SUMATOTEK™ E-Vehicle Lithium Battery Charger – 1kW

SUMATOTEK™ Lithium Battery Charger is a SMPS type battery charger optimized for charging LFP (Lithium Ferrous Phosphate) or NCM or NCA chemistry battery packs for Light E-Vehicle application. Various models are available in this series for charging 13-Cell-Series to 23-Cell-Series Lithium Battery packs.

Features:

- Charging Current and Voltage profile optimized for LFP or NCM or NCA chemistry battery packs for Light E-Vehicle application. Can be customized for other Li-Ion chemistry such as LTO also.
- High Efficiency with Power factor correction to reduce Power Consumption from Mains.
- High charging current even at low mains voltages for faster charging.
- Electronic Reverse Battery Protection – enhanced safety and avoid inconvenient fuse replacement in case of accidental reverse connection.
- Informative Battery Bar Graph and Mains indication along with audio alarms.
- Compact size for easy handling.
- Rugged metal enclosure.

Specifications

Parameter	Range				
Model	**ES-5517LI**	**ES-5816LI**	**ES-6712LI**	**ES-8212LI**	**ES-8410LI**
Battery Pack Type	15S-LFP or 13S-NCM	16S-LFP or 14S-NCM	16S-NCM	23S-LFP or 20S-NCM	20S-NCM
MAX. CHARGING VOLTAGE	54.5V Typ	58.0V Typ.	67.0V Typ	82.0V Typ	83.5V Typ
MAX. CHARGING CURRENT	17A ± 1.0A	16A ± 1.0A	12A ± 1.0A	12A ± 1.0A	10A ± 1.0A
CHARGE PROFILE	CC – CV – with Charge Termination Timer and current threshold.				
MAINS OPREATING RANGE	120VAC±10V -280VAC±10V				
MAINS OPREATING FREQUENCY	40 Hz TO 60 Hz				
INPUT POWER FACTOR	Active PF correction, >0.95				
EFFICIENCY	>89%				
COOLING SYSTEM	Forced Air Cooled				
VISIUAL INDICATIONS (LED)	1. MAINS NORMAL INDICATION.				
	2. 4 LED BATTERY CHARGE STATUS BAR GRAPH				
	FAULT INDICATIONS BY LED BLINK - Battery Too Low, Battery Too High, Abnormal High Current, Over Temperature/Fan failure, Mains abnormal				
AUDIO INDICATIONS (Buzzer)	1. Battery Connect, Battery Charge Completion – Interminent beeps.				
	2. Mains Failure or any Fault – long Beeps				
REVERSE BATTERY PROTECTION	Electronically Protected – Charger will not start unless battery is connected in correct polarity.				
MAINS VOLTAGE PROTECTION	Withstand up to 320V AC RMS.				
MAINS OVER CURRENT PROTECTION	By FUSE, in case of abnormal condition				
THERMAL PROTECTION	Electronically protected with internal sensor.				
CHARGER OPERATING TEMPRATURE	0°C TO 45°C				
HUMIDITY	95% RH Non-Condensing				
ENCLOSURE	Powder coated sheet metal cabinet				

LED indications:

Indication	Condition
MAINS LED STEADY ON	Charging On from Mains
MAINS LED BLINK	Mains out of Acceptable range.
BATTERY BAR ALL FOUR LED STEADY ON	Charging Complete
BATTERY BAR One or More LED Up-Down	Charging On
MAINS LED OFF, ONE OR MORE BATTERY BAR LED STEADY ON	Current Battery Voltage, Mains Off
ALL FOUR BATTERY BAR LED BLINK	Output Short Circuit Fault.
3 BATTERY BAR LED 100,75,50 BLINK	Over current Fault
2 BATTERY BAR LED 100,75 BLINK	Over temperature Fault
2 BATTERY BAR LED 100,25 BLINK	Battery Voltage Too high OR Reverse Battery OR Output Short OR PCM Disconnect.
2 BATTERY BAR LED 50, 25 BLINK	Internal Fault
1 BATTERY BAR LED 25 Blink	Deep Discharged Battery