Class II, with functional earth (FE) Class I, earth wire connected directly to output negative
Note 3:	Review output isolation options with our article: <a href="#">PSU Isolation and Identify</a>

## EMC

Applicable Standards:	Medical: EN 60601-1-2 (4e) Emissions: EN55032, EN61000-6-3, EN61000-6-4 Immunity: EN55024, EN61000-6-1 (4e), EN61000-6-2 (4e)
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, Criterion A
Radiated RF Immunity:	EN61000-4-3, 10V/m @ 80-1000MHz, 3V/m @ 1-2.7GHz, 80% 1KHz AM, Criterion A
EFT/Burst Immunity:	EN61000-4-4, 4KV/100KHz., Criterion A
Line Surge Immunity:	EN61000-4-5, 2KV differential, 4KV common-mode, Criterion A

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Conducted RF Immunity:	EN61000-4-6, 10VRMS, 80% 1KHz AM, Criterion A
Voltage Dip Immunity:	EN61000-4-11, Criterion B/C
Note 4:	When a Class II power supply is connected to an earth-referenced system, conducted/radiated EMI levels tend to increase since the distant earth connection creates a long return path for common-mode EMI currents. This model includes an output common-mode choke to help alleviate system-level EMI issues. This choke can be removed for cost-sensitive applications.

## Enclosure

Housing:	High impact plastic, 94V0 polycarbonate, non-vented
Markings:	Adhesive backed label or laser engraving

## Security

USB Power Delivery:	Two non-standard voltage profiles are included: 5.8V and 15.1V. System designers may use these non-standard profiles to reduce the likelihood of system operation with non-GlobTek power supplies. 12.0V is also not standard, but is often included in other power supplies.  The power supply will respond to a USB PD "Discover Identity" VDM with 0x4754 in the "ProductID" field. USB PD host systems may check this value before initiating/allowing power negotiation.
Note 5:	These measures do not guarantee a secure implementation, and are only suggested as a method of risk mitigation.
Note 6:	Please see our article <a href="#">Product Security and Risk Mitigation for USB Power Delivery (PD) Based Systems</a> for additional information.

## Special Options

Non-standard - Contact GlobTek

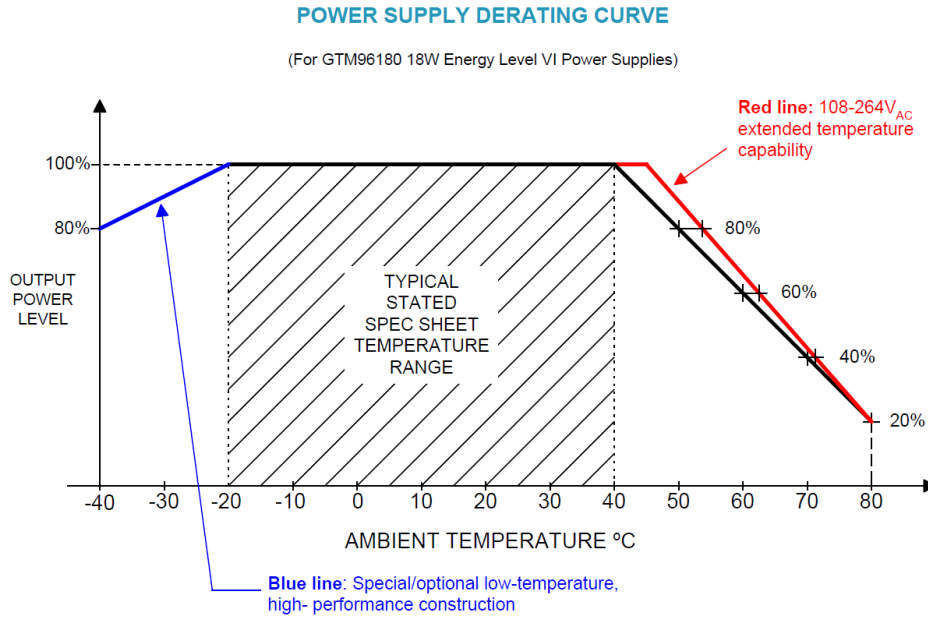
1. Custom housing and output cord colors
2. Custom fixed output cord length, for applicable models (1m, 2m, 3m lengths)
3. Custom markings and marking methods
4. Custom USB PD PDOs: Output voltages selectable between 5V and 20V, in 100mV increments

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# DERATING CURVE





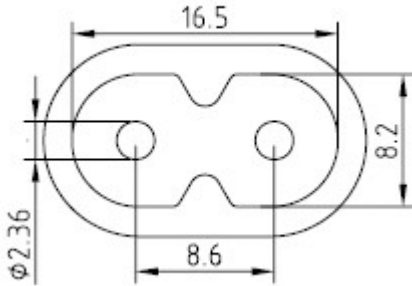
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**INPUT CONFIGURATION**

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

Part Number	Type	Standard	Connector	Length (mm)	Length (feet)
<a href="#">2094112M703(R)</a>	Argentina (Type I)	IRAM 2063	IEC 320/C7	2000	7
<a href="#">5014112M703A(R)</a>	Australian (Type I)	AS 3112	IEC 320/C7	2000	7
<a href="#">207B4111M8703(R)</a>	Brazil (Type N)	NBR14136	IEC 320/C7	1800	6
<a href="#">4533501M8703(R)</a>	China (Type A)	GB 2099.1	IEC 320/C7	1830	6
<a href="#">2074112M703A(R)</a>	European (Type C)	CEE 7/16	IEC 320/C7	2000	7
<a href="#">2074112M703AEUSA(R)</a>	European/South Africa Combo(Type C)	CEE 7/16	IEC 320/C7	2000	7
<a href="#">2084111M8703B(R)</a>	India (Type D)	IS 1293	IEC 320/C7	1800	6
<a href="#">451J3401M8703(R)</a>	Japan (Type A)	JIS 8303	IEC 320/C7	1830	6
<a href="#">2044112M703A(R)</a>	Korea (Type C)	KS C8305	IEC 320/C7	2000	7
<a href="#">4511116F703A(R)</a>	North America (Type A)	NEMA 1-15P	IEC 320/C7	1830	6
<a href="#">2084111M8703(R)</a>	South Africa (Type M)	BS 546	IEC320/C7	1830	6
<a href="#">4033401M8703A(R)</a>	Taiwan (Type A)	CNS690	IEC 320/C7	1830	6
<a href="#">6104112M703A(R)</a>	UK, Hong Kong, Singapore, Gulf States (Type G)	BS1363	IEC 320/C7	2000	7

**PROPRIETARY INFORMATION**

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<https://www.globtek.com/datasheet/w70612>

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<a href="#">451G1116F703A(R)</a>	Gulf States (Kuwait, Bahrain, Oman, Qatar, Saudi Arabia, Yemen and the United Arab Emirates (UAE)(Type A)	Nema 1-15P	IEC320/C7	1830	6
<a href="#">6303742M5703(R)</a>	Thailand (Type C)	TIS 166-2549	IEC320/C7	2500	8

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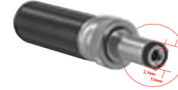
**OUTPUT CONFIGURATION**

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
	Morocco SDoC declaration <a href="http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/">http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/</a>
	UKCA Certification