

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

Model:GTM46161-16V.V-USB2C

May 20, 2024

GTM46161-16V.V-USB2C

Information

Model Number	GTM46161-16V.V-USB2C
Description	GTM46161-16V.V-USB2C, ICT / ITE / Medical Power Supply, 60601-1-4th Ed. , Wall Plug-in, Regulated Switchmode AC-DC Power Supply AC Adaptor, , Input Rating: 100-240V~, 50-60 Hz, Blade Options for Q Series Wall Plug-in Power Supplies, Output Rating: 16 Watts, Power rating with convection cooling (W) , 5-5.5V in 0.1V increments, Approvals: RCM;

Model Picture



Agency Documents	http://www.globtek.info/certs/GTM46161%20-1A,2A,C/
CE EC-Declaration	https://www.globtek.com/pdf/ec_declaration/a0O3a00000MvihaEAB
RoHS/RoHS2 Declaration	https://www.globtek.com/pdf/rohs_cert/a0O3a00000MvihaEAB
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

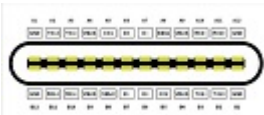
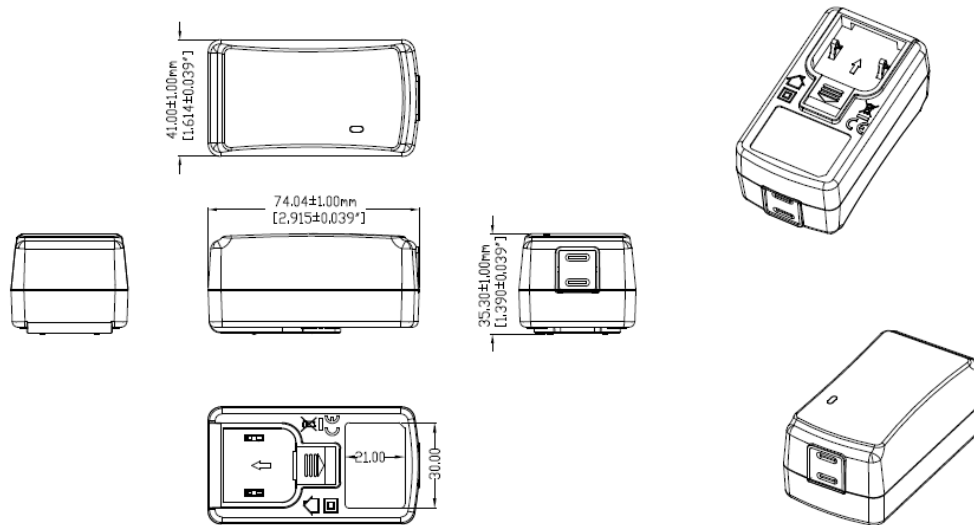
Type	Wall Plug-in
Technology	Regulated Switchmode AC-DC Power Supply AC Adaptor
Category	ICT / ITE / Medical Power Supply
Input Voltage	100-240V~, 50-60 Hz
I/P Amps (A)	0.45A
Wattage (W)	16.0
Vout Range (V)	5-5.5
Efficiency Level	USA DOE Level VI / Eco-design Directive 2009/125/EC, (EU) 2019/1782
Ingress Protection	Indoor Use
Size (mm)	41.0 x 70.0 x 35.1

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ENCLOSURE



10K resistor between CC1 (A5) and VCC (A4)

Link to Globtek USB-C Adaptive Power Delivery White Paper

<http://en.globtek.com/technical-articles/usb-type-c-connectors-and-adaptive-power-delivery-white-paper>

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RATING TABLE

Model Number	Voltage	Amps(A)	Watts(W)	RFQ
GTM46161-155.0-USB2C	5 V	3	15.00	RFQ
GTM46161-165.5-USB2C	5.5 V	2.9	15.95	RFQ

SPECIFICATIONS

A) ELECTRICAL SPECIFICATIONS:

1. Input Voltage: Specified 90-264 V_{AC}, Nameplate rated 100-240 V_{AC}
2. Input Frequency: Specified 47-63 Hz, Nameplate rated 50-60 Hz
3. Output Regulation: $\pm 5\%$ measured at the end of a 1.2 meter USB cordset employing 20AWG conductors (RFP RFI-50856)
4. Line Voltage Regulation: $\pm 3\%$ (typical)
5. Output Ripple (V_{P-P}): 150mV, measured with a 47 μ F electrolytic capacitor in parallel with a 0.1 μ F ceramic capacitor across the output, and 20MHz bandwidth limiting
6. Turn-On/Turn-Off Overshoot: 5% maximum, 500 μ s maximum recovery time for 25% step load.
7. Turn-On Delay: 3000ms (max.) @ 115V_{AC} and full load
8. Hold-Up Time: 8ms (min.) @ 100V_{AC} and full load
9. Inrush Current: No damage when switching on/off repeatedly under any condition
10. Switching Frequency: 66.5 KHz (typical)
11. Average Efficiency: 78.7% (min.) (CEC&DOE Level VI Compliant), 79.0% (min.) (ErP **European** Commission's Ecodesign Directive (2005/32/EC) / CoC Tier 2 Compliant)
12. No-Load Input Power: $< 0.1W$ $< 0.1W$, $< 0.075W$ (ErP **European** Commission's Ecodesign Directive (2005/32/EC) / CoC Tier 2 Compliant)

B) PROTECTION

1. Over-Voltage: Output shut down and auto restart
2. Over Temperature Protection: Output shut down and auto restart
3. Short Circuit Protection Output shut down and auto restart
4. Over Load Protection Output shut down and auto restart
5. Input Protection: Input line fusing
6. ESD: 8 kV Contact/20kV Air Discharge

C) SAFETY

1. Dielectric Withstand Voltage: 4000V_{AC} or 5656V_{DC} 10mA 1 minute
2. Earth Leakage Current: N/A for Class II units. Since there is no PE ground pin, earth leakage current is not measured
3. Touch Current: Maximum allowed values: 100 μ A NC(Normal Condition) 500 μ A SFC(Single Fault Condition)
4. Means of Protection: 2 x MOPP
5. ROHS 2: Complies with EU 2011/65/EU and China SJ/T 11363-2006

D) EMC

1. Emissions, per EN 55032, EN 61000-6-3, EN 61000-6-4 (See Note.)

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Conducted Emissions: Class B, FCC Part 15, Class B

Radiated Emissions: Class B, FCC Part 15, Class B

2. Line Frequency Harmonics EN61000-3-2, Class A

3. Voltage Fluctuations/Flicker EN61000-3-3

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

Static Discharge Immunity EN61000-4-2, 8KV Contact Discharge, 15KV air discharge

Radiated RF Immunity EN61000-4-3, 3V/m 80-2700MHz, 80% 1KHz AM.

EFT/Burst Immunity EN61000-4-4, 2KV/100kHz.

Line Surge Immunity EN61000-4-5, 1KV differential, 2KV common-mode

Conducted RF Immunity EN61000-4-6, 3V_{RMS}, 80% 1KHz AM

Power Frequency Magnetic Field Immunity EN61000-4-8, NA

Voltage Dip Immunity EN61000-4-11, Criteria

Note: When a Class II power supply is connected to an earth-referenced system, conducted/radiated EMI levels tend to increase since the earth connection creates a return path for common-mode currents. This model includes an output common-mode choke to help alleviate system-level EMI issues. This choke can also be removed to lower product cost .

E) OTHER:

1. USB2.0 , BC1.2 compliant
2. MTBF: 200,000 hours @ 25°C ambient temperature
3. Operating Temperature: 0°C to 40°C ambient temperature
4. Humidity: 0% to 95% relative humidity
5. Storage Temperature: -40°C to 80°C

F) ENCLOSURE

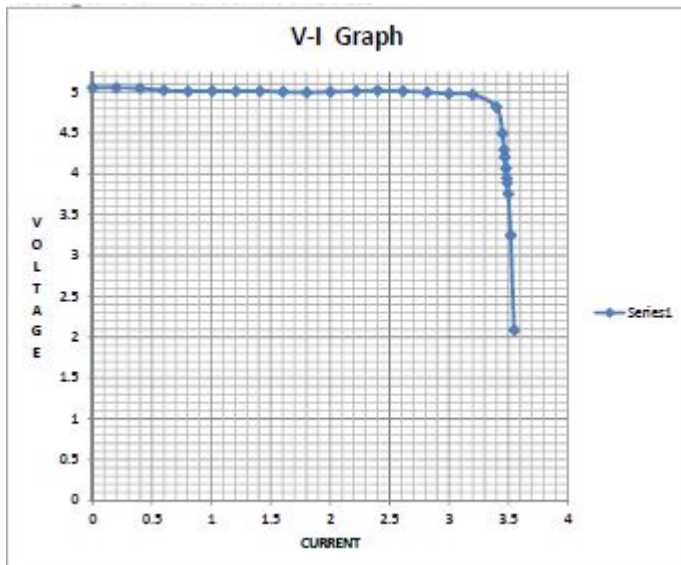
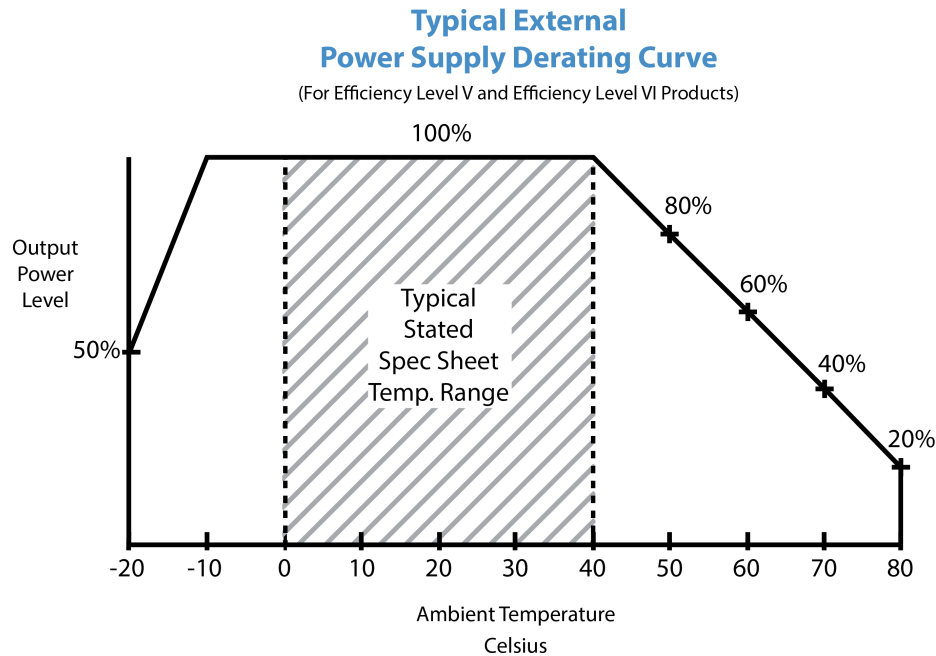
1. Housing: High impact plastic, 94V0 polycarbonate, non-vented
2. Markings: Label and/or Pad Printed and/or Molded in the case

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DERATING CURVE



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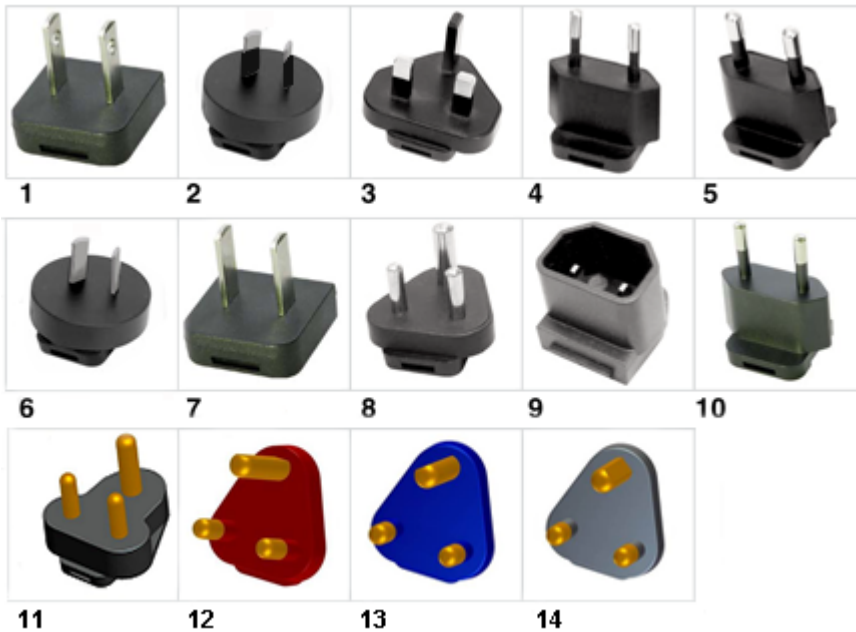
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INPUT CONFIGURATION

Description Blade Options for Q Series Wall Plug-in Power Supplies

Data Sheet: <http://en.globtek.com/interchangeable-blades.php>

Insertion Instructions: <http://www.globtek.com/pdf/Instructions-Interchangeable-Blades.pdf>

Video: [Q-Blade Style Instruction Video](#)


INPUT CONNECTOR: Q-Socket (below are available blades configurations which are "not included" (unless stated above); can be purchased separately, package with power supply or as a separate "Q-KIT" if specified

01. United States / Canada / Japan NEMA 1-15P/ IEC PLUG Type A [WORKS IN PLUG B] configuration: NA 2 blades, Class II; US/CA/JP P/N: Q-NA(R)
02. Australian AS 3112 configuration: SAA 2 blade/ IEC TYPE I, Class II; AU P/N: Q-SAA(R)
03. UK BS 1363 configuration: UK 3 blade with dummy Ground/ IEC TYPE G, Class II; GB P/N: Q-UK(R)
04. European CEE 7/16 configuration: Europlug 2 pins/ IEC TYPE C [WORKS IN TYPE E&F], Class II; EU P/N: Q-EU(R)
05. Korean KS C8305 configuration: 2 pins/SIMILAR TO IEC TYPE C, Class II; KR P/N: Q-KR(R)
06. Argentina IRAM 2073 configuration: 2 blades/SIMILAR TO IEC TYPE I; AR P/N: Class II Q-AR(R)
07. China GB 2099 configuration: 2 blades/SIMILAR TO TYPE A, Class II; CN P/N: Q-CN(R)
08. India IS 1293 6A/BS546 configuration: 5A, 3 pins with Dummy Ground, Class II/IEC TYPE D; IN P/N: Q-IN(R)
09. IEC60320/C18 Inlet, Class II; P/N: Q-C18(R)
10. Brazilian NBR6147 configuration: 2 pins, Class II;SIMILAR TO IEC TYPE C BR P/N: Q-BR(R)
11. South Africa SABS164-1 and India IS 1293, IS694, 16A type plug, 3 round prongs, Class II + dummy ground, IEC TYPE M P/N: Q-SANS164-1-16A(R)
12. South Africa SABS164-4, 3 round prongs with a notched prong @ 0°, Class II + dummy ground, IEC TYPE M Red, P/N: Q-SANS164-4C-16A(R)

PROPRIETARY INFORMATION

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<https://www.globtek.com/ds/mxkk7JqUshB/mtXhRPi7DAz.html>

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13. South Africa SABS164-4, 3 round prongs with a notched prong @ -53°, Class II + dummy ground, Blue, IEC TYPE M,
P/N:

Q-SANS164-4L-16A(R)

14. South Africa SABS164-4, 3 round prongs with a notched prong @ +53°, Class II + dummy ground, Black, IEC TYPE M
P/N:

Q-SANS164-4R-16A(R)

Kits

01. Q-KIT: 1,2,3,4 above

02. Q-KIT-INTL: 2,3,4 above

03. Q-KIT-6: 1,2,3,4,5,6 above

04. Q-KIT-7: 1,2,3,4,5,6,7 above

05. Q-KIT-8: 1,2,3,4,5,6,7,8 above

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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
 GMA-516946-EA	RCM certificate GMA-516946-EA; Australia and New Zealand Regulatory Compliance, Mark (http://rcm.standards.org.au/rcmfaq/rcmfaq.htm)