LEON® SB LBLIFEPO4-36V100AH

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- **Higher reliability**
  - **Longer lifespan: 10x longer than VRLA and 3x longer than NMC**
  - **Higher energy density: 3x longer run-time, 1/3 the weight and 1/3 the size of VRLA**
  - **4x faster charge-time than VRLA: during multiple successive outages, comes up to full charge faster, resulting in longer run-times and greater plant reliability**
  - **Greater DoD: 90% of capacity is usable energy compared to 50% for VRLA**

- **Minimal effect on battery lifespan from high discharge rates**
- **Less maintenance due to lack of corrosion**

Other features

- **Green/Environmentally-friendly**
  - **Non-contaminating: contains no lead, mercury, cadmium, cobalt or rare-earth metals to pollute and enter ground water**
  - **100% recyclable**
  - **Less waste:**
    - **Fewer raw materials (number of batteries required) for same energy density reduces waste**
    - **Longer lifespan equates to fewer batteries used over time resulting in less waste**
- **Efficient**
  - **No float charging required: reduces operational energy use**
  - **Low self-discharge rate: eliminates wasted energy required to “top up” batteries**
  - **Less effects from extreme temperature:**
    - **Charge: 0°C to +55°C (+32°F to +131°F)**
    - **Discharge: -20°C to +60°C (-4°F to +140°F)**
- **Safe**
  - **No outgassing of harmful acidic gases and explosive hydrogen that are present with lead-acid during charging**
  - **No sulphuric acid-based electrolyte: eliminates acid burn hazards and the need for personal protective equipment (PPE) such as aprons, gloves, face shields, etc.**
  - **Inherently non-combustible:**
    - **Safest, most chemically and structurally stable of all battery chemistries**
    - **Excellent thermal stability without any possibility for thermal run-away, decomposition at high temperatures, fire, or explosion**
    - **No flammability hazards eliminates special personnel training**

36 VDC, 100 Ah LiFePO4 broadband standby battery

Technetix’ LBLIFEPO4-36V100AH is the next generation lithium iron phosphate (LiFePO4) broadband battery for standby powering applications. This 36 VDC, 100 Ah, LiFePO4 battery fits on a single outside plant (OSP) cabinet battery shelf, replacing three (3) 12 VDC lead-acid (VRLA) batteries connected in series to create a 36 VDC string. This ANSI/CAN/UL 1973 and CE certified LiFePO4 battery offers premium performance while providing clean, energy efficient, safe, reliable and sustainable standby power to an HFC network standby power supply. Extremely high energy density with up to 90% depth of discharge (DoD) provides longer run-times and improved network reliability, with little to no maintenance.

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12/2023 - EN/V1

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LBLIFEPO4-36V100AH device and performance specifications

Electrical

Parameter	LBLIFEPO4-36V100AH	Units	Notes
Nominal voltage	38.4	VDC	
Nominal capacity	100	Ah	
Energy storage	3840	Wh	
Cells	12 series connected 3.2 VDC prismatic LiFePO4		
Internal resistance	≤10 mΩ @ 50% SoC		
Efficiency	≥99	%	

Charging

Parameter	LBLIFEPO4-36V100AH	Units	Notes
Charging mode	Bulk (CC) + absorption (CV)		
Continuous charge current	1C (100 A) max., 0.2C (20 A) recommended		
End of charge voltage	43.8	VDC	
Charging cut-off current	0.02C (2 A)		

Discharging

Parameter	LBLIFEPO4-36V100AH	Units	Notes
Continuous discharge current	1C (100 A) max., 0.5C (50 A) recommended		

BMS

Parameter	LBLIFEPO4-36V100AH	Units	Notes
Type	Internal		
Self-consumption current	≤ 20 mA (running), 200 µA (sleep mode)		
Overcharge protection - cut-off voltage	44.4	VDC	
Overcharge protection - delay	1.0	s	
Overcharge protection - reconnect voltage	42.0	VDC	
Overdischarge protection - cut-off voltage	31.2	VDC	
Overdischarge protection - delay	10	s	
Overdischarge protection - reconnect voltage	32.4	VDC	
Overdischarge protection - cut-off current	130	ADC	
Overdischarge protection - reconnect conditions	Disconnect load and charge		
Short circuit protection	1500 A (2 s)		
Short circuit protection - delay	400	µs	
Short circuit protection - reconnect condition	Disconnect load		
Balancing/Equalization turn-on voltage	40.8	VDC	

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BMS

Parameter	LBLIFEPO4-36V100AH	Units	Notes
Balance/Equalization current	50	mA	
High temperature operation protection - cut-off	+75°C (+167°F)	°C/°F	
High temperature operation protection - reconnect	+50°C (+122°F)	°C/°F	
Low temperature charge protection	-5°C (+23°F)	°C/°F	
Low temperature charge protection reconnect	-2°C (+29°F)	°C/°F	
Low temperature discharge protection	-20°C (-4°F)	°C/°F	
Low temperature discharge protection reconnect	-10°C (+14°F)	°C/°F	

Certifications

Parameter	LBLIFEPO4-36V100AH	Units	Notes
Certifications	ANSI/CAN/UL 1973		
	UN38.3		
	CE		

Mechanical and environmental specifications

Parameter		LBLIFEPO4-36V100AH	Units	Notes
Operating temperature	Charge	0°C to +55°C (+32°F to +131°F)	°C/°F	
	Discharge	-20°C to +60°C (-4°F to +140°F)	°C/°F	
Storage temperature		-5°C to +35°C (+23°F to +95°F)	°C/°F	
Storage humidity		<95	%	
Terminal type		M8 x 1.25		
Terminal torque		221 in-lb (25 Nm)		
Case material		ABS		
Enclosure protection		IP65		
Dimensions (H x W x D)		8.7”H x 20.5”W x 10.6”D (22.1H x 52.0W x 26.9D cm)	in/cm	
Weight		66.1 lb (30.0 kg)	lb/kg	

Order information

Item code	Description
19200934	36 VDC, 100 Ah LiFePO4 broadband standby battery

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