
HUDDLE
AREA
SAMSAR
TOYOTA

SAMSAR

ISO 9001:2015

RE-MADE IN THE USA

THE SAMSAR STORY

THE EXECUTIVES

STEVE HELLMAN

MANAGING PARTNER – MOBILITY IMPACT PARTNERS

FOUNDER – SAMSAR RESOURCES

Samsar was born from a simple question – how can we best make use of the tsunami of used electric vehicle batteries? Lithium recycling has shown to recover only a small fraction of the value of a battery, and why recycle a battery that still retains 80% or more of its capacity? There must be a better way. That way is Samsar – based on the concept of Samsara, the cycle of birth, death, and rebirth. Samsar captures up to 95% of the value of a used EV battery, enabling all kinds of new applications, and helping keep batteries out of the landfill.

GUILLERMO GARCIA

CHIEF EXECUTIVE OFFICER – SAMSAR RESOURCES

The concept of repurposing lithium batteries for second life applications has so many advantages – it makes those applications more affordable; the used batteries are already in the US which means our customers pay no tariffs; and the repurposing process is much more sustainable and captures more value than recycling. What makes Samsar's process unique is that every one of our batteries is engineered to be easily disassembled, allowing for continuous reuse. The result – more affordable batteries, built in the USA duty free, tested and certified for quality.

KENT O'HARA

FORMER PRESIDENT OF NISSAN ENERGY

BOARD MEMBER – SAMSAR RESOURCES

At Nissan I helped bring the Nissan Leaf, one of the most popular electric vehicles of all time to America's roads. As the president of Nissan Energy I saw how hungry the world was for sustainable energy storage and knew that in a few years there was going to be millions of EV batteries that would be headed for recycling. I knew there must be a way to match the need for power with the growing supply. Samsar is the solution – affordable – sustainable – and built here, in the USA.

SAMSAR IS OWNED BY MOBILITY IMPACT PARTNERS

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RE-MADE IN THE USA

SAMSAR

BETTER FOR PEOPLE AND THE PLANET

SAMSAR IS THE ONLY LITHIUM BATTERY COMPANY THAT BUILDS BATTERIES TO BE EASILY DISASSEMBLED AND UPCYCLED AT END OF LIFE. SAVE MONEY AND HELP SUPPORT A CLEAN AND SUSTAINABLE FUTURE FOR EVERYONE.

BETTER FOR THE PLANET

CARBON NEUTRAL

- CARBON NEUTRAL
- LESS E-WASTE
- CONSERVES RARE EARTH MINERALS
- LESS LITHIUM MINING
- MORE AFFORDABLE
- CIRCULAR ECONOMY

SAMSAR IS BASED ON SAMSARA -THE CYCLE OF LIFE, DEATH, AND REBIRTH.

SAMSAR BATTERIES ARE DESIGNED TO LAST 10 YEARS, THEN ENJOY A 2nd LIFE OF 5-10 YEARS, AND EVEN A 3rd LIFE OF 3-5 YEARS.

SAMSAR BATTERY PROCESSING, HOUSTON, TX

SAMSAR

12V SHORT 2.3KWh LITHIUM-ION BATTERY

MADE WITH CERTIFIED REPURPOSED NISSAN LEAF MODULES

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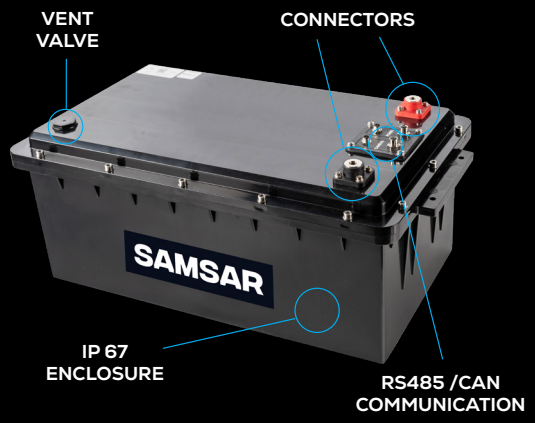
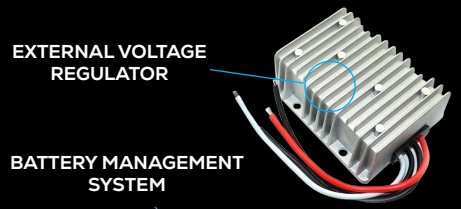
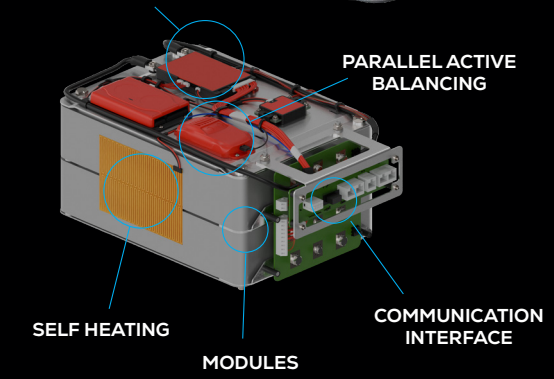
RE-MADE IN THE USA







SUMMARY

- Battery box dimensions:
  519mm x 281mm x 221mm (LWH)
- Includes Voltage Regulator
- Real-time online performance tracking & control
- Battery swapping compatible with active balancing
- System supports up to 16x packs in parallel
- Battery Pack Cell Configuration: 8S2P

PARAMETER	VALUE
Pack Capacity	160Ah
Depth of Discharge (DOD)	85%
Nominal Voltage	Pack Voltage 14.6V (Regulator 12.8V)
Nominal Charge Current	40 A
Continuous Discharge Current	40 A
Maximum Discharge Current	20 A (60 sec)
Charging Mode	CC-CV
Mounting	Vertical
Dimensions (LxWxH) (mm)	519 X 281 x 221
Weight (Kg)	18 (Max)
Operating Temperature Range: Charging	0°C to +50°C Non Heated -20°C to +50°C Self- Heated
Operating Temperature Range: Discharging	-20°C to +55°C
Storage Temperature Range	10°C to +45°C
Protections	Over Charge / Discharge Current
	Short Circuit
	Over / Under Voltage
	Over / Under Temperature
Voltage Regulator (External)	Voltage Regulator / Converter from 16V to 12.8V included
Connectors	Elecbee Part No.: EB-IF-FM8M6-3356-150A
Communications	CAN 2.0, BLE Victron Enabled Communication Board
IP Class	IP 67
IoT	Compatible/FOTA enabled Remote Monitoring & Control Available
Self Heating Option	Available
Certification	UN 38.3

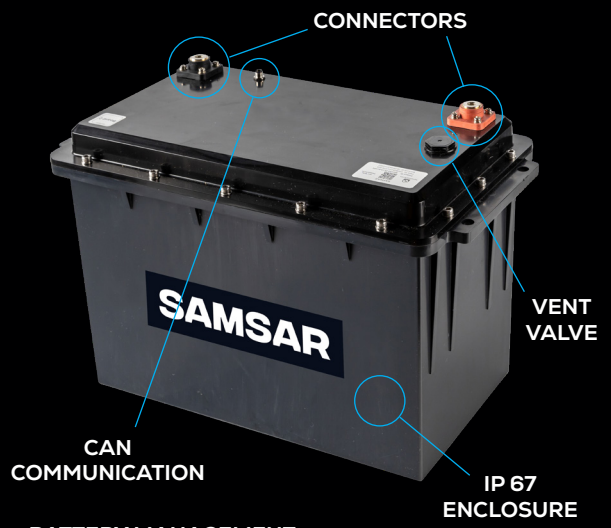
SAMSAR

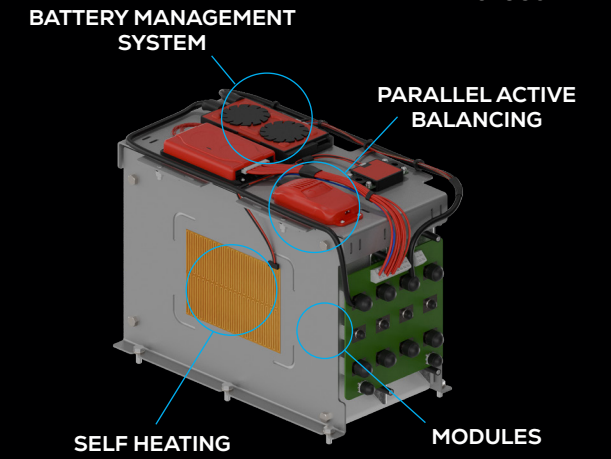
12V LONG 2.3KWh LITHIUM-ION BATTERY

MADE WITH CERTIFIED REPURPOSED NISSAN LEAF MODULES

ISO 9001:2015

RE-MADE IN THE USA





SUMMARY

- Battery box dimensions:
  398mm x 216mm x 302mm (LWH)
- Includes Voltage Regulator
- Real-time online performance tracking & control
- Battery swapping compatible with active balancing
- System supports up to 16x packs in parallel
- Battery Pack Cell Configuration: 8S2P

PARAMETER	VALUE
Pack Capacity	160Ah
Depth of Discharge (DOD)	85%
Nominal Voltage	Pack Voltage 14.6V (Regulator 12.8V)
Nominal Charge Current	40 A
Continuous Discharge Current	40 A
Maximum Discharge Current	20 A (60 sec)
Charging Mode	CC-CV
Mounting	Vertical
Dimensions (LxWxH) (mm)	398 x 216 x 302
Weight (Kg)	18 (Max)
Operating Temperature Range: Charging	0°C to +50°C Non Heated -20°C to +50°C Self- Heated
Operating Temperature Range: Discharging	-20°C to +55°C
Storage Temperature Range	10°C to +45°C
Protections	Over Charge / Discharge Current
	Short Circuit
	Over / Under Voltage
	Over / Under Temperature
Voltage Regulator (External)	Voltage Regulator / Converter from 16V to 12.8V included
Connectors	Elecbee Part No.: EB-IF-FM8M6-3356-150A
Communications	CAN 2.0, BLE Victron Enabled Communication Board
IP Class	IP 67
IoT	Compatible/FOTA enabled Remote Monitoring & Control Available
Self Heating Option	Available
Certification	UN 38.3

SAMSAR

15V SHORT 2.3KWh LITHIUM-ION BATTERY

MADE WITH CERTIFIED REPURPOSED NISSAN LEAF MODULES

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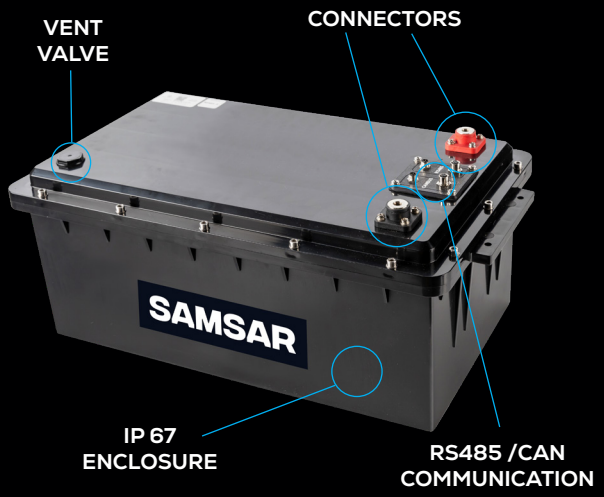
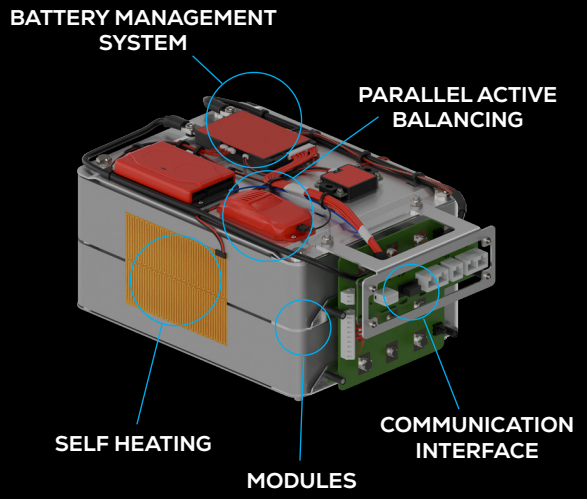
RE-MADE IN THE USA





SUMMARY

- Battery box dimensions:
  519mm x 281mm x 221mm (LWH)
- Real-time online performance tracking & control
- Battery swapping compatible with active balancing
- System supports up to 16x packs in parallel
- Battery Pack Cell Configuration: 8S2P

PARAMETER	VALUE
Pack Capacity	160Ah
Depth of Discharge (DOD)	85%
Nominal Voltage	15V
Nominal Charge Current	40 A
Continuous Discharge Current	40 A
Maximum Discharge Current	20 A (60 sec)
Charging Mode	CC-CV
Mounting	Vertical
Dimensions (LxWxH) (mm)	519 x 281 x 221
Weight (Kg)	18 (Max)
Operating Temperature Range: Charging	0°C to +50°C Non Heated -20°C to +50°C Self- Heated
Operating Temperature Range: Discharging	-20°C to +55°C
Storage Temperature Range	10°C to +45°C
Protections	Over Charge Current
	Over Discharge Current
	Short Circuit
	Over / Under Voltage
	Over / Under Temperature
Connectors	Elecbee Part No.: EB-IF-FM8M6-3356-150A
Communications	CAN 2.0, BLE Victron Enabled Communication Board
IP Class	IP 67
IoT	Compatible/FOTA enabled Remote Monitoring & Control Available
Self Heating Option	Available
Certification	UN 38.3

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15V LONG 2.3KWh LITHIUM-ION BATTERY

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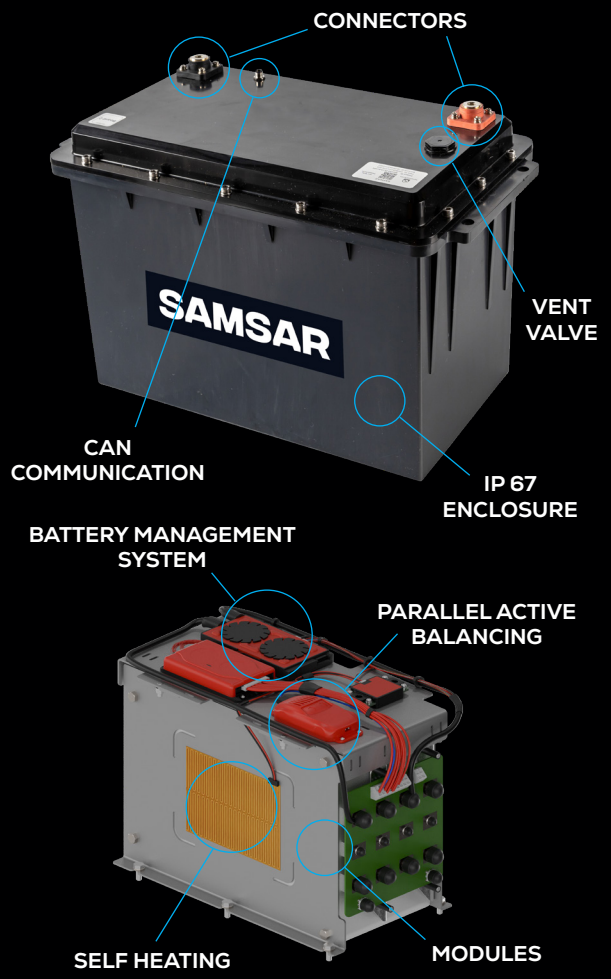

PARAMETER	VALUE
Pack Capacity	160Ah
Depth of Discharge (DOD)	85%
Nominal Voltage	15V
Nominal Charge Current	40 A
Continuous Discharge Current	40 A
Maximum Discharge Current	20 A (60 sec)
Charging Mode	CC-CV
Mounting	Vertical
Dimensions (LxWxH) (mm)	398 x 216 x 302
Weight (Kg)	18 (Max)
Operating Temperature Range: Charging	0°C to +50°C Non Heated -20°C to +50°C Self- Heated
Operating Temperature Range: Discharging	-20°C to +55°C
Storage Temperature Range	10°C to +45°C
Protections	Over Charge Current
	Over Discharge Current
	Short Circuit
	Over / Under Voltage
	Over / Under Temperature
Connectors	Elecbee Part No.: EB-IF-FM8M6-3356-150A
Communications	CAN 2.0, BLE Victron Enabled Communication Board
IP Class	IP 67
IoT	Compatible/FOTA enabled Remote Monitoring & Control Available
Self Heating Option	Available
Certification	UN 38.3

SUMMARY

- Battery box dimensions:
  398mm x 216mm x 302mm (LWH)
- Real-time online performance tracking & control
- Battery swapping compatible with active balancing
- System supports up to 16x packs in parallel
- Battery Pack Cell Configuration: 8S2P

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SAMSAR

DISCOVER THE SAMSAR ADVANTAGE

2x POWER

1/2 WEIGHT

10x LIFESPAN

5x FASTER

10 YR WARRANTY

0 MAINTENANCE

SAMSAR

25.6V CUBE 5.888KWH LiFePO4 BATTERY

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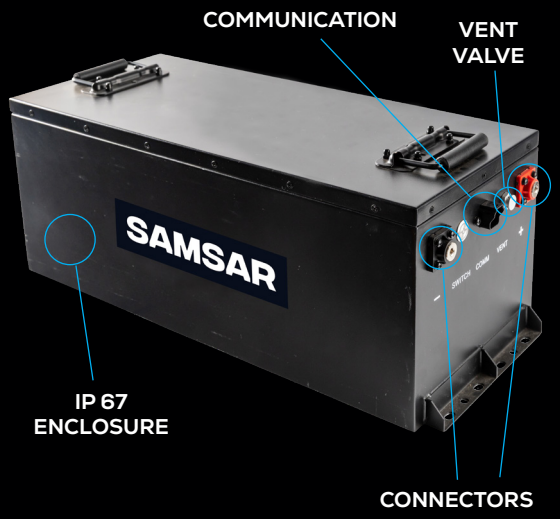

PARAMETER	VALUE
Pack Capacity	230Ah
Depth of Discharge (DOD)	85%
Nominal Voltage	25.6V
Nominal Charge Current	46 A
Maximum Charge Current	115 A
Continuous Discharge Current	200 A
Maximum Discharge Current	300 A (15 sec)
Charging Ending Voltage / Charge Mode	28.8V / CC-CV / Cell over charge protection @ 3.65V
Discharging Ending Voltage / Discharge Mode	19.2V / cell over discharge protection @ 2.3V
Mounting	Vertical
Dimensions (LxWxH) (mm)	632 x 255 x 253
Weight (Kg)	36 (Max)
Cell Type	New Grade A+ LiFePO4 Prismatic cell. 3.2V 230Ah
PCM/BMS model	8S-200A
Operating Temperature Range: Charging	Standard - 0°C to +50°C Non Heated
Operating Temperature Range: Discharging	-20°C to +55°C
Storage Temperature Range	10°C to +45°C
Protections	Over Charge
	Discharge Current
	Short Circuit
	Over Voltage
	Under Voltage
	Over Temperature
	Under Temperature
Connectors:	Marine Grade M8 bolt in battery terminal
Communications	CAN 2.0, BLE
IP Class	IP 67
Certification	UN 38.3

SUMMARY

- Battery box dimensions:
  632mm x 255mm x 253mm (LWH)
- Multi-generational build quality for enhanced lifespan and durability. Allows for upcycling at end of life.
- Active cell balancing for enhanced battery lifespan
- IP 67 Waterproof Steel Case for enhanced durability
- Smart BMS with CAN-bus communication for ethernet connectivity
- Battery Pack Cell Configuration: 8S1P

SAMSAR

29V SHORT 2.3KWh LITHIUM-ION BATTERY

MADE WITH CERTIFIED REPURPOSED NISSAN LEAF MODULES

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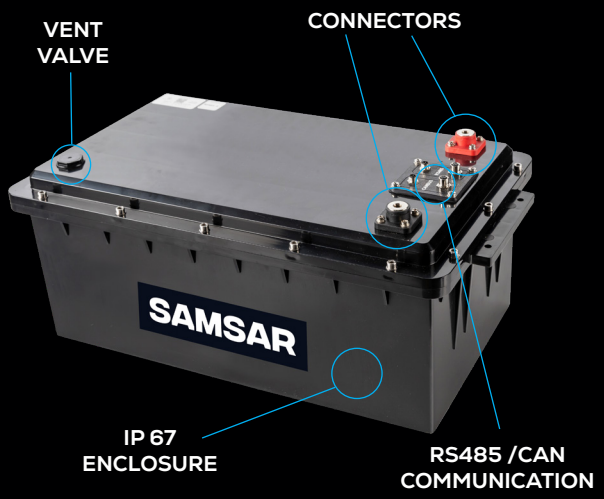

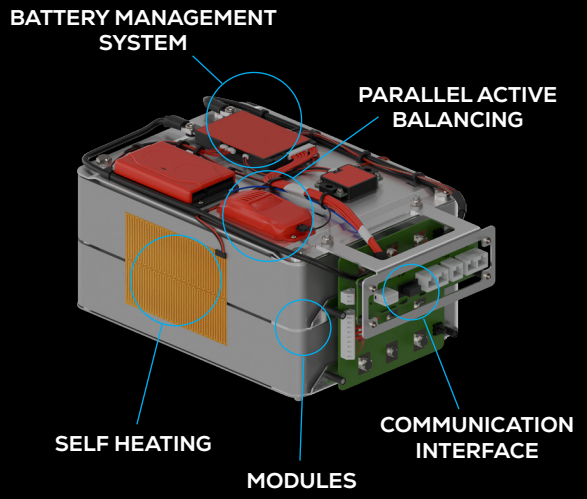

SUMMARY

- Battery box dimensions:
  519mm x 281mm x 221mm (LWH)
- Real-time online performance tracking & control
- Battery swapping compatible with active balancing
- System supports up to 16x packs in parallel
- Battery Pack Cell Configuration: 8S2P

PARAMETER	VALUE
Pack Capacity	80Ah
Depth of Discharge (DOD)	85%
Nominal Voltage	29V
Nominal Charge Current	40 A
Continuous Discharge Current	40 A
Maximum Discharge Current	20 A (60 sec)
Charging Mode	CC-CV
Mounting	Vertical
Dimensions (LxWxH) (mm)	519 x 281 x 221
Weight (Kg)	18 (Max)
Operating Temperature Range: Charging	0°C to +50°C Non Heated -20°C to +50°C Self- Heated
Operating Temperature Range: Discharging	-20°C to +55°C
Storage Temperature Range	10°C to +45°C
Protections	Over Charge Current
	Over Discharge Current
	Short Circuit
	Over / Under Voltage
	Over / Under Temperature
Connectors	Elecbee Part No.: EB-IF-FM8M6-3356-150A
Communications	CAN 2.0, BLE Victron Enabled Communication Board
IP Class	IP 67
IoT	Compatible/FOTA enabled Remote Monitoring & Control Available
Self Heating Option	Available
Certification	UN 38.3

SAMSAR

29V LONG 2.3KWh LITHIUM-ION BATTERY

MADE WITH CERTIFIED REPURPOSED NISSAN LEAF MODULES

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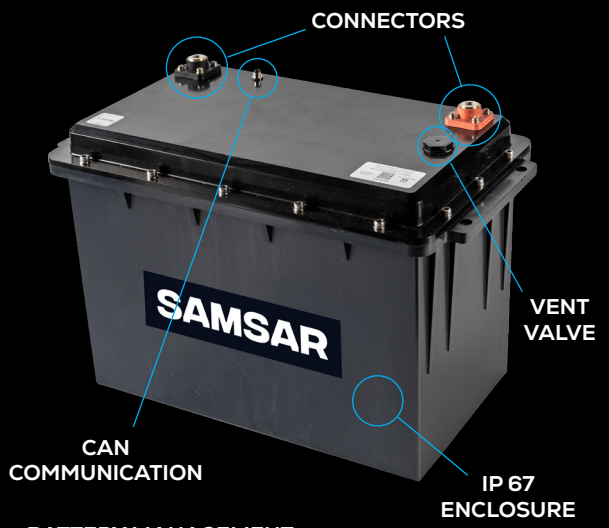
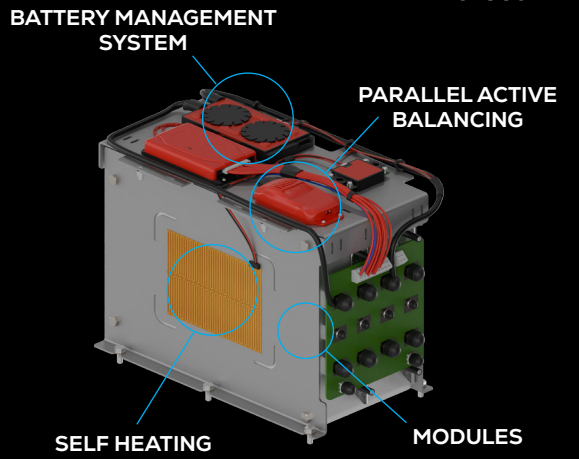
RE-MADE IN THE USA





PARAMETER	VALUE
Pack Capacity	80Ah
Depth of Discharge (DOD)	85%
Nominal Voltage	29V
Nominal Charge Current	40 A
Continuous Discharge Current	40 A
Maximum Discharge Current	20 A (60 sec)
Charging Mode	CC-CV
Mounting	Vertical
Dimensions (LxWxH) (mm)	398 x 216 x 302
Weight (Kg)	18 (Max)
Operating Temperature Range: Charging	0°C to +50°C Non Heated -20°C to +50°C Self- Heated
Operating Temperature Range: Discharging	-20°C to +55°C
Storage Temperature Range	10°C to +45°C
Protections	Over Charge Current
	Over Discharge Current
	Short Circuit
	Over / Under Voltage
	Over / Under Temperature
Connectors	Elecbee Part No.: EB-IF-FM8M6-3356-150A
Communications	CAN 2.0, BLE
IP Class	IP 67
IoT	Compatible/FOTA enabled Remote Monitoring & Control Available
Self Heating Option	Available
Certification	UN 38.3

SUMMARY

- Battery box dimensions:
  398mm x 216mm x 302mm (LWH)
- Real-time online performance tracking & control
- Battery swapping compatible with active balancing
- System supports up to 16x packs in parallel
- Battery Pack Cell Configuration: 8S2P

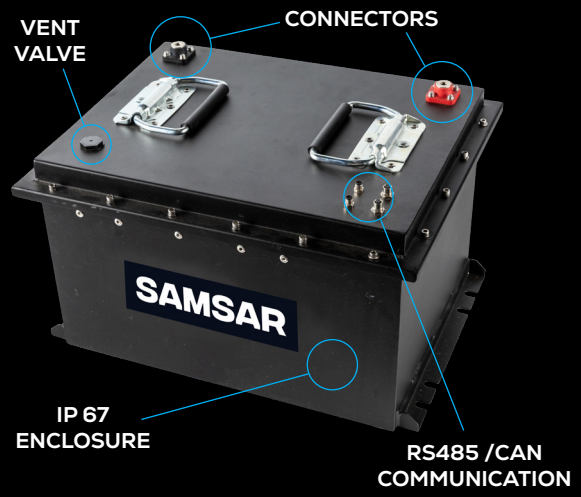
SAMSAR

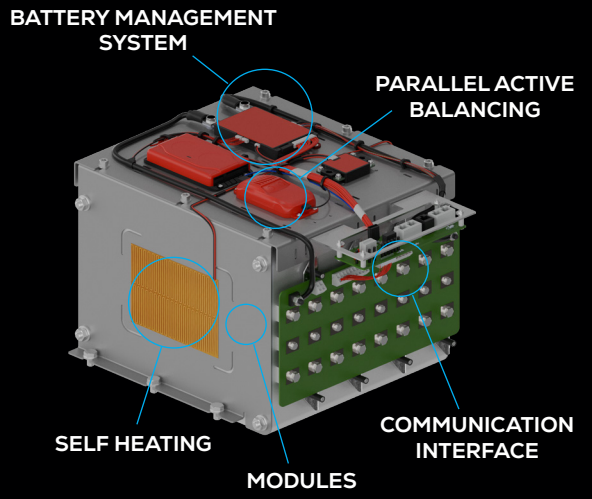
58V CUBE 4.6KWh LITHIUM-ION BATTERY

MADE WITH CERTIFIED REPURPOSED NISSAN LEAF MODULES

ISO 9001:2015

RE-MADE IN THE USA





SUMMARY

- Battery box dimensions:
  505mm x 366mm x 272mm (LWH)
- Real-time online performance tracking & control
- Battery swapping compatible with active balancing
- System supports up to 16x packs in parallel
- Battery Pack Cell Configuration: 16S2P

PARAMETER	VALUE
Pack Capacity	80Ah
Depth of Discharge (DOD)	85%
Nominal Voltage	58V
Nominal Charge Current	40 A
Continuous Discharge Current	40 A
Maximum Discharge Current	40 A (60 sec)
Charging Mode	CC-CV
Mounting	Vertical
Dimensions (LxWxH) (mm)	505 x 366 x 272
Weight (Kg)	36 (Max)
Operating Temperature Range: Charging	0°C to +50°C Non Heated -20°C to +50°C Self- Heated
Operating Temperature Range: Discharging	-20°C to +55°C
Storage Temperature Range	10°C to +45°C
Protections	Over Charge Current
	Over Discharge Current
	Short Circuit
	Over / Under Voltage
	Over / Under Temperature
Connectors	Elecbee Part No.: EB-IF-FM8M6-3356-150A
Communications	CAN 2.0, BLE Victron Enabled Communication Board
IP Class	IP 67
IoT	Compatible/FOTA enabled Remote Monitoring & Control Available
Self Heating Option	Available
Certification	UN 38.3

ISO 9001:2015

RE-MADE IN THE USA

SAMSAR

POWERS A CIRCULAR ECONOMY

BATTERY 1st LIFE

10 YEARS (DEPENDENT ON USE)

MANUFACTURE NEW LITHIUM BATTERIES DESIGNED TO LIVE MULTIPLE LIVES.

EXISTING ELECTRIC VEHICLE OR OTHER APPLICATION(S) BATTERY

BATTERY 3rd LIFE

3-5 YEARS

(DEPENDENT ON USE)

REPEAT RE-PURPOSE PROCESS

BATTERY 2nd LIFE

5-10 YEARS

(DEPENDENT ON USE)

RE-PURPOSE PROCESS

TESTS AND CERTIFIES RE-PURPOSED CONTENT FROM ELECTRIC VEHICLES AND 1st LIFE APPLICATIONS VIA UL 1974

HOUSTON, TX

PROOF OF QUALITY DATA IS SAVED TO NthLIFE PLATFORM AND AVAILABLE VIA QR CODE ON THE BATTERY

HOUSTON, TX

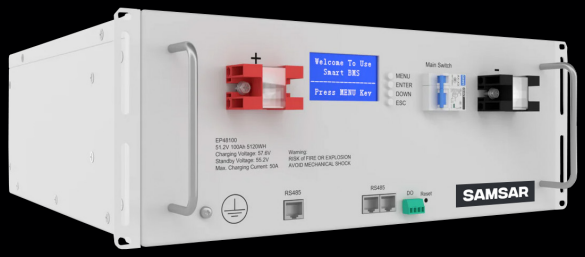
REPURPOSED CONTENT ASSEMBLED INTO 2nd LIFE BATTERIES

DALLAS, TX

SAMSAR

48V 5.2KWh STACKABLE LiFePO4 BATTERY

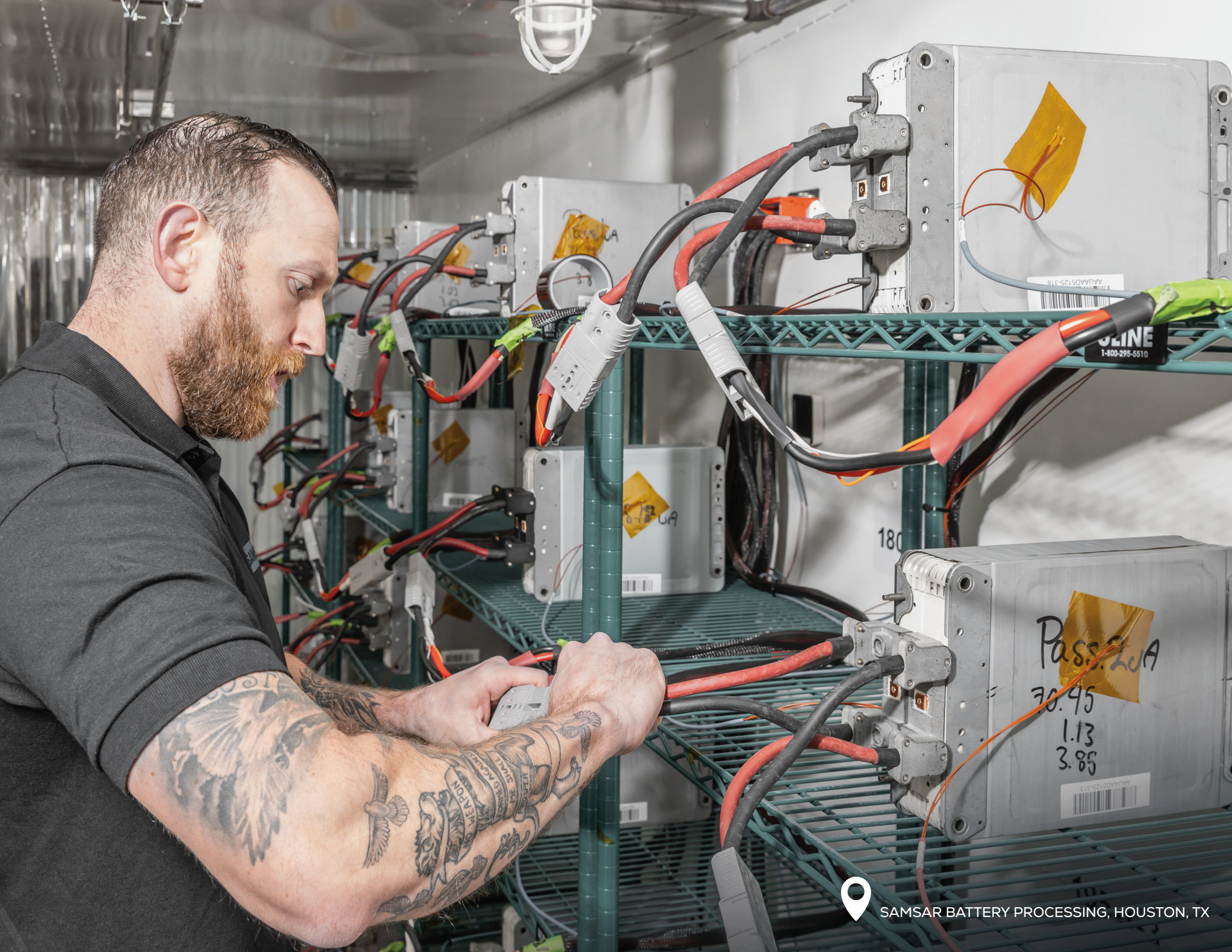
ISO 9001:2015



PARAMETER	VALUE
Pack Capacity	100Ah
Nominal Voltage	51.2V
Nominal Charge Current	50 A
Maximum Charge Current	50 A
Continuous Discharge Current	50A
Maximum Discharge Current	100 A (10 sec)
Charging Ending Voltage / Charge Mode	57.6V / CC-CV / Cell over charge protection @ 3.65V
Discharging Ending Voltage / Discharge Mode	36.8V / Cell over discharge protection @ 2.3V
Mounting	Stackable
Dimensions (LxWxH) (mm)	442 x 470 x 143
Weight (Kg)	44
Cell Type	New Grade A+ LiFePO4 Prismatic cell. 3.2V 100Ah
PCM/BMS model	16S-100A
Operating Temperature Range: Charging	Standard - 0°C to +55°C
Operating Temperature Range: Discharging	-20°C to +60°C
Storage Temperature Range	-20°C to +45°C
Protections	Over Charge / Discharge Current
	Short Circuit
	Over / Under Voltage
	Over / Under Temperature
Connectors:	Flexible coppoer busbars / M8 bolt terminals
Communications	CAN 2.0, BLE
IP Class	IP 65
IoT	Compatible/FOTA enabled / Remote Monitoring & Control Available
Certification	UN 38.3

SUMMARY

- Battery box dimensions:
  442mm x 470mm x 143mm (LWH)
- Multi-generational build quality for enhanced lifespan and durability. Allows for upcycling at end of life.
- Active cell balancing for enhanced battery lifespan
- IP 65 Waterproof Steel Case for enhanced durability
- Smart BMS with CAN-bus communication for ethernet connectivity
- Battery Pack Cell Configuration: 16S1P



SAMSAR BATTERY PROCESSING, HOUSTON, TX

SAMSAR

36V 105Ah 4KWh LiFePO4 GOLF CART & EV BATTERY

ISO 9001:2015

SUMMARY

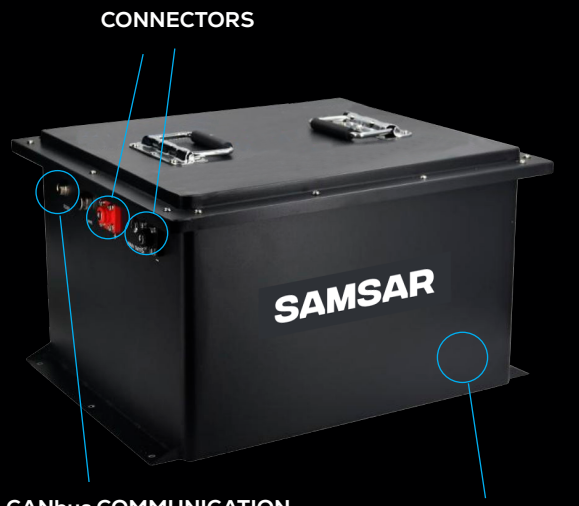
- Battery box dimensions:
  436mm x 334mm x 230mm (LWH)
- Multi-generational build quality for enhanced lifespan and durability. Allows for upcycling at end of life.
- Active cell balancing for enhanced battery lifespan
- IP 67 Waterproof Steel Case for enhanced durability
- Smart BMS with CAN-bus communication for ethernet connectivity
  - LCD dashboard display with DS20 Aviation Connector cable included
- Battery Pack Cell Configuration: 4S4P

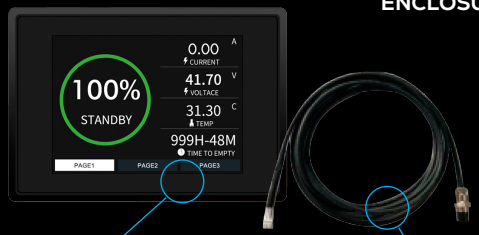
PARAMETER	VALUE
Pack Capacity	105Ah
Depth of Discharge (DOD)	85%
Nominal Voltage	38.4V
Nominal Charge Current	100 A
Maximum Charge Current	100 A
Continuous Discharge Current	200A
Maximum Discharge Current	400 A (35 sec)
Charging Ending Voltage / Charge Mode	43.8V / CC-CV / Cell over charge protection @ 3.65V
Discharging Ending Voltage / Discharge Mode	40V / Cell over discharge protection @ 2.3V
Mounting	Vertical
Dimensions (LxWxH) (mm)	436 x 334 x 230
Weight (Kg)	36.5 (Max)
Cell Type	New Grade A+ LiFePO4 Prismatic cell. 3.2V 105Ah
PCM/BMS model	4S-800A
Operating Temperature Range: Charging	-20°C to +50°C Self- Heated
Operating Temperature Range: Discharging	-20°C to +60°C
Storage Temperature Range	0°C to +30°C
Protections	Over Charge / Discharge Current
	Short Circuit
	Over / Under Voltage
	Over / Under Temperature
Connectors:	3/8" stainless steel threaded studs
Communications	CANbus RS485 DS20 Aviation Connector Cable included
IP Class	IP 67
IoT	Compatible/FOTA enabled / Remote Monitoring & Control Available
Self Heating Option	Included
Battery Monitor	LCD dashboard display with DS20 Aviation Connector cable included
Certification	UN 38.3

SAMSAR

48V 105Ah 5.3KWh LiFePO4 GOLF CART & EV BATTERY

ISO 9001:2015





LCD Dashboard

DS20 Aviation Connector cable

SUMMARY

- Battery box dimensions:
  460mm x 334mm x 230mm (LWH)
- Multi-generational build quality for enhanced lifespan and durability. Allows for upcycling at end of life.
- Active cell balancing for enhanced battery lifespan
- IP 67 Waterproof Steel Case for enhanced durability
- Smart BMS with CAN-bus communication for ethernet connectivity
  - LCD dashboard display with DS20 Aviation Connector cable included
- Battery Pack Cell Configuration: 4S4P

PARAMETER	VALUE
Pack Capacity	105Ah
Depth of Discharge (DOD)	85%
Nominal Voltage	51.2V
Nominal Charge Current	100 A
Maximum Charge Current	150 A
Continuous Discharge Current	200A
Maximum Discharge Current	400 A (35 sec)
Charging Ending Voltage / Charge Mode	58.4V / CC-CV / Cell over charge protection @ 3.65V
Discharging Ending Voltage / Discharge Mode	9.2V / Cell over discharge protection @ 2.3V
Mounting	Vertical
Dimensions (LxWxH) (mm)	460 x 334 x 230
Weight (Kg)	45.5 (Max)
Cell Type	New Grade A+ LiFePO4 Prismatic cell. 3.2V 105Ah
PCM/BMS model	4S-800A
Operating Temperature Range: Charging	-20°C to +50°C Self- Heated
Operating Temperature Range: Discharging	-20°C to +60°C
Storage Temperature Range	0°C to +30°C
Protections	Over Charge / Discharge Current
	Short Circuit
	Over / Under Voltage
	Over / Under Temperature
Connectors:	3/8" stainless steel threaded studs
Communications	CANbus RS485 DS20 Aviation Connector Cable included
IP Class	IP 67
IoT	Compatible/FOTA enabled / Remote Monitoring & Control Available
Self Heating Option	Included
Battery Monitor	LCD dashboard display with DS20 Aviation Connector cable included
Certification	UN 38.3

SAMSAR

72V 105Ah 8KWh LiFePO4 ELECTRIC VEHICLE BATTERY

ISO 9001:2015

PARAMETER	VALUE
Pack Capacity	105Ah
Depth of Discharge (DOD)	85%
Nominal Voltage	76.8V
Nominal Charge Current	50 A
Maximum Charge Current	50 A
Continuous Discharge Current	100 A
Maximum Discharge Current	350 A (35 sec)
Charging Ending Voltage / Charge Mode	87.6V / CC-CV / Cell over charge protection @ 3.65V
Discharging Ending Voltage / Discharge Mode	52.8V / Cell over discharge protection @ 2.3V
Mounting	Vertical
Dimensions (LxWxH) (mm)	460 x 334 x 232
Weight (Kg)	56 (Max)
Cell Type	New Grade A+ LiFePO4 Prismatic cell. 3.2V 105Ah
PCM/BMS model	4S-800A
Operating Temperature Range: Charging	-20°C to +50°C Self- Heated
Operating Temperature Range: Discharging	-20°C to +60°C
Storage Temperature Range	0°C to +30°C
Protections	Over Charge / Discharge Current
	Short Circuit
	Over / Under Voltage
	Over / Under Temperature
Connectors:	3/8" stainless steel threaded studs
Communications	CANbus RS485
IP Class	IP 67
IoT	Compatible/FOTA enabled / Remote Monitoring & Control Available
Self Heating Option	Included
Certification	UN 38.3

SUMMARY

- Battery box dimensions:
  460mm x 334mm x 232mm (LWH)
- Multi-generational build quality for enhanced lifespan and durability. Allows for upcycling at end of life.
- Active cell balancing for enhanced battery lifespan
- IP 67 Waterproof Steel Case for enhanced durability
- Smart BMS with CAN-bus communication for ethernet connectivity
- Battery Pack Cell Configuration: 4S4P

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WARRANTY AND SERVICE LEVEL AGREEMENT

WARRANTY GUARANTEE

COMPREHENSIVE 10 YR WARRANTY WITH FULL REPAIR AND REPLACEMENT FOR PRODUCTS WITH DEFECTS IN DESIGN, MATERIALS, AND WORKMANSHIP.

COMMENCEMENT DATE TRIGGERED BY EVENTS BELOW:

- UPON COMMISSIONING WITH END USER
- 30 DAYS AFTER ASSEMBLY
- 3 MONTHS AFTER UNIT SHIPPED

WARRANTY EXCLUSIONS APPLICABLE FOR MISUSE, TAMPERING, IMPROPER USE OF GUIDELINES/MANUAL, PHYSICAL DAMAGE, AND OTHER APPLICABLE TERMS

SERVICE LEVEL AGREEMENT (SLA)

COMPREHENSIVE SERVICE LEVEL AGREEMENT WILL INCLUDE FOLLOWING TERMS:

- TECHNICAL SUPPORT HOTLINE
- COMPONENT REPLACEMENT WITHIN 72HRS OF RECEIPT
- DEDICATED FREIGHT AND LOGISTICS EXECUTIVE
- DEDICATED TECHNICAL SUPPORT EXECUTIVE
- 100% US BASED ENGINEERING AND TECHNICAL SUPPORT
- CUSTOMER SATISFACTION UPON REPLACEMENT

CLOUD PLATFORM WILL BE UTILIZED TO ISOLATE AND SUBMIT SERVICE REQUEST

REMOTE MONITORING AND CONTROL VIA CELLULAR NETWORK AVAILABLE AS UPGRADE

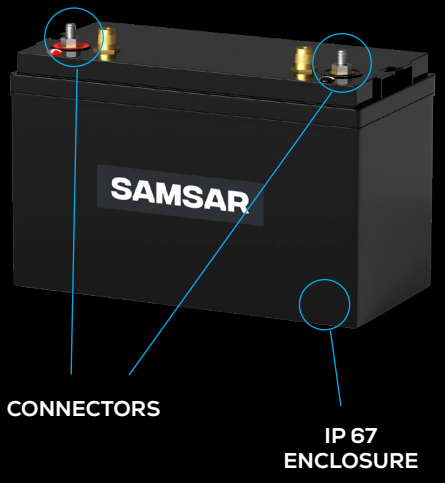
WARRANTY AND SLA HAS BEEN CUSTOMIZED TO ENSURE RELIABILITY ACROSS YOUR FLEET THROUGHOUT THE PRODUCT LIFECYCLE

SAMSAR BATTERY PROCESSING, HOUSTON, TX

SAMSAR

12.8V 1500CCA 1.2KWh GROUP 31 AUTOMOTIVE BATTERY

ISO 9001:2015



SUMMARY

- Battery box dimensions:
  330mm x 173mm x 240mm (LWH)
- Remote jump start from up to 50 ft away - no more dead batteries
- Compatible with semi-truck and large vehicle alternators.
- Intelligent BMS protects vehicles alternator and holds 3 jump starts in reserve
- Real time performance data via Bluetooth connectivity
- Million-mile vibration resistant case
- 230°C heat resistant case and cover UL94-V0 fire resistance
- Active cell balancing for enhanced battery lifespan
- IP 67 Waterproof ABS plastic case for enhanced durability
- Battery Pack Cell Configuration: 4S1P

PARAMETER	VALUE
Pack Capacity	100Ah
Nominal Voltage	12.8V
Nominal Charge Current	150 A
Maximum Charge Current	1 50 A
Continuous Discharge Current	100A
Maximum Discharge Current	1500 A (10 sec)
Charging Ending Voltage / Charge Mode	14.5V / CC-CV / Cell over charge protection @ 3.65V
Discharging Ending Voltage / Discharge Mode	9.2V / Cell over discharge protection @ 2.3V
Mounting	Vertical
Dimensions (LxWxH) (mm)	330 x 173 x 240
Weight (Kg)	11
Cell Type	New Grade A+ LiFePO4 Prismatic cell. 3.2V 100Ah
PCM/BMS model	4S-1500A
Operating Temperature Range: Charging	Standard - 0°C to +55°C
Operating Temperature Range: Discharging	-20°C to +60°C
Storage Temperature Range	0°C to +30°C
Protections	Over Charge / Discharge Current
	Short Circuit
	Over / Under Voltage
	Over / Under Temperature
Connectors:	3/8" stainless steel threaded studs
Communications	Bluetooth
IP Class	IP 67
IoT	Compatible/FOTA enabled / Remote Monitoring & Control Available
Certification	UN 38.3

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WARRANTY AND SERVICE LEVEL AGREEMENT

WARRANTY GUARANTEE

COMPREHENSIVE 5 YR WARRANTY WITH FULL REPAIR AND REPLACEMENT FOR PRODUCTS WITH DEFECTS IN DESIGN, MATERIALS, AND WORKMANSHIP.

COMMENCEMENT DATE TRIGGERED BY EVENTS BELOW:

- UPON COMMISSIONING WITH END USER
- 30 DAYS AFTER ASSEMBLY
- 3 MONTHS AFTER UNIT SHIPPED

WARRANTY EXCLUSIONS APPLICABLE FOR MISUSE, TAMPERING, IMPROPER USE OF GUIDELINES/MANUAL, PHYSICAL DAMAGE, AND OTHER APPLICABLE TERMS

SERVICE LEVEL AGREEMENT (SLA)

COMPREHENSIVE SERVICE LEVEL AGREEMENT WILL INCLUDE FOLLOWING TERMS:

- TECHNICAL SUPPORT HOTLINE
- COMPONENT REPLACEMENT WITHIN 72HRS OF RECEIPT
- DEDICATED FREIGHT AND LOGISTICS EXECUTIVE
- DEDICATED TECHNICAL SUPPORT EXECUTIVE
- 100% US BASED ENGINEERING AND TECHNICAL SUPPORT
- CUSTOMER SATISFACTION UPON REPLACEMENT

CLOUD PLATFORM WILL BE UTILIZED TO ISOLATE AND SUBMIT SERVICE REQUEST

REMOTE MONITORING AND CONTROL VIA CELLULAR NETWORK AVAILABLE AS UPGRADE

WARRANTY AND SLA HAS BEEN CUSTOMIZED TO ENSURE RELIABILITY ACROSS YOUR FLEET THROUGHOUT THE PRODUCT LIFECYCLE

SAMSAR

E-BIKE LiFePO4 BATTERIES

ISO 9001:2015

SUMMARY

- Case & mounting hardware can be customized to your application.
- Multi-generational build quality for enhanced lifespan and durability. Allows for upcycling at end of life.
- Active cell balancing for enhanced battery lifespan
- IP 67 Waterproof molded case for enhanced durability & re-use
- Drop in replacement for many mobility applications.
- 2-year battery warranty
- FINANCING OPTIONS & BATTERY AS A SERVICE (BAAS) OPTIONS AVAILABLE

BAAS
BATTERY AS A SERVICE

48V 20Ah

SIZE: 393mm x 84mm x 109mm
WEIGHT: 12lbs
BMS PROTECTED
IP67 WEATHERPROOF CASE

36V 17.5Ah

SIZE: 430mm x 64.3mm x 94mm
WEIGHT: 9lbs
BMS PROTECTED
IP67 WEATHERPROOF CASE

48V 26Ah

SIZE: 513mm x 76mm x 110mm
WEIGHT: 15lbs
BMS PROTECTED
IP67 WEATHERPROOF CASE

48V 20Ah

SIZE: 360mm x 88mm x 125mm
WEIGHT: 11.5lbs
BMS PROTECTED
IP67 WEATHERPROOF CASE

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SAMSAR

WARRANTY AND SERVICE LEVEL AGREEMENT

WARRANTY GUARANTEE

COMPREHENSIVE 2 YR WARRANTY WITH FULL REPAIR AND REPLACEMENT FOR PRODUCTS WITH DEFECTS IN DESIGN, MATERIALS, AND WORKMANSHIP.

COMMENCEMENT DATE TRIGGERED BY EVENTS BELOW:

- UPON COMMISSIONING WITH END USER
- 30 DAYS AFTER ASSEMBLY
- 3 MONTHS AFTER UNIT SHIPPED

WARRANTY EXCLUSIONS APPLICABLE FOR MISUSE, TAMPERING, IMPROPER USE OF GUIDELINES/MANUAL, PHYSICAL DAMAGE, AND OTHER APPLICABLE TERMS

SERVICE LEVEL AGREEMENT (SLA)

COMPREHENSIVE SERVICE LEVEL AGREEMENT WILL INCLUDE FOLLOWING TERMS:

- TECHNICAL SUPPORT HOTLINE
- COMPONENT REPLACEMENT WITHIN 72HRS OF RECEIPT
- DEDICATED FREIGHT AND LOGISTICS EXECUTIVE
- DEDICATED TECHNICAL SUPPORT EXECUTIVE
- 100% US BASED ENGINEERING AND TECHNICAL SUPPORT
- CUSTOMER SATISFACTION UPON REPLACEMENT

CLOUD PLATFORM WILL BE UTILIZED TO ISOLATE AND SUBMIT SERVICE REQUEST

REMOTE MONITORING AND CONTROL VIA CELLULAR NETWORK AVAILABLE AS UPGRADE

WARRANTY AND SLA HAS BEEN CUSTOMIZED TO ENSURE RELIABILITY ACROSS YOUR FLEET THROUGHOUT THE PRODUCT LIFECYCLE

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SAMSAR

NTH LIFE™

QUALITY GUARANTEED BY SAMSAR'S PROPRIETARY NthLIFE™ SOFTWARE PLATFORM

NTH LIFE™ REMOTE MONITORING

- BACKEND PLATFORM FOR GPS TRACKING, TEMPERATURE, STATE OF CHARGE MONITORING, AND REMOTELY TURNING THE BATTERY ON AND OFF VIA CELLULAR NETWORK
- MONITORS BATTERY PERFORMANCE WITH DETAILED USE HISTORY
- ALLOWS REMOTE CONTROL AND SENDS PERFORMANCE/SECURITY ALERTS
- REDUCES SERVICE CALLS AND COST OF SERVICE OVER TIME

NTH LIFE™ BATTERY PASSPORT

- TRANSPARENCY IN BATTERY PERFORMANCE WITH BATTERY MANUFACTURING HISTORY AND CERTIFICATION AVAILABLE THROUGH A DIGITAL BATTERY PASSPORT
- SCAN A QR CODE OR LOGIN TO A DASHBOARD TO SEE BATTERY HISTORY, CERTIFICATION, STATUS, AND PERFORMANCE

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SAMSAR

CUSTOM DESIGN SERVICES

BRING SAMSAR'S QUALITY, COST ADVANTAGE, AND PERFORMANCE TO YOUR PROJECT

SAMSAR PARTNERS WITH YOU TO BUILD THE PERFECT BATTERY FOR YOUR APPLICATION. WE'LL ENGINEER YOUR BATTERY WITH A CLEAR REUSE PATH AND MULTI-GENERATIONAL BUILD QUALITY SO IT CAN BE UPCYCLED, EXTENDING THE PRODUCT LIFE AND LIFETIME VALUE.

NEW BATTERIES ARE MANUFACTURED USING UL CERTIFIED GRADE A NEW CELLS. IF DESIRED, SAMSAR CAN INCORPORATE CERTIFIED RE-PURPOSED MATERIALS FROM OUR UL CERTIFIED SUPPLY CHAIN TO REDUCE COSTS, INCREASE SUSTAINABILITY, AND ADD A COMPELLING STORY TO YOUR BATTERY AND YOUR PRODUCT.

SAMSAR'S LEAN ENGINEERING PROCESS

- CREATE A REQUIREMENTS DOCUMENT (1-2 WEEKS)
- RAPID PROTOTYPING - US ASSEMBLY (2-4 WEEKS)
- PROTOTYPE APPROVAL (2-4 WEEKS)
- MASS PRODUCTION - US ASSEMBLY (2-4 WEEKS TOOLING FOR HIGH VOLUME)

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SAMSAR

FLEXIBLE COMMERCIAL OFFER - FINANCING & LEASING AVAILABLE

BATTERIES AVAILABLE VIA SALES BUYBACK (BUY NOW PAY LATER) OR BATTERY AS A SERVICE (LEASING), REDUCING CAPEX AND OFFERING FINANCIAL FLEXIBILITY. CONSERVE YOUR CASH AND WORKING CAPITAL WHILE HELPING ENSURE YOUR BATTERIES WILL BE FULLY RECYCLED AT END OF LIFE.

BUY NOW
PAY LATER

- 1 YEAR, 2 YEAR, AND 5 YEAR FINANCING TERMS
- AT END OF PAYMENT TERM YOU OWN THE PRODUCT
- CONSERVES CASH WHILE BUILDING BALANCE SHEET VALUE OVER TIME
- POSITIVE P & L IMPACT - PRODUCT DEPRECIATES OVER THE 10 YEAR WARRANTY TERM

BAAS

BATTERY AS A SERVICE

- LEASE ENERGY STORAGE FOR THE LIFETIME OF YOUR APPLICATION
- BATTERY IS RETURNED TO SAMSAR AT END OF 1st USE LIFE TO BE RE-PURPOSED
- CONSERVES CASH AND REDUCES CAPEX
- ALLOWS FOR RAPID GROWTH – GREAT FOR RAPIDLY SCALING COMPANIES

ISO 9001:2015

RE-MADE IN THE USA

SAMSAR

UNIQUE VALUE PROPOSTITION

FLEXIBLE COMMERCIAL OFFER - FINANCING & LEASING AVAILABLE:

Batteries available via sales buyback (financing) or Battery as a Service (leasing), reducing Capex and offering financial flexibility. These options conserve cash and working capital while helping ensure batteries will be fully recycled at end of life.

DOMESTIC SUPPLY CHAIN - USA ASSEMBLED

Battery components are tested and certified in Houston, Texas. Final battery assembly in Dallas, Texas. US based supply chain conserves working capital, improves cash flow, allows for lean inventory practices & rapid delivery, and reduces trade policy and tariff exposure.

PERFORMANCE VS TRADITIONAL BATTERIES

Half the weight and twice the usable power. 5X the lifespan. 10X the warranty coverage of traditional lead acid batteries. Provides greater performance and value over time. 10-year warranty allows for 10-year depreciation, improving P&L performance.

ONLINE MONITORING AND CONTROL:

Backend platform for GPS tracking, temperature, and charge monitoring. Allows remote control and sends performance/security alerts. Reduces service calls and cost of service over time.

BATTERY PASSPORT ENABLED:

Transparency in battery performance with battery repurpose certification available through a digital battery passport. Scan a QR code or login to a dashboard to see battery history, certification, status and performance.

SAFETY AND BMS PROTECTIONS:

BMS provides protection against over-discharge, short circuits, over-voltage, over-temperature, and under-temperature while extending battery life.

CARBON NEUTRAL:

Batteries are carbon neutral with CO_2 emissions already accounted for, resulting in zero emissions moving forward. Built from certified repurposed EV battery cells.

UL CERTIFIED PROCESSING CENTER:

First UL 1974 certified lab in the U.S., ensuring top standards in battery repurposing and safety compliance.


SAMSAR