LITH-ON

UNLEASHED POWER

MAKE IN INDIA

UNLIMITED GREEN STORAGE

www.lith-on.com

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CONTENT

LITH-ON

INTRODUCTION

POWERING THE FUTURE WITH SMART ENERGY STORAGE

WELCOME TO LITH-ON, WHERE INNOVATION MEETS SUSTAINABILITY. AS PIONEERS IN LITHIUM-BASED ENERGY STORAGE, WE'RE REDEFINING HOW THE WORLD CONSUMES POWER. WHETHER IT'S INDUSTRIAL, COMMERCIAL, OR UTILITY-SCALE NEEDS — OUR INTELLIGENT, ECO-CONSCIOUS SOLUTIONS OFFER UNMATCHED RELIABILITY AND PERFORMANCE. DIVE INTO A WORLD OF ENERGY SOLUTIONS ENGINEERED FOR THE FUTURE — CLEANER, SAFER, AND SMARTER. YOUR JOURNEY TO SEAMLESS POWER BEGINS HERE.

GREEN & CLEAN

VISION & MISSION

VISION

TO BE A GLOBAL LEADER IN NEXT-GENERATION LITHIUM BATTERY TECHNOLOGY, DRIVING THE SHIFT TOWARDS A GREENER, SMARTER ENERGY ECOSYSTEM.

MISSION

TO EMPOWER INDUSTRIES AND COMMUNITIES WITH CUTTING-EDGE ENERGY STORAGE SOLUTIONS THAT ARE RELIABLE, SUSTAINABLE, AND EFFICIENT.

LONG LASTING

Lith-On batteries are the best choice to power your home inverter during long power-cuts. They are optimal designed to provide the best of power and resilience.

From Lead-Acid batteries to Lithium batteries, we offer a stellar range of quality with enhanced safety & low maintenance. Our batteries are compatible with all inverters and work best.

LONG LIFE

RECYCLABLE

ENHANCED SAFETY

LOW MAINTENANCE

HOME BATTERY SERIES

LITH-ON

10+
Years Life

With State of
Charge Design

Support Fast
Charging

Eco
Friendly

LCD
Display

Multi
Function

Modern
Wall Mount

Support High
Discharge Up To 100A

PRODUCT FEATURES

LCD Display For Monitoring Energy Storage, Power Data & Operating Status.

High-Quality LiFePO4 Battery For Safety, Deep Cycle And Long Lifespan.

Metal Casing That Ensures Explosion - Proof Safety.

Easy Installation Across Various Location With Ease.

In-Built BMS For Over-Voltage, Over-Load And Over-Temperature Protection.

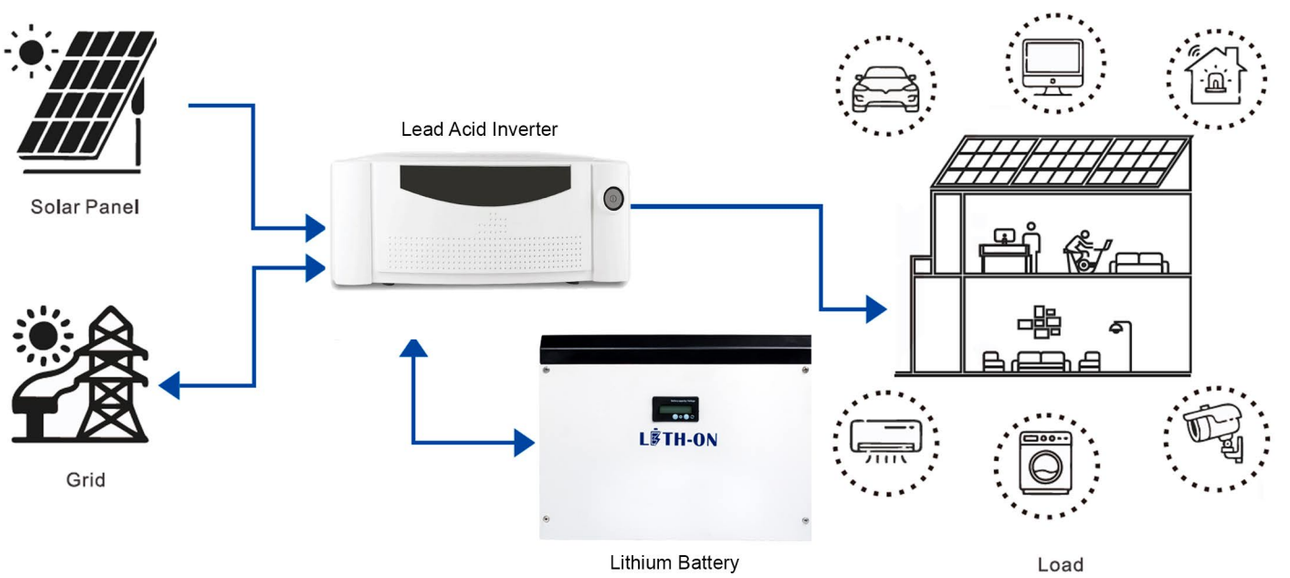
Comes With Dual Mode - (UPS / INVERTER)

Installation Option: Floor / Walls.

PRODUCT SPECIFICATIONS

1 KWH Lead Acid Replacement - Lithium Battery			
S. No.	**Parameter**	**Unit**	**Rating**
1	Battery Type		LiFePO4 Battery
2	Cell Model	Ah	100
3	Nominal Capacity		100Ah @0.5C 100%DOD
4	Nominal Voltage (Cell)	V	3.2V
5	Approx. Dimensions	mm	L174xT48.5xH133
6	Approx. Weight	kg	2.2Kg
7	Charge Voltage	V	14.2-14.6V
8	Charge Mode		0.2C to 14.6V, then 14.6V,charge current to 0.02C (CC/CV)
9	Charge Current		20A
10	Max charge Current		100A
11	Max Discharge Current	A	100A
12	Peak Discharge Current	A	400A±80A 0.5-1.5S
13	Discharge Cut-off Voltage	V	10V±0.5V
14	Nominal Voltage		12.8V
15	Energy		1280Wh
16	Cycle Life		>6000 cycles @100%DOD
17	Charge Temperature		0 to 55 (32F to 131F) @60± 25% Relative Humidity
18	Discharge Temperature		20 to 60 (-4F to 140F) @60 ±25% Relative Humidity
19	IP Class		IP65
20	Cabinet		Metal

Application Diagram



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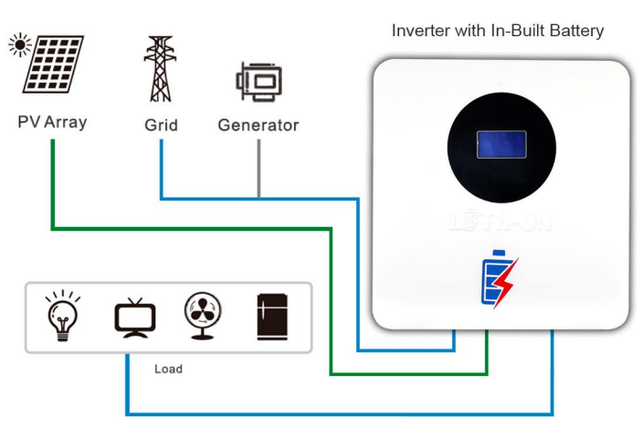

PRODUCT SPECIFICATIONS

600 - VA - Off Grid Solar Inverter With In-Built Lithium Battery			
S. No.	**Parameter**	**Unit**	**Rating**
1	Model name (600 VA)		600
2	System rating	VA	600 (480 WATT)
3	Battery Type (Inbuilt)		Lithium Ion (Lifepo4)
		AH	50/86/100
4	Full Load Input Current ±2A	Amp	45
5	Operating DC voltage	V	12.8
6	Input voltage max Voc	Vdc	25
7	Maximum Solar array power	Wp	660
8	Switching element in SCC		MOSFET
9	Type of control		Micro
10	Type of solar charger		PWM
11	Max current rating of SCC	Adc	40.0
12	Efficiency of MPP tracking	%	NA
13	Efficiency of SCC	%	>90
14	Switching element in Inverter		MOSFET
15	Type of Control		PWM
16	Nominal Output voltage in inverter mode	Vac	220V ± 7V
17	Output supply phases		single
18	Nominal Output Frequency of Inverter	Hz	50 ± 1
19	Frequency (Min - Max during Grid by pass) UPS mode	Hz	47-53
20	Frequency (Min - Max during Grid by pass) Inverter mode	Hz	40-60
21	Output voltage regulation	%	180-220
22	Output THD (v) at linear load	%	<5%
23	Creast Factor		03:01
24	Overload capacity 125%	Sec	6 (6 Retry)
25	Overload capacity 150%	Sec	2 (6 Retry)
26	Cooling Fan ON at temp	°C	60 (or 45% of rated Load or Solar I>15A)
27	Cooling Fan Off at temp	°C	55 (or 40% of rated Load or Solar I<15A)
28	Peak efficiency of inverter	%	< 82
29	Battery low voltage alarm	Vdc	11.0 ± 0.2
30	Battery low voltage cut y	Vdc	10.8 ± 0.2 (With 4 Retry)
31	Batter low cut recovery per battery through Solar	Vdc	12.7 ± 0.2 (or Mains or reset swich on front panel)
32	Max Battery charging voltage by grid	Vdc	14.2 ± 0.2
33	Max Battery charging current by grid	Adc	15A±2A
34	Max Battery charging voltage by Solar	Vdc	15.3 ± 0.2
35	Battery High cut with Alarm	Vdc	15.0±0.2
37	Max Battery charging current by Solar	Adc	15±2A
38	Max Charging current to battery by Solar+Grid	Adc	15±2A
39	Grid low cut voltage (IT load/Normal load)	Vac	180/100 ± 10
40	Grid low cut voltage recovery (IT load/Normal load)	Vac	190/110 ± 10
41	Grid high cut voltage (IT load/Normal load)	Vac	265/280 ± 10
42	Grid high cut voltage recovery (IT load/Normal load)	Vac	255/270 ± 10
43	Grid charging Enable/Disable		yes
44	Selection of UPS Load/Normal Load		yes
45	Input current at no load at Nominal Battery voltage	Adc	< 2
46	Noise @ 1 meter	dB	<50
47	Protections		Overload, Battery Deep discharge,Battery Overcharge,Short circuit(1retry),Battery Hi,PV Reverse,Over Temp,Fuse/MCB Trip,battery reverse.
	LCD Display parameters		PV Current, Battery voltage, Mains voltage, UPS ON/OFF, UPS Mode, Symbol of sun (Smily) if solar available, (non smily symbol in absence of solar), Load percentage (0 to 150%), over load, short ckt, fault, battery low, over temp, PV reverse, Fuse trip, (Customised LCD)
48	Indication LEDs		Tact switch Status
49	Operating Temperature range	°C	0-50
51	Storage Temperature range	°C	0 +65
	Max RH	%	95
52	Front panel details (Display, Selection switch etc)		Display with tact switch
53	Enclosure protection		IP20
54	Changeover time in UPS mode	ms	<10
55	Changeover time in Normal mode (Inv mode)	ms	<40
56	Input Protection		Resettable Circuit breaker
57	Backup @ 400Watt Load	Hrs	2.00 -3.25
58	Weight without Packing	Kg	18
59	Dimension (LXWXH) without Packing	MM	445x385x170

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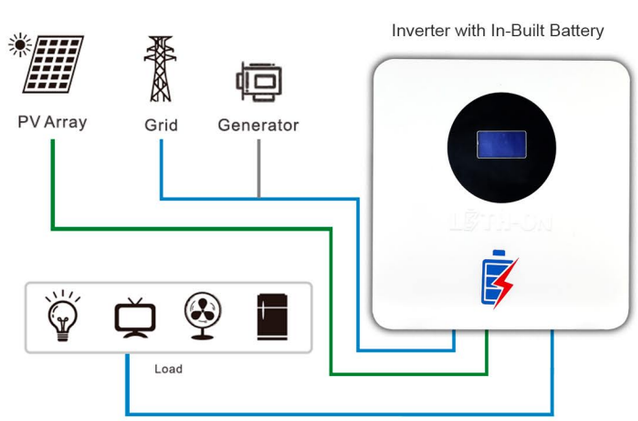

PRODUCT SPECIFICATIONS

1 KVA - Off Grid Solar Inverter With In-Built Lithium Battery - 50/80/100Ah			
S. No.	**Parameter**	**Unit**	**Rating**
1	Model name (1 KVA)		1000
2	System rating	VA	1000 (800 WATT)
3	Battery Type (Inbuilt)		Lithium Ion (Lifepo4)
		AH	50/86/100
4	Full Load Input Current ±2A	Amp	63
5	Operating DC voltage	V	12.8
6	Input voltage max Voc	Vdc	25
7	Maximum Solar array power	Wp	660
8	Switching element in SCC		MOSFET
9	Type of control		Micro
10	Type of solar charger		PWM
11	Max current rating of SCC	Adc	40.0
12	Efficiency of MPP tracking	%	NA
13	Efficiency of SCC	%	>90
14	Switching element in Inverter		MOSFET
15	Type of Control		PWM
16	Nominal Output voltage in inverter mode	Vac	220V ± 7V
17	Output supply phases		single
18	Nominal Output Frequency of Inverter	Hz	50 ± 1
19	Frequency (Min - Max during Grid by pass) UPS mode	Hz	47-53
20	Frequency (Min - Max during Grid by pass) Inverter mode	Hz	40-60
21	Output voltage regulation	%	180-220
22	Output THD (v) at linear load	%	<5%
23	Creast Factor		03:01
24	Overload capacity 125%	Sec	6 (6 Retry)
25	Overload capacity 150%	Sec	2 (6 Retry)
26	Cooling Fan ON at temp	°C	60 (or 45% of rated Load or Solar I>15A)
27	Cooling Fan Off at temp	°C	55 (or 40% of rated Load or Solar I<15A)
28	Peak efficiency of inverter	%	< 82
29	Battery low voltage alarm	Vdc	11.0 ± 0.2
30	Battery low voltage cut y	Vdc	10.8 ± 0.2 (With 4 Retry)
31	Batter low cut recovery per battery through Solar	Vdc	12.7 ± 0.2 (or Mains or reset swich on front panel)
32	Max Battery charging voltage by grid	Vdc	14.2 ± 0.2
33	Max Battery charging current by grid	Adc	15A±2A
34	Max Battery charging voltage by Solar	Vdc	14. ± 0.2
35	Battery High cut with Alarm	Vdc	15.±0.2
37	Max Battery charging current by Solar	Adc	25±2A
38	Max Charging current to battery by Solar+Grid	Adc	25±2A
39	Grid low cut voltage (IT load/Normal load)	Vac	180/100 ± 10
40	Grid low cut voltage recovery (IT load/Normal load)	Vac	190/110 ± 10
41	Grid high cut voltage (IT load/Normal load)	Vac	265/280 ± 10
42	Grid high cut voltage recovery (IT load/Normal load)	Vac	255/270 ± 10
43	Grid charging Enable/Disable		yes
44	Selection of UPS Load/Normal Load		yes
45	Input current at no load at Nominal Battery voltage	Adc	< 2
46	Noise @ 1 meter	dB	<50
47	Protections		Overload, Battery Deep discharge,Battery Overcharge,Short circuit(1retry),Battery Hi,PV Reverse,Over Temp,Fuse/MCB Trip,battery reverse.
	LCD Display parameters		PV Current, Battery voltage, Mains voltage, UPS ON/OFF, UPS Mode, Symbol of sun (Smily) if solar available, (non smily symbol in absence of solar), Load percentage (0 to 150%), over load, short ckt, fault, battery low, over temp, PV reverse, Fuse trip, (Customised LCD)
48	Indication LEDs		Tact switch Status
49	Operating Temperature range	°C	0-50
51	Storage Temperature range	°C	0 +65
	Max RH	%	95
52	Front panel details (Display, Selection switch etc)		Display with tact switch
53	Enclosure protection		IP20
54	Changeover time in UPS mode	ms	<10
55	Changeover time in Normal mode (Inv mode)	ms	<40
56	Input Protection		Resettable Circuit breaker
57	Backup @ 400Watt Load	Hrs	2.00 -3.25
58	Weight without Packing	Kg	18-21
59	Dimension (LXWXH) without Packing	MM	445x385x170

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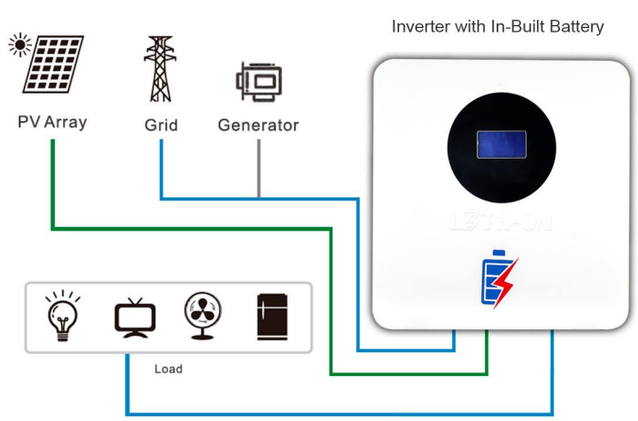
Application Diagram



PRODUCT SPECIFICATIONS

2 KVA - Off Grid Solar Inverter With In-Built Lithium Battery - 50/80/100Ah			
S. No.	**Parameter**	**Unit**	**Rating**
1	Model name (2 KVA)		2000
2	System rating	VA	2000 (1600 WATT)
3	Battery Type (Inbuilt)		Lithium Ion (Lifepo4)
		AH	50/86/100
4	Full Load Input Current ±2A	Amp	63
5	Operating DC voltage	V	25.6
6	Input voltage max Voc	Vdc	50
7	Maximum Solar array power	Wp	1500
8	Switching element in SCC		MOSFET
9	Type of control		Micro
10	Type of solar charger		PWM
11	Max current rating of SCC	Adc	70.0
12	Efficiency of MPP tracking	%	NA
13	Efficiency of SCC	%	>90
14	Switching element in Inverter		MOSFET
15	Type of Control		PWM
16	Nominal Output voltage in inverter mode	Vac	220V ± 7V
17	Output supply phases		single
18	Nominal Output Frequency of Inverter	Hz	50 ± 1
19	Frequency (Min - Max during Grid by pass) UPS mode	Hz	47-53
20	Frequency (Min - Max during Grid by pass) Inverter mode	Hz	40-60
21	Output voltage regulation	%	180-220
22	Output THD (v) at linear load	%	<5%
23	Creast Factor		03:01
24	Overload capacity 125%	Sec	6 (6 Retry)
25	Overload capacity 150%	Sec	2 (6 Retry)
26	Cooling Fan ON at temp	°C	60 (or 45% of rated Load or Solar I>15A)
27	Cooling Fan Off at temp	°C	55 (or 40% of rated Load or Solar I<15A)
28	Peak efficiency of inverter	%	< 82
29	Battery low voltage alarm	Vdc	22.0 ± 0.4
30	Battery low voltage cut per battery	Vdc	21.6 ± 0.4 (With 4 Retry)
31	Batter low cut recovery per battery through Solar	Vdc	24.7 ± 0.2 (or Mains or reset swich on front panel)
32	Max Battery charging voltage by grid	Vdc	28.4± 0.4
33	Max Battery charging current by grid	Adc	15A±2A
34	Max Battery charging voltage by Solar	Vdc	28.± 0.4
35	Battery High cut with Alarm	Vdc	30.0±0.2
37	Max Battery charging current by Solar	Adc	25±2A
38	Max Charging current to battery by Solar+Grid	Adc	25±2A
39	Grid low cut voltage (IT load/Normal load)	Vac	180/100 ± 10
40	Grid low cut voltage recovery (IT load/Normal load)	Vac	190/110 ± 10
41	Grid high cut voltage (IT load/Normal load)	Vac	265/280 ± 10
42	Grid high cut voltage recovery (IT load/Normal load)	Vac	255/270 ± 10
43	Grid charging Enable/Disable		yes
44	Selection of UPS Load/Normal Load		yes
45	Input current at no load at Nominal Battery voltage	Adc	< 2
46	Noise @ 1 meter	dB	<50
47	Protections		Overload, Battery Deep discharge,Battery Overcharge,Short circuit(1retry),Battery Hi,PV Reverse,Over Temp,Fuse/MCB Trip,battery reverse.
	LCD Display parameters		PV Current, Battery voltage, Mains voltage, UPS ON/OFF, UPS Mode, Symbol of sun (Smily) if solar available, (non smily symbol in absence of solar), Load percentage (0 to 150%), over load, short ckt, fault, battery low, over temp, PV reverse, Fuse trip, (Customised LCD)
48	Indication LEDs		Tact switch Status
49	Operating Temperature range	°C	0-50
51	Storage Temperature range	°C	0 +65
	Max RH	%	95
52	Front panel details (Display, Selection switch etc)		Display with tact switch
53	Enclosure protection		IP20
54	Changeover time in UPS mode	ms	<10
55	Changeover time in Normal mode (Inv mode)	ms	<40
56	Input Protection		Rated MCB
57	Backup @ 400Watt Load	Hrs	4.0-7.0
58	Weight without Packing	Kg	32-38
59	Dimension (LXWXH) without Packing	MM	500x445x180

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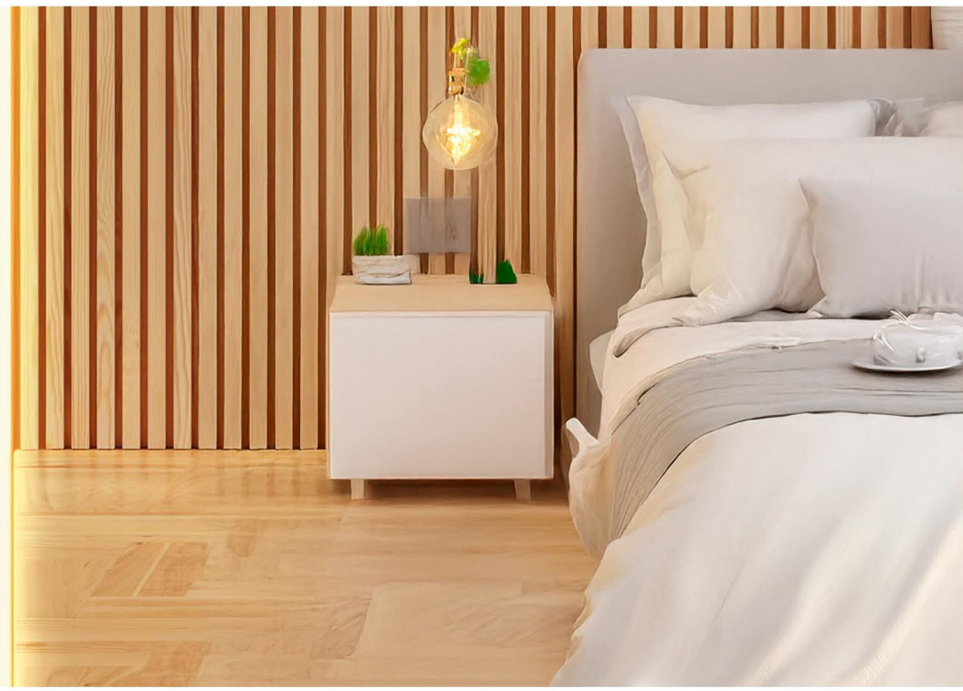

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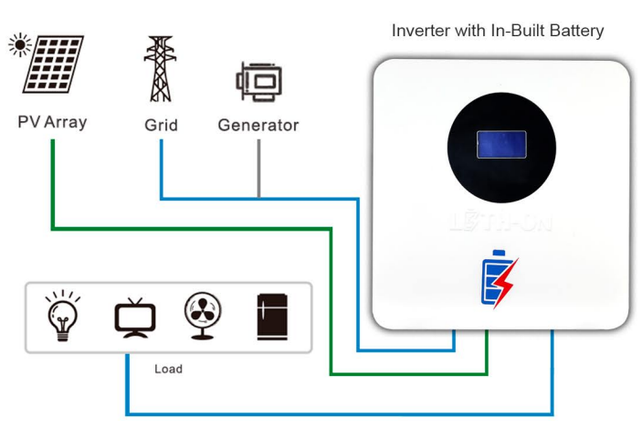

PRODUCT SPECIFICATIONS

3 KVA - Off Grid Solar Inverter With In-Built Lithium Battery - 80/100Ah			
S. No.	**Parameter**	**Unit**	**Rating**
1	Model name (3 KVA)		3000
2	System rating	VA	3000 (2400 WATT)
3	Battery Type (Inbuilt)		Lithium Ion (Lifepo4)
		AH	86/100
4	Full Load Input Current ±2A	Amp	80
5	Operating DC voltage	V	25.6
6	Input voltage max Voc	Vdc	50
7	Maximum Solar array power	Wp	2000
8	Switching element in SCC		MOSFET
9	Type of control		Micro
10	Type of solar charger		PWM
11	Max current rating of SCC	Adc	70.0
12	Efficiency of MPP tracking	%	NA
13	Efficiency of SCC	%	>90
14	Switching element in Inverter		MOSFET
15	Type of Control		PWM
16	Nominal Output voltage in inverter mode	Vac	220V ± 7V
17	Output supply phases		single
18	Nominal Output Frequency of Inverter	Hz	50 ± 1
19	Frequency (Min - Max during Grid by pass) UPS mode	Hz	47-53
20	Frequency (Min - Max during Grid by pass) Inverter mode	Hz	40-60
21	Output voltage regulation	%	180-220
22	Output THD (v) at linear load	%	<5%
23	Creast Factor		03:01
24	Overload capacity 125%	Sec	6 (6 Retry)
25	Overload capacity 150%	Sec	2 (6 Retry)
26	Cooling Fan ON at temp	^{o}C	60 (or 45% of rated Load or Solar I>15A)
27	Cooling Fan Off at temp	^{o}C	55 (or 40% of rated Load or Solar I<15A)
28	Peak efficiency of inverter	%	< 82
29	Battery low voltage alarm	Vdc	22.0 ± 0.4
30	Battery low voltage cut per battery	Vdc	21.6 ± 0.4 (With 4 Retry)
31	Batter low cut recovery per battery through Solar	Vdc	24.7 ± 0.2 (or Mains or reset swich on front panel)
32	Max Battery charging voltage by grid	Vdc	28.4± 0.4
33	Max Battery charging current by grid	Adc	15A±2A
34	Max Battery charging voltage by Solar	Vdc	28.± 0.4
35	Battery High cut with Alarm	Vdc	30.0±0.2
37	Max Battery charging current by Solar	Adc	25±2A
38	Max Charging current to battery by Solar+Grid	Adc	25±2A
39	Grid low cut voltage (IT load/Normal load)	Vac	180/100 ± 10
40	Grid low cut voltage recovery (IT load/Normal load)	Vac	190/110 ± 10
41	Grid high cut voltage (IT load/Normal load)	Vac	265/280 ± 10
42	Grid high cut voltage recovery (IT load/Normal load)	Vac	255/270 ± 10
43	Grid charging Enable/Disable		yes
44	Selection of UPS Load/Normal Load		yes
45	Input current at no load at Nominal Battery voltage	Adc	< 2
46	Noise @ 1 meter	dB	<50
47	Protections		Overload, Battery Deep discharge,Battery Overcharge,Short circuit(1retry),Battery Hi,PV Reverse,Over Temp,Fuse/MCB Trip,battery reverse.
	LCD Display parameters		PV Current, Battery voltage, Mains voltage, UPS ON/OFF, UPS Mode, Symbol of sun (Smily) if solar available, (non smily symbol in absence of solar), Load percentage (0 to 150%), over load, short ckt, fault, battery low, over temp, PV reverse, Fuse trip, (Customised LCD)
48	Indication LEDs		Tact switch Status
49	Operating Temperature range	^{o}C	0-50
51	Storage Temperature range	^{o}C	0 +65
	Max RH	%	95
52	Front panel details (Display, Selection switch etc)		Display with tact switch
53	Enclosure protection		IP20
54	Changeover time in UPS mode	ms	<10
55	Changeover time in Normal mode (Inv mode)	ms	<40
56	Input Protection		Rated MCB
57	Backup @ 400Watt Load	Hrs	4.0-7.0
58	Weight without Packing	Kg	32-38
59	Dimension (LXWXH) without Packing	MM	500x445x180

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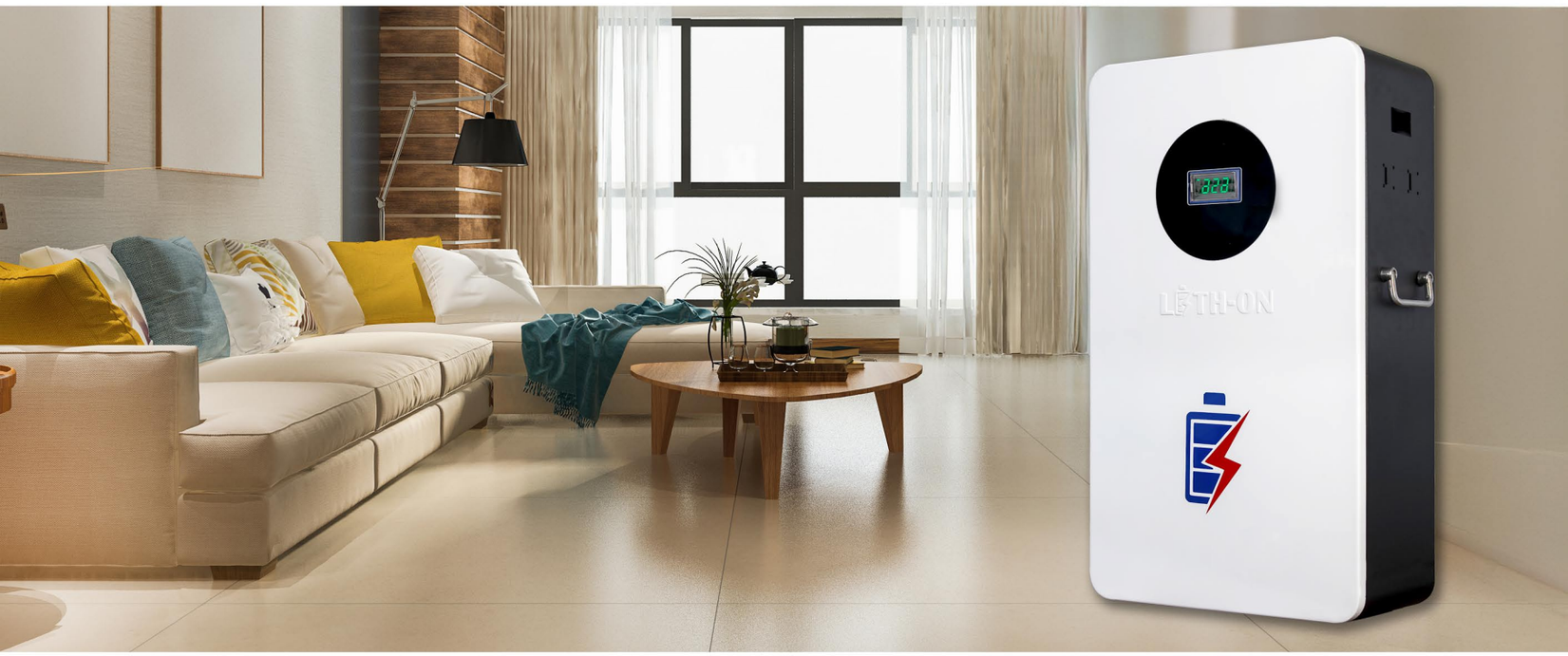

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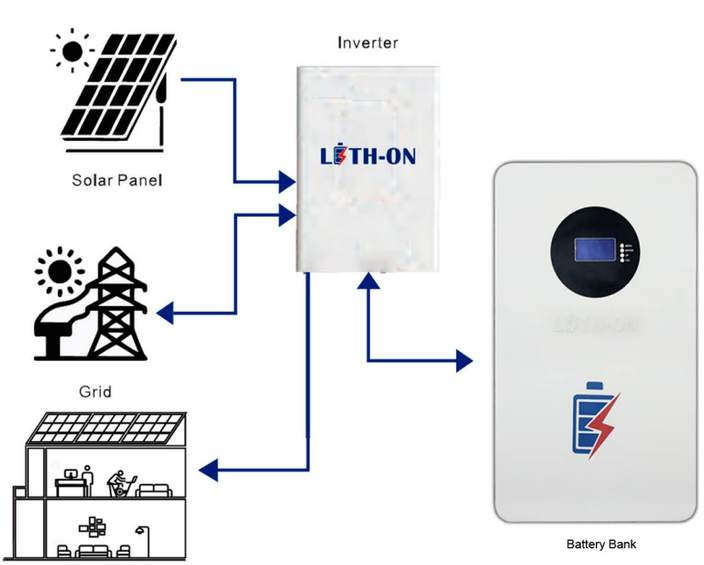
PRODUCT FEATURES

- Smart Battery (Can Be Parallel Up To 16 Modules)
- Bluetooth Enabled
- 10 Types Of Protection With Inbuilt Smart BMS Like - Over / Under Charge / Discharge, Temperature Management Balancing ETC.
- Wall Mounted Modular Cabinet
- Fast Charging / Discharging
- Smart Display For Monitoring Purpose
- Compatible With Most Of The Inverter In Market (LFP / LEAD ACID)

Application Diagram

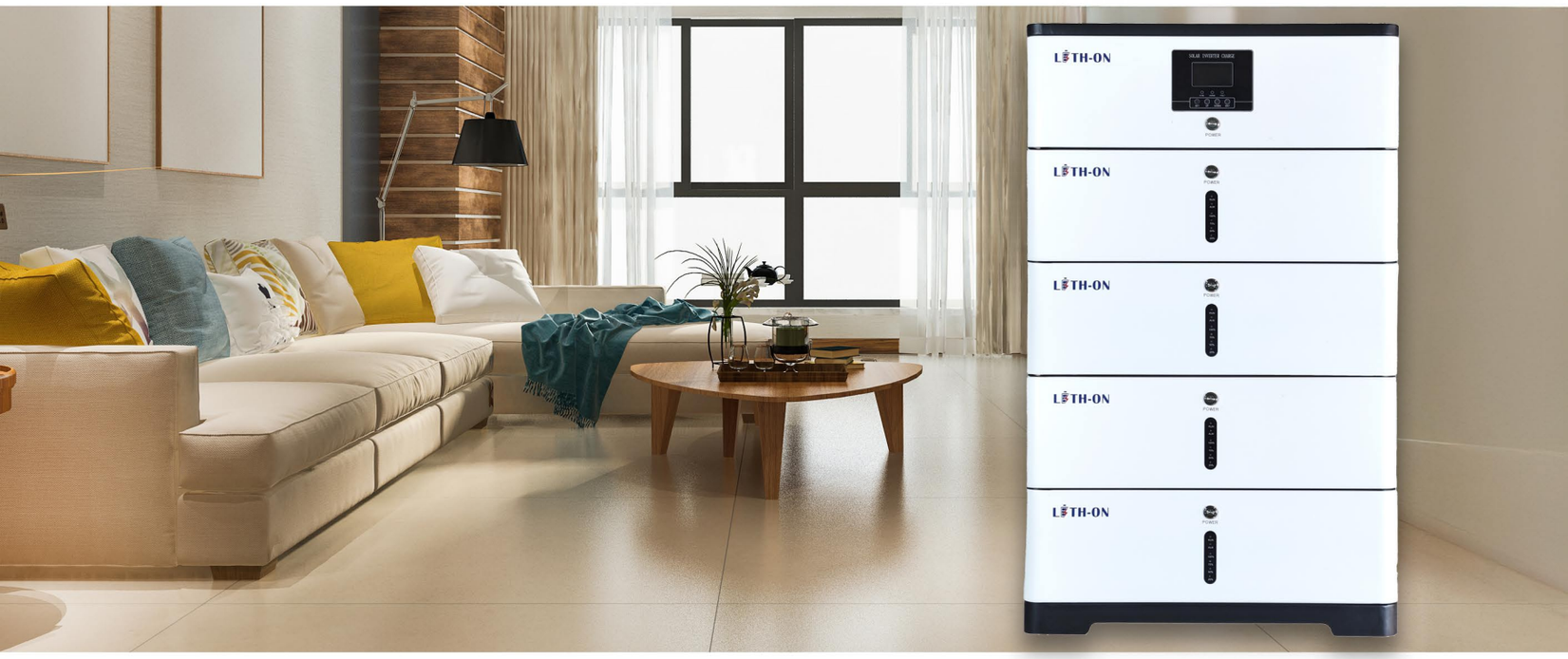


PRODUCT SPECIFICATIONS

5 KWH - Energy Storage System - Wall Mount		
Model		**NEES 5- KWH**
Electrical Characteristics	**Nominal Voltage**	48v/51.2V
	Nominal Capacity	100Ah
	Energy	4800Wh/5120Wh
	Cycle Life	≥4800 cycles @80% DOD, 25°C
	Self-Discharge (28 days)	≤3%, @25°C
	Efficiency of charge	≥98%
	Efficiency of Discharge	≥98% @ 0.2C
		≥96% @ 0.5C
Charge	**Charge Voltage (max)**	54.7V±0.1V/58.4V±0.1V
	Charging Method	Charge current of 0.2C up to 54.7V/58.4V, then 0.02C after reaching 54.7V/58.4V (CC/CV)
	Max. Charge Current	100 (1C)
	Charge Cut-off Voltage	56.2V±0.2V/60V±0.2V
Discharge	**Max. Continuous Discharge Current**	100A (1C)
	Discharge Cut-off Voltage	42V±0.2V/44.8V±0.2V
Environmental	**Charge Temperature Range**	0°C to 45°C
	Discharge Temperature Range	-20°C to +60°C
	Optimum Operation Temperature	20°C to 25°C
	Storage Temperature	-20°C to +25°C
	Humidity	5%≤RH≤85%
	Ingress protection rating	IP20
Mechanical	**Module**	Wall Mount
	Dimensions (MM)	405(L) X 182(W) X 704(H)
	Weight (Kg)	Approx. 45KG
	Protections	Over & Under voltage, short circuit, over Temperature, Over Charge Current, Over Disharge Current
Others	**Communication Protocol**	RS 485, CAN 2.0
	SOC	LCD Display

- High quality LFP cells
- High rate charge/discharge current @ 1C/1C
- Long design life up to 15+years @25°C
- High efficiency between charge and discharge
- Multiple protection method using own BMS
- RS 485 Modbus / CAN Bus (Optional)

LITH-ON



10+
Years Life

SOC
With State of
Charge Design

Support High Charge
up to 1C

Eco
Friendly

Smart
Display

Multi
Function

Modern
Wall Mount

Support High
Discharge Up to 100A

PRODUCT FEATURES

Smart Battery (Can Be Parallel Up To 16 Modules)

Bluetooth Enabled.

10 Types Of Protection With Inbuilt Smart BMS Like -

Over / Under Charge / Discharge, Temperature Management,

Balancing ETC.

Wall Mounted Modular Cabinet.

Fast Charging / Discharging.

Smart Display For Monitoring Purpose

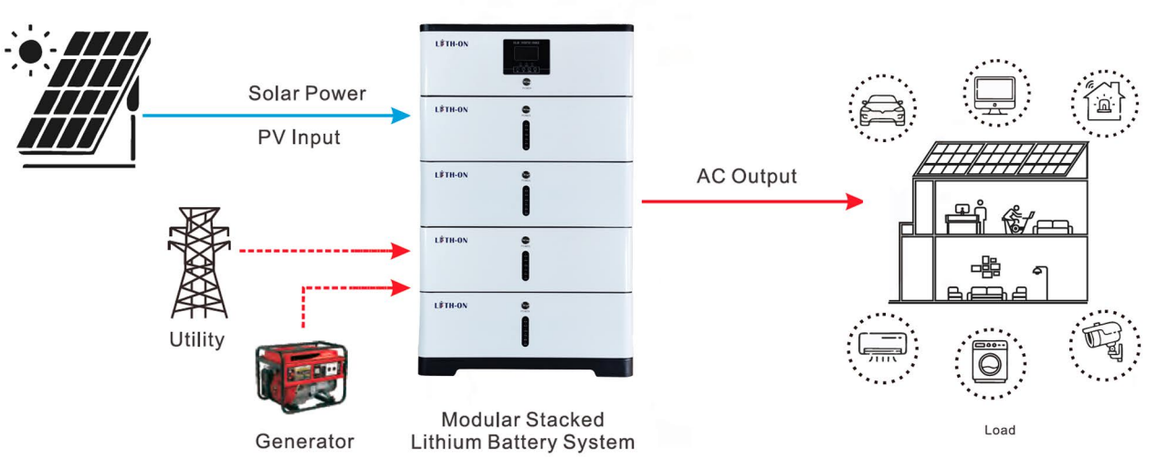
Compatible With Most Of The Inverter In Market

(LFP / LEAD ACID)

PRODUCT SPECIFICATIONS

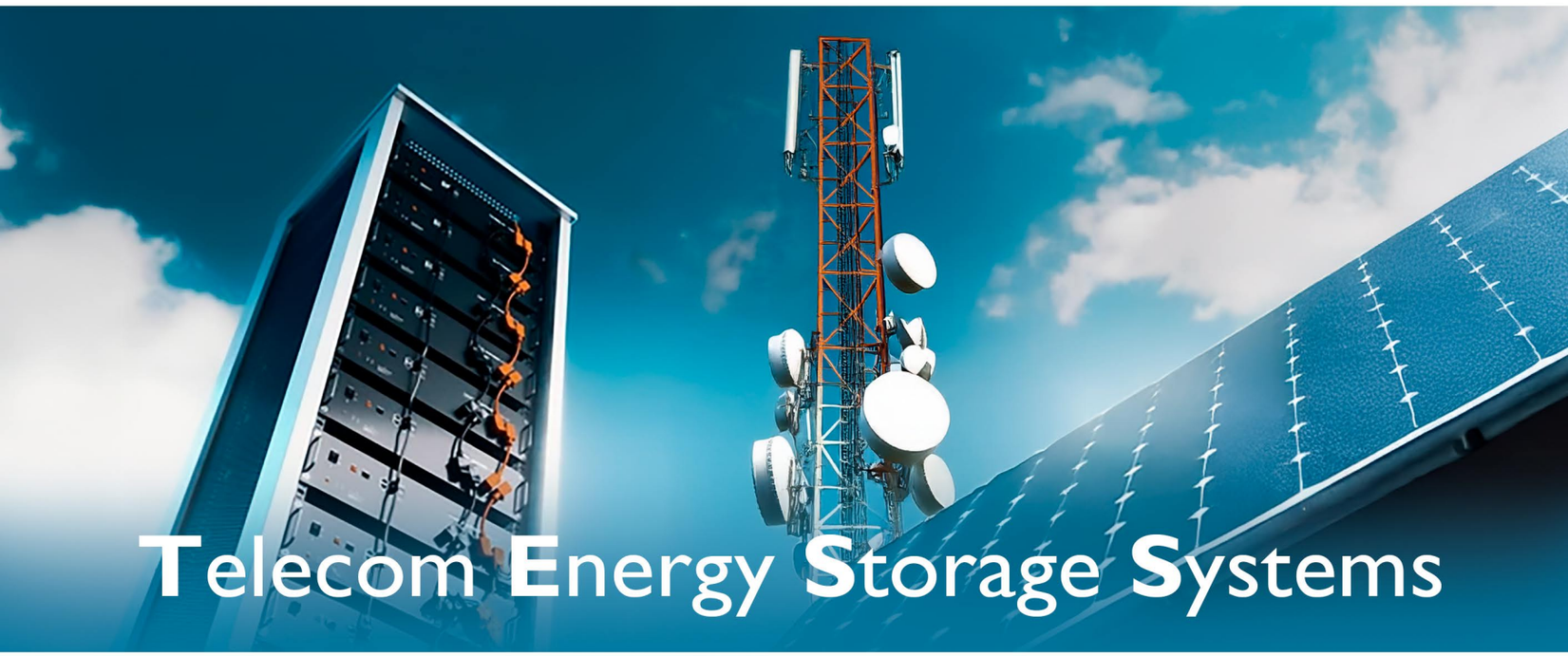
ENERGY STORAGE SYSTEM - STACKABLE					
S. No.	**MODEL**	**NESS-5LV1**	**NESS-5LV2**	**NESS-5LV3**	**NESS-5LV4**
1	Number of Modules	1	2	3	4
2	Energy Capacity	100Ah	100Ah	100Ah	100Ah
3	Energy Capacity	4.8kWh	9.6kWh	14.4kWh	19.2kWh
	Size(LxWxH)	574x395x134mm	574x395x302mm	574x395x470mm	574x395x638mm
4	Weight	49Kg	88Kg	127Kg	166Kg
5	Standard Charge/Discharge Current	75A	75A	100A	100A
6	Battery Type	Lithium Iron Phosphate(LFP)			
7	Nominal Voltage	48V	96V	144V	192V
8	Operating Voltage Range	40-54.7V			
9	Protection Grade	IP65			
10	Installation	Floor installation			
11	Operation Temperature	-10~60C			
12	Cycle Life	6000 Cycles			
13	Communication Port	CAN			
14	Warranty: 5 Years /10 Years	Yes/optional			
15	BMS Monitoring Parameters	SOC,System voltage,current, cell voltage, cell temperature, PCBA temperature measurement			
S. No.	**MODEL**	**NESS-5LV5**	**NESS-5LV6**	**NESS-5LV7**	**NESS-5LV8**
1	Number of Modules	5	6	7	8
2	Energy Capacity	100Ah	100Ah	100Ah	100Ah
3	Energy Capacity	24kWh	28.8kWh	33.6kWh	38.4kWh
	Size(LxWxH)	574x395x806mm	574x395x974mm	574x395x1142mm	574x395x1310mm
4	Weight	205Kg	244Kg	283Kg	322Kg
5	Standard Charge/Discharge Current	100A	100A	100A	100A
6	Battery Type	Lithium Iron Phosphate(LFP)			
7	Nominal Voltage	240V	288V	336V	384V
8	Operating Voltage Range	40-54.7V			
9	Protection Grade	IP65			
10	Installation	Floor installation			
11	Operation Temperature	-10~60C			
12	Cycle Life	6000 Cycles			
13	Communication Port	CAN			
14	Warranty: 5 Years /10 Years	Yes/optional			
15	BMS Monitoring Parameters	SOC,System voltage,current, cell voltage, cell temperature, PCBA temperature measurement			

Application Diagram



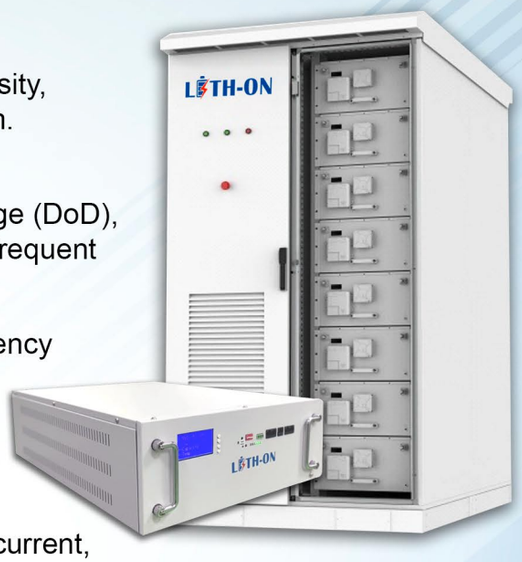

LITH-ON
MORE

LITH-ON



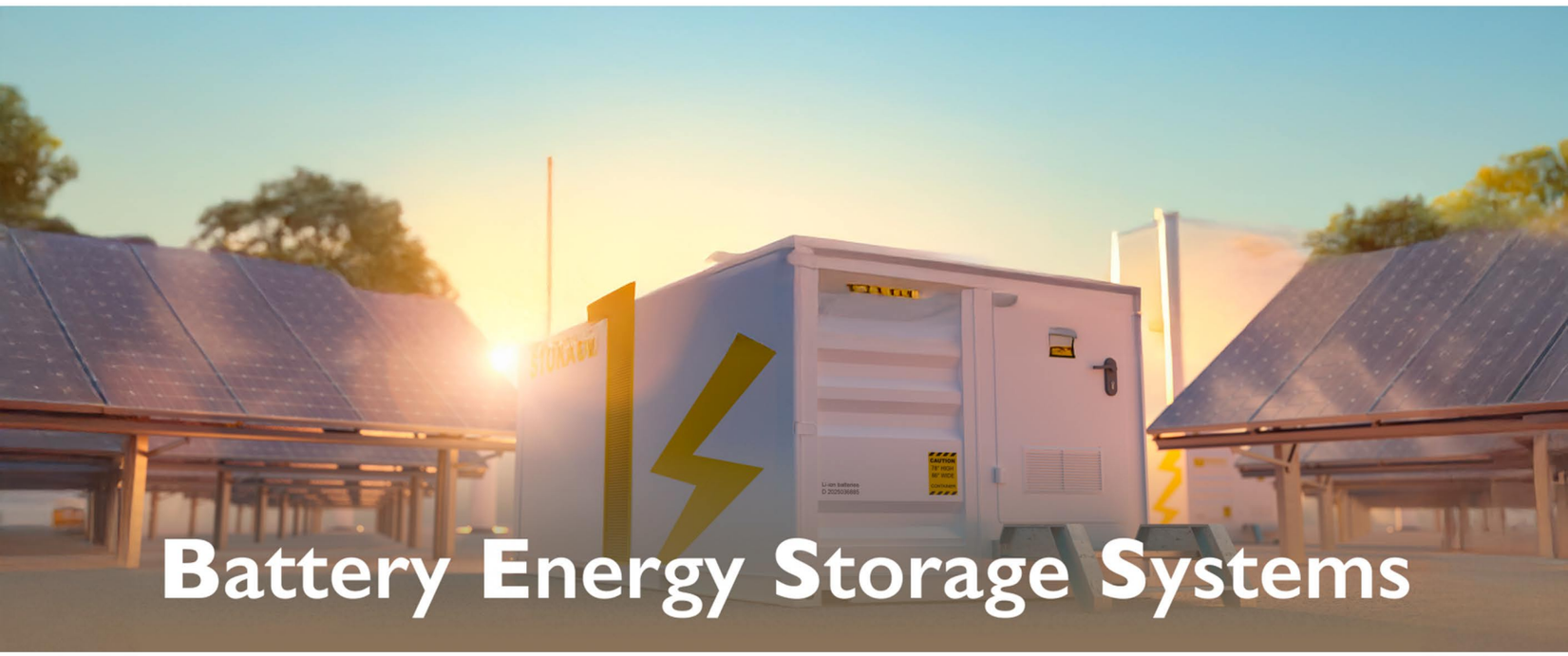
Telecom Energy Storage Systems

Advantages of the 480V Lithium-Ion Telecom Battery System



- **High Energy Density:** Lithium-ion cells provide a high energy density, allowing the battery system to store more energy in a compact form. This is particularly beneficial for telecom sites with limited space.
- **Long Cycle Life:** With over 3,000 cycles at 80% Depth of Discharge (DoD), the battery system offers a long service life, reducing the need for frequent replacements and lowering maintenance costs.
- **Efficient Performance:** The system boasts a high round-trip efficiency of over 95%, ensuring minimal energy loss during charge and discharge cycles. This efficiency translates to better utilization of stored energy and reduced operational costs.
- **Safety Features:** The lithium-ion cells used in the system have integrated safety features such as overvoltage, undervoltage, overcurrent, and short circuit protection. Additionally, the system includes thermal management with integrated sensors and auto-shutdown capabilities, enhancing operational safety.
- **Environmental Friendliness:** Lithium-ion technology is more environmental friendly compared to traditional lead-acid batteries. It has a lower environmental impact due to its reduced weight, smaller volume, and recyclability, making it a sustainable choice for energy storage.
- **Wide Operating Temperature Range:** The battery system is capable of operating in a broad temperature range, from -20°C to 60°C for discharging and 0°C to 45°C for charging, making it suitable for diverse climates and environments.
- **Scalability and Flexibility:** This telecom battery system is modular, allowing easy scaling of capacity according to the specific needs of the installation. It can be adapted for both small-scale and large-scale telecom applications.

LITH-ON



Battery Energy Storage Systems

Containerized Battery Energy Storage Systems (BESS) provide a powerful and flexible solution for large-scale energy storage needs, with capacities typically ranging from 500 kW to several megawatts. These systems are housed in durable, weather-resistant shipping containers, making them easy to transport install, and deploy in various environments, including remote or challenging locations. Key Features: Scalability: Multiple containers can be stacked or linked together to expand storage capacity, enabling seamless scaling from hundreds of kilowatts to several megawatts. This makes containerized BESS suitable for a wide range of applications, from commercial and industrial facilities to utility-scale projects. Versatility: These systems support diverse energy applications, including grid stabilization, peak shaving, load shifting, and renewable energy integration. They are also ideal for providing backup power during outages, ensuring continuous operations in critical infrastructure. Efficiency and Reliability: Container BESS are designed for high energy density and efficiency, utilizing advanced lithium-ion or other battery chemistries to deliver consistent and reliable power. The containers are equipped with sophisticated thermal management and safety systems, ensuring optimal performance and longevity even in extreme conditions. Ease of Installation: The containerized design allows for rapid deployment and integration into existing energy systems. They can be installed on-site with minimal civil work, reducing both installation time and costs. Remote Monitoring and Control: Most containerized BESS come with integrated monitoring and control systems, allowing operators to manage and optimize energy storage operations remotely. This feature enhances operational efficiency and simplifies maintenance. Overall, containerized BESS of er a highly adaptable and efficient energy storage solution, capable of meeting the demands of modern energy systems while supporting the transition to more sustainable energy sources.

LITH-ON

BENEFITS & FEATURES

LiFePO4 High Service Life: >3500 Cycles Ultra safe Lithium Iron Phosphate chemistry (no thermal run-away, no fire or explosion risks)

Embedded BMS (Battery Management System) improve and secure the battery

No Lead, no rare earths, no acid, no degassing. Calendar life > 10 years

Excellent temperature robustness (-20 °C up to +60 °C)

RANGE: 51.2V 86Ah to 200Ah

Constant power during discharge (very low internal resistance)

Very low Peukrt's losses (energy efficiency >98%)

Very low self-discharge (<2.5% per month)

About 50% lighter and 40% smaller than equivalent Lead-AGM battery with same usable energy

Certification: IEC, ISO, ROHS, UN38.3, BIS

Neoclo Energy Private Limited is proud to introduce our advanced Lithium Iron Phosphate (LiFePO4) battery solutions specifically designed for E-Rickshaws. Our Batteries are engineered to offer superior performance, longer life and enhanced safety, making them the ideal choice for electric rickshaw applications.

LITH-ON

DIESEL GENERATORS

ENERGY STORAGE SYSTEM

CHOOSE THE BEST **BETTER TOMORROW**

Capital Investment

Parameters	Lithium Battery ESS	DG Sets
Initial Cost	Higher upfront cost due to battery technology and inverter systems	Lower initial cost.
Installation Cost	Lower (modular systems, simple installation)	Higher (fuel lines, venting, etc.)

Operational Costs

Parameters	Lithium Battery ESS	DG Sets
Fuel Cost	None (powered by solar or grid electricity)	High (diesel consumption)
Maintenance Cost	Minimal (no moving parts, periodic checks for BMS)	High (engine servicing, filters, etc)
Lifespan	10–15 years (5000+ cycles)	5–10 years depending on usage

Efficiency

Parameters	Lithium Battery ESS	DG Sets
Efficiency (%)	90–95% (charge-discharge cycles)	30–40% (diesel energy converted to power)
Energy Utilization	Higher, with energy savings when paired with renewables	Lower due to higher losses

LITH-ON

LEAD ACID BATTERY

LITHIUM BATTERY

CHOOSE THE BEST **BETTER TOMORROW**

Particular	Lead Acid	Lithium -Ion
Size and Weight	Lead Acid battery weight 5 times more than lithium battery . If led Acid battery 30kg/kwh then Lithium battery 6 kg /kwh	Lithium-ion batteries have a much higher energy density, making them half the size and a quarter the weight of equivalent Lead Acid batteries.
Voltage Fluctuation	Lead Acid batteries exhibit voltage fluctuations that are dependent on the output load	Lithium-ion batteries provide stable voltage output, ensuring reliable and consistent power supply for optimal system performance
Cycle Life	Lead Acid batteries have a cycle life of 500 to 1000 cycles under similar conditions. Warranty side maintain by the manufacturer up to 2-3 yrs	Lithium-ion batteries offer 4,500–6,000 cycles with 5–10 years of manufacturer warranty
Depth of Discharge (D.O.D.)	Lead Acid batteries, however, have a limited depth of discharge of around 50-60%	Lithium-ion batteries can discharge up to 99% of their capacity, maximizing usage before recharging.
Charging Time	Whereas Lead Acid batteries typically require 8 to 12 hours for a complete charge	Lithium-ion batteries charge fully in 5–6 hours, offering fast turnaround for applications like EVs and energy storage
Temperature Stability	Lead Acid batteries have a more limited operating temperature range of -20 to +55 degrees Celsius	Lithium-ion batteries offer excellent thermal stability, operating efficiently from -20°C to +75°C

LITH-ON

OUR INSTALLATIONS

NTPC

LUCKNOW

FUEL STATION

GHAZIABAD

RSPL - KANPUR

NTPC - SHRAVASTI

LITH-ON

OUR INSTALLATIONS

KASHMIR

NTPC

INDIAN ARMY

UTTAR PRADESH

SRINAGAR

PATNA

LITH-ON

OUR CERTIFICATES

CERTIFICATE OF REGISTRATION

ICI UK

This is to certify that the management system of

NEOCLO ENERGY PRIVATE LIMITED

has been formally assessed by
INTERNATIONAL CERTIFICATION & INSPECTION UK LTD.
and found to comply with the requirements of

ISO 9001:2015

(Quality Management Systems)

Scope of Registration:

Manufacturing, Design & Development, Marketing, Supply of Solar & Energy Products Trading, Wholesale, Import Export of The Lithium Batteries, Recycling of Batteries and Solar Panels.

Registered Site (s):

Khasra No-65, Khata No. 285, Pargana Jalalabad, Village Morta, Ghaziabad, Uttar Pradesh- 201001, India.

:: Certificate No :: ICI/4423718/24

Date of initial registration:	22 March 2024
First Surveillance Audit on or before:	22 February 2025
Second Surveillance Audit on or before:	22 February 2026
Re-certification Due:	21 March 2027

This Certificate is property of ICI UK Ltd. and remains valid subject to satisfactory surveillance audits.

Ex. Director
International Certification & Inspection UK Limited

UK Cert

Certificate of Compliance

Certificate No.: 010724501

Manufacturer Details

Name : NEOCLO ENERGY PRIVATE LIMITED

Product Details

Name : LITHIUM ION BATTERIES

Model : LITH-ON

Date of Registration	01st July 2024
1st Surveillance Due	01st July 2025
Certificate Expiry	01st July 2025
Recertification Due	30th June 2027

RoHS compliant

Authorised Signatory

UK Cert Limited (UK)

CERTIFICATE OF REGISTRATION

ICI UK

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INTERNATIONAL CERTIFICATION & INSPECTION UK LTD.
and found to comply with the requirements of

IEC 61850 vs DNP3

(A Comparative Analysis)

Scope of Registration:

Manufacturing, Design & Development, Marketing, Supply of Solar & Energy Products Trading, Wholesale, Import Export of The Lithium Batteries, Recycling of Batteries and Solar Panels.

Registered Site (s):

Khasra No-65, Khata No. 285, Pargana Jalalabad, Village Morta, Ghaziabad, Uttar Pradesh- 201001, India.

:: Certificate No :: ICI/4369574/24

Date of initial registration:	23 April 2024
First Surveillance Audit on or before:	23 March 2025
Second Surveillance Audit on or before:	23 March 2026
Re-certification Due:	22 April 2027

This Certificate is property of ICI UK Ltd. and remains valid subject to satisfactory surveillance audits.

Ex. Director
International Certification & Inspection UK Limited

To check validity of the certificate please visit at www.ici-uk.co

CERTIFICATE OF REGISTRATION

ICI UK

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NEOCLO ENERGY PRIVATE LIMITED

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INTERNATIONAL CERTIFICATION & INSPECTION UK LTD.
and found to comply with the requirements of

ISO 14001:2015

(Environmental Management Systems)

Scope of Registration:

Manufacturing, Design & Development, Marketing, Supply of Solar & Energy Products Trading, Wholesale, Import Export of The Lithium Batteries, Recycling of Batteries and Solar Panels.

Registered Site (s):

Khasra No-65, Khata No. 285, Pargana Jalalabad, Village Morta, Ghaziabad, Uttar Pradesh- 201001, India.

:: Certificate No :: ICI/4424525/24

Date of initial registration:	22 March 2024
First Surveillance Audit on or before:	22 February 2025
Second Surveillance Audit on or before:	22 February 2026
Re-certification Due:	21 March 2027

This Certificate is property of ICI UK Ltd. and remains valid subject to satisfactory surveillance audits.

Ex. Director
International Certification & Inspection UK Limited

To check validity of the certificate please visit at www.ici-uk.co

UK Cert

Transportation Compliance Certificate

Certificate No.: 010724501

Name : NEOCLO ENERGY PRIVATE LIMITED

Registration & Factory Address: Khasra No. 65, Khata No. 285, Pargana Jalalabad, Village Morta, Ghaziabad-201001, Uttarpradesh, India

Product : LITHIUM-ION BATTERIES

Type of Battery : LFP Battery Pack

Date of Initial Registration	25 June 2024
Date of the Certificate	01 July 2024
Certificate Expiry	01 July 2025
Recertification Due	30 June 2027

Authorised Signatory

UK Cert Limited (UK)

CERTIFICATE OF REGISTRATION

ICI UK

This is to certify that the management system of

NEOCLO ENERGY PRIVATE LIMITED

has been formally assessed by
INTERNATIONAL CERTIFICATION & INSPECTION UK LTD.
and found to comply with the requirements of

IEC 61508-1:2010

(Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 1)

Scope of Registration:

Manufacturing, Design & Development, Marketing, Supply of Solar & Energy Products Trading, Wholesale, Import Export of The Lithium Batteries, Recycling of Batteries and Solar Panels.

Registered Site (s):

Khasra No-65, Khata No. 285, Pargana Jalalabad, Village Morta, Ghaziabad, Uttar Pradesh- 201001, India.

:: Certificate No :: ICI/4567236/24

Date of initial registration:	23 April 2024
First Surveillance Audit on or before:	23 March 2025
Second Surveillance Audit on or before:	23 March 2026
Recertification Due:	22 April 2027

This Certificate is property of ICI UK Ltd. and remains valid subject to satisfactory surveillance audits.

Ex. Director
International Certification & Inspection UK Limited

To check validity of the certificate please visit at www.ici-uk.co

LITH-ON

LITH-ON

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SERVICE SUPPORT
PAN INDIA

LITH-ON

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more Information

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Ghaziabad, Uttar Pradesh 201003