



48V 24Ah Portable Lithium-Ion BATTERY Pack

Product Data Sheet



MANUFACTURED BY

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PPC4824N
48V 24Ah LI-ION BATTERY PACK

BATTERY PACK DESCRIPTION

- Pacto Power's 48V 24Ah portable battery pack is a compact, safe and economical Li-Ion battery pack. This standalone battery pack is designed for Electric Vehicle (Bike and Scooty) with high power NMC Li-Ion Cells. No additional equipment is required for safe operation of battery pack.
- In extreme operating conditions, BMS disconnect battery from the system. This ensure safe operation and protect the battery pack against short circuits, over-charge, over-discharge, over current and over temperature.
- This Li-Ion battery pack is maintenance free, and has a longer run time with a shorter recovery time than equivalent lead acid battery packs. It weighs 70% less and takes 60% less space than equivalent lead acid battery packs, providing increased range product compatibility.

BATTERY PACK FEATURES

- **SAFE OPERATION:**

- It is designed to the highest automotive standards
- A Class BMS ensures 24/7 battery performance and safety
- Protect against short circuit, cell over voltage, cell under Voltage, charge over current and discharge under current
- BMS monitors all 13 cell series voltage for passive balancing

- **HIGH PERFORMANCE:**

- We have used a high power NMC Li-Ion cells.
- It support 40A continuous and 60A peak discharge current
- It support 20A continuous charge current
- This battery pack has extremely low power dissipation
- Up to 50mA passive cell balancing

- **CONVENIENT TO USE:**

- This battery pack is direct replacement to lead acid battery pack
- Standards Plug in Plus Out power socket
- It has very short charging time
- Light weight and portable to use.
- It comes with IP54 water tight enclosure also.

BATTERY PACK TECHNICAL PARAMETERS

GENERAL SPECIFICATION	
Model	PPC4824N
Dimensions (LxWxH)	195mmX195X155mm
Weights	7.5kg
Nominal Packing	METAL BOX
Cell Type	3.7V NMC Cylindrical
Cell Model	18650

ELECTRICAL SPECIFICATION	
Nominal Voltage	48.1V
Nominal Capacity	24Ah
Energy	1155Wh
Resistance	40mΩ at 50%SOC
Efficiency	99%
Self-Discharge	<5% Per Month

CHARGING PARAMETRS	
Recommended Charge Current	1A – 20A
Maximum Charge Current	20A
Recommended Charge Voltage	54.5V – 55.0V
BMS Charge Cut-Off Voltage	55.25V±0.25V
Over Charge Detection Delay	500 – 600mSec
Over Charge Release Voltage	53.95V±0.50V

DISCHARGING PARAMETRERS	
Recommended Discharge Current	1A – 40A
Maximum Continuous Discharge Current	40A
Peak Discharge Current	60A for 2 Sec
Recommended Discharge Voltage	34.5V – 35.0 V
BMS Discharge Cut-Off Voltage	35.75V±0.50V
Over Discharge Detection Delay	500 – 600mSec
Over Discharge Release Voltage	36.4V±0.50V

FEATURES OF BMS



Our A Class BMS provides passive balancing of up to 50 mA. Cell balancing is achieved by discharging energy from the highest charged cells, resulting in increased pack lifetime with a higher capacity and longer runtime than unbalanced battery packs.



Our A Class BMS protect battery pack from over charging. It detect the voltage and cut the charging at 55.25V. This is a very essential safety parameter as it make battery pack safe from overheating.



Our A Class BMS protect battery pack from over discharging when running on load. It detect the voltage and cut the discharging at 35.75V. This is a very essential safety parameter as it make battery pack safe from deep discharge.



BMS protect battery from short circuit condition. If any exterior short circuit is happening it detect the condition and disconnect the load from battery pack.



BMS protect battery pack from over current in case heavy load is applied on pack other than specified. It detects the current at 60A and cut the load from battery bank.

SAFETY AND PRECAUTION

- When charging the battery, use dedicated chargers and follow the specified conditions.
- Do not connect battery directly to an electric outlet or high current application.
- Do not heat or throw battery into a fire.
- Do not use, leave battery close to fire or inside of a car where temperature may be above 60°C. Also do not charge / discharge in such conditions.
- Do not immerse, throw, and wet battery in water/ seawater.
- Do not put batteries in your pockets or a bag together with metal objects such as necklaces, Hairpins, coins, or screws. Do not store batteries with such objects.
- Do not short circuit the (+) and (-) terminals with other metals.
- Do not place battery in a device with the (+) and (-) in the wrong way around.
- Do not pierce battery with a sharp object such as a needle.
- Do not hit with a hammer, step on or throw or drop to cause strong shock.
- Do not disassemble or modify the battery.
- Do not use a battery with serious scar or deformation.

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