



NOCO NLP5 250A Lithium Powersport Battery User Guide

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DANGER



READ AND UNDERSTAND ALL SAFETY INFORMATION BEFORE USING THIS PRODUCT.

Failure to follow these safety instructions may result in ELECTRICAL SHOCK, EXPLOSION, FIRE, which may result in a SERIOUS INJURY, DEATH, or PROPERTY DAMAGE.



Electrical Shock. Product is an electrical device that can shock and cause serious injury. Do not submerge in water or get wet.



Explosion. Never short-circuit the battery terminals. Do not use with an incompatible charging device. Do not attempt to jump start, charge, or discharge the battery if damaged or frozen. Never charge or discharge the product outside its operating temperatures. Never over-charge or over-discharge the battery. Never exceed the maximum charging currents of the battery. Never incinerate.



Fire. The product is an electrical storage device that can emit heat. Do not cover product or place objects on top of the product. Keep the product away from combustible materials.



Eye Injury. Wear eye protection when operating product. Batteries can explode and cause flying debris. In the case of contamination of eyes or skin, flush affected area with running clean water and contact poison control immediately.

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Important Safety Warnings

Proposition 65. Battery posts, terminals, and related accessories contain chemicals. These materials are known to the State of California to cause cancer and congenital disabilities and other reproductive harm. Personal Precaution. Only use the product as intended. In case of an emergency, have someone nearby while using this product. Wear complete eye protection and protective clothing while working near a battery. Always wash hands after handling batteries and related materials. Do not handle or wear any metal objects when working with batteries, including; tools, watches, or jewelry. If metal is dropped onto the battery, it may spark or create a short-circuit resulting in electrical shock, fire, explosion, which may result in injury, death, or property damage. Minors. If the product is intended by "Purchaser" to be used by a minor, the purchasing adult agrees to provide detailed instructions and warnings to any minor before use. The "Purchaser" agrees to indemnify NOCO for any unintended use or misuse by a minor. Choking Hazard. Accessories for the product may present a choking hazard to children. Do not leave children unattended with the product or any accessory. The product is not a toy. Handling. Handle the product with care. The product can become damaged if impacted. Do not use a damaged product, including, but not limited to, cracks to the casing. Humidity and liquids may damage the product. Do not handle products or any electrical components near any liquid. Store product in dry locations. Do not operate the product if it becomes wet. If the product is already operating and becomes wet, discontinue use immediately. Modifications. Do not attempt to alter, modify, or repair any part of the product. Disassembling the product may cause injury, death, or damage to property. If the product becomes damaged, malfunctions or comes in contact with any liquid, discontinue use, and contact NOCO. Never disable the internal battery management system (BMS) for any reason. Any modifications to the product void your warranty. Operating. The operating temperature range is -4°F (-20°C) to 140°F (60°C). The charging temperature range is 14°F (-10°C) to 122°F (50°C). Do not operate outside of the recommended temperature ranges. Storage. The recommended storage temperature range is -4°F (-20°C) to 140°F (60°C). Never exceed 140°F (60°C) under any circumstances. For optimal longevity, store at 77°F (25°C) and a state-of-charge (SOC) higher than seventy-percent (70%). The storage self discharge rate is less than five-percent (5%) per month. It is not recommended to store the battery for more than 6 months without charging. Ventilation. The product does not release gas during regular use, so there are no

specific ventilation requirements. However, it is crucial to minimize temperature extremes or restricting airflow to the product. A minimum of 0.50" (12.7 mm) of space should be kept around the product to allow for adequate airflow. Disposal. The product must be recycled or disposed of separately from household waste. Disposal of the product in household trash is unlawful under state and federal environmental laws and regulations. Always take the product to your local battery recycling center. Retrofit. Lithium-ion batteries weigh substantially less than lead-acid batteries of comparable capacity. Some equipment is designed to utilize the weight of lead-acid batteries to achieve weight distribution. Using the product as a replacement battery could impact the weight distribution of the equipment. Understand the consequences of modified weight distribution and ensure safe weight distribution. You assume all responsibility and liability for any damages, injuries, or accidents that may occur due to degraded stability. Charging. The product is a 12-volt lithium-ion battery. Do not use a charger that utilizes a pulse charge or a desulfation feature. For optimal performance, we recommend only using the 12-volt lithium mode on NOCO Genius chargers. If using a third-party charger, it must be compatible with 12-volt Lithium Iron Phosphate (LiFePO4) batteries with a charging voltage of 14.6-volts, and be certified under one or more of the following standards: IEC60601, UL1236, RCM, PSE or CE (LVD, EMC). Be cautious of using low-quality chargers, as they may present a severe electrical risk that can result in injury to person and property, as well as shorten the life of the product and cause the product to malfunction. NOCO is not responsible for the user's safety when using accessories or chargers that are not approved by NOCO. During charging, if the battery becomes excessively warm, deforms, swells, or emits smoke or odor, discontinue use immediately and contact support. Connections. Make sure all connections to the product are secure. Use 70-90 inch-pounds of torque to secure the connections properly. Loose connections may cause reduced performance and increased heat due to resistance that may cause the melting of the enclosure or potentially a fire. Medical Devices. The product may emit electromagnetic fields. The product contains magnetic components that may interfere with pacemakers, defibrillators, or other medical devices. Consult with your physician before use if you have any medical device. If you suspect the product is interfering with a medical device, stop using the product immediately, and consult your physician. Cleaning. Disconnect and remove the product before cleaning. Immediately dry the product if it comes in contact with liquid or any contaminant. Use a soft, lint-free (microfiber) cloth. Do not use a pressure washer to clean the battery. Explosive Atmospheres. Obey all signs and instructions. Do not operate the product in any area with a potentially explosive atmosphere, including fueling areas or areas which contain chemicals or particles such as grain, dust, or metal powders. High Consequence Activities. Do not use the product where the failure of the product could lead to injury, death, or severe environmental damage. Radio Frequency Interference. This product complies with regulations governing radio frequency emissions. Such emissions from the product may negatively affect the operation of other electronic equipment, possibly causing them to malfunction.

Installation

Before installing the product, make sure it's fully charged. Visually inspect the product for any signs of damage (e.g., cracks, dents).

Make sure the battery terminals are free from dirt, oxidation, or corrosion. Install the product in any horizontal or vertical orientation, except with the terminals facing downward. Follow the below steps for the installation process:

1. Remove the original battery following the manufacturer's guidelines.
2. Compare the height of the original battery to the product. If the original battery dimensions are larger than the product, use the included spacers and foam to adjust the height to match the original battery as closely as possible. For more information on fitment, see our battery fitment guide.
3. Securely fasten the battery to the battery tray/box, making sure the battery cables reach both battery terminals.
4. Using the included fastening hardware, attach the positive (+) battery cable to the positive (+) battery terminal and the negative (-) battery cable to the negative (-) battery terminal. Make sure the battery cables connect to the correct polarity.
5. Securely fasten to the battery by using 70-90 inch-pounds of torque. Do not overtighten.

Battery Fitment

The following table provides the battery fitment and the corresponding spacers and foam needed to achieve proper height, width and length for retrofit applications.

Model	Battery Fitment	Spacers
	BTZ5S	None
	BTX4L-BS	None
	BTX5L-BS	(1) 20mm
	BTX7L-BS	(1) 20mm, (1) 24mm
NLP9	BTX7A-BS	None
	BTX9-BS	(1) 12.5mm
NLP14	BTX12-BS	(1) 12.5mm, (1) 25mm
	BTX14-BS	(2) 25mm
	BTX16-BS	(1) 17mm, (2) 25mm
	B16A-AB	(1) 12.5mm, (3) 25mm
	BTZ10S	None
NLP20	BTX20L-BS	(1) 12mm, (1) 15mm
	B50-N18L-A3	(2) 15mm, (4) 7.5mm Foam
	B16CL-B	(3) 15mm, (3) 7.5mm Foam
NLP30	BTX30L	None

Troubleshooting

Dynamic BMS.

The product utilizes a dynamic Battery Management System (BMS) that monitors the internal lithium-ion cells and disconnects them if a fault occurs. The BMS protects against over-charge, over-discharge, over-current, short-circuit, over-temperature, and undertemperature fault conditions. The BMS also includes cell balancing to maintain voltage balance between individual cells to ensure optimal battery performance. The BMS automatically recovers from fault conditions without user intervention.

In extremely cold temperatures, the battery may be slow to provide power initially. If this occurs, attempt to start the equipment again. Repeated attempts will self-heat the lithium cells and allow them to provide sufficient power. In order to protect the lithium cells, the BMS will not allow charging below -10°C (14.0°F). Once the battery temperature reaches -10°C (14.0°F) or higher, charging will be allowed.

In order to protect the lithium cells, the BMS will not allow charging or discharging when the battery temperature reaches 60°C (140°F). This situation can occur with high ambient temperature and repeated starting attempts which self-heat the battery. Once the battery cools the BMS will allow charging and discharging.

Protection	Recovery Process
Over-Charge	Recovers when an external load is applied.
Over-Discharge	Recovers when a charger is applied.
Over-Current	Recovers when an external load is removed.
Short-Circuit	Recovers when an external load is removed.
Over-Temperature	Recovers when returning to its operating temperature range.
Under-Temperature	Recovers when returning to its operating temperature range.

Charging

To recharge the product, connect a compatible lithium-ion charger to the positive (+) and negative (-) battery terminals. The recommended charging voltage is 14.6-volts. The product uses advanced lithium-ion technology that allows for the rapid charging of the internal lithium-ion cells. This is a table of the charging times, based on 100% depth-of-discharge (DOD), using recommended NOCO Genius Smart Battery Chargers:

Recharge Times Using NOCO GENIUS Chargers.

	GENIUS1	GENIUS2	GENIUS5	GENIUS10
NLP5	2hr	1hr	24min	–
NLP9	3hr	1.5hr	36min	–
NLP14	4hr	2hr	48min	24min
NLP20	7hr	3.5hr	1.4hr	42min
NLP30	8hr	4hr	1.6hr	48min

Technical Specifications

BCI Size	5	9	14	20	30
Type	Lithium – Ion				
Chemistry	Lithium Iron Phosphate (LiFePO4)				
Nominal Voltage (V)	12.8				

Amp-Hours	2	3	4	7	7.8
Watt-Hours (Wh)	25.6	38.4	51.2	89.6	99.84
Starting Current	250	400	500	600	700
Continuous Current	20A	30A	40A	70A	80A
Charging Voltage (V)	14.6V				
Charging Current (A)	6A (Max)	9A (Max)	12A (Max)	21A (Max)	24A (Max)
Operating Temperature	-20°C to 60°C				
Charging Temperature	-10°C to 50°C				
Storage Temperature	-20°C to 60°C				
Housing Protection	IP66 waterproof rated				
Dimensions: Inches (cm)	3.35×4.45×2.76 (8.5×11.3×7.01)	3.66×5.87×3.43 (9.29×14.9×8.71)	3.66×5.87×3.43 (9.29×14.9×8.71)	5.0×6.9×3.4 (12.7×17.5×8.6)	7.0×6.5×5.0 (17.7×16.5×12.7)
Weight: Lbs (kg)	1.5 (0.69)	2.29 (1.03)	2.58 (1.17)	3.73 (1.7)	5.0 (2.27)

NOCO Five (5) Year Limited Warranty

NOCO warrants that this product (the "Product") will be free from defects in material and workmanship for a period of Five (5) Years from the date of purchase (the "Warranty Period"). For defects reported during the Warranty Period, NOCO will, at its discretion, and subject to NOCO's technical support analysis, either repair or replace defective products. Replacement parts and products will be new or serviceably used, comparable in function and performance to the original part and warranted for the remainder of the original Warranty Period.

NOCO'S LIABILITY HEREUNDER IS EXPRESSLY LIMITED TO REPLACEMENT OR REPAIR. TO THE MAXIMUM EXTENT PERMITTED BY LAW, NOCO SHALL NOT BE LIABLE TO ANY PURCHASER OF THE PRODUCT OR ANY THIRD PARTY FOR ANY SPECIAL, INDIRECT, CONSEQUENTIAL OR EXEMPLARY DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, PROPERTY DAMAGE OR PERSONAL INJURY, RELATED IN ANY WAY TO THE PRODUCT, HOWSOEVER CAUSED, EVEN IF NOCO HAD KNOWLEDGE OF THE POSSIBILITY OF SUCH DAMAGES. THE WARRANTIES SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND THOSE ARISING FROM COURSE OF DEALING, USAGE OR TRADE PRACTICE. IN THE EVENT THAT ANY APPLICABLE LAWS IMPOSE WARRANTIES, CONDITIONS OR OBLIGATIONS THAT CANNOT BE EXCLUDED OR MODIFIED, THIS PARAGRAPH SHALL APPLY TO THE GREATEST EXTENT ALLOWED BY SUCH LAWS.

This Warranty is made solely for the benefit of the original purchaser of the Product from NOCO or from a NOCO approved reseller or distributor and is not assignable or transferable. To assert a warranty claim, the purchaser must: (1) request and obtain a return merchandise authorization ("RMA") number and return location information (the "Return Location") from NOCO Support by emailing support@no.co or by calling 1.800.456.6626; and (2) send the Product, including RMA number, and receipt to the Return Location. DO NOT SEND IN PRODUCT WITHOUT FIRST OBTAINING AN RMA FROM NOCO SUPPORT.

The original purchaser is responsible (and must prepay) all packaging and transportation costs to ship products for warranty service.

NOTWITHSTANDING THE ABOVE, THIS HASSLE-FREE WARRANTY IS VOID AND DOES NOT APPLY TO PRODUCTS THAT: (a) are misused, mishandled, subjected to abuse or careless handling, accident, improperly stored, or operated under conditions of extreme voltage, temperature, shock, or vibration beyond NOCO's recommendations for safe and effective use; (b) improperly installed, operated or maintained; (c) are/were modified without the express written consent of NOCO; (d) have been disassembled, altered or repaired by anyone other than NOCO; (e) the defects of which were reported after the Warranty Period.

THIS HASSLE-FREE WARRANTY DOES NOT COVER: (1) normal wear and tear; (2) cosmetic damage that does not affect functionality; or (3) Products where the NOCO serial number is missing, altered, or defaced.

HASSLE-FREE WARRANTY CONDITIONS

These conditions apply only to product during the warranty period. The Hassle-Free Warranty is void either by elapsed time from date of purchase (elapsed time from serial number date, if no proof of purchase) or from the conditions listed earlier in this document. Return product with the appropriate documentation.

With Receipt:

5 Year: No charge. With proof of purchase, the warranty period begins on date of purchase.

With NO Receipt:

5 Year: No charge. With no proof of purchase, the warranty period begins on the serial number date.

We recommend registering your NOCO product in order to upload proof of purchase and extend your effective warranty dates. You may register your NOCO product online at: no.co/register. If you have any questions regarding your warranty or product, contact NOCO Support (email and phone number above) or write to: The NOCO Company, at 30339 Diamond Parkway, #102, Glenwillow, OH 44139 USA.

Documents / Resources

	<p>NOCO NLP5 250A Lithium Powersport Battery [pdf] User Guide NLP9, NLP14, NLP20, NLP30, NLP5 250A Lithium Powersport Battery, 250A Lithium Powersport Battery</p>
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