

THE POWER OF
REDARC®

QUICK START GUIDE

REDLAB ICON SLIM LITHIUM BATTERY

12 V LiFePO₄ Slimline Lithium Battery

MODELS:

- LBATS12100
- LBATS12200



■ Full-length
Instruction Manual

■ Get the
Free App



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WARNINGS & SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS — This guide contains important safety instructions. Do NOT operate the Lithium Battery unless you have read and understood this guide.

It is strongly recommended to read the full-length manual before operating the battery. It can be accessed using the QR code on the front page.

The Lithium Battery is recommended to be installed by a qualified person.

Disclaimer: REDARC accepts no liability for any injury, loss of property damage which may occur from the improper or unsafe installation or use of its products.

SAFETY MESSAGE CONVENTIONS

Safety messages in this manual include a signal word to indicate the level of the hazard as follows:

⚠ WARNING: Indicates potential for a hazardous situation that may result in death or serious injury.

⚠ CAUTION: Indicates potential for a hazardous situation that may result in moderate or minor injury.

NOTICE: Indicates potential for a situation that may cause equipment damage or poor performance.

⚠ WARNING: RISK OF FIRE, EXPLOSION, TOXIC GAS.

Lithium batteries can fail at any time producing toxic gas and fire.

- It is safest to install the battery in a fireproof enclosure that is vented externally.
- Do NOT dismantle, crush, puncture, open, or shred the Battery.
- Do NOT heat above 70°C (158°F) or incinerate.
- Do NOT mount the battery in the engine bay.
- Do NOT drill holes in the Battery.
- Do NOT connect Battery in reverse polarity.
- Do NOT short circuit Battery terminals.
- Do NOT operate Battery beyond published specifications.
- Do NOT dispose in general waste or household recycling

⚠ WARNING: RISK OF FIRE.

Improper wiring design or installation may cause a fire.

- Wiring must be completed by a qualified person
- Read and understand the full-length manual
- Fuses must be used to protect the wiring
- The correct length terminal bolt must be used

⚠ CAUTION: Risk of strain. Risk of crushing.

- Multiple people are recommended to handle the battery.
- Use protective footwear.
- Do NOT lift the battery above shoulder height

⚠ CAUTION: Risk of Injury. Risk of cuts, eye injury, crushing, hearing damage and dust inhalation during installation process. Personal Protective Equipment is required.



⚠ CAUTION: Risk of projectiles, crushing, electrolyte leakage.

- Do NOT mount the battery suspended from the ceiling.
- Do NOT mount the battery upside down.
- Other mounting orientations are acceptable, see full-length manual for details.

PRODUCT OVERVIEW

The REDARC Slim Lithium Battery is a self-protected Lithium Iron Phosphate (LiFePO₄) rechargeable battery. The battery operates as a 12 V power source for mobile and stationary applications.

KIT CONTENTS / PARTS

1. LITHIUM BATTERY

- 2. Power Button
- 3. Control Button
- 4. Status LEDs / SoC Display
- 5. Bracket Mounting Points
100 Ah: x8 | 200 Ah: x10
- 6. Positive Battery (+) Terminal (with Terminal Cover)
- 7. Negative Battery (-) Terminal (with Terminal Cover)
- 8. Remote Switch Jumper (90°, fitted)
- 9. Communications Port (**LINK IN**)
- 10. Communications Port (**LINK OUT**)
- 11. Remote Switch Port (**REMOTE ON/OFF**)

12. TERMINAL CONNECTION HARDWARE

- 13. Standard Terminal Bolts (x2)
- 14. Long Terminal Bolts (x2)

15. DRAWSTRING BAG

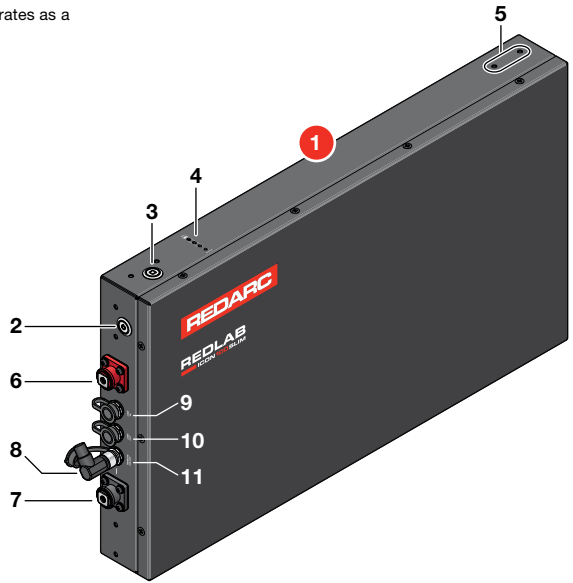
16. MOUNTING TEMPLATE

17. MOUNTING BRACKET HARDWARE

- 18. Mounting Brackets (x6)
- 19. M4 x 12 mm Screws (Bracket → Battery) (x12)

20. R-BUS NETWORK CABLES

- 21. Remote ON/OFF Switch Kit 1 m (3.3')
- 22. Battery → R-Bus Communications Cable 300 mm (12")
- 23. Battery → Battery Communications Cable 1 m (3.3')



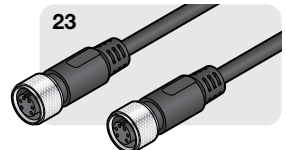
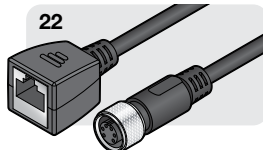
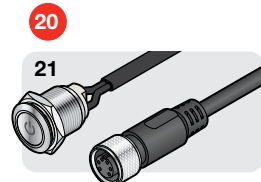
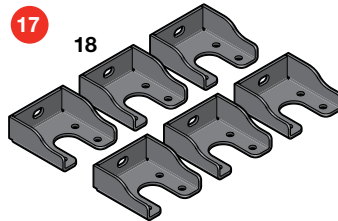
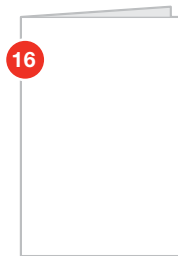
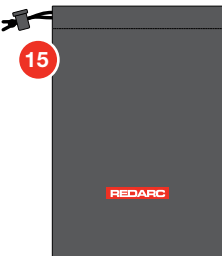
12



100 Ah: M6 x 12 mm
200 Ah: M8 x 16 mm



100 Ah: M6 x 16 mm
200 Ah: M8 x 20 mm



HANDLING

⚠ CAUTION: Risk of strain. Risk of crushing.

- Multiple people are recommended to handle the battery.
- Wear protective footwear.
- Do NOT lift the battery above shoulder height.

NOTICE: Risk of product damage, surface damage. Before installation, place the battery on the packaging foam or a protective mat to reduce scratches and scuffs.

INSTALLATION

⚠ CAUTION: Risk of cuts, eye injury, crushing, hearing damage and dust inhalation during installation process.



Installation (including mounting and wiring) must be undertaken by a qualified individual. It requires specialised skills and knowledge, including knowledge of local laws and regulations.

You must read and understand the full-length manual before beginning installation.

INSTALLATION REQUIREMENTS

⚠ WARNING: RISK OF FIRE, EXPLOSION, TOXIC GAS.

- Do NOT mount the battery in the engine bay.
- Do NOT drill holes in the battery.
- It is safest to install the battery in a fireproof enclosure that is vented externally.

⚠ CAUTION: Risk of projectile, crushing, electrolyte leakage.

- Do NOT mount the battery suspended from the ceiling.
- Do NOT mount the battery upside down.
- Other mounting orientations are acceptable, see the full-length manual for details.

NOTICE: Risk of property damage. Check both sides of vehicle mounting surfaces before drilling.

MOUNTING CHECKLIST

- ☐ **COMPLIANT** — Ensure your installation complies with applicable laws and regulations.
- ☐ **SEPARATED** — Installation inside or nearby sleeping areas must prevent exposure to fire and toxic gases during a battery failure. It is safest to install batteries in an externally vented fireproof enclosure.
- ☐ **SECURE** — Mount the Battery using approved methods to a strong, fixed surface. Ensure the battery will be secure under foreseeable conditions, including a vehicle collision.
- ☐ **PROTECTED** — Install in a location protected from heat, moisture, chemical exposure, and direct sunlight.
- ☐ **ACCESSIBLE** — Ensure there is access to the battery for required functions and usage of accessory cables. Ensure the battery can easily be turned OFF and ON in its final position.
- ☐ **CLEAR** — Ensure there is clearance and adequate airflow around the battery. Airflow improves cooling, performance, and product lifetime.

MOUNTING USING SUPPLIED BRACKETS

⚠ WARNING: RISK OF EXPLOSION.

Do NOT drill holes in the battery.

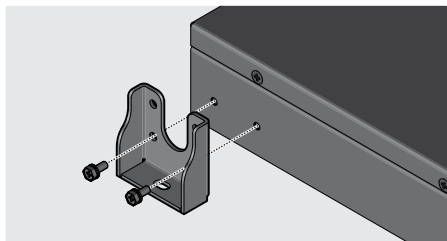
⚠ WARNING: RISK OF PROJECTILES, CRUSHING.

- At least four Brackets must be used
- Each corner must be supported by at least one Bracket
- Using six Brackets is recommended

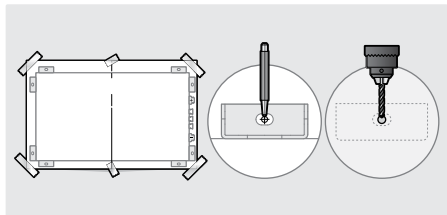
STEPS:

1. Attach each bracket to the battery using the supplied M4 screws using a #2 Phillips-head driver, or a 7 mm (9/32") spanner or socket.

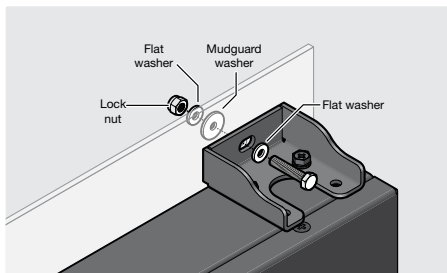
Torque each screw to 2–3 N·m (1.5–2.2 lbf·ft).



2. Mark and drill holes in the vehicle surface using the supplied Mounting Template as a guide.



3. Attach each bracket to the vehicle surface using M6 bolts, washers and lock nuts as shown (not supplied).



MOUNTING USING THE INSET MOUNTING POINTS (LBATS12200 ONLY)

The Inset Mounting Points on the LBATS12200 are provided as an alternative mounting method.

⚠ WARNING: RISK OF EXPLOSION.

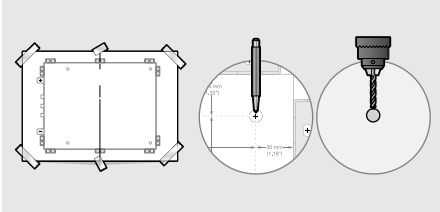
Do NOT drill holes in the battery.

⚠ WARNING: RISK OF PROJECTILES, CRUSHING.

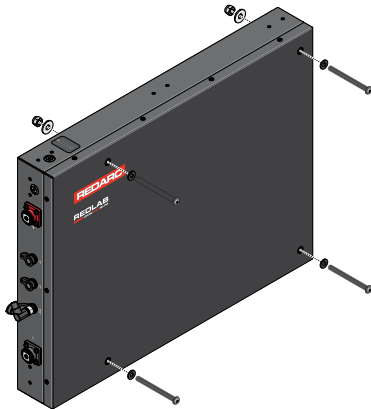
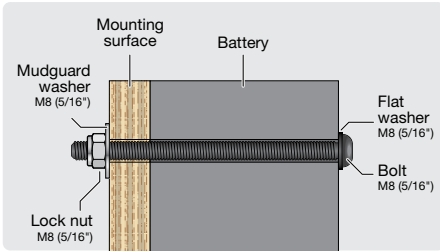
All four (4) Inset Mounting Points must be used. Read the full-length manual before installation.

STEPS:

1. Mark and drill holes on the vehicle mounting surface using the Mounting Template as a guide.



2. Fasten the battery to the vehicle surface using M8 (5/16") bolts, washers, mudguard washers and lock nuts (fasteners not supplied).



BASIC WIRING

⚠ WARNING: RISK OF FIRE.

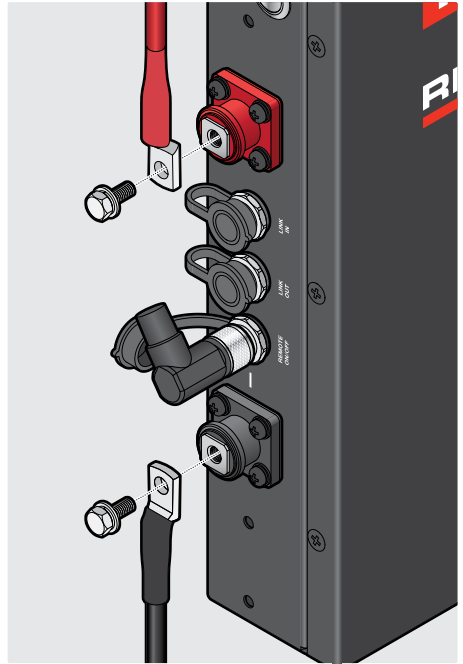
Improper wiring configuration or installation may cause a fire.

- Wiring must be completed by a qualified person
- Read and understand the full-length manual
- Suitably rated fuses must be used to protect the wiring
- The correct length terminal bolt must be used

NOTICE: Risk of poor performance and faults. Only use chargers which are designed for Lithium Iron Phosphate batteries (LiFePO₄).

STEPS:

1. Use the appropriate length Terminal Bolt to secure the cable lugs to the Terminals.



2. Fit the Terminal Covers.

PARALLEL AND SERIES BATTERY BANKS

The battery supports wiring in parallel and series. Refer to the full-length manual for more information.

OPERATION

TURNING THE BATTERY ON

⚠ WARNING: RISK OF FIRE.

Inspect equipment and wiring for damage if a manual reset is required after a battery fault is triggered.

For safety, the battery will only turn on if:

The Power Button is ON (pushed down) and the Remote Switch jumper is plugged into the **REMOTE ON/OFF** port.



— OR —

The Power Button on the battery and the Remote Switch are **both ON** (pushed down).



CHECKING STATE OF CHARGE



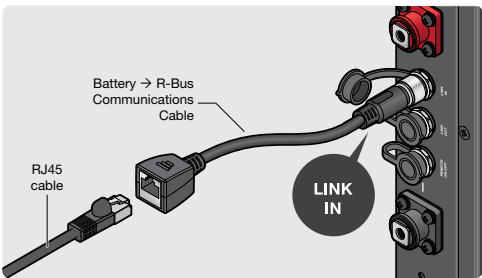
Press the Control Button for 2 seconds to display State of Charge (SoC) on the LED Display. The SoC is displayed in approximately 33% increments.

CONNECTING TO AN R-BUS SYSTEM

The Battery can connect to a REDARC R-Bus system for integrated monitoring and control.

The Battery → R-Bus communications cable (supplied) connects to the **LINK IN** Communication Port and terminates with a female RJ45 socket.

A standard RJ45 cable (not supplied) can then connect the battery to the R-Bus system.



BATTERY BANK COMMUNICATION

Battery to battery communication is supported for configuring and monitoring a battery bank. Refer to the full-length manual for more information.

CONNECTING TO THE APP

The battery supports Bluetooth® connection to Android and iOS mobile devices. The app allows you to monitor parameters such as State of Charge, current, voltage, and temperature.



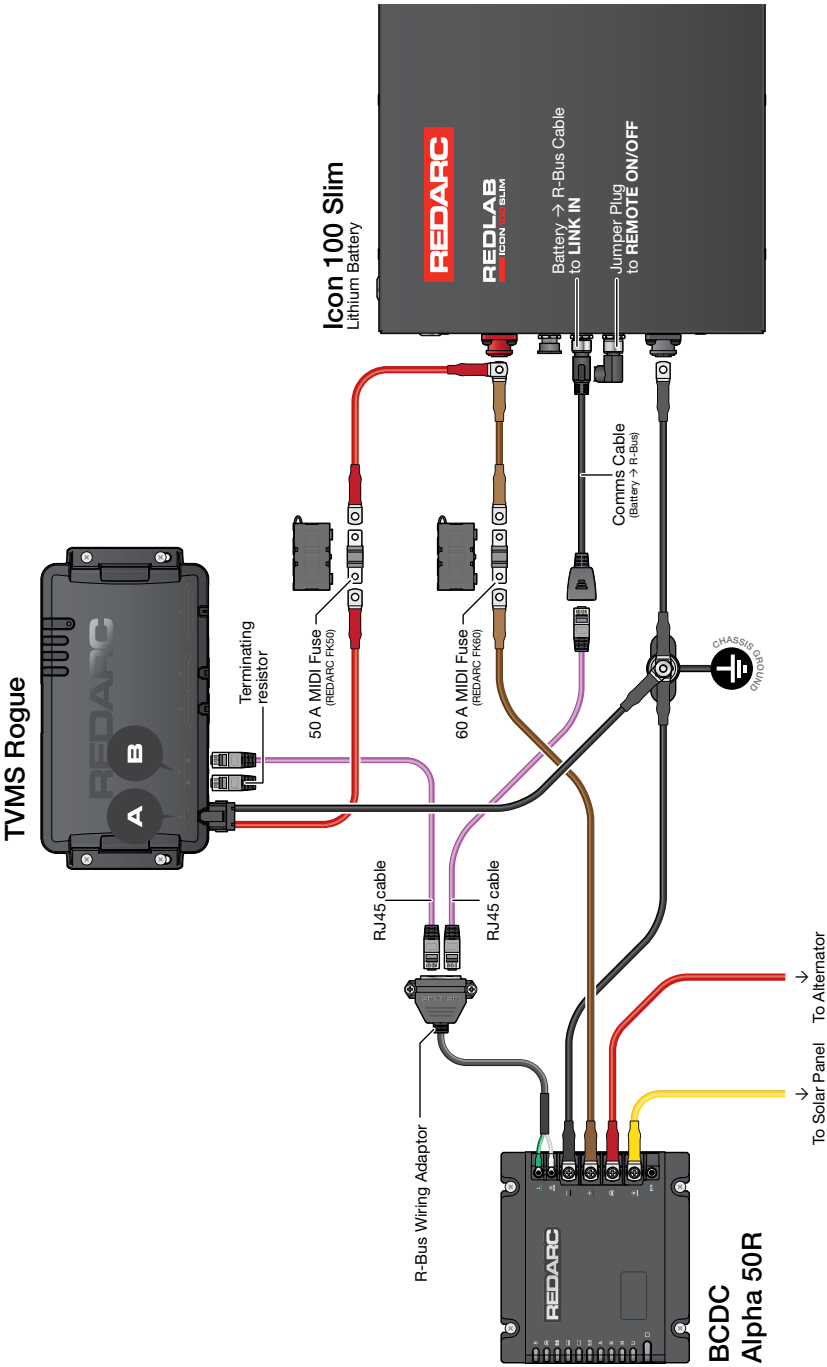
Download the free App

STORAGE

NOTICE: Risk of product lockout. Recharging an overdischarged battery is hazardous. The battery will prevent operation if a severe overdischarge is detected.

- Disconnect the Battery and turn to the OFF state when not in use. This will reduce risk of overdischarge in storage.
- Store batteries at 80% State of Charge and recharge every 6 months. This maximises product lifetime.
- Fully charge the battery after long periods of inactivity for maximum performance and SoC accuracy.

SYSTEM EXAMPLE



LIMITED WARRANTY

For full warranty terms and conditions, visit the Warranty page of the REDARC website: www.redarcelectronics.com/warranty

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DISPOSAL

⚠ WARNING: RISK OF FIRE, EXPLOSION, AND TOXIC GAS.

- Incorrect disposal creates significant fire and toxic gas hazards for waste operators. DO NOT dispose of the Battery in household recycling, general waste, or landfill.
- Dispose the LiFePO₄ battery in accordance with local laws. Contact your local waste authority, council, or battery recycling facility for safe disposal options.
- Fully discharge the Battery, turn it to the OFF state, and use electrical tape to cover terminals before disposal. This reduces the likelihood of hazards when processing the battery.

SPECIFICATIONS

GENERAL SPECIFICATIONS

	LBATS12100	LBATS12200
Nominal Capacity (25°C)	100 Ah	200 Ah
Nominal Voltage	12.8 V DC ^{***}	
Nominal Energy (25°C)	1.28 kWh	2.56 kWh
Recommended Charge Voltage	14.2 V	
Maximum Charge Voltage	14.6 V	
Maximum Charge Current (25°C)	100 A	200 A
Recommended Continuous Discharge	50 A	100 A
Maximum Continuous Discharge (25°C)	100 A	200 A
Peak Discharge Current (< 30 seconds)	150 A	300 A
Short Circuit Protection	> 1000 A for 0.5 ms	
Operating Temperature Range	-20°C to 60°C	
IP Rating	IP20	IP54
Weight	16 kg (35 lbs)	33 kg (74 lbs)
Dimensions (L × W × D)	Refer to full-length manual or mounting template for dimensioned drawings.	
Cycles	> 6000 (80% DoD)	

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