

# ONBOARD CHARGERS

## MODEL:ST-LF-144-46



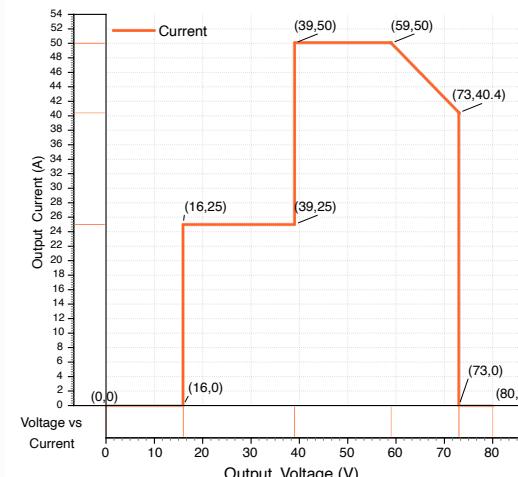
### FEATURES

Support UDS diagnosis, with CAN wake-up function
Full-sealed process, can reliably work in the temperature of -40°C~60°C
Built-in thermal sensor, shut off when temperature up to 90°C
Protection level with IP67

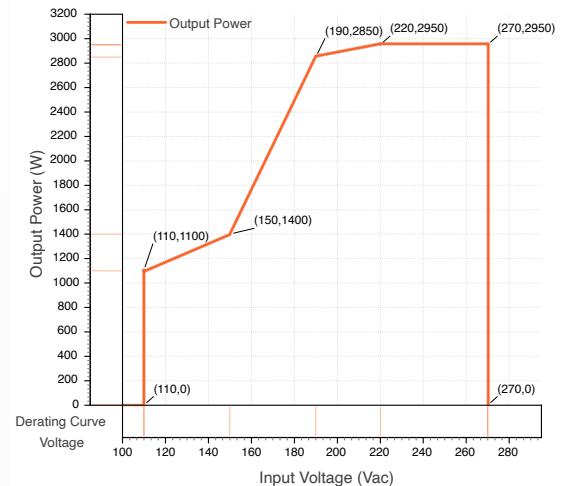
### SAFETY

Isolation Levels (Input - Output)	Basic insulation: 2000VAC
Isolation Levels (Input - Shell)	Basic insulation: 2000VAC
Isolation Levels (Output - Shell)	Basic insulation: 1000VAC
Insulation resistance	
Drop Resistance	

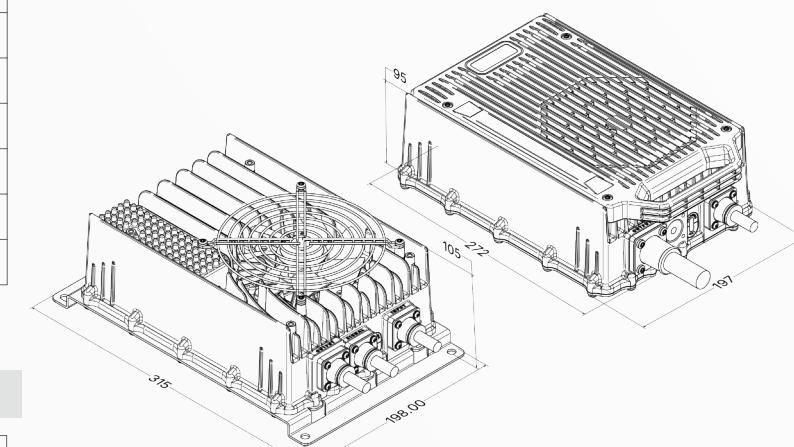
### OUTPUT VOLTAGE VS CURRENT



### UIN VS POWER



### DIMENSIONS



### MECHANICAL

Dimensions (mm)	312.8 (L)*268.36 (W)*111.2 (H) mm
IP Rating	IP67
Weight	8kg (17.6lb)
Cooling Method	Fan-cooled
Number of Ports	
Mounting Options	
Enclosure Type	
Connectors	
Encapsulant	

### ENVIRONMENTAL

Operating Temperature	-40°C~60°C
Storage Temperature	-40°C~105°C
Altitude	≤5000m
Vibration & Shock	10~25Hz swing 1.2mm, 25~500Hz 30m/S <sup>2</sup>
Audible Noise	max when working ≤65dB
Relative Humidity	5%~95%, no condensation
Design Life	

### REGULATORY


Solterra Technologies Private Limited designs and manufactures robust power electronics for electric mobility, traction and energy storage applications, offering on-board and off-board chargers, power modules, inverters, communication controllers and auxiliary DC-DC systems engineered for demanding environments. This ST-LF-144-46 onboard charger delivers 6600W with 46A output current for 144V battery systems, adopting advanced high-power conversion technology specifically designed for seamless ultra-high-voltage vehicle integration with maximum charging efficiency. It has the characteristics of active power factor correction, high efficiency, high reliability, intelligent control and robust design optimized for demanding onboard automotive applications.

The charger adopts intelligent forced cooling thermal management technique with advanced multi-stage cooling solutions, achieving high power density with optimized thermal performance ideal for high-power vehicle integration. It has the functions of comprehensive battery management system communication, enhanced ultra-high-voltage protection features, and sophisticated adaptive charging algorithms to ensure safe and efficient onboard charging operations.

### MAIN ATTRIBUTES

Max Output Power	6600W
Peak Efficiency	≥94%
Voltage Range	95V - 202V
CP Mode Output Current	46A
MTBF	150000 hours
Voltage Regulation	
Current Regulation	
Topology	
Battery Type	144V lead acid battery pack

### PROTECTIONS

Input Under/Over Voltage	
Input Overcurrent	
Output Over Voltage	Stop output when exceed the highest voltage ±5V
Output Overcurrent	
Output Short Circuit	Stop output
Output Reverse Polarity & No Load Protection	
Automatic Shutdown	
Over Temperature Protection	Power start to decrease when internal temperature rise to 85°C, shut off when rise to 90°C

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