



# LITHIUM

**MODEL: ATLS12-120**

**CERTIFICATIONS**  
 UL1642 (Cell), CE (Pack), IEC62133 (Cell), UN38.3 (Cell / Pack), IEC62619 (Cell), ROHS (Cell)



## Specifications

Electrical Specifications	Nominal Voltage	12.8V	
	Nominal Capacity	120 Ah	
	Nominal Power	1536 Wh	
	Parallel Connection	max 6 units	
	Series Connection	max 4 units	
	Circuit Protection	Overcharge, over discharge, over current, high temperature, short circuit, cell balancing	
	Cycle life	3000 cycles @100% DOD 6000 cycles @80%DOD	
Charge Specifications	Charge Profile	CC @ 0.2C to 14.4V, then CV @ 14.4V until current $\leq 0.01C$ (CC/CV)	
	Max Charge Voltage	14.4 $\pm$ 0.2V	
	Standard Current	24A	
	Max Current	60A	
Discharge Specifications	Standard Current	24A	
	Max Continuous Current	120A	
	Cut-off Voltage	10V	
Environmental Specifications	Charge Temperature	0°C to 55°C	60 $\pm$ 25% Relative Humidity
	Discharge Temperature	-20°C to 60°C	
	Storage Temperature	-5°C to 45°C	
Mechanical Specifications	Dimensions, mm	305x169x210 (Group 27)	
	Approx Weight, kg	13.5	
	Terminal type	M8	
	Case Material	Plastic ABS	
	IP Rating	IP65	
	Cell Type	Cylindrical LiFePO <sub>4</sub>	

Circuit Protection	Characteristic	Parameters
Overcharge protection	High voltage protection	15V $\pm$ 0.15V
	Reset/Recovery voltage	14.2V $\pm$ 0.15V
	Reset trigger	below reset value
	Time delay	5s
Over discharge protection	Low voltage protection	8.8V $\pm$ 0.15V
	Reset/Recovery voltage	10.8V $\pm$ 0.15V
	Reset trigger	Cut Load, Auto release
	Time delay	5s
Overcurrent	Max discharge current protection	700A $\pm$ 50A
	Discharge current protection reset	Cut Load, Auto release
	Time delay	300ms

Circuit Protection	Characteristic	Parameters
High temperature	Max charge temperature	65°C $\pm$ 3°C
	Recovery point	45°C $\pm$ 3°C
	Time delay	10s
	Max discharge temperature	65°C $\pm$ 3°C
	Recovery point	45°C $\pm$ 3°C
	Time delay	10s
MOSFET over temperature protection	MOSFET over temperature protection	90°C $\pm$ 5°C
	Balance condition voltage (per cell)	$\geq 3.6V$
Cell balance	Cell balance current	116 $\pm$ 10mA
	Short circuit protection	Short circuit protection
Time delay		$\leq 800\mu s$



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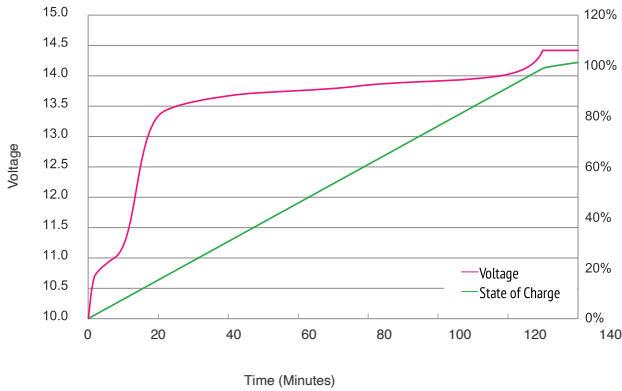
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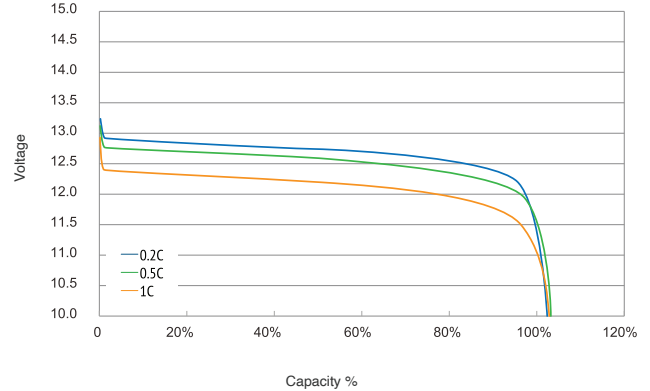


## Characteristics Curve

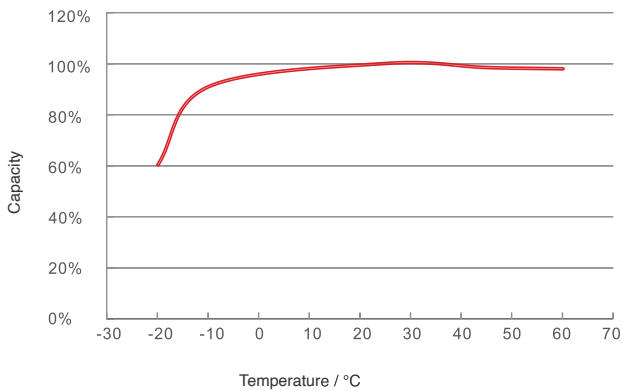
### Charging Characteristics (0.5C @ 25°C)



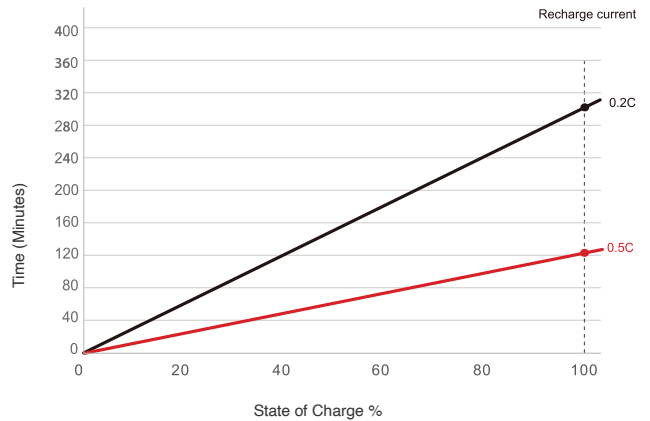
### Discharging Characteristics (0.2C, 0.5C, 1C @ 25°C)



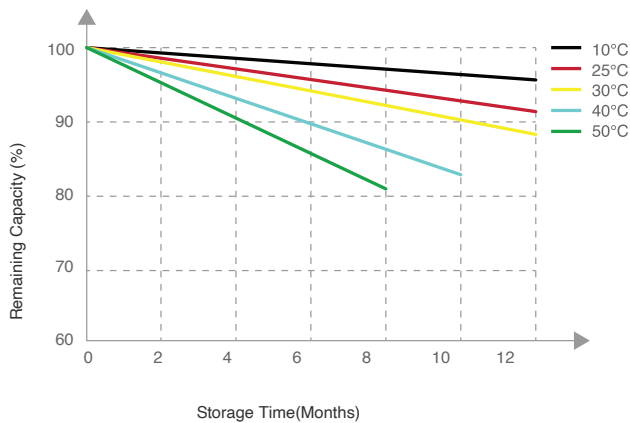
### Different Temperature Capacity Curve



### Typical Charge Time Curve



### Different Temperature Self Discharge Curve



### Different DOD Discharge Cycle Life Curve

