



LITHIUM

MODEL: ATLS12-9

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



Specifications

Electrical Specifications	Nominal Voltage	12.8V	
	Nominal Capacity	9 Ah	
	Nominal Power	115.2 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	
	Charge Current	$\leq 4A$ (0.2C @ 1.6A)	
	Max Current	4A	
Discharge Specifications	Recommended Discharge Current	$\leq 4A$ (0.2C @ 1.6A)	
	Max Continuous Current	8A	
	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	151x65x91	
	Approx Weight, kg	23	
	Terminal type	T1	
	Case Material	Plastic ABS	
	IP Rating	IP65	
	Cell Type	Cylindrical LiFePO ₄	

Circuit Protection	Characteristic	Parameters
Overcharge protection	High voltage protection	15V
	Reset/Recovery voltage	14.4V
	Reset trigger	below reset value
	Time delay	10s
Over discharge protection	Low voltage protection	10V
	Reset/Recovery voltage	10.4V
	Reset trigger	cut load, press reset button or charge/apply voltage >12V
	Time delay	10s
Overcurrent	Max charge current protection	145A
	Charge current protection reset	140A
	Time delay	10s
	Max discharge current protection	800A

Circuit Protection	Characteristic	Parameters
High temperature	Max charge temperature	65°C
	Recovery point	55°C
	Time delay	10s
	Max discharge temperature	65°C
	Recovery point	55°C
	Time delay	10s
	MOSFET over temperature protection	85°C
Cell balance	Balance condition voltage (per cell)	$\geq 3.3V$
	Balance condition voltage difference (cell)	30mv
	Balanced closed voltage difference (cell)	20mv
	Cell balance current	30mA
	Short circuit protection	Short circuit protection
Time delay		100 μ s



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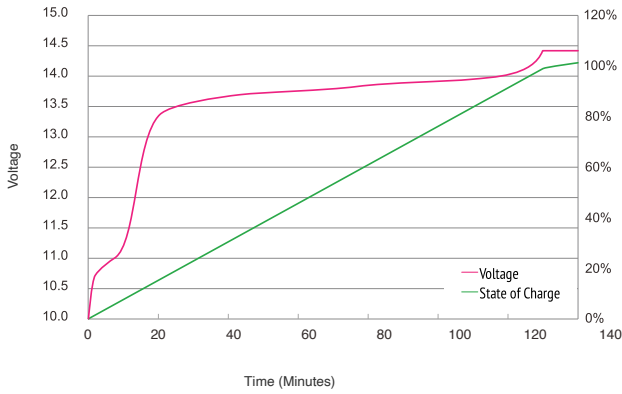
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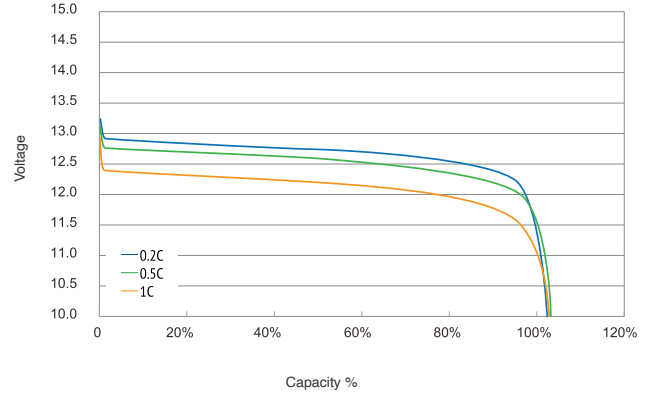


Characteristics Curve

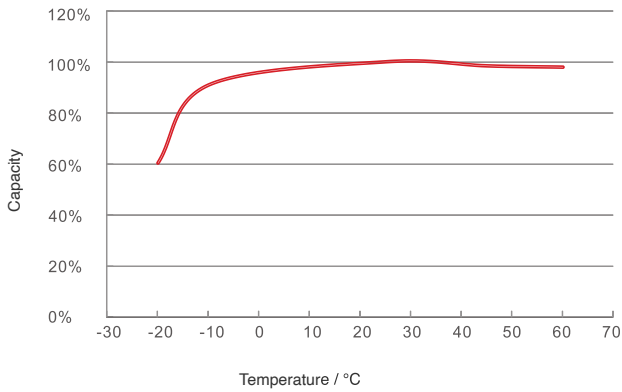
Charging Characteristics (0.5C @25°C)



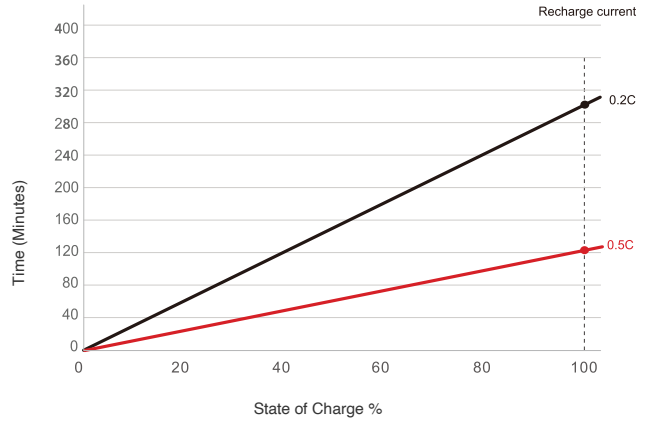
Discharging Characteristics (0.2C, 0.5C, 1C @25°C)



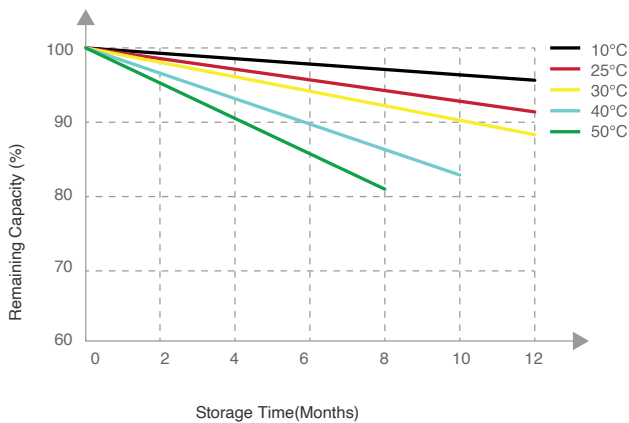
Different Temperature Capacity Curve



Typical Charge Time Curve



Different Temperature Self Discharge Curve



Different DOD Discharge Cycle Life Curve

