

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

Model:GTC90600-XCXS

May 2, 2024

GTC90600-XCXS

Information

Model Number	GTC90600-XCXS
Description	GTC90600-XCXS, , Vehicle/Car DC/DC Converter, Li-Ion Battery Charger, , Input Rating: 12Vdc, 5.5 mm x 2.5 mm DC Power Jack Socket Female, Output Rating: 60 Watts, Power rating with convection cooling (W) , 4.2-12.6V in 0.1V increments, Approvals:

Model Picture

Agency Documents

CE EC-Declaration	https://www.globtek.com/pdf/ec_declaration/a0O0c00000Pzo8SEAR
RoHS/RoHS2 Declaration	https://www.globtek.com/pdf/rohs_cert/a0O0c00000Pzo8SEAR
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

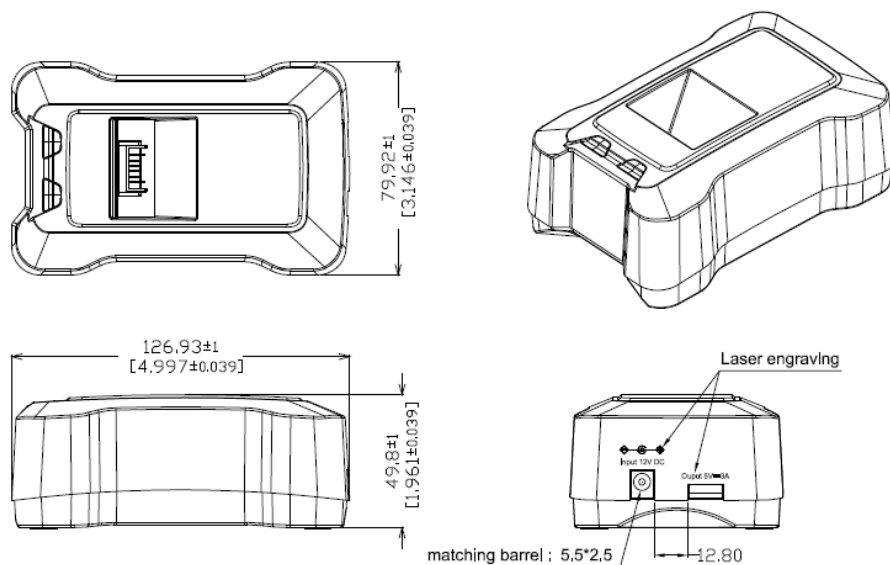
Type	Vehicle/Car DC/DC Converter
Technology	Li-Ion Battery Charger
Category	
Input Voltage	12Vdc
I/P Amps (A)	4.0A
Wattage (W)	60.0
Vout Range (V)	4.2-12.6
Efficiency Level	
Ingress Protection	Indoor Use
Size (mm)	

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ENCLOSURE



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RATING TABLE

Model Number	Voltage	Amps(A)	Watts(W)	RFQ
GTC90600-1C2S	8.4 V	7.142	59.99	RFQ

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SPECIFICATIONS

A) ELECTRICAL SPECIFICATIONS

Input Voltage: Nameplate rated: 12Vdc

Input Current: < 6A Max

01. Pre-Charge Current: 10% of bulk charge current (typical)

02. Bulk Charge Current: see table for nominal value, $\pm 10\%$ max variance

03. Full Charge Voltage: 1 cell: 4.2Vdc; 2 cell: 8.4Vdc, 3 cell: 12.6Vdc, $\pm 1\%$ Max Variance

04. Charge Termination Current: 10% of bulk charge current (typical)

05. Pre-Charge to Bulk Charge Battery Transition Voltage: 1 cell: 2.86Vdc to 3.15Vdc, 2 cell: 5.72Vdc to 6.30Vdc; 3 cell: 8.58Vdc to 9.45Vdc Charger will be in pre-charge mode when the battery voltage is below the transition voltage.

06. Battery Charging Ambient Temperature: 0°C to 35°C

07. Back-Up Charge Termination Timer: 3 hours standard. Timer may be set to 3 to 12 hours range for batteries with high Ahr capacity by GT engineering. Charger will terminate charging when timer expired. Please advise Sales dept of you battery Ahr capacity.

08. LED Charge Status Indicator

a. Pre-Charge: Solid Amber

b. Bulk Charge: Solid Amber

c. Charge Complete: Solid Green

d. No battery or Fault: Green and Amber LED off

B) ENERGY EFFICIENCY PERFORMANCE

01. CEC Compliant, to Battery Charger Requirements, with up to 10Ahr battery

02. DOE Compliant, to Battery Charger Requirements, with up to 10Ahr battery

C) PROTECTION MODES*

01. Over Voltage Protection: 1 cell: 4.6Vdc - 5.0Vdc, 2 cell: 9.2Vdc - 10.0Vdc; 3 cell: 13.8Vdc - 15.0Vdc Charger will terminate charging when over voltage occurs

02. Short Circuit Protection: Charger will not commence charging when BAT+ and BAT- are shorted

03. Over Temperature Protection: Charger will terminate charging if battery temperature reached $45^{\circ}\text{C} \pm 3^{\circ}\text{C}$. Charger will autorecover when temperature drops to about $30^{\circ}\text{C} \pm 3^{\circ}\text{C}$. For this feature, 10Kohm thermistor (NTC, 103AT) is required to be installed inside the battery pack. For battery packs without the thermistor, over temperature protection feature is not available and a 10K Ohm resistor is installed inside the charger to bypass the over temperature protection circuit.

04. Reverse Battery Protection: Battery should be mechanically protected from being installed reversed

05. Defective Battery Protection: If battery voltage will not rise above the pre-charge to bulk charge transition voltage (2.86Vdc to 3.15Vdc) within 30 minutes from the time pre-charging begins, the battery is considered defective and the charger will terminate charging.

*When fault condition occurs, the battery has to be removed from the charger and reinstalled after at least 3 seconds to reset the protection. Charging will commence after battery reinstallation only when the fault is cleared.

D) SAFETY

1. IEC 60950-1, IEC 60601-1, IEC 60335-1, IEC 61558-1.

2. Dielectric Withstand Voltage: 5656 Vdc from primary to secondary

3. Earth Leakage Current: N/A for Class II units, there is no PE Ground pin, so Earth Leakage current is not measured

4. Touch Current: Maximum allowed values: 100uA NC(Normal condition) 500uA SFC(single fault condition)

E) OTHER:

PROPRIETARY INFORMATION

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- 01. MTBF: 300,000 Hours @ 25°C ambient temperature
- 02. Operating Temperature: 0°C to 35°C ambient temperature
- 03. Humidity: 0% to 90% relative humidity
- 04. Storage Temperature: -10°C to 70°C
- 05. Cooling: Convection

F) ENCLOSURE

- 01. Housing: High impact plastic, 94V0 polycarbonate, non-vented
 - 02. Size: 53.47*117.53*36.6 +/-1.0 mm
 - 03. Markings: Label and/or Pad Printed and/or Molded in the case
 - 04. GREEN LED to indicate (see above electrical specifications)
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DERATING CURVE

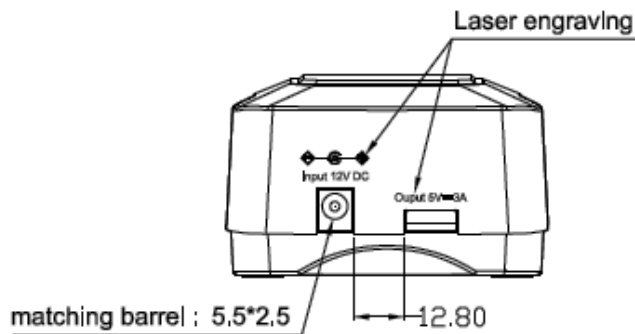
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INPUT CONFIGURATION

Description 5.5 mm x 2.5 mm DC Power Jack Socket Female



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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	
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