TEB Series

TEB4815 – 4U 48V/150Ah

Lithium-ion Iron Phosphate (LFP) Battery

This new DELTA 48V battery pack is designed with 150Ah capacity battery cell of lithium-ion iron phosphate chemistry.

It provides larger capacity in a compact size of 19” rack-mounted 4U chassis. This pack has RS485 communication and built-in BMS with automatic protection and cell balancing to offer safe and most efficient operation to customers.

The pack application is developed for Telecom equipment power backup. Under normal condition, grid AC power supplies to rectifier module and the Telecom loads and also charge battery pack.

When the AC power failed, rectifier module stop power supply to loads, the battery serves for Telecom equipment to ensure the Telecom equipment operation normally; when the AC power is switched on again, power from rectifier module to Telecom equipment recovered and charge the battery pack back to backup status.

Main features

- RS485 communication output for monitoring
- Built-in automatic protection for automatic protection for over-charge, over-discharge and over-temperature conditions
- Built-in BMS with Charging current limiting circuit
- Built-in battery optimal control algorithm to manage sleep/wakeup and intermittent charging mode to improve operation efficiency.
- Built-in Cell balancing function
- LED indication of State of Charge and Alarm/Run status
- Compatible with standard Telecom rectifiers
- Maintenance free

Applications

- 3G / 4G / 5G
- Fixed Line
- Datacom

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Nominal	
Voltage	48.0V_{DC}
Nominal Capacity (25°C)	150Ah (capacity is measured under to 0.2C / 25oC @ BOL)

Electrical	
Energy - Nominal Energy (25°C, 0.2C) - Volumetric Energy Density - Gravimetric Energy Density	7200Wh (capacity is measured under to 0.2C / 25°C @ BOL) 206Wh/L 118Wh/kg
Standard Discharge (25°C) - Maximum continuous Current - Cut-off Voltage - LVBD Voltage	100A 37.5V_{DC} 41.3V_{DC}
Standard Charge (25°C) - Maximum continuous Current - Recommended Charging Current - Charge Voltage	100A 50A Max 53.5 V_{DC} (Recommend: 51.9V_{DC})
Charge current limit function	10A
Internal impendence	<19mΩ

Mechanical	
Dimensions (W x H x D)	Without handle : 442（±1) x 165（±1) x 480（±1) mm With handle & terminal : 442（±1) x 165（±1) x 521.5（±1) mm
Weight	approx. 61±1.0kg
Total Cells Quantity in Battery Module	15pcs of cell in series (Prismatic type cell)
Materials of Battery case	Carbon steel with corrosion resistant coating
Cell	LFP 150Ah
Max Quantity of Battery Parallel Connection	15 for one RS-485 and max 30 pcs in system.
Color	RAL9003 (White)

Delta Electronics (Netherlands) B.V.,
Zandsteen 15 2132 MZ Hoofddorp, The Netherlands
Phone: +31 20 800 3900
www.delta-emea.com
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Environmental	
Calendar Life (25℃)	> 10 years
Cycle Life (100A/100A, DOD 100%, 25℃)*	SOH 80%, 3500 cycles
Operating Temperature**	0 to +50ºC (De-rating from 35ºC)
Storage Temperature	to +45ºC (Recommended range: 10 to +30ºC)

BMS Parameters	
Voltage (Charge)	Cell voltage protection: 3.75V protection (Recover at 3.45V) Total voltage protection: 55.5V protection (Recover at 50.4V)
Voltage (Discharge)	Cell voltage protection: 2.5V protection (Recover at 3.1V) Total voltage protection: 37.5V protection (Recover at 45V)
Current (Charge)	Normal ≤ 100A Charging current limiting function: > 110A (10sec) Charging current limiting function: > 125A (3sec)
Current (Discharge)	Normal ≤ 100A Over current protection 1: > 110A and < 125A (10sec) Over current protection 2: > 125A (3sec) Short circuit protection: ≥ 320A (<1ms)
Temp (Cell)	Low temp protection: Charging < 0℃, Discharging < -20℃ High temp protection: Charging > 55℃, Discharging > 60℃
Temp (PCB)	temp protection ≥95℃ (Recovery < 75℃)
Cell Balance (Balance)	BMS include Passive balancing circuit and algorithm , (Current:＜100mA)
Dry contact	D.O x 2

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Standards	
Safety	CE, UN38.3, IEC62619, IEC60730-1
EMC	EN 61000-6-3:2007+A1:2011+AC:2012 EN IEC 61000-6-1:2019

Ordering Information	
BSPMT-GP1151C0GL0	BATTERY PACK LI-ION 48.0V 150AH

* It means to charge at 100A and discharge at 100A.
** Operation temperature means the ambient temperature. Protection may be triggered if the conditions defined in the specification are exceeded.
All specifications are subject to change without prior notice.
Performance may vary depending on, but not limited to cell usage and application.
If cell is used outside specifications, performance will diminish.

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