



Lithium Battery Solution

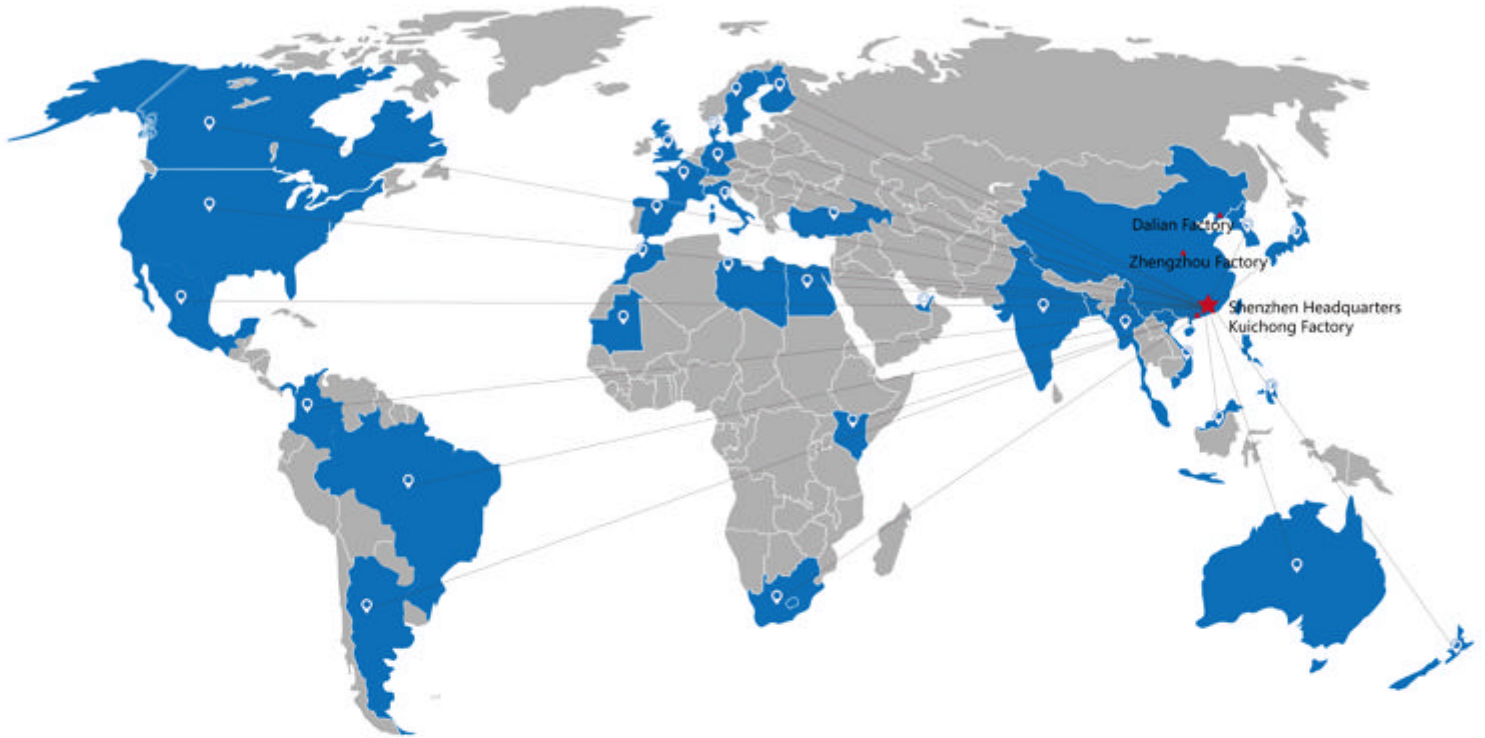
Power the world, Change the Future



UN38.3



Global Delivery



Shenzhen Ace Battery Co.,Ltd

Tel: +86-755-8887 8567 / +86-755-8328 2723

E-mail: sales@acebattery.com

Headquarters: 26/F, BAK Technology Building, 9Keyan Rd., Nanshan Hi-Tech Park, Shenzhen city, China

Factory Add: No.11 Meigui Street(East), Huayuankou Economic Zone, Dalian,China

BAK Industrial Park, Kuichong Street, Dapeng District, Shenzhen, China

BAK Street, Zhongmu county, Zhengzhou, China

Web: www.acebattery.com



ACEPOWER

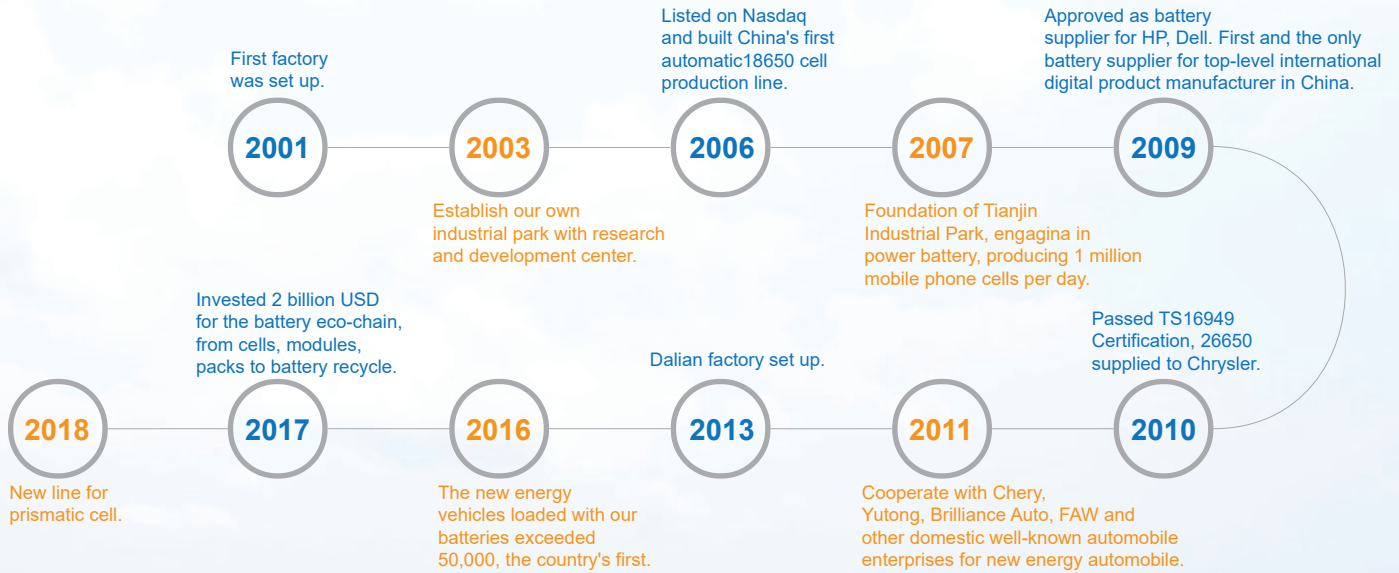
About us

We are focusing on Li-ion and LiFePO₄ battery cell and pack sales, R&D and production for diversified markets such as medical, military, material handling, power tool, ESS, UPS and LEV etc.

We are a group company with over 5000 employees, headquartered in Shenzhen with factories spread in Dalian, Zhengzhou and Shenzhen etc. Listed on the NASDAQ in 2006 and with 20 year experiences in lithium battery industry, Now we reach yearly production capacity of 15GWh batteries with TS16949, ISO9001, ISO14001, UL, CE, CB, UN38.3 certified. High quality of cells and strong capability of integration of system help us win reputed worldwide customers.



Development History



Battery Cells



Description:

CBAK offers cylindrical cells like 18650, 26650 and 21700, with diversified capacity levels and discharge rates, applicable for power tool, E-mobility, consumer, medical and ESS products etc.

Li-ion (NCM) cell list

| PN# | H18650CC | H18650CIL | N18650CNP | N18650CL | N18650CK | N18650CP | N21700CB |
|----------------------------------|----------------|-------------|------------|-------------|-------------|-------------|-------------|
| Typical Capacity(Ah) @0.2C | 2.2 | 2.5 | 2.5 | 2.9 | 3 | 3.3 | 4.8 |
| Nominal Voltage(V) | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 |
| Energy Density | 172Wh/Kg | 184Wh/Kg | 191Wh/Kg | 213Wh/Kg | 222Wh/Kg | 251Wh/Kg | 253Wh/kg |
| Weight (g) | 45 | 49 | 47 | 48 | 47 | 48 | 70 |
| Internal Resistance(mΩ) | 35 | 35 | 16 | 35 | 35 | 35 | 30 |
| Discharge | Standard | 0.5C | 0.5C | 0.5C | 0.5C | 0.5C | 0.5C |
| | Max. | 5C | 3C | 12C | 3C | 3C | 3C |
| | End Voltage(V) | 2.75 | 2.75 | 2.5 | 2.5 | 2.5 | 2.5 |
| Charge | Standard | 0.5C | 0.5C | 0.5C | 0.5C | 0.5C | 0.5C |
| | Max. | 1C | 1C | 2C | 1C | 1C | 1C |
| | End Voltage(V) | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| Temperature | Charge | 0~45℃ | 0~45℃ | 0~45℃ | 0~45℃ | 0~45℃ | 0~45℃ |
| | Discharge | -20~60℃ | -20~60℃ | -20~60℃ | -20~60℃ | -20~60℃ | -20~60℃ |
| Cycle Life (to 80% BOL capacity) | 1000 cycles | 1000 cycles | 500 cycles | 1000 cycles | 1000 cycles | 1000 cycles | 1000 cycles |

Lithium Ion Phosphate(LiFePO4) cell list

| PN# | P26650HP | 26650PFS | 26650FS2A | 26650FS3 | 26650FS3A |
|----------------------------------|----------------|-------------|-------------|-------------|-------------|
| Typical Capacity(Ah) @0.2C | 2.5 | 3 | 3.4 | 3.6 | 3.8 |
| Nominal Voltage(V) | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| Energy Density | 103Wh/Kg | 110Wh/Kg | 123Wh/Kg | 129Wh/Kg | 137Wh/Kg |
| Weight (g) | 78 | 87 | 88 | 89 | 90 |
| Internal Resistance(mΩ) | 8 | 15 | 20 | 20 | 20 |
| Discharge | Standard | 1C | 1C | 0.5C | 0.5C |
| | Max. | 15C | 10C | 3C | 3C |
| | End Voltage(V) | 2 | 2 | 2 | 2 |
| Charge | Standard | 1C | 1C | 0.5C | 0.5C |
| | Max. | 5C | 2C | 1C | 1C |
| | End Voltage(V) | 3.6 | 3.6 | 3.6 | 3.6 |
| Temperature | Charge | 0~45℃ | 0~45℃ | 0~45℃ | 0~45℃ |
| | Discharge | -20~60℃ | -20~60℃ | -20~60℃ | -20~60℃ |
| Cycle Life (to 80% BOL capacity) | 2000 cycles | 2000 cycles | 2000 cycles | 2000 cycles | 2000 cycles |

E-mobility Battery



PHYSICAL SPECIFICATIONS

| Model | Voltage (V) | Capacity(Ah) | | Dimension (mm) | | |
|---------|-------------|--------------|---------|----------------|-------|--------|
| | | Minimum | Typical | Length | Width | Height |
| ZP17014 | 48 | 30.8 | 31.9 | 535 | 160 | 98 |
| ZP18031 | 72 | 19.2 | 20.0 | 220 | 220 | 180 |
| ZP18032 | 72 | 28.8 | 30.0 | 300 | 220 | 180 |
| ZP18033 | 72 | 38.4 | 40.0 | 240 | 200 | 340 |
| ZP18034 | 72 | 48.0 | 50.0 | 270 | 230 | 367 |
| ZP18035 | 72 | 57.6 | 60.0 | 270 | 230 | 367 |

ELECTRICAL SPECIFICATIONS

| Items | | ZP17014 | ZP18031 |
|----------------|--|-----------|-----------|
| Charge | Charge voltage | 54.6±0.1V | 84.0±1.0V |
| | Charge current | 10A | 4A |
| | Max charge current | 15A | 10A |
| Discharge | Continuously discharge current | 50A | 50A |
| | Peak discharge current | 75A (5S) | 60A 1min |
| Temperature | Charge temperature | 0℃~+45℃ | 0℃~+45℃ |
| | Discharge temperature | -20℃~+60℃ | -20℃~+60℃ |
| | Storage temperature | -10℃~40℃ | -20℃~45℃ |
| Communication | CanBus | | |
| SOC Gauge | LED Indicator | | |
| BMS Protection | Over charge/over discharge, over/under temperature, under voltage, short circuit | | |



Feature:

High quality lithium cell

- Fully automatic production line
- Good consistency of cell performance
- Long cycle life : more than 1000 cycles

Flexible BMS Hardware

- Available for 4S~16S system
- Full protection for charging/discharging/temperature/Short circuit
- Secondary security protection system

CERTIFICATIONS

- UL 1642 (cells) UN38.3
- IEC 62133 RoHs Compliant

Safest structure design

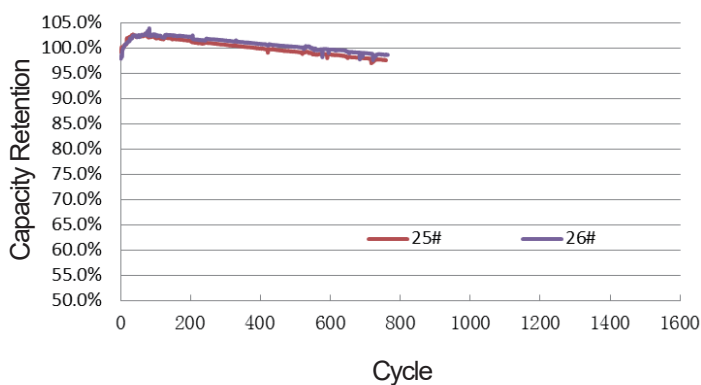
- UL94V-0 materials
- IP65~IP67
- Physical layout to avoid thermal runaway
- Screw locked internal wire connection

Intelligent BMS Firmware

- Advanced CANbus communication protocol
- Smart cell balance system
- Accurate SOC calculation
- Promptly updating system
- Black box for data storage
- Lowest power consumption with sleep mode and ship mode

| Weight (kgs) | Case | Color |
|--------------|---------------|---------------|
| 9.8 | ABS/Aluminium | Black/Silvery |
| 12.3 | Iron | Black |
| 17.2 | Iron | Black |
| 22.6 | Iron | Black |
| 27.8 | Iron | Black |
| 31.7 | Iron | Black |

0.75C / 0.75C cycle curve @ 25°C
(2.5-3.5V)



| ZP18032 | ZP18033 | ZP18034 | ZP18035 |
|-------------|-------------|-------------|-------------|
| 84.0±1.0V | 84.0±1.0V | 84.0±1.0V | 84.0±1.0V |
| 6A | 85A | 10A | 12A |
| 15A | 20A | 25A | 30A |
| 60A | 80A | 100A | 100A |
| 80A 1mins | 100A 1mins | 120A 1mins | 120A 1mins |
| 0°C~+45°C | 0°C~+45°C | 0°C~+45°C | 0°C~+45°C |
| -20°C~+60°C | -20°C~+60°C | -20°C~+60°C | -20°C~+60°C |
| -20°C~45°C | -20°C~45°C | -20°C~45°C | -20°C~45°C |

Over charge/over discharge, over/under temperature, under voltage, short circuit

LFP Powersport Battery

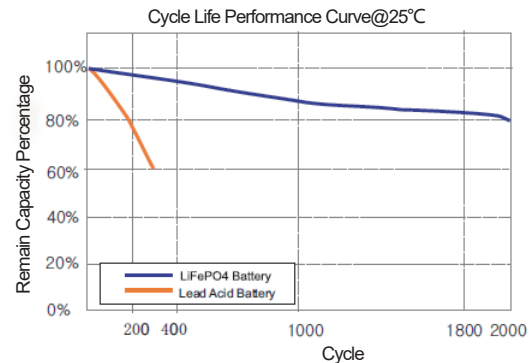
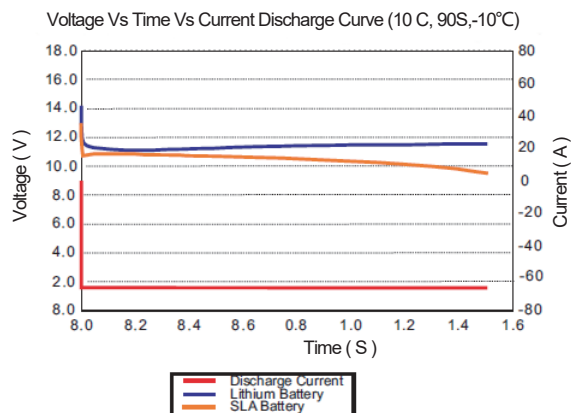


Feature:

- High cranking power
- Light weight
- Long service life
- Safe technology
- Full BMS Protection
- Free Maintenance

| PN# | Voltage | Energy | CA | Dimension(mm) | | | Weight | Charge current (A) | |
|----------|---------|--------|-----|---------------|-----|-----|--------|--------------------|------|
| | V | Wh | A | L | W | H | (Kg) | Standard | Max. |
| BKFP0501 | 12.8 | 32 | 150 | 113 | 70 | 85 | 0.45 | 1.3 | 12 |
| BKFP0502 | 12.8 | 42 | 190 | 113 | 70 | 85 | 0.55 | 1.7 | 16 |
| BKFP0702 | 12.8 | 42 | 190 | 150 | 66 | 93 | 0.72 | 1.7 | 16 |
| BKFP0703 | 12.8 | 64 | 300 | 150 | 66 | 93 | 0.86 | 2.5 | 25 |
| BKFP0901 | 12.8 | 42 | 190 | 150 | 87 | 93 | 0.73 | 1.7 | 16 |
| BKFP0903 | 12.8 | 64 | 300 | 150 | 87 | 93 | 0.95 | 2.5 | 25 |
| BKFP1201 | 12.8 | 64 | 300 | 135 | 75 | 130 | 0.88 | 2.5 | 25 |
| BKFP1202 | 12.8 | 77 | 360 | 135 | 75 | 130 | 1.09 | 3.0 | 30 |
| BKFP2002 | 12.8 | 77 | 360 | 175 | 87 | 130 | 1.1 | 3.0 | 30 |
| BKFP2003 | 12.8 | 102 | 480 | 175 | 87 | 130 | 1.75 | 4.0 | 40 |
| BKFP3001 | 12.8 | 115 | 540 | 166 | 125 | 173 | 1.8 | 4.5 | 45 |
| BKFP3002 | 12.8 | 154 | 720 | 166 | 125 | 173 | 2 | 6.0 | 60 |

DISCHARGE CHARACTERISTIC



LFP Battery For SLA Battery Replacement



Feature:

- **Longer cycle life:** 2000 times cycle life and 5 times longer than SLA battery
- **Wider temperature range:** -20°C~60 °C
- **Green products:** No pollution!
- **Lighter weight:** About 40% of the weight of a SLA battery
- **Higher power:** Delivers twice power of lead acid battery
- **Very low self discharge:** As low as 3% per month
- **Maintenance free:** No need any maintenance during using

Flexible functions add on:

- Bluetooth
- SMBus protocol
- Multi-connection in series/parallel

| Model | Voltage (V) | Capacity (AH) | Energy (Wh) | Dimension (±2MM) | | | | Approx. Weight (Kg) | Terminal | Charge Current (A) | Continuously Discharge Current (A) |
|-------------|------------------|--------------------|------------------|------------------|-----|-----|-----|-----------------------------|----------|----------------------------|--|
| | | | | L | W | H | TH | | | | |
| BLFP12-4.5 | 12.8 | 4.5 | 57.6 | 90 | 70 | 101 | 107 | 0.75 | T1 | 0.9 | 4.5 |
| BLFP12-7.5 | 12.8 | 7.5 | 96 | 151 | 65 | 94 | 101 | 1.1 | T2 | 1.5 | 7.5 |
| BLFP12-10 | 12.8 | 10 | 128 | 151 | 98 | 95 | 101 | 1.55 | T2 | 2 | 10 |
| BLFP12-18 | 12.8 | 18 | 230.4 | 181 | 77 | 167 | 167 | 2.7 | M5 | 3.6 | 18 |
| BLFP 12-20 | 12.8 | 20 | 256 | 181 | 77 | 167 | 167 | 2.75 | M5 | 4 | 20 |
| BLFP 12-33 | 12.8 | 33 | 422.4 | 195 | 130 | 164 | 170 | 4.8 | M6 | 6.6 | 33 |
| BLFP 12-40 | 12.8 | 40 | 512 | 197 | 165 | 170 | 175 | 5.75 | M6 | 8 | 40 |
| BLFP 12-50 | 12.8 | 50 | 640 | 229 | 138 | 205 | 211 | 7.52 | M6 | 10 | 50 |
| BLFP 12-60 | 12.8 | 60 | 768 | 259 | 168 | 208 | 214 | 9.1 | M6 | 12 | 60 |
| BLFP 12-75 | 12.8 | 75 | 960 | 259 | 168 | 208 | 214 | 10.5 | M6 | 15 | 75 |
| BLFP 12-100 | 12.8 | 100 | 1280 | 342 | 173 | 210 | 215 | 13.6 | M8 | 20 | 100 |
| BLFP 12-150 | 12.8 | 150 | 1920 | 483 | 170 | 224 | 239 | 22.5 | M8 | 30 | 120 |
| BLFP12-200 | 12.8 | 200 | 2560 | 522 | 240 | 220 | 224 | 29.6 | M10 | 40 | 120 |

AGV and Forklift Battery



- Feature:**
- Remote temperature monitor
 - Cycle life monitor
 - GPS location tracking
 - Usage state management
 - Timely malfunction feedback
 - Charge/discharge data management
 - Online mode smart charging station
 - PLC programing guidance related to battery use



| | |
|-----------------------------|-----------------|
| Nominal Voltage | 24V |
| Nominal Capacity (C/5,23°C) | 50Ah |
| Energy | 12KWh |
| Dimension(L*W*H,max) | ~ 310*228*153mm |



| | |
|-----------------------------|-----------------|
| Nominal Voltage | 24V |
| Nominal Capacity (C/5,23°C) | 100Ah |
| Energy | 24KWh |
| Dimension(L*W*H,max) | ~ 325*332*206mm |



| | |
|-----------------------------|-----------------|
| Nominal Voltage | 48V |
| Nominal Capacity (C/5,23°C) | 560Ah |
| Energy | 29.5KWh |
| Dimension(L*W*H,max) | ~ 830*630*627mm |



| | |
|-----------------------------|-----------------|
| Nominal Voltage | 24V |
| Nominal Capacity (C/5,23°C) | 270Ah |
| Energy | ~ 7KWh |
| Dimension(L*W*H,max) | ~ 623*296*650mm |



Medical Cart Battery



Feature:

- Maintenance free
- Cycle life is long
- The capacity is higher than lead acid
- The BMS can communication with device
- Device controller can monitor SOC% and SOH and so on

PHYSICAL SPECIFICATIONS

| Model | Voltage | Capacity | | Dimension (mm) | | | Weight (kg) | Case |
|---------|---------|----------|---------|----------------|-------|--------|-------------|------|
| | | Minimum | Typical | Length | Width | Height | | |
| ZE18017 | 12.8 | 51.0Ah | 52.5Ah | 210 | 138 | 186 | 6.5 | ABS |

ELECTRICAL SPECIFICATIONS

| Electrical Features | | |
|---------------------|--|---------------|
| Charge | Charge voltage | 14.4±0.1V |
| | Charge current | 10.8A |
| | Max charge current | 40A ≤2S |
| Discharge | Continuously discharge current | 30A |
| | Peak discharge current | 40A |
| | Discharge Cut Off Voltage | 9.6V |
| Temperature | Charge temperature | 0°C ~ +45°C |
| | Discharge temperature | -20°C ~ +60°C |
| | Storage temperature | -10°C ~ 40°C |
| BMS Protection | Over charge/over discharge, over current, over/under temperature, under voltage, short circuit, passive cell balance | |
| Communication | SMBus | |



Telecom Battery



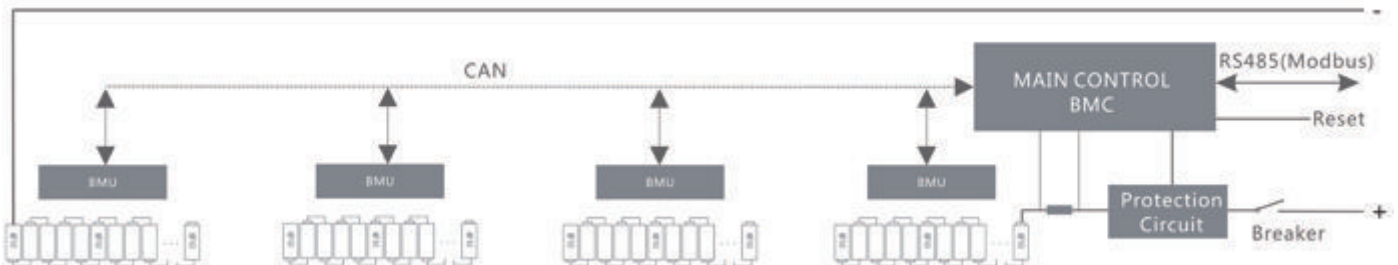
Feature:

- Advanced algorithm of SOC/SOH,system calculates the real time SOC value of battery pack automatically.
- Communication protocol:RS232/RS485/CAN and Ethernet, etc.
- Support multi packs working in parallel.
- Full BMS protection

| Model | CBAK-4810P | CBAK-4820P | CBAK-4840P | CBAK-4850P | CBAK-4860P | CBAK-48100P |
|----------------------------------|----------------------------------|--------------|--------------|--------------|--------------|--------------|
| Cycle Life (80% DOD) | ≥4000 cycles | ≥4000 cycles | ≥4000 cycles | ≥4000 cycles | ≥4000 cycles | ≥4000 cycles |
| Nominal Voltage | 48V | 48V | 48V | 48V | 48V | 48V |
| Nominal Capacity | 10Ah | 20Ah | 40Ah | 50Ah | 60Ah | 100Ah |
| Max. Charge Current (A) | 5A | 10A | 20A | 25A | 30A | 50A |
| Continuous Discharge Current (A) | 5A | 10A | 20A | 25A | 30A | 50A |
| Max. Discharge Current (A) | 10A | 20A | 40A | 50A | 60A | 100A |
| Approx. Weight (Kg) | 11KG | 16KG | 27KG | 32kg | 36.5kg | 56.5 |
| Width | 19*1U | 19*2U | 19*3U | 19*3U | 19*3U | 19*5U |
| Dimensions L*W*H (mm) | 482*360*44 | 482*360*88 | 482*420*133 | 482*420*133 | 482*420*133 | 482*420*222 |
| COM Port | RS232/RS485/CAN and Ethernet,etc | | | | | |
| Parallel Connection | Yes | | | | | |
| Operating Circumstance | 0~40 C R.H.50 30%(noncondensing) | | | | | |

Date showed in charts may varies for each model,pls contact us.

CIRCUIT TOPOLOGY



LFP UPS Battery



Feature:

- Long lasting run time
- Safe LiFePO4 Battery technology
- High rate discharge performance
- Full BMS protection function
- Support up to 4S10P connection without external BMS

PHYSICAL SPECIFICATIONS

| Model | Voltage | Capacity | | Dimension (mm) | | | Weight (kgs) | Case |
|---------|---------|----------|---------|----------------|-------|--------|--------------|------|
| | | Minimum | Typical | Length | Width | Height | | |
| ZE18017 | 12.8 | 5.8Ah | 6.0Ah | 151 | 65 | 93 | 1.1 | ABS |

ELECTRICAL SPECIFICATIONS

| Electrical Features | | |
|---------------------|--|---------------|
| Charge | Charge voltage | 14.4±0.1V |
| | Charge current | 6A |
| | Max charge current | 12A |
| Discharge | Continuously discharge current | 45A |
| | Peak discharge current | 57A (1S) |
| Temperature | Charge temperature | 0°C ~ +45°C |
| | Discharge temperature | -20°C ~ +60°C |
| | Storage temperature | -10°C ~ +40°C |
| BMS Protection | Over charge/over discharge, over/under temperature, under voltage, short circuit | |
| Connection | Can support max.4pcs in series and 10 pcs in parallel connection | |

Constant Power Discharge Characteristics @ 25°C

| Watts | 450W | 225W | 113W | 45W |
|----------|---------|--------|--------|--------|
| Run Time | 7.5mins | 15mins | 35mins | 95mins |

CERTIFICATIONS

| | |
|----------------|--------------------------------|
| UL 1642 | FCC 47CFR 15 Class B |
| UL1973 | IEC61000-6-1,-2,-3,-4, |
| UN38.3 | IEC62133-2017,CB |
| ICES-003 | Battery Directive (2006/66/EC) |
| RoHS Compliant | |