

TECHNICAL SPECIFICATIONS (5000 Series)

Product Picture





Model	LS5000-4880LA	LS5000-4880LF	LS5000-7260LA	LS000-7260LF	LS3300-9640LA	LS5000-9640LF
EAN number	4738470664786	4738475209517	4738470392221	4738471232588	4738475707815	4738476917732
Description	48V80A for LA	48V80A for LFP	72V60A for LA	72V60A for LFP	96V40A for LA	96V40A for LFP
Nominal Voltage(V)	48	48	72	72	96	96
Max Charge Voltage (V)	58.4	57.6	87.6	82.8	116.8	115.2
Max Charge Current (A)	80	80	60	60	40	40
Battery type	Lead-acid (wet/AGM)	LFP	Lead-acid (wet/AGM)	LFP	Lead-acid (wet/AGM)	LFP
Battery capacity range (Ah)	500-1000	80-800	360-720	60-600	240-480	40-400
Charging protection <0 °C	-	Yes	-	Yes	-	Yes
Temperature compensation	Yes	-	Yes	-	Yes	-
AC input range (Vac)	Three Phase 260~457Vac (Line voltage)					
AC input nominal (Vac)	400					
AC input frequency (Hz)	45-65					
AC input rated current(A)	<9A @ 400VAC					
AC Power Factor	> 0.95					
Efficiency	90%					
Noise Level	<50dB					
AC Input connection	Single terminal, can be customized					
AC Input cable	2m length black 4x14 AWG Power cables					
DC Output connection	Default SB175; can be customized					
DC Output cable	3m length black 2x16mm2 dc cable					
Temp. Sensor Cable	110mm length temp. sensor with heat shrink tube					
Interlock protection	Yes, open contact if charger is connected to AC-mains; 2m length 2x0.5mm2 Grey, Green wires with 2 pin Interlock Jack					
CAN bus function	Default no CAN function, but can be customized					
AUX PSU	Yes, option, 2A/12V					
Bluetooth APP function	Yes					
LED Indicator	On the charger and 1m length 3x0.5mm2 wires with 3 pin extension Jack for optional external indicator					
Cooling	FAN cooling; The Fan rotates at charging and stops after fully charged; Green RAL6024FAN cover plate to protect					
IP Protection rating	IP67					
AC Input undervoltage prot.	When 3-phase AC voltage <250 VAC input the charger will switch off					
Over current protection	Yes					
No-load protection	yes					
Battery reversed protection	yes					
Temperature protection	The charger can operate up to 45°C and will de-rate the charge current linearly to 50% when reaching 60°C. When the case reaching >65°C the charging is will stop, after temperature decrease it will automatically resume.					
Temperature compensation	By cable with NTC temperature sensor. For the lead-acid charger the NTC is used for temp. compensation at -4mV/°C per 2V cell. For the Lithium charger the NTC is used to prevent charging < 0 °C ambient temperature					
AC Input connection	Black AC cable 2m 4 wires; (optional CEE 4P+E red plug IEC60309 or customized)					
DC Output connection	Output red / black DC 3m 16mm2 cable with Anderson SB175 grey connector					
Cooling	FAN cooling; The Fan rotates at charging and stops after fully charged; Green RAL6024 FAN cover plate to protect					
Dimensions (mm)	419 x 281.5 x 100.5					
N.W / G.W (kg)	18 / 20					

GENERAL SPECIFICATIONS FOR ALL CHARGER MODELS

SAFETY, EMC AND ENVIRONMENT

Safety test AC to DC	≤20mA@2000Vac/1min
Safety test AC to CASE	≤20mA@2000Vac/1min
Safety test DC to CASE	≤20mA@1000Vac/1min
Interlock contact	Open contact if charger is connected to AC-mains; Max 1A / 30V
Safety	IEC 60335-2-29:2016; IEC 61558-1-2019
Insulation Resistance test	AC to CASE > 100MΩ/DC 500V
EMC	EN 55014-1:2006; EN 55014-A2:2011; EN 61000-3-2:2014; EN 61000-3-3:2013 EN 61000-4-2/3/4/5/11
CE marking	Yes
Working ambient temp.	-20 ...+45°C ; 45...60°C linear de-rating to 50%
Storage temperature	-20 ...+60°C
Humidity	20...90 % RH

LED INDICATORS

LED Indication Label	For LI Battery	For LA Battery
		
Battery Capacity Status	In Charging: Red light flashes Fully Charged: Green light is lighting	Red LED flash per second, to show capacity < 80% Yellow LED flash per second, to show capacity > 80% Green LED lights constantly, to show capacity = 100%
Non Load Status	R,G,R,G,R,G	
Fault Status (“-“: means pause)	Over-volt/current protection: flash R, G, R, -, -, - Ambient temperature too high or low: flash R,G,R,G, -, - Over temperature: flash G,R,-,-,-,- Output under-voltage: flash R,G,-,-,-,- Input AC voltage abnormal: flash R,G,R,G,R,- Other faults: flash G,R,G,-,-,-	
Fully charged	Green LED lights constantly	

WARRANTY

Warranty will be granted according ACES Energy Warranty Conditions 24 months from the date of purchase.

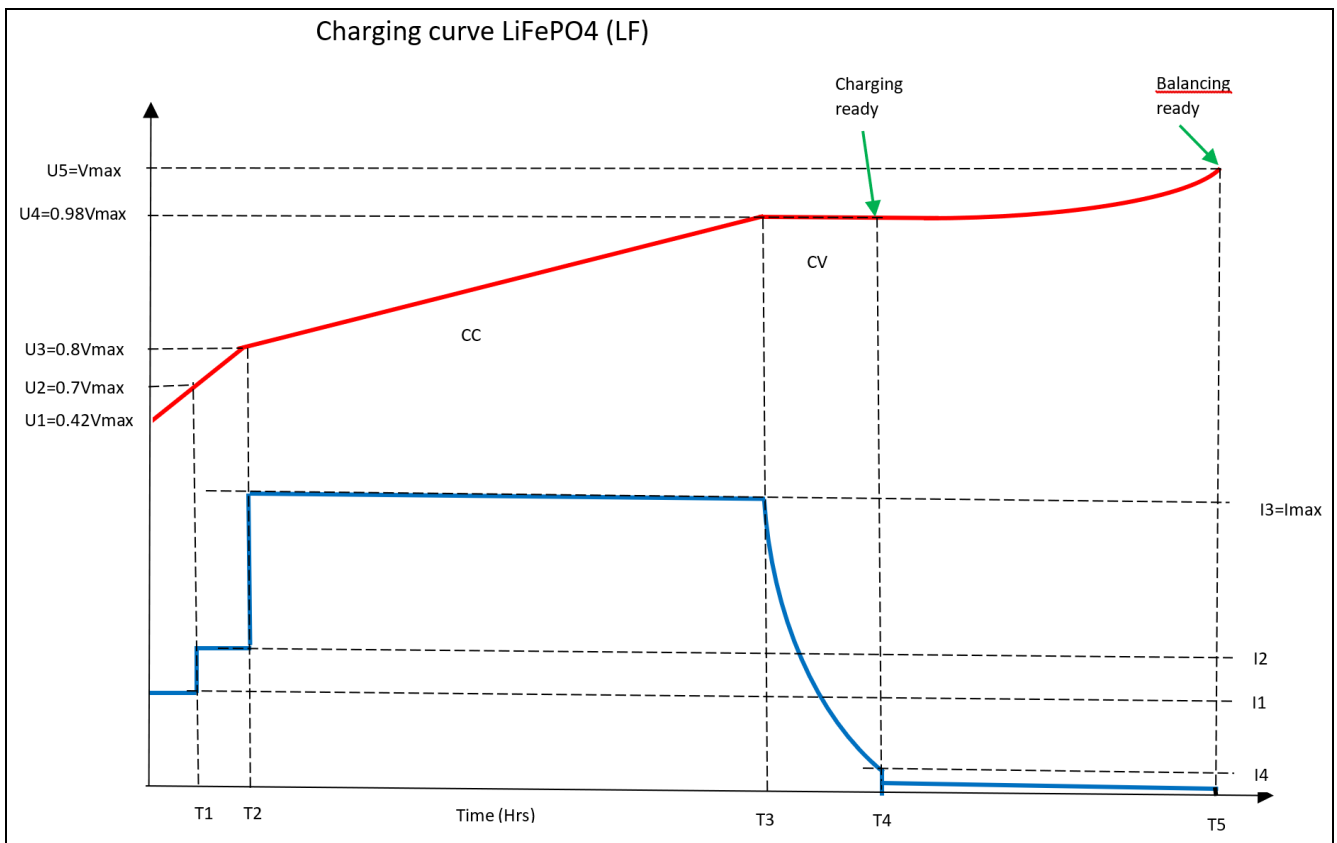
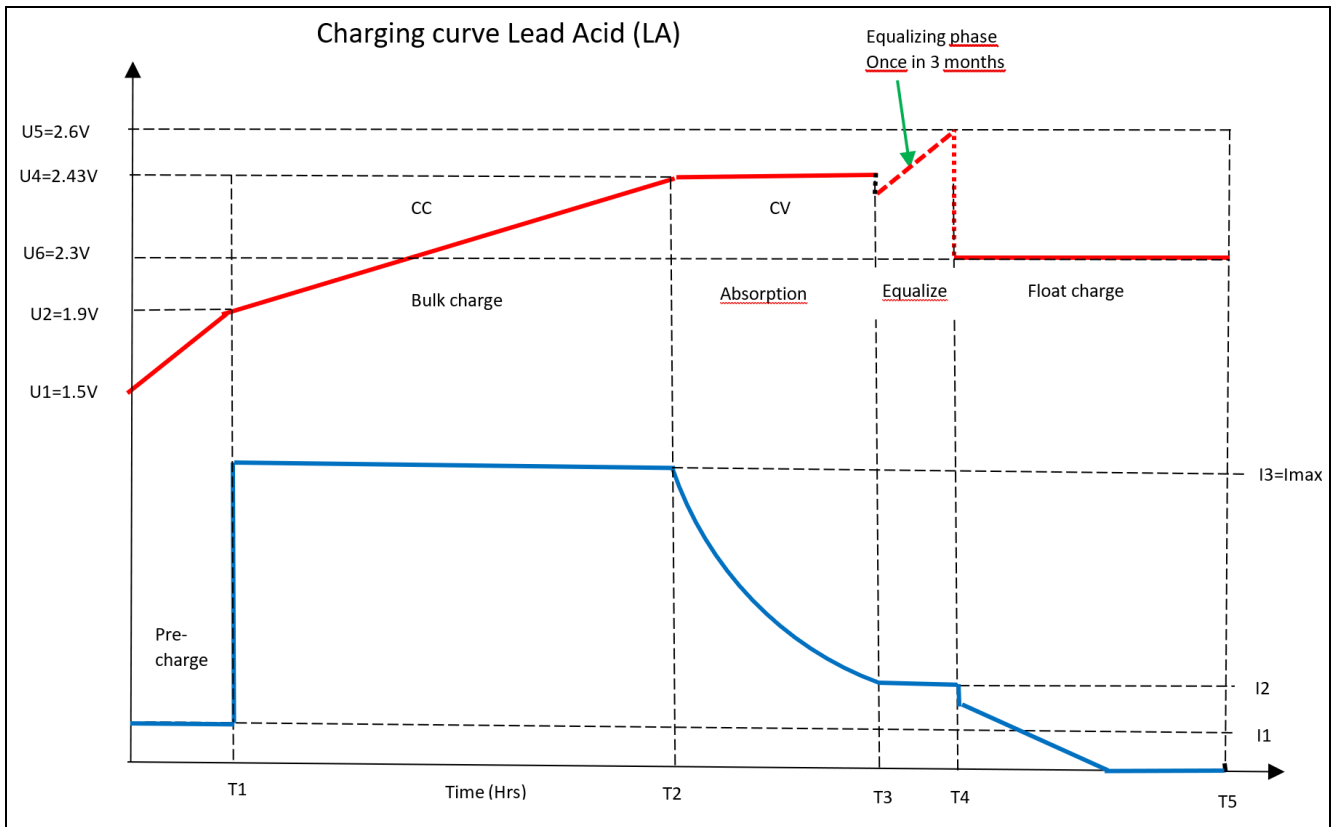
No warranty will be provided when:

- Product failure due to improper use
- Product damage due to bad environmental use and natural disasters.
- The product is repaired by unauthorized persons
- Product appearance has obvious deformation, incomplete, other damage

GENERAL

- Installation Type:** Portable or On-board usage, except the LSC300 it has a green FAN cover plate on the top side to protect the FAN and a blank aluminum bottom bracket with installation holes that shall be used for onboard EV.
- Accessories:** Handgrip + 2 screws in separate bag; for some models also Interlock connector and/or LED extension cable.
- Packing:** One 3-layer carton box with EPE foam protection, on carton outside has a carton label, the content of Carton label include Model, Max. Charging voltage, Charging current and Series number with 1D Bar-code (The Series number with 1D Bar-code must match the inside product).

■ CHARGING CURVE FOR Lead-acid (LA) and LiFePO4 (LF) batteries



COMMON FAULTS AND SOLUTIONS

LED Indication Status	Fault Indication	Solution
R, G, R, G, R, G	No Load connection	Check the connection between charger and battery, whether B+,B- polarity reversed, whether battery voltage lower than start voltage
R, G, R, -, -, -	Over Voltage/Current	If restart the charger still can't fix, the charger failed, return to repair
R, G, R, G, -, -	Environmental Temp over-heat or too low	Check whether temperature around the charger too high, whether the FAN rotate normally, whether the heat emission slots under the FAN cover blocked, whether environment ventilation isn't good, check the temperature sensor probe...etc
G, R, -, -, -, -	Charger over-heat	Check the temperature as upon
R, G, -, -, -, -	Output under-voltage	If restart the charger still can't fix, the charger failed, return to repair
R, G, R, G, R, -	Input AC voltage abnormal	Check Input AC voltage need charger spec, also check AC plug connection
G, R, G, -, -, -	When one of upon 5 faults repeat 5 times, the LED shows status	Unplug the AC power and re-power on the charger, to see which fault item match, fix it accordingly.

Note: ("-": means pause)

Series 3PHASE SMART BATTERY CHARGER

