C-SERIES / AUXILIARY BATTERY

Auxiliary LiFePO4 Battery

WTTB-24V-314Ah

C-SERIES
SKU: WTTB-24V-314Ah



Auxiliary LiFePO4 battery / powder-coated steel enclosure

25.6 V
NOMINAL VOLTAGE
Operating range: 20-29.2 V

314 Ah
NOMINAL CAPACITY
Prismatic cells / 1P8S

8.04kWh
NOMINAL ENERGY
8.04kWh

Core specifications at a glance

- ✓ **157A continuous discharge**
  Separate short-duration and surge ratings.
- ✓ **IP65 steel enclosure**
  Powder-coated housing / approx. 63 kg.
- ✓ **Heating function**
  Charging temperature: 0 to +55 °C.
- ✓ **Bluetooth + RS-485**
  Battery communication supported.

ELECTRICAL RATINGS

Electrical specifications

Nominal battery data and distinct charge, discharge and surge limits.

GENERAL	
Nominal voltage	25.6 V
Operating voltage range	20-29.2 V
Nominal capacity	314 Ah
Nominal energy	8.04kWh
Cell chemistry	LiFePO4
Cell type / configuration	Prismatic / 1P8S (8 cells)
Self-discharge	1% per month
Cycle life (1)	10,000 cycles
IP rating	IP65

CHARGE & DISCHARGE CURRENT	
Recommended charge current	100 A
Maximum charge current	150 A
Continuous discharge current	157 A
Short-duration discharge current	200 A for 30 s
Short-duration discharge current	300 A for 10 s
Surge discharge current (2)	1200 A for 1 s

TIME-LIMITED DISCHARGE

200 A for 30 s.
300 A for 10 s.
Current ratings are distinct from the 157 A continuous rating.

Read each rating with its duration

157 A
CONTINUOUS DISCHARGE
Continuous rating

200 A for 30 s
300 A for 10 s
SHORT-DURATION DISCHARGE

1200 A
1-SECOND SURGE (2)
Published surge limit

(1) WeVolt cycle-life target: 10,000 cycles at 0.5C, 25°C, 80% DoD, 70% EOL; pack-level validation pending.

(2) Published 1-second surge limit; this is not a continuous rating. Operating conditions were not provided.

OPERATING SETTINGS & SYSTEM DATA

Settings & system specifications

Voltage settings, temperature limits, physical data and BMS protection.

CHARGING & DISCHARGING

Bulk / absorption voltage	**29.2 V**
Float voltage	**28 V or off**
BMS high-voltage cut-off	**29.2 V**
Recommended discharge cut-off	**22.4 V**
BMS low-voltage cut-off	**20.8 V**
BMS voltage recovery	**21.6 V**
Charging temperature	**0 to +55 °C**
Discharging temperature	**-20 to +60 °C**

BMS PROTECTION

Pack over-voltage	**Yes**
Pack / cell under-voltage	**Yes**
Cell over-temperature	**Yes**
BMS over-temperature	**Yes**
Short circuit / over-current	**Yes**
Cell balancing	**Yes**
Certifications	**Not specified**

PHYSICAL & SYSTEM

Dimensions (L x W x H)	**505 x 345 x 230 mm**
Weight	**Approx. 63 kg**
Enclosure	**Powder-coated steel**
Terminal type	**Bulkhead terminals**
Series connection	**Not supported**
Parallel connection	**Supported**
Bluetooth	**Supported**
RS-485	**Supported**
Active cell balancing	**Yes**
Heating function	**Yes**

OPERATING NOTES

Use the charging temperature range above. The heating function does not establish permission to charge below 0 °C.

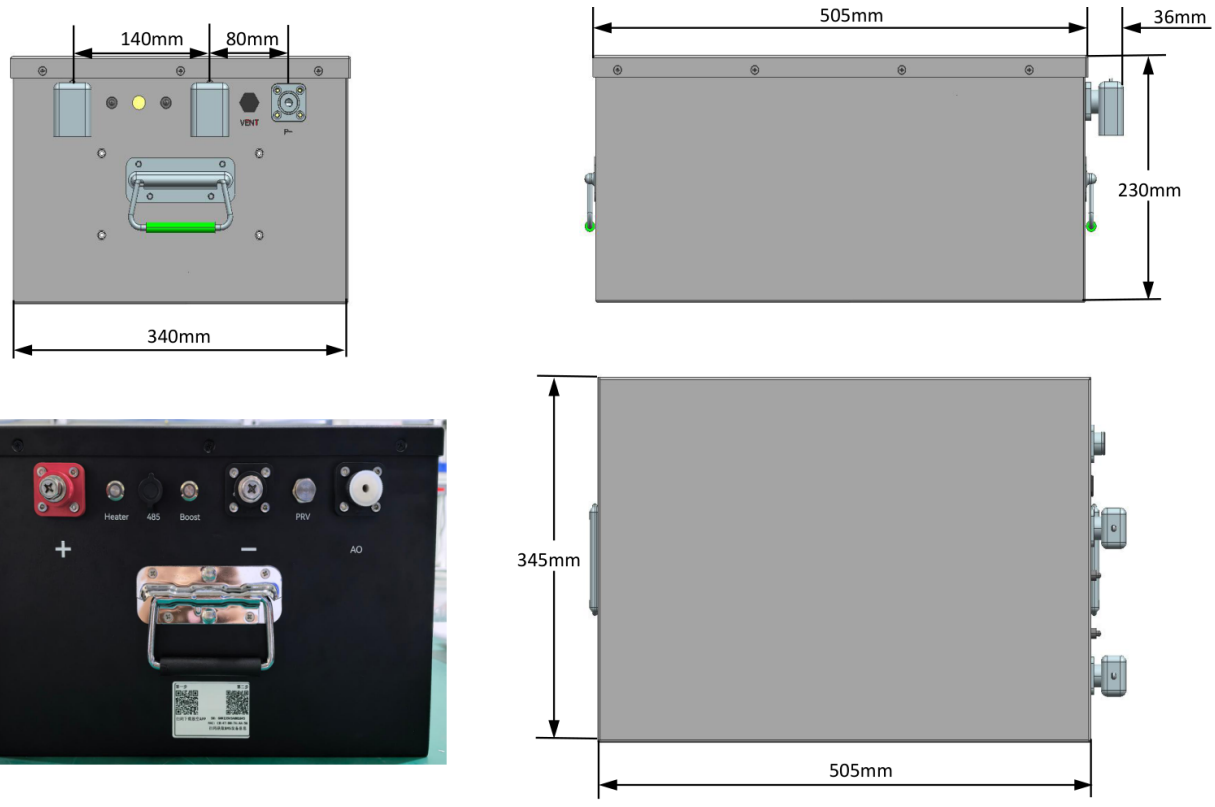
Series connection is not supported.

MECHANICAL DIMENSIONS

Dimensions & enclosure

Specified enclosure size: 505 x 345 x 230 mm (L x W x H).

505 mm	345 mm	230 mm
LENGTH	WIDTH	HEIGHT



DRAWING CLARIFICATION

The end-view drawing labels 340 mm; the specification and top view give 345 mm width. Use 345 mm for the enclosure; confirm mounting clearances with WeVolt.

Battery mechanical drawings.

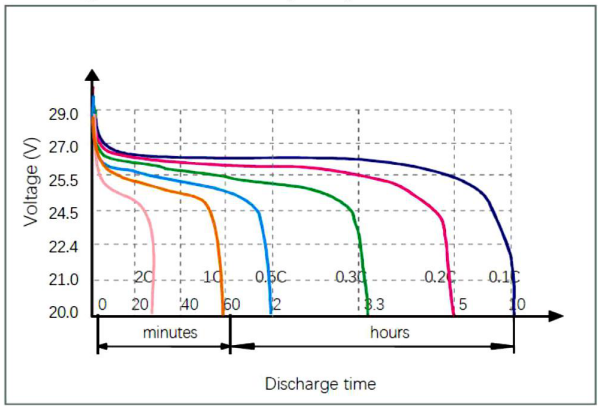
PERFORMANCE REFERENCE

Performance curves

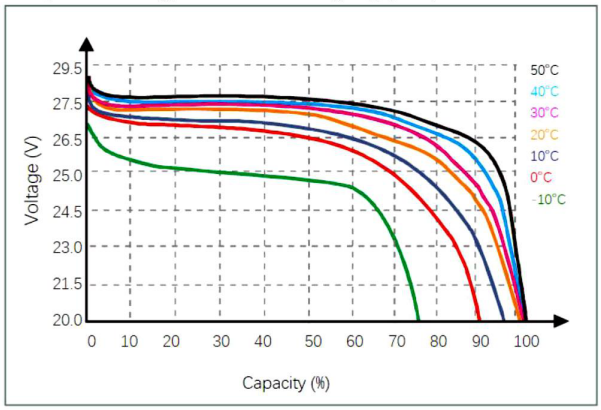
Discharge, temperature, state-of-charge and charging plots.

PERFORMANCE CURVES

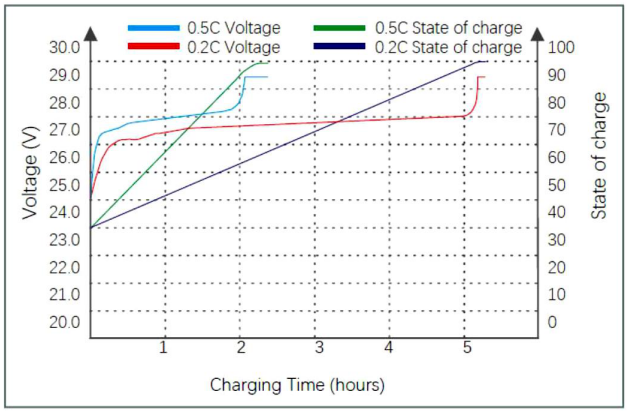
Discharge Characteristics (25°C)



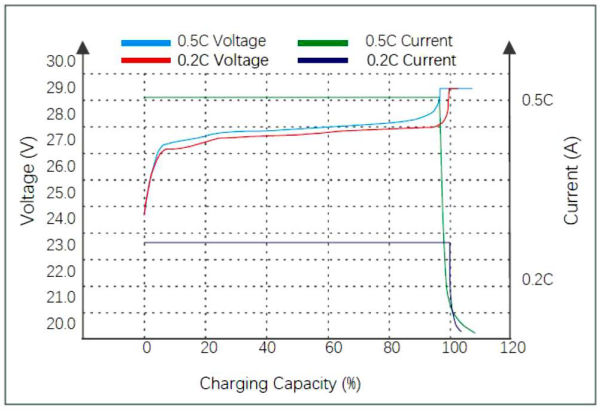
Temperature effect on discharging (0.5)



State of Charge Curve (25°C)



Charge Characteristics (25°C)



PERFORMANCE DATA NOTES

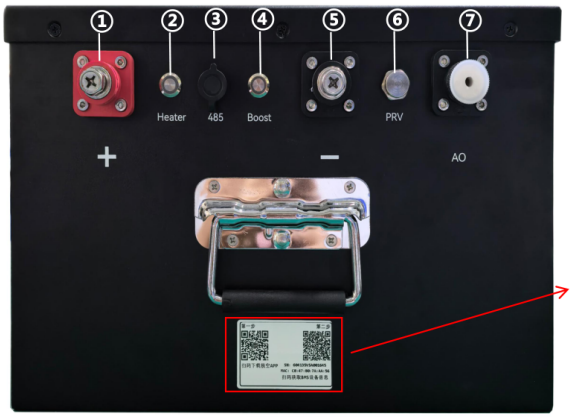
Performance curves shown for reference.

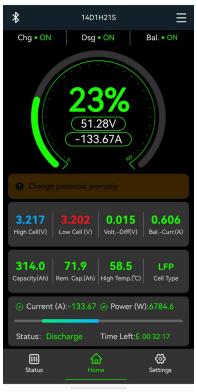
Cycle-life target: 10,000 cycles @ 0.5C, 25°C, 80% DoD (70% EOL capacity).
Pack-level validation pending; plots above are not cycle-life test results.

CONNECTIONS & USER GUIDE

Terminals, Bluetooth & safety

Connection points, app access and the supplied operating precautions.





App screen example; displayed values are illustrative.

Scan the QR code to download the Bluetooth app. Scan the device QR code in the app to view battery information. Default password: 1234.

NO.	TERMINAL / CONTROL	DESCRIPTION
1	**BAT+**	Positive load connection.
2	**Forced heating switch**	Turns on heating when required at low temperature.
3	**RS-485 COMM**	Pin 1: RS-485 A; pin 2: RS-485 B.
4	**Force start switch**	Hold to enable discharge for about 5 s for emergency cranking. Bypasses part of BMS protection; emergency use only.
5	**BAT-**	Negative load connection.
6	**Pressure relief valve**	Single-use device that releases excess internal gas and pressure under abnormal conditions.
7	**Service negative terminal**	Direct cell-negative connection. Maintenance only. Do not connect loads during normal operation; this may cause over-discharge and permanent damage.

Safety precautions

Handling and storage

Keep away from water, fire and heaters. Avoid extreme heat. Do not short-circuit the terminals, strike or throw the battery, solder directly to terminals, disassemble or modify the battery.

Abnormal conditions

Stop use and charging if there is an unusual odor, heat, discoloration, deformation or other abnormality. If electrolyte enters the eyes, do not rub; rinse with clean water and seek immediate medical attention.

LONGEVITY & WARRANTY

Warranty & lifecycle

Cycle-life basis, cell selection, warranty and application scope.

8,000
CYCLE-LIFE TARGET
80% DoD / 70% EOL

10 years
LIMITED WARRANTY
Or 10,000 cycles

Grade A
PRISMATIC LFP CELLS
Grade A LiFePO4

Warranty & lifecycle specifications

PARAMETER	WEVOLT SPECIFICATION
Cell grade	**Grade A LiFePO4**
Cycle life (70% EOL capacity)*	**8,000 cycles**
Cycle-life test conditions*	**0.5C, 25°C, 80% DoD (20%-100% SOC)**
Design life	**10 years**
Warranty***	**10 years or 10,000 cycles**
Usable energy at 80% DoD	**6.43 kWh | nominal**
Lifetime production**	**61.09 MWh | estimated**

Supported applications

Residential / Commercial / Off-grid / Backup
Heavy-Duty Truck eAPU / Engine-Off HVAC / Hotel Loads

RATING DEFINITIONS & CALCULATION NOTES

* 8,000 cycles at 70% EOL, 0.5C, 25°C and 80% DoD is a EVE performance target; pack-level validation is pending. Cell specifications do not verify this identical test basis.

** Lifetime production = (25.6 V x 314 Ah x 80% x 10,000 x 95%) / 1,000,000 = 61.09 MWh. 95% efficiency is assumed for the calculation and is not a verified WeVolt rating. The estimate ignores capacity fade and is not warranted energy output.

*** 10 years or 10,000 cycles, whichever occurs first; subject to the official WeVolt limited-warranty terms. Grade A denotes the specified cell sourcing grade.