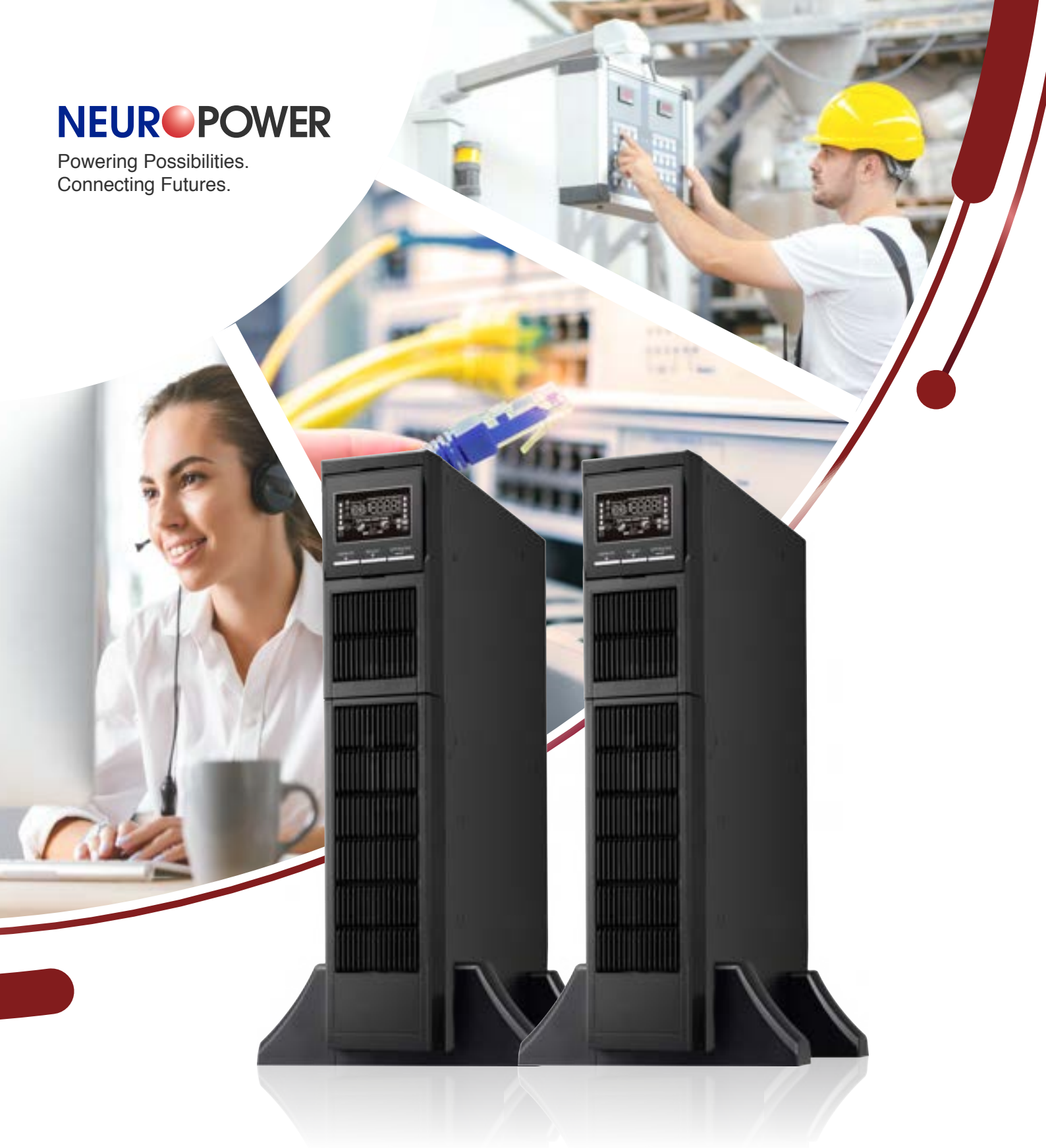
NEUROPOWER

Powering Possibilities.
Connecting Futures.



Lithium-ion UPS

Galleon One LiO

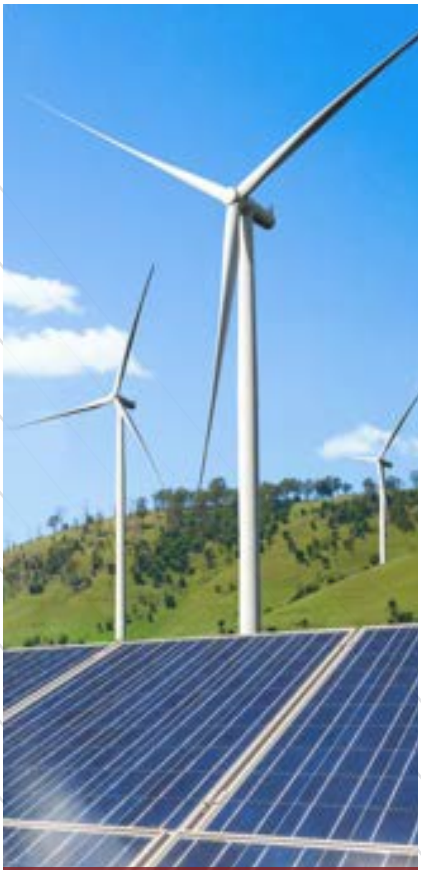
RT Series

Galleon One LiO Series (Rackmount)

Lithium ion (Li-ion) batteries are becoming a norm in the industry for UPS systems, data centers and many more as they offer higher energy density at a smaller physical footprint as well as longer lifecycles at a lower cost compared to traditional sealed lead acid maintenance (SLA) batteries.

Amongst all the Li-ion technologies, Neuropower implements the latest Li-ion technology, Lithium Iron Phosphate (LiFePO4) into our UPS system. The Galleon One LiO series offers to users the main benefits such as the highest specific power with high performance, safest with the most stable thermal stability Li-ion battery technology, longest lifecycle with no replacement needed within 10-15 years and lowest in cost compared to other Li-ion battery technologies.

The innovatively designed Galleon One LiO is the user's choice when it comes to reducing equipment's footprints while keeping it compact and space friendly for revenue increase, thus lowering overall costs for users.



GREEN ENERGY CENTRE

DATA CENTER

MEDICAL IMAGING SUPPORT

Galleon One LiO RT Series 1kVA-5kVA features

Pure sinewave output using true double conversion technology with an output power factor up to 1.0 enhanced with Lithium batteries.

1. Latest Lithium ion battery design - Lithium Iron Phosphate (LiFePO4)

Implementing the latest Li-ion technology into our UPS system offers advantages like high power performance with the longest lifecycle yet the lowest in cost compared to other Li-ion battery technologies. Safe to use and produces a smaller physical footprint due to its stable thermal components.

2. Built-in protection circuit in battery pack certified with UL 1973 (MH63914)

To make sure that our UPS is safe for our users and their critical faciltiies, the built-in protection circuit in the battery pack has undergone and is certified with the UL 1973 safety standards.

3. UN 38.3 certification for battery transportation

As a safety precaution, the Lithium ion batteries are tested and certified with the UN 38.3 test for their safety while being transported. This means that the Lithium ion UPS series can be shipped by air hence shortening shipping time

4. Input power factor correction

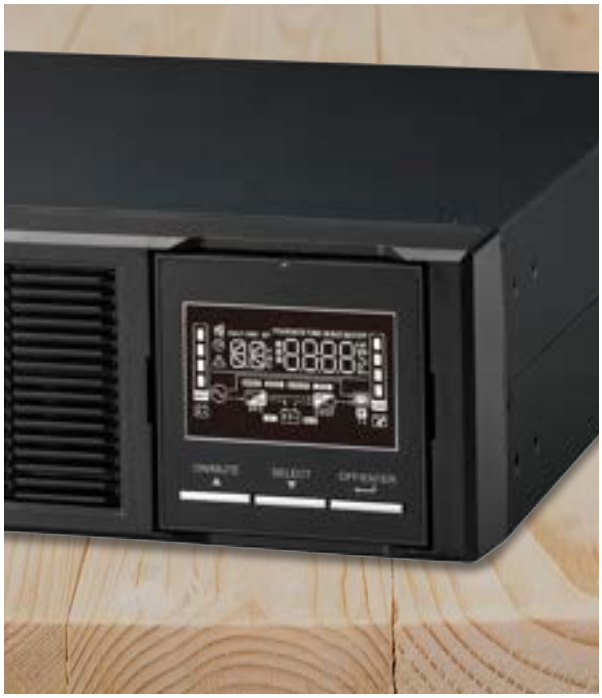
UPS input power factor is the ratio between the input active or also known as real power against the input apparent power. By using input power correction technology, more active power will be available from the UPS, essentially allowing more loads to be supported by a single UPS. Thus, saving floor space and overall cost especially cabling and installation.

5. Built-in Battery Management System (BMS)

Users may easily monitor connect to the UPS's built-in Battery Management System (BMS) communication port for direct, convenient and detail battery management purpose.

6. Faster battery recharge time compared to regular SLA battery power UPS

In compared to typical sealed lead acid maintenance (SLA) batteries, the UPS's Lithium ion battery technology eases users with a fast battery recharge time. Both 1-3kVA and 5kVA models achieve 1.5 hours of recovery charging time to a 90% capacity.



7. More than 8 minutes backup time at full load capacity

In the event of a power outage, Galleon LifePO4 is capable of operating for more than 8 minutes at full load capacity. This is longer runtime than most regular SLA battery powered UPS that runs for 3 to 5 minutes at full load.

8. Generator compatible

UPS can be installed in residential or commercial places with generators on standby. In the event of an extended power outage, the UPS ensures a stable and clean uninterrupted power supply to the essential equipment for its maximum protection and efficiency.

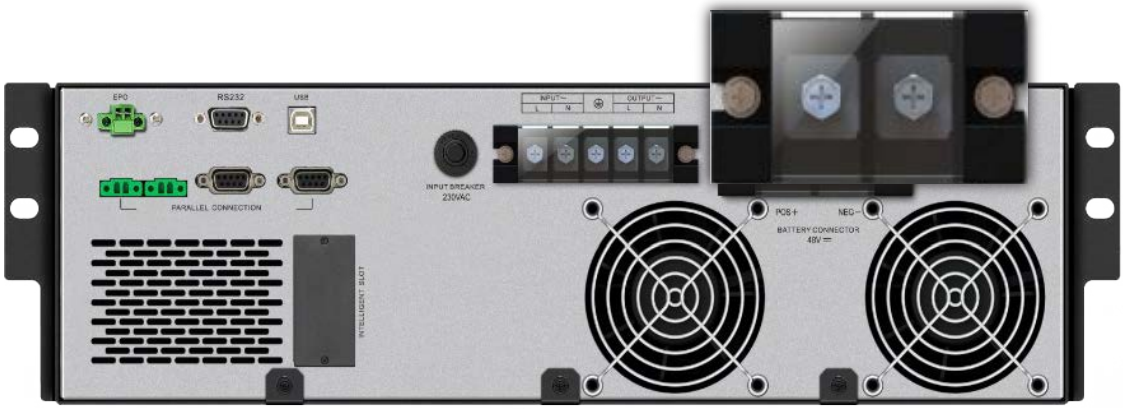
9. Long battery lifecycle

The use of Lithium ion batteries in this UPS helps it to achieve an extended runtime. No replacement is needed within 10 to 15 years. More than 2000 cycles for the 1-3kVA model and more than 8000 cycles for the 5kVA model.

10. Easy expansion modular design

Easiest and fastest UPS battery system expansion one will ever see. Simply add battery modules to the existing system to extend backup time.

Battery panel for battery replacement

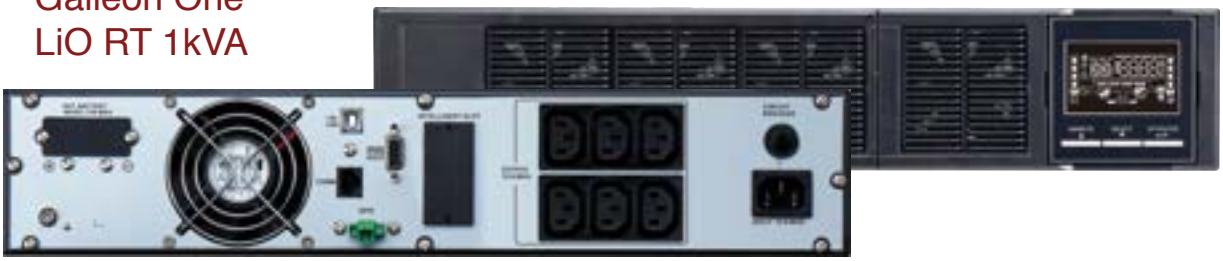


Rear view of Galleon One LiFePO4 model

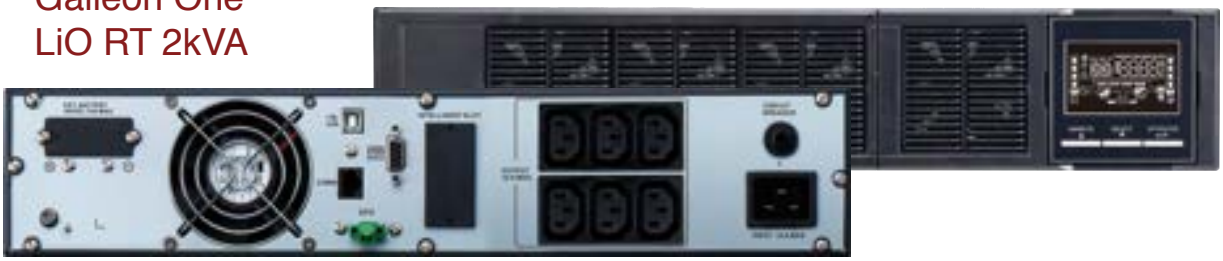
Galleon One LiO RT Series Models

This UPS comes with state of the art lithium iron phosphate batteries and different power ratings to provide a versatile power protection solution.

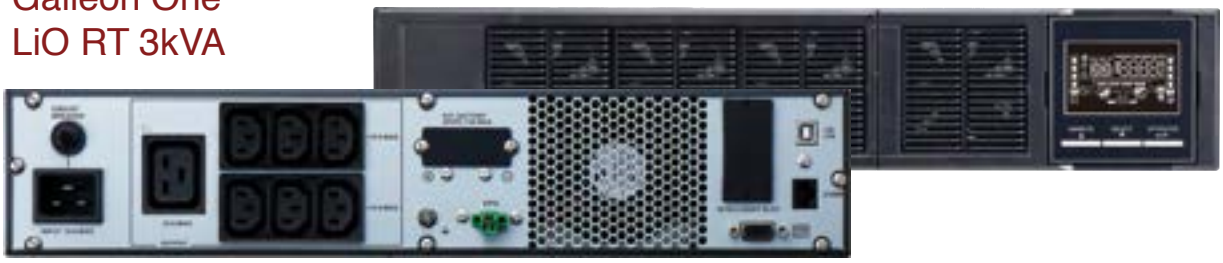
Galleon One
LiO RT 1kVA



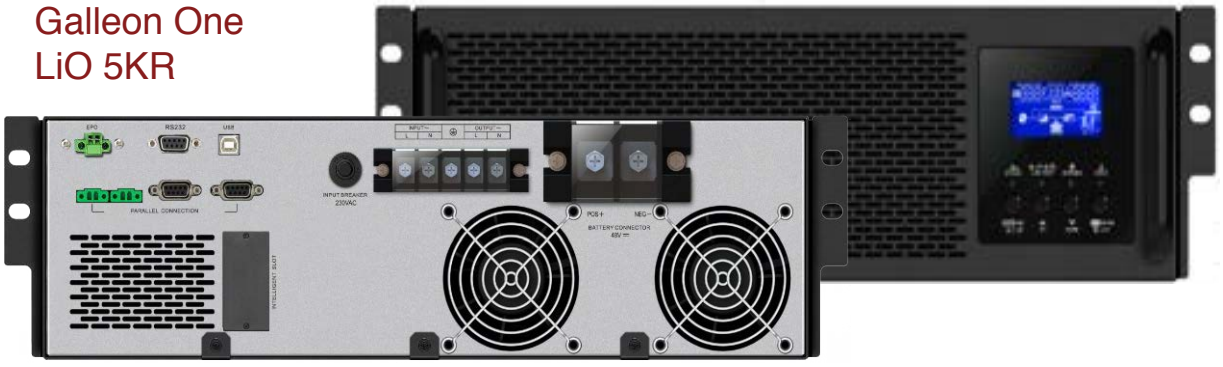
Galleon One
LiO RT 2kVA



Galleon One
LiO RT 3kVA



Galleon One
LiO 5KR



Technical Specification (1kVA - 5kVA)

Specification	Model		Galleon One LiO RT 1K		Galleon One LiO RT 2K		Galleon One LiO RT 3K		Galleon One LiO 5KR
	Phase		Single Phase with Ground						
	Capacity (VA / W)		1000 / 900		2000 / 1800		3000 / 2700		5000 / 5000
Input	Nominal Voltage (VAC)		230						
	Input Voltage Range (VAC)		160 - 300 @ 100% load						176 - 300 @ 100% load
	Frequency (Hz)		40 - 70						46 - 54 or 56 - 64
	Power Factor		≥ 0.95						≥ 0.99
	Connection		IEC 320 C14		IEC 320 C20		IEC 320 C20		Terminal
Output	Nominal Voltage (VAC)		220/230/240						
	Voltage Regulation		± 1%						
	Synchronized Frequency Range (Hz)		47 - 53 or 57 - 63						46 - 54 or 56 - 64
	Battery Mode Frequency Range (Hz)		50 ± 0.1 or 60 ± 0.1						
	Harmonic Distortion (THD)		Linear: < 3%, Non-Linear: < 6%						Linear: < 3%, Non-Linear: < 5%
	Crest factor		3.0 to 1						
	Transfer Time (ms)	AC Mode to Batt Mode	0						
		Inverter to Bypass	< 4						< 4
	Waveform		Pure Sine Wave						
	Charging Current (A)		5.3		10		10, if load > 95% = 6		10/20/30 (default = 20)
	Outlet		6 x IEC 320 C13 sockets		6 x IEC 320 C13 sockets		6 x IEC 320 C13 + 1 x IEC C19		Terminal
	Overload Capability @ < 35°C (Line Mode)		105-125% 2min; 125-140% 30sec; >140% immediately						< 105%, Continue >105% 10min; >125% 1min; >150% immediately
	Overload Capability @ < 35°C (Battery Mode)		105-120% 1min; >120% immediately						100-110% 30sec; 110-130% 10sec; >130% immediately
Efficiency	AC Mode		90%						93%
	Battery Mode		84%		85%		86%		93%
Battery	Battery Type & Voltage (VDC)		LiFePO4 / 48V						
	Battery Model		LIO 4805	LIO 4810	LIO 4805	LIO 4810	LIO 4805	LIO 4810	LIO 4810
	Battery Capacity (AH)		50	100	50	100	50	100	100
	Continous Discharge Current (A)		75	150	75	150	75	150	150
	Typical Recharge Time to 90% (hrs)		9	18	5	10	5	10	1.5
	Max Charging Current (A)		50	100	50	100	50	100	100
	Charging Voltage (VDC)		52.5						
	Communication Port		RS485(RJ45) for UPS and Pack; CANbus(RJ11) for Pack and Pack						
	Regulatory Approvals		IEC 62619, IEC 60730-1, UN38.3						
Standard Backup Runtime	Half Load (Watts)@ 25°C		450		900		1350		2500
	Half Load Runtime (mins) @25°C		229	460	115	230	77	160	96
	Full Load (Watts)@ 25°C		900		1800		2700		5000
	Full Load Runtime (mins) @25°C		117	235	60	120	40	80	48
Display	LCD Display		UPS status, load level, battery level, input/output voltage, discharge timer and fault conditions						
UPS Physical	Dimension, W x D x H (mm)		438 x 452 x 86 (2U)		438 x 502 x 86 (2U)		438 x 502 x 86 (2U)		438 x 420 x 130.8 (3U)
	Weight (kg)		8.0		8.8		10.0		15.0
Battery Module Physical	Dimension, W x D x H (mm) & Weight (kg)		LIO 4805 50AH: 438 x 630 x 86 (2U) & 28.2KG						LIO 4810 100AH: 438 x 676 x 133 (3U) & 57.0KG
			LIO 4810 100AH: 438 x 630 x 133 (3U) & 58.5KG						
Features	Description		LED & LCD Display, Replaceable battery, Input breaker, Battery connector						
Communications	Interface Port		USB, Smart RS-232, EPO, BMS port, Intelligent Slot						
	Intelligent Slot		Power Management from SNMP manager and web browser						
Power Management	Software		Supports Windows® family OS						
Protection	Surge Energy Rating (Joules)		945						
Operating Environment	Temperature and Humidity		20 - 90% RH @ 0°C - 40°C (Non-Condensing)						
	Noise Level @ 1 Meter (dB)		< 50						< 55
Design Standards	Safety and EMC		EMC EN 62040-2 C2 for CE UPS models, Battery Pack comply to UL1973, UN38.3, IEC 62619, IEC 60730-1						

*All Neuropower's lithium ups is only compatible with Neuropower supplied lithium battery modules。

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