

# LIO RT 1-3KVA



LIO UPS



LIO UPS with LIO 4805 (48V 50Ah) battery



LIO UPS with LIO 4810 (48V 100Ah) battery

- True double-conversion
- Output power factor 0.9
- Compactible to our own LIO 4805/4810 Lithium-ion battery. Also compatible to other brand Lithium-ion battery.
- 48VDC battery voltage for 1K -3K
- Built-in BMS communication port
- UN38.3 ready for battery transportation
- IEC62619 ready for safety certificated

## LIO Lithium-ion Battery Rack/Tower Online UPS Selection Guide

MODEL		LIO 1K	LIO 2K	LIO 3K
PHASE		Single phase with ground		
CAPACITY		1000 VA / 900 W	2000 VA / 1800 W	3000 VA / 2700 W
<b>INPUT</b>				
Nominal Voltage		220/230/240 VAC		
Input Voltage Range		160 ~ 300 VAC		
Frequency Range		40Hz ~ 70Hz		
Power Factor		≥ 0.99 @ nominal voltage (100% load)		
<b>OUTPUT</b>				
Output Voltage		220/230/240 VAC		
AC Voltage Regulation (Batt. Mode)		± 1%		
Frequency Range (Synchronized Range)		57~63Hz or 47 ~ 53 Hz		
Frequency Range (Batt. Mode)		60 Hz ± 0.1 Hz or 50Hz ± 0.1 Hz		
Current Crest Ratio		3:1		
Harmonic Distortion		≤ 3% THD (Linear Load) ; ≤ 5% THD (Non-linear Load)		
Transfer Time	AC to Battery Mode	Zero		
	Inverter to Bypass	<4 ms (Typical)		
	ECO to Battery Mode	8 ms (Typical)		
Waveform (Batt. Mode)		Pure Sinewave		
<b>EFFICIENCY</b>				
AC Mode		88%	90%	91%
Battery Mode		85%	85%	86%
<b>CHARGER</b>				
Battery Voltage		48 V		
Charging Voltage		52.5 V		
Charging Current		5A	10A	10A
<b>PHYSICAL</b>				
Dimension,DxWxH(mm)		450 x 438 x 88	500 x 438 x 88	500 x 438 x 88
Net Weight (kgs)		7.5	8.6	11.3
<b>ENVIRONMENT</b>				
Operating Humidity		20-80 % RH @ 0- 40°C (non-condensing)		
Noise Level		Less than 50dBA		
<b>MANAGEMENT</b>				
Smart RS-232 & USB		Supports Windows® Family, Linux and MAC		
BMS Communication		RS485		
SNMP		Power management from SNMP manager and web browser		
<b>STANDARD</b>				
EMC/Safety		CE (EMC: EN62040-2 C2)		

Product specifications are subject to change without further notice

# 48V 50Ah & 100Ah Lithium battery Rack & System



- Modular design
- Life cycle : 8000 cycles at 25°C, 60% DoD
- 1.5C continuous discharging current
- High surge discharging current up to 2C
- Wide operating voltage range from 34.5 to 52.5Vdc
- Flexible front and Rear installation
- Communication protocols: RS485
- Easy capacity extension by paralleled
- Aluminum case LiFeO4 for cells, more safety and stable

## Rack Mounted Lithium Battery Pack Selection Guide

MODEL	LIO-4805	LIO-4810
CAPACITY	2400Wh	4800Wh
<b>PARAMETERS</b>		
Nominal Voltage	48 VDC	
Full Charge Voltage (FC)	52.5V	
Full Discharge Voltage (FD)	34.5V	
Typical Capacity	50Ah	100Ah
Max Continuous Discharging Current	75A	150A
Max Peak Discharging Current	100A	180A
Battery Connector Max current	75A	75A+75A
Protection	BMS, Breaker	
Charge Voltage	52.5 ± 0.1V	
Maximum Charge Current	50A (1C)	100 A (1C)
Standard Charge Method	0.2C CC (Constant current) charge to FC, CV (Constant voltage FC) charge till charge current decline to <0.05C	
Inner Resistance	<20m ohm	
<b>PHYSICAL</b>		
Dimension, D x W x H (mm)	676 x 438 x 86	676 x 438 x 129
Net Weight (kgs)	31.6	44.8
<b>INDICATORS</b>		
LED	Battery Status, Battery level, Battery fault, Alarm	
<b>ENVIRONMENT</b>		
Operating Environment	Charge : 0°C~50 °C	
	Discharge: 0°C~50 °C	
Storage Temperature Range °C (At 50% SOC and specified temp, recoverable capacity in % vs time / 50%)	< 18 months: -20°C~25 °C	
	< 3 months: 25°C~45 °C	
	< 1 months: 45°C~60 °C	
	20°C ± 5 °C is the recommended storage temperature	
<b>MANAGEMENT</b>		
Communication	RS485 port (RJ45), extension port (RJ11)	
Certifications	UN38.3, IEC 62619	
Design Life	>10 years @ 25 °C	
Lifecycle	> 4500 @ 25 °C	

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