General Specifications

Nominal Voltage	51.2V
Maximum Charge Voltage	58.4V
Nominal Capacity @1C/1C	40Ah
Energy	2.048kWh
Cell Chemistry	$LiFePO_4$
Cycle Life at 100% DOD	>2,000
Parallel Cascade	Up to 15
Serial Cascade	Not Supported
LED Indicator	YES, Tri-color
Button	Multi-function
Vent Valve	YES

Discharge

Maximum Continuous Discharge Current	80A
1st Level Discharge Cut-Off	TBD
Peak Discharge (30S)	TBD
Peak Discharge (10S)	TBD
Discharge Cut-Off Voltage	40V

Charge

Maximum Charge Current	40A

Others

Charge Temperature	-30~65°C
Discharge Temperature	-20~65°C
Standby Current	<30mA
Sleep Current	<30μA
Self-discharge	~3.5%

Dimension (L*W*H)	260*180*275mm
Enclosure Material	ABS+PC
Case Flame Class	UL94 V-0
IP Rating	IP67
Design Compliance	UN 38.3, IEC 62133, UL2271, UL2580
Shipping	UN3480, Class 9

ATP-GC2-4840 rechargeable battery is designed specially for fitting most motive applications such as utility vehicles, golf carts, AGV, aerial working platforms and etc.

9 THINGS to consider when choosing the right deep cycle batteries for motive applications

1) Energy Density

This is always the main reason to drive you to convert from lead acid to lithium, ATP-GC2-4840 is almost alone in the industry to offer 48V40Ah (2.048kWh) in GC2 form factor

2) Opportunity Charging

With **Speedy Charge** feature, ATP-GC2-4840 supports up to 1C of charge current, which enable charging a fully discharged battery to full in less than 70 mins

3) Long Cycle Life

The superb cell consistency and state of art battery pack design facilitates up to 2,000 charge/discharge cycles even under 100% DOD

4) Cell Safety

Instead of Pouch & Prismatic cells, ATP-GC2-4840 makes use of cylindrical cells, which are widely ascertained the most mature cell technology in automotive and motive applications

5) Expandable Capacity

Up to 15 units of ATP-GC2-4840 can be cascaded in parallel, provide up to 600Ah (30kWh) of energy, simultaneous charge and discharge to this battery bank is allowed, thanks to the built-in BMS which safeguarding these operations

6) CAN bus Communication

The optional built-in CAN bus port enables a link between the cascaded batteries, the host and the smart chargers

7) SOC Estimation by Current Integration

With the built-in high precision coulomb counting ADC, the RSOC is estimated by current integration instead of voltage measuring

8) Quick Cascade Connection

With the two extra connectors in both positive & negative, user may cascade the batteries in few seconds with dedicated cables.

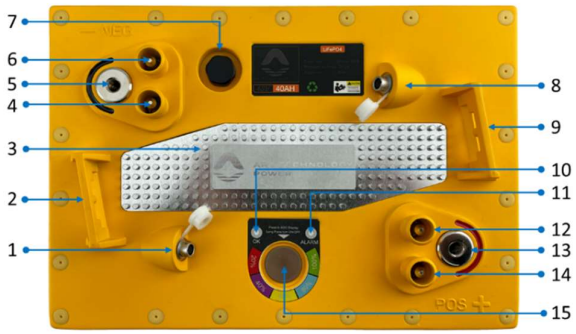
9) Wide Range of Charging Temperature

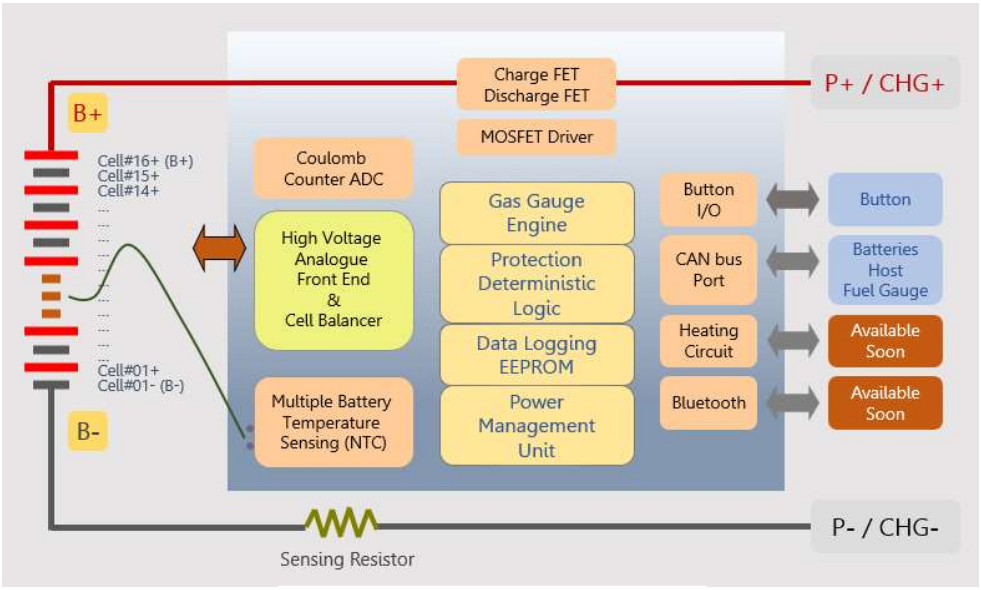
Last but not the least, ATP-GC2-4840 allows charging at sub-zero temperature and up to 65°C

CORPORATE INTRODUCTION

Shenzhen ATPower Electronics Co. Ltd. is the industry leader in design & manufacturing Lithium batteries for varies industrial & commercial applications. ATPower has in-house development team to design the BMS hardware and firmware, we can provide turnkey service from cell selection & qualification, battery pack design, ID & enclosure design, communication protocol design and battery pack manufacturing.

NO.	FUNCTION	NO.	FUNCTION
1	CAN bus OUT	8	CAN bus IN
2, 9	Lift up handle	10	Status indicator
3	Heat sink	11	Alarm indicator
4, 5, 6	Chg/Dischg negative	12, 13, 14	Chg/Dischg positive
7	Vent valve	15	Push button





ATP-GC2-4840 Block Diagram

BATTERY PROTECTIONS
Cell Over Voltage
Cell Under Voltage
Over Charge Current
Over Discharge Current
High Temperature in Charging
High Temperature in Discharging
Low Temperature in Charging
Low Temperature in Discharging
Short Circuit

CHARGER REQUIREMENTS	
Charge Voltage	55.2V(3.45vpc)
Float Charge Voltage	54.4V
Over Charge Voltage Cut-Off	59.2V(3.7vpc) for 4S
Bulk Charge Current	≤40A
Over Charge Current Cut-Off	45A for 4S
Temperature Compensation	None

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