





PROUDLY MADE IN INDIA

 D-28 & D-167 Noida, Sector-63
Uttar Pradesh, 201301, India

 B-25 Noida, Sector-80
Uttar Pradesh, India

 A Block, Ghilot Industrial Area,
Neermana, Rajasthan

 +91 8055224405 | info@inverted.in | www.inverted.in

Leading
Lithium-ion Battery
Manufacturer

Our Journey

- **2017** Inverted started with a team of energy enthusiasts.
- **2018** Implementation of micro-grid with GE. Multiple residential & commercial institutions.
- **2019** We achieved our 100MWh goal in two years we successfully designed and tested 2W & 3W prototypes.
- **2020** Launched our in-house BMS-OJAS. Started large scale manufacturing facility.
- **2021** Shipped 5,000 smart batteries across India.
- **2022** Large scale smart battery delivered for mobility & storage across India.
- **2023** Installed world-class laser machine and advanced R&D equipment. Certified batteries with AIS 156 Phase 2 automation process.
- **2024** Launched Liquid cooled battery solution for mobility.
- **2025** Commissioned a manufacturing facility in Noida, established a 6.5 GWh plant in Ghilot, Rajasthan and launched BESS offerings.

Our Strength



Research & Development
Design Engineering
Simulations & Testing
Design Validation



Process Control
Quality Checks
Efficient Manufacturing
Safety Standards



Supply Chain
Logistics
Customer Management
Tele - Service

About Us

Inverted is a deep-tech energy company focused on the conceptualization, design, fabrication and large-scale implementation of Li-ion Batteries. With a deep focus on engineering and R&D, the company has made significant strides in the Electric Mobility and Energy Storage Solutions.

Inverted works with excellent sets of people from the fields of engineering, research design, science, arts, finance and literature to run a diverse and meritocratic organization.

Highlights



250+
Our Team



2
Patents Filed



3
Inhouse BMS Developed



600+
MWh Delivered
for Energy Storage



750+
MWh Delivered
for Mobility



6+
Collaboration with top Indian
Institute like IIT-BHU, IIT-D, NID

Infrastructure:

Installed capacity of 6.5 GWh

We operate 3 manufacturing facilities & a corporate office in Delhi NCR & a production plant in Rajasthan. Together, delivering a combined capacity of 6.5 GWh.

Each facility is equipped with advanced automation, precision testing, and quality control systems, ensuring consistent performance across every battery pack. This infrastructure supports large-scale production and allows flexibility for customized solutions, reinforcing our commitment to powering India's energy future

**Upcoming 4-Acre Production Plant,
Ghilot, Rajasthan**

3 Manufacturing Facilities & Corporate Office

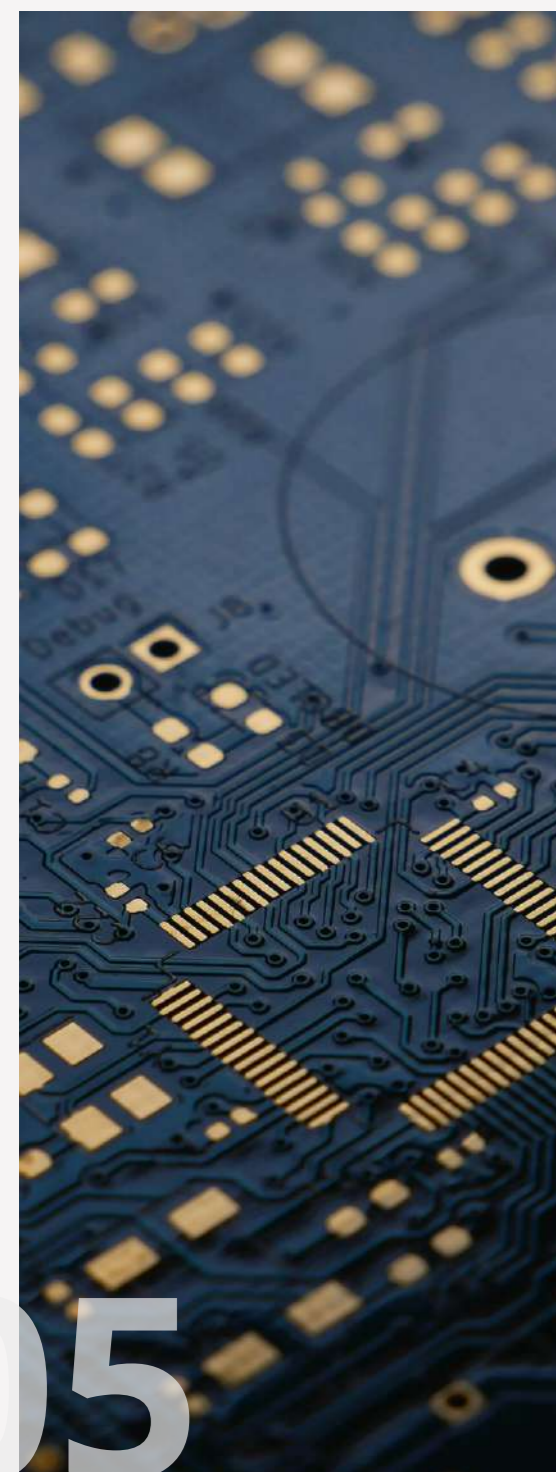
Delhi NCR Region



R & D

Our researchers and engineers are driven to create innovative solutions that are high in quality and performance. The Research & Development section is built on a unique combination of complex simulations, deep data science and rigorous field validations.

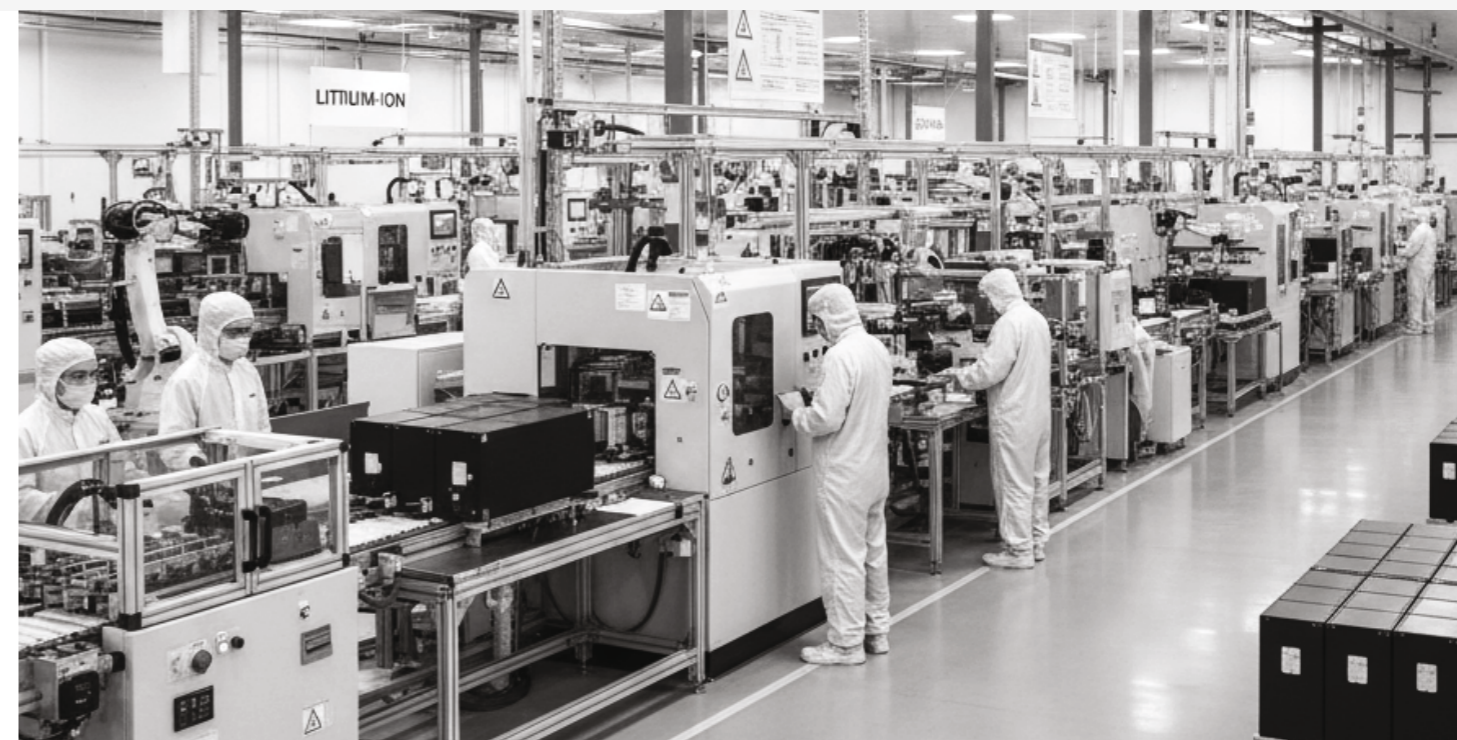
The team has been able to make significant advancement in in-house BMS, patented casing designs, innovative thermal management, integrated IoT platforms and many other engineering developments.



Design & Engineering

Inverted leverages cutting-edge scientific instruments and state-of-the-art methodologies to investigate complex problems and develop innovative solutions.

Through strategic collaborations with renowned institutions like IIT Delhi, IIT BHU, and other top-tier laboratories, the company gains privileged access to India's most advanced testing facilities. The extensive range of projects continuously elevates the knowledge and expertise of our dedicated teams, ensuring that we remain at the forefront of technological advancements in our field.



Testing & Validation

At the forefront of our lithium-ion battery manufacturing, our Testing and Simulation team is dedicated to ensuring the utmost reliability and durability in our product development process. We conduct rigorous mechanical, electrical, and thermal tests to guarantee superior performance and safety standards.

Leveraging advanced simulation techniques in Computational Fluid Dynamics (CFD) and Computer-Aided Engineering (CAE), we optimize battery designs and anticipate challenges, driving innovation while maintaining the highest quality standards.



Key Proficiency



Mobility Solutions

Offering a variety of certified batteries such as two wheeler, three wheeler, L-5 batteries, we specialize in mobility solutions. Superior performance, dependability and safety are guaranteed with our AIS 156-certified batteries. Specifically engineered to optimize vehicle performance, they are furnished with cutting-edge technology for maximum efficiency. Embrace your vehicles with our batteries for more power and performance, ensuring a comfortable and effective ride.

PRISM

Our superior range of LFP batteries assist you in improving product performance and delivering better, future ready products.

Product Range

Smart Platform
51.2 V - 45 Ah
60 V - 45 Ah
and many more...

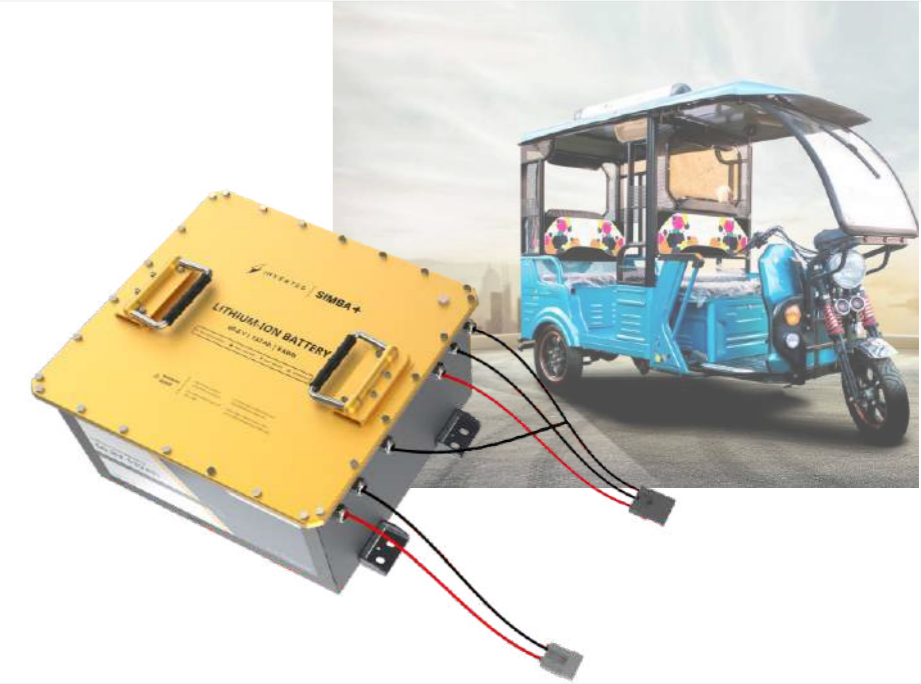


3Wheeler - SIMBA / SIMBA+

Our batteries are designed specifically to improve vehicle performance and range on harsh Indian conditions.

Product Range

Smart Platform
51.2 V - 105 / 132 Ah
60.8 V - 105 / 132 Ah
and many more...



EDGE

Our swappable NMC batteries ensure interoperability with 2W & 3W vehicles, offering a lightweight and user-friendly handling in diverse conditions.

Product Range

Smart Platform
50.4V 40Ah
51.2V 60Ah



L5 Battery - HORIZON

Our L5 batteries enhance product performance, offering reliable power and robust load-bearing capabilities for consistent performance.

Product Range

Smart Platform
51.2V 210Ah



NEW LAUNCH

Experience the future of transport with our new 3W and L5 models. The 3W offers unmatched agility and efficiency for urban travel and last-mile connectivity. For heavier duties, the L5 delivers enhanced power and extended range. Both models showcase our commitment to sustainable, robust, and high-quality mobility, providing the perfect vehicle to drive your business and life forward. Reliable, powerful, and ready to go!

3Wheeler - SIMBA+

Engineered for higher strength, faster response and longer life. Perfectly tuned for evolving demands of Indian roads.

Product Range

- Smart Platform
- 51.2V 164 Ah
- 60.8V 164 Ah



L5 Battery - HORIZON+

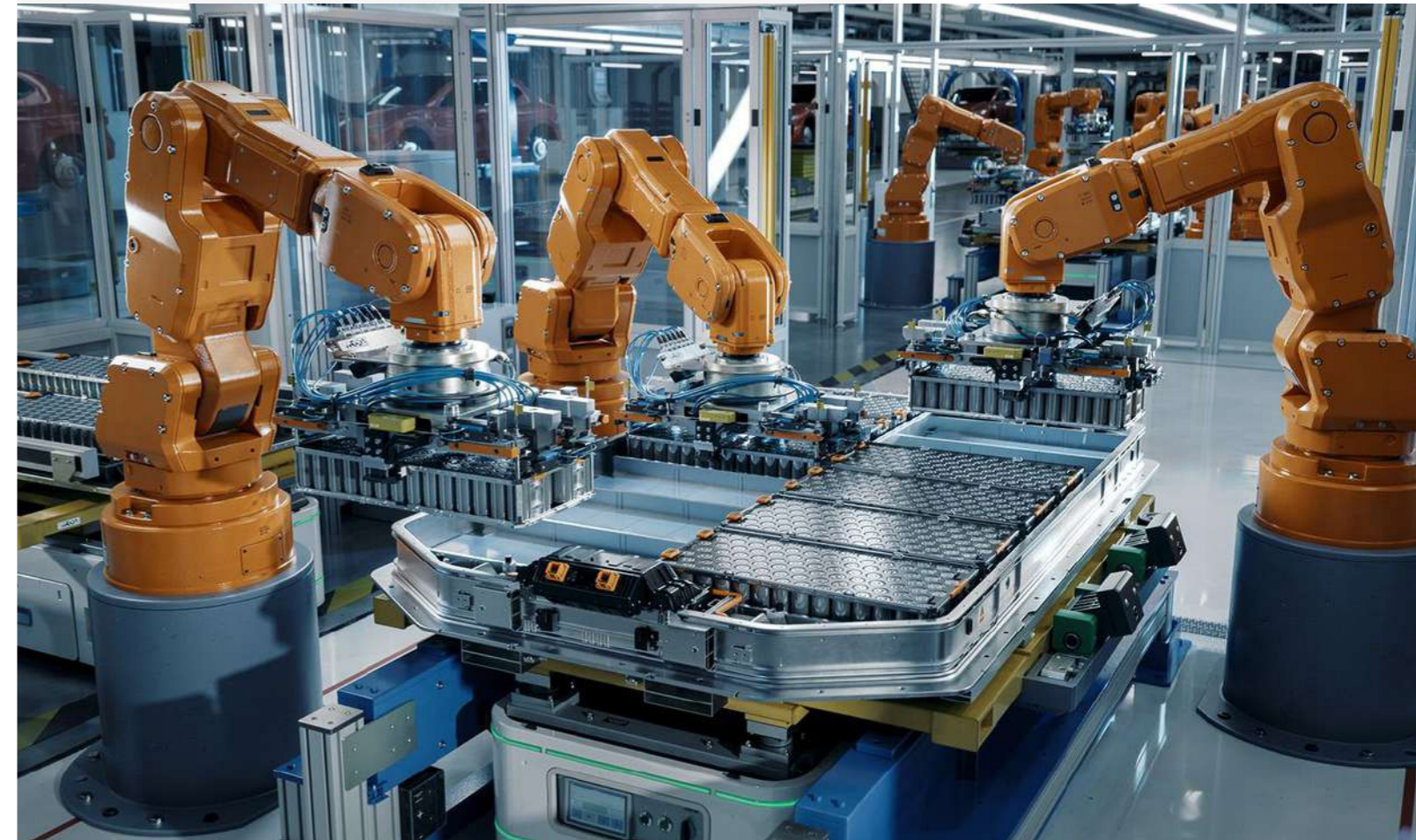
Designed for higher efficiency, this range delivers smooth, reliable power for improved performance. Its advanced build ensures stable output and long-lasting operation

Product Range

- Smart Platform
- 64V 230Ah
- 72V 230Ah



Laser Welded Battery



Seamless Connections, Boundless Possibilities

At Inverted Energy Private Limited, we spearhead the industry with our cutting-edge laser welding technology, elevating precision in battery manufacturing. With a focus on precision, reliability, accuracy, and advancement, we redefine the landscape of energy solutions. Join us in embracing a future where our state-of-the-art batteries set the benchmark for excellence, providing a seamless blend of innovation and dependability.

Benefits

-  Structural Integrity
-  Superior uniformity
-  Speed & Efficiency
-  Precision & Accuracy

Energy Storage Solution

Specializing in energy storage solutions for commercial and residential sectors, our range includes batteries designed to reduce carbon footprints, and ensure reliable backup power. With a focus on promoting self-sufficiency during outages, our batteries are renowned for their reliability and seamless power backup. Engineered with top-notch build quality and attractive designs, they offer both functionality and aesthetic appeal, contributing to grid stability and lower bills.

ARRAY

Our batteries enhance energy security, cut costs, reduce carbon footprints and energy storage during outages.

Product Range

Smart Platform
48 V - 105Ah



COMMERCIAL

Commercial batteries are designed for reliable backup power, lower bills and grid stability support for a sustainable energy future.

Product Range

Smart Platform
48V 100Ah, 200Ah, 800Ah
96V 100Ah
240V 100Ah
320 V -100Ah and many more...



ATOM

Designed for essential daily needs, these compact units deliver stable, efficient power and reliable performance for household applications

Product Range

Smart Platform
12.8V 100Ah
25.6V 100Ah



TELECOM

Elevate telecom reliability with our advanced batteries, ensuring uninterrupted power supply and peak performance for seamless communication.

Product Range

Smart Platform
48V 800Ah



Alerts



CAN Enabled



Cell Protection



Cell Balancing



Thermal Protection



Current & Voltage protection

Certifications

Our batteries have earned AIS 156 certification, signifying exceptional quality and performance. This reflects our steadfast dedication to meeting industry benchmarks. With this certification, customers can rely on the reliability and efficiency of our batteries, proven through rigorous testing. While many batteries are certified, we're working on more certifications to ensure top-notch performance. Stay tuned for updates as we remain committed to delivering quality and customer satisfaction.

TYPE APPROVAL TEST REPORT

TAC No.: AN504
Report No.: ARAI/AED/2022/23/30002814CT/1978
Date: 24-Mar-2023
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Note 1: This test report of AIS156 Part I Amendment 3 Phase 2 shall be read along with the battery pack test report ARAI/AED/2022/23/30002814CT/1978 dated: 24-Mar-2023 of AIS156 Part I Amendment 3 Phase 1.

Name & Address of the Customer: M/s. Inverted Energy Pvt Ltd, A-87, Okha Phase 2, New Delhi - 110022.

Name & Address of the manufacturing plant: Inverted Energy Pvt Ltd, Plot No. D-28, Sector 63, Phase III, Noida Gurgaon Gurgaon Haryana, Uttar Pradesh - 201301.

Customer reference: E-mail Dated: 30-Jan-2023.

Test Objective: To carry out safety requirements of Rechargeable Electrical Energy Storage System (REESS) as per AIS-156 (Part II)/2020, as per amendment 3 Phase 2.

Description of the traction battery under test: Lithium-ion traction battery packs were received in good condition.

REESS receipt date: -

Intended vehicle category: L1/L2 category.

Removable REESS: Yes.

REESS Details: The test components were received in good condition.

Make & trade name: Inverted Energy.

Model no.: EV_MNV_MMC_7242.

Weight: 29 kg.

Cell configuration in module: 28S 1P.

Module configuration in pack: -

Operating voltage range: 60 V to 84 V.

Nominal voltage: 72 V.

Rated capacity: 42 Ah.

BMS make: Dongguan Doly Electronics.

BMS model number: INVMS1640.

BMS type: Integrated & centralized.

BMS software version: 11_221617_S4T.

Battery Photo:

Signatures: V S JOSHI (ENGINEER), S P PANDIT (GENERAL MANAGER), A B MULAY (DEPUTY DIRECTOR).

72V 42Ah

TYPE APPROVAL TEST REPORT

TAC No.: AN508
Report No.: ARAI/AED/2022/23/30002814CT/1977
Date: 24-Mar-2023
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Note 1: This test report of AIS156 Part I Amendment 3 Phase 2 shall be read along with the battery pack test report ARAI/AED/2022/23/30002814CT/1978 dated: 24-Mar-2023 of AIS156 Part I Amendment 3 Phase 1.

Name & Address of the Customer: M/s. Inverted Energy Pvt Ltd, A-87, Okha Phase 2, New Delhi - 110022.

Name & Address of the manufacturing plant: Inverted Energy Pvt Ltd, Plot No. D-28, Sector 63, Phase III, Noida Gurgaon Gurgaon Haryana, Uttar Pradesh - 201301.

Customer reference: E-mail Dated: 30-Jan-2023.

Test Objective: To carry out safety requirements of Rechargeable Electrical Energy Storage System (REESS) as per AIS-156 (Part II)/2020, as per amendment 3 Phase 2.

Description of the traction battery under test: Lithium-ion traction battery packs were received in good condition.

REESS receipt date: -

Intended vehicle category: L1/L2 category.

Removable REESS: Yes.

REESS Details: The test components were received in good condition.

Make & trade name: Inverted Energy.

Model no.: EV_MNV_MMC_6052.

Weight: 29 kg.

Cell configuration in module: 14S 2P.

Module configuration in pack: -

Operating voltage range: 48 V to 67.2 V.

Nominal voltage: 51.2 V.

Rated capacity: 52 Ah.

BMS make: HLT.

BMS model number: INVMS1640.

BMS type: Integrated & centralized.

BMS software version: 11_221617_S4T.

Battery Photo:

Signatures: V S JOSHI (ENGINEER), S P PANDIT (GENERAL MANAGER), A B MULAY (DEPUTY DIRECTOR).

60V 52Ah

TYPE APPROVAL TEST REPORT

TAC No.: AP5131
Report No.: ARAI/AED/2022/23/30002814CT/1527
Date: 12-Mar-2023
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Note 1: This test report of AIS156 Part I Amendment 3 Phase 2 shall be read along with the battery pack test report ARAI/AED/2022/23/30002814CT/1526 dated: 27-Feb-2023 of AIS156 Part I Amendment 3 Phase 1.

Name & Address of the Customer: M/s. Inverted Energy Pvt Ltd, A-87, Okha Phase 2, New Delhi - 110022.

Name & Address of the manufacturing plant: Inverted Energy Pvt Ltd, Plot No. D-28, Sector 63, Phase III, Noida Gurgaon Gurgaon Haryana, Uttar Pradesh - 201301.

Customer reference: E-mail Dated: 6-Jan-2023.

Test Objective: To carry out safety requirements of Rechargeable Electrical Energy Storage System (REESS) as per AIS-156 (Part II)/2020, as per amendment 3 Phase 2.

Description of the traction battery under test: Lithium-ion traction battery packs were received in good condition.

REESS receipt date: -

Intended vehicle category: All L category vehicles.

Removable REESS: Yes.

REESS Details: The test components were received in good condition.

Make & trade name: Inverted Energy Pvt Ltd.

Model no.: EV_MNV_MMC_5140.

Weight: 29 kg.

Cell configuration in module: 14S 1P.

Module configuration in pack: -

Operating voltage range: 38.2 V to 58.8 V.

Nominal voltage: 51.0 V.

Rated capacity: 40 Ah.

BMS make: Dongguan Doly Electronics Co. Ltd.

BMS model number: INVMS1640.

BMS type: Integrated & centralized.

BMS software version: 11_221617_S4T.

Battery Photo:

Signatures: V S JOSHI (ENGINEER), S P PANDIT (GENERAL MANAGER), A B MULAY (GENERAL MANAGER).

51.8V 40Ah

TYPE APPROVAL TEST REPORT

TAC No.: AP5103
Report No.: ARAI/AED/2022/23/30002814CT/1526
Date: 13-Mar-2023
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Note 1: This test report of AIS156 Part I Amendment 3 Phase 2 shall be read along with the battery pack test report ARAI/AED/2022/23/30002814CT/1526 dated: 13-Mar-2023 of AIS156 Part I Amendment 3 Phase 1.

Name & Address of the Customer: M/s. Inverted Energy Pvt Ltd, A-87, Okha Phase 2, New Delhi - 110022.

Name & Address of the manufacturing plant: Inverted Energy Pvt Ltd, D-28, Sector 63, Phase 3, Noida-201301.

Customer reference: E-mail Dated: 6-Jan-2023.

Test Objective: To carry out safety requirements of Rechargeable Electrical Energy Storage System (REESS) as per AIS-156 (Part II)/2020, as per amendment 3 Phase 2.

Description of the traction battery under test: Lithium-ion traction battery packs were received in good condition.

REESS receipt date: -

Intended vehicle category: L1/L2/L3 category.

Removable REESS: No.

REESS Details: The test components were received in good condition.

Make & trade name: Inverted Energy Pvt Ltd.

Model no.: EV_MNV_LFP_51200.

Weight: 110 kg.

Cell configuration in module: 16S 2P.

Module configuration in pack: -

Operating voltage range: 44.8 V to 58.4 V.

Nominal voltage: 51.2 V.

Rated capacity: 200 Ah.

BMS make: Dongguan Doly Electronics Co. Ltd.

BMS model number: INVMS1640.

BMS type: Integrated & centralized.

BMS software version: 11_220813_100T.

Battery Photo:

Signatures: V S JOSHI (ENGINEER), S P PANDIT (GENERAL MANAGER), A B MULAY (DEPUTY DIRECTOR).

51.2V 200Ah

TYPE APPROVAL TEST REPORT

TAC No.: AP5004
Report No.: ARAI/AED/2022/2024/300028967CT/5028
Date: 20-Apr-2023
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1.0 Name & Address of the Customer: M/s. Inverted Energy Pvt Ltd, A-87, Okha Phase 2, New Delhi - 110022.

2.0 Name & Address of the manufacturing plant: M/s. Inverted Energy Pvt Ltd, D-28, Sector 63, Phase 3, Noida-201301.

3.0 Customer reference: E-mail Dated: 2-Jan-2023.

4.0 Test Objective: To carry out safety requirements of Rechargeable Electrical Energy Storage System (REESS) as per AIS-156 (Part II)/2020, as per amendment 3.

5.0 Description of the traction battery under test: Lithium-ion traction battery packs were received in good condition.

5.1 DUT receipt date: 05-Jan-23.

6.0 Intended vehicle category: L1/L2/L3 category.

7.0 Removable REESS: No.

8.0 Battery Pack Details:

Make & trade name:	Inverted Energy
Model no.:	EV_MNV_LFP1100
Weight:	50 kg
Cell configuration in pack:	16S 1P
Operating voltage range:	48 V to 56 V
Nominal voltage:	51.2 V
Rated capacity:	100 Ah
BMS make:	Dongguan Doly Electronics Co. Ltd.
BMS model number:	INVMS16100
BMS type:	Integrated & centralized
BMS software version:	11_220813_100T

Signatures: V S JOSHI (ENGINEER), S P PANDIT (GENERAL MANAGER), A B MULAY (DEPUTY DIRECTOR).

51.2V 100Ah

Extension Report

Report No.: ARAI/AED/2022/2024/300028967CT/0899
Date: 11-Aug-2023
CONFIDENTIAL

1.0 Customer Name and Address: Inverted Energy Private Limited, A-87, Okha Industrial Area, Phase-2, New Delhi, Delhi - 110022.

2.0 Original Reference Report No.: ARAI/AED/2022/23/30002814CT/1526 dated 07-Mar-2023.

4.0 Approved Model: INVMS1640.

5.0 Reason for Extension Approval: Subsequently, via letter dated 03rd August 2023 M/s. Inverted Energy Private Limited have informed that they have additional variants of Battery Management System (BMS) with same hardware & software. This BMS variant has the same PCB layout as that of the certified BMS with battery pack was the higher variant. The extension required BMS are lower variants.

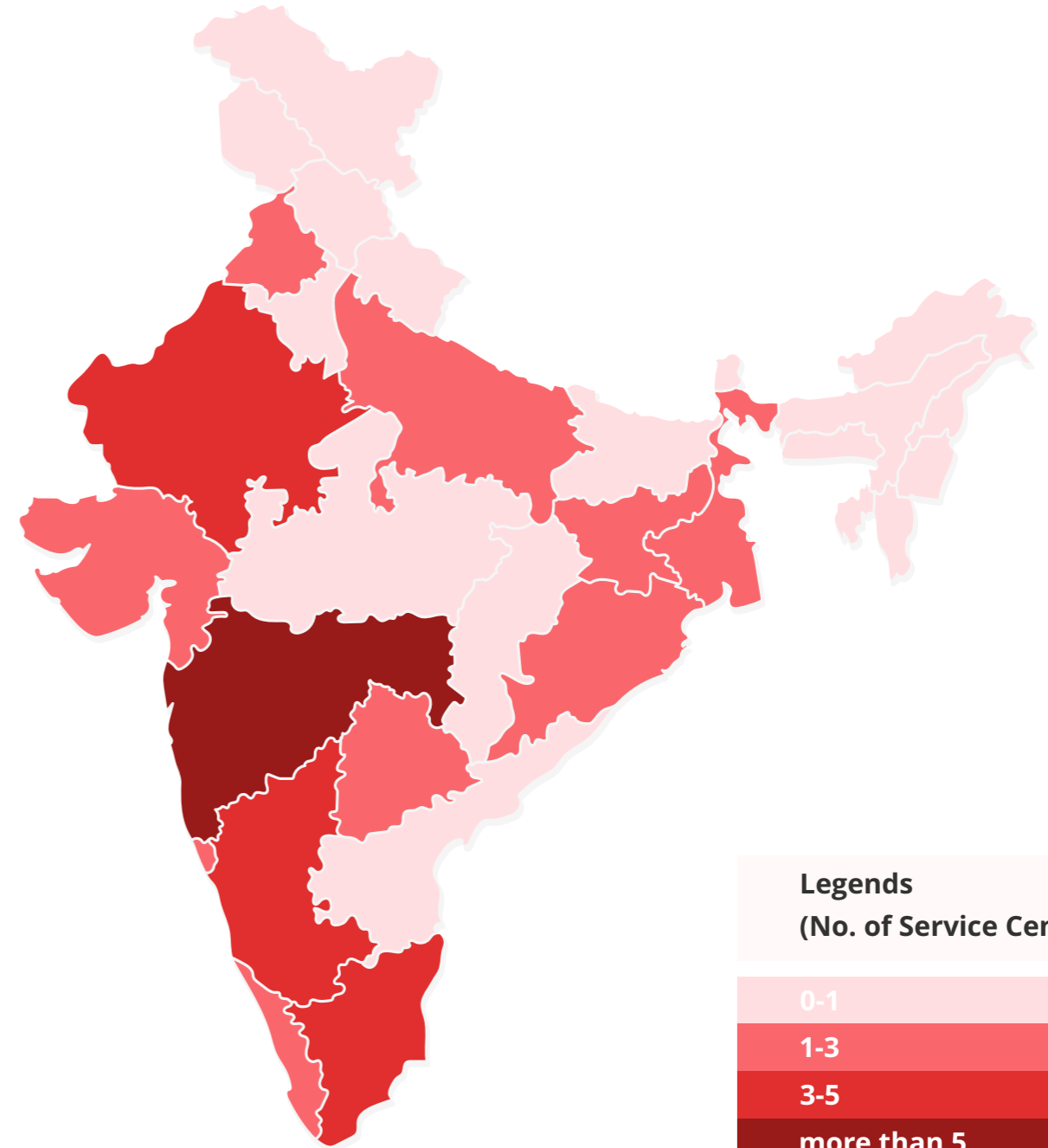
DUT Name	Approved Part	Variant 1 for Extension	Variant 2 for Extension
Battery Management System (BMS), 60V 52Ah	Battery Management System (BMS), 60V 40Ah	Battery Management System (BMS), 60V 25.6Ah	Battery Management System (BMS), 60V 25.6Ah
Manufacturer Name	Inverted Energy Pvt. Ltd.	Inverted Energy Pvt. Ltd.	Inverted Energy Pvt. Ltd.
Model No.	INVMS1640	INVMS1640	INVMS1640
Part No.	INVMS1640	INVMS1640	INVMS1640
Software Version	11_221017_S4T	11_221017_S4T	11_221017_S4T

6.0 Conclusion: Hence, compliance for EMC as per AIS-204 (Part 3), as amended from time to time is hereby extended to BMS as mentioned in the above table.

Signatures: N R SHIRDI (MANAGER), S H JANAGOND (MANAGER), A A PAPADE (GENERAL MANAGER).

60V 40Ah

Service Network



Legends (No. of Service Center)

- 0-1
- 1-3
- 3-5
- more than 5

Locations

Ahmedabad, Gujarat	Goa	Kolkata, West Bengal	Rourkela, Odisha
Agra, UP	Haveri, Karnataka	Ludhiana, Punjab	Salem, Tamil Nadu
Akola, Maharashtra	Hosur, Tamil Nadu	Manday, Karnataka	Tiruvannamalai, Tamil Nadu
Amravati, Maharashtra	Jaipur, Rajasthan	Malappuram, Kerala	Udaipur, Rajasthan
Bengaluru, Karnataka	Kolhapur, Maharashtra	Palghar, Maharashtra	Yavatmal, Maharashtra
Bhuwaneshwar, Odisha	Kandivali, Maharashtra	Pune, Maharashtra	
Burdwan, West Bengal	Kalyan, Maharashtra	Ranchi, Jharkhand	
Delhi (NCR)	Kondapur, Telangana	Rajsamand, Rajasthan	