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Model:GTC90600-XCXS

May 25, 2019

## GTC90600-XCXS

### Information

Model Number GTC90600-XCXS

Description GTC90600-XCXS, , Vehicle/Car DC/DC Converter, Li-Ion Battery Charger, , Input Rating: 11-16 Vdc, Terminal Block, 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/a000c00000Pzo8SEAR](https://www.globtek.com/pdf/ec_declaration/a000c00000Pzo8SEAR)

RoHS/RoHS2

Declaration [https://www.globtek.com/pdf/rohs\\_cert/a000c00000Pzo8SEAR](https://www.globtek.com/pdf/rohs_cert/a000c00000Pzo8SEAR)

REACH

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

Conflict

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

Declaration

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**Model Parameters**

Type	Vehicle/Car DC/DC Converter
Technology	Li-Ion Battery Charger
Category	
Input Voltage	11-16 Vdc
I/P Amps (A)	6
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	<a href="#">RFQ</a>

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

Input Voltage: Specified 90-264 Vac, Nameplate rated: 100-240Vac

Input Frequency: Specified 47-63 Hz, Nameplate rated 50-60Hz

Input Current: < 1.5A RMS 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, +/-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: 9.2Vdc - 10.0Vdc 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:**

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

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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**

DescriptionTerminal Block



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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