Manufacturing : SBB ENERGY PVT. LTD.

Technical specification:" **ThoR" BESS**

All -in - One Solution for your Energy needs! Savings!

PRODUCT: "ThoR" BESS MODEL / SKU: 2 kW / 5 kWh

"ThoR" BESS ensures energy reliability while supporting the transition to sustainable power systems. Paired with the **"ThoR"** monitoring tool, it efficiently stores and dispatches energy using advanced hardware and software. With models ranging from 2 kW and 5 kW in Light Duty Segment, **"ThoR" BESS** is designed to capture and deliver electrical energy as needed, providing significant advantages for commercial and industrial users.

"ThoR" BESS	**"ThoR" BESS**
10 kW / 10 kWh	**15 kW / 20 kWh**

Designed for 12-15 years' life cycle/ Fast Charging / Smart AI BESS / High Safety standards

1. Product parameters

The fundamental technical parameters and core operational characteristics of the **"ThoR"** Battery Energy Storage System (**BESS**) unit.

Property	Specification
Nominal Power (Continuous)	Output of 5 kW (5000 Watts) Available in both alternating current (AC) and direct current (DC) configurations.
Energy Capacity (LFP)	210 AH & 420 AH (Amp Hours) at 2 kWh or 5 kWh
Battery Chemistry (SDI)	The battery chemistry is designated as Lithium Iron Phosphate (LFP) prismatic, conforming to Industrial eV Grade standards
Nominal Voltage	24v and 48 v (Customized)
AC Output	A continuous AC output : 220 - 240 V/50Hz
DC Output	DC output: 36V / 48V / eV charging port DC output : USB type A / C
Operating Temperature	System is designed to operate effectively within the temperature range of -10°C to 50°C
Enclosure Protection Rating	The enclosure is Carbon fibre Composite build, certified with an Ingress Protection / IP55 & NABL Certification
Weight	Weight upto 489 Kg.
Dimensions	Physical dimensions of the unit (1.2m x 1.5m x 1m) / customized
Noise Level	The acoustic emission during operation is maintained at a level not exceeding 34 dB.
Build Quality	Engineered & Built for Field, outdoor, off-grid, demanding environments.

2. Operational specifications / off -grid or on -grid

"ThoR" BESS operational specifications, encompassing port configurations and

All -in- one charging protocols.

Specification	Details
AC Output Ports	The unit is equipped with multiple (3) AC output ports, 3-Pin Universal AC Sockets
DC Output Ports	DC output ports Type-A USB (2) / Type-C USB (2) eV Charging 48 V@ 50A (2W/3W)
Charging Ports	AC Grid (220 V /50Hz) , Solar /Wind Input Port (48V @50A), eV Port customized
Charging Time	The time required for a full recharge from a 0% state-of-charge to 90% is approximately range in between 4 hrs to 8 hrs, depend on Source
Charging Temperature Range	The recommended ambient temperature range for charging operations is 0°C to 54°C
Discharge Temperature Range	The permissible ambient temperature range for discharging operations is -10°C to 72°C
Efficiency	"ThoR" BESS exhibits a round-trip energy efficiency of 84% to 92 % (Depend on user environment)

Service Operation Hours (hrs) ref. Operation duty hrs as per load applied : "ThoR" BESS duty time: Table 05	"ThoR" BESS 2 kW /at 25% load >= 10 hrs "ThoR" BESS 5 kW / at 25% load >= 16 hrs

3. Operational context, safety, and certification

Feature	Details
Key Applications	Disaster management, First responder Ambulance, Defence, Alternate to UPS with fast switching speed than Traditional Diesel Generator, Emergency Backup, Off-Grid Power, Various other Industrial Use
Safety Features	Integrated safety mechanisms include protection against overcharge and over-discharge, short circuit protection, "ThoR" smart Battery Management System (BMS), and a comprehensive 'ThoR" Advance thermal management system.
Certifications	Certification from NABL standards, following IS, IEC, UL, and IP
Warranty & Service Life	A warranty of 10 years' Service Life, Along with AMC service during service life
Standby Mode	During standby operation, the state-of-charge is expected to diminish by less than 3- 8 % over a period of 90 days

4. Expandability and communication interfaces

Feature	Details
Communication Interfaces	The unit is equipped with Bluetooth 5.0, Wi-Fi, GPRS, UART communication interfaces.
Remote Access	Remote monitoring and control capabilities are facilitated via IoT-enabled remote monitoring
Expansion	The system is designed for parallel connection for increased capacity or power for enhanced functionality.

www.thorenergybox.com **https://www.youtube.com/watch?v=UZbTfkIW7Iw**	Email : sbbcto@thorenergybox.com
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