RedEarth
ENERGY STORAGE

# Troppo Ultra-5156

## Installation and Operation Manual

RedEarth's own battery, Troppo ULTRA, is an Australian-made and owned battery approved and listed by the Clean Energy Council.


Cells tested by the National Battery Test Centre (NBTC) Brisbane, QLD.

BEST PRACTICE GUIDE: BATTERY STORAGE EQUIPMENT
COMPLIANT

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# Safety instructions

## Installers and users are responsible for familiarising themselves with this manual.

The Troppo Ultra-5156 battery is certified to IEC62619:2022, IEC62040.1:2017 and UN 38.3. It is listed on the Australian CEC (Clean Energy Council) list of approved batteries. IEC62619 is required to be able to sell this type of battery in Australia.

The Troppo Ultra battery uses high-quality cylindrical Lithium Ferro Phosphate (LFP) cells which are safe, robust, and reliable in higher ambient temperatures. The cells themselves are also certified to IEC62619 by TuV, specifically for RedEarth, and have industry leading service life. They are fully recyclable.

Troppo Ultra features a two-way communication link, using a CAN bus and RS485, between the Battery Management System (BMS) designed by RedEarth, and the inverter. The inverter and battery continuously exchange information such as state of charge, voltage, and temperature, allowing for real-time, intelligent control. The battery provides high surge capacity together with protection against operation in over- and under-temperature, over- and under-voltage, over-current (charging), as well as short circuit (discharging) protection. The battery also extends the service life of the battery through internal balancing of the individual cell strings.

The maximum short-circuit current for each Troppo Ultra battery is 1.1 kA. If multiple Troppo Ultra batteries are installed, then the maximum short circuit current of the battery bank is: 1.1 kA x number of Troppo Ultra batteries connected in parallel.

**Note:** The Troppo Ultra battery is only designed to be connected in parallel as a nominal 51.2 Vdc string of batteries. They will not work if connected in series.

The battery includes a 2-pole non-polarised circuit breaker (K-curve) specifically manufactured for RedEarth. A 2-pole circuit breaker is required to meet Australian standards for battery installations. A single pole circuit breaker alone is not normally sufficient in Australia as batteries are usually installed with a floating negative, unlike e.g., in the USA where the negative terminal is usually grounded to earth and so only a single-pole circuit breaker is required on the positive cable.

Other safety features of the Troppo Ultra battery include the use of touch-safe high-quality industry standard Amphenol Surlok DC connectors for safe and easy connection of the DC battery cables. These have a significant safety advantage over legacy systems using exposed bolted terminals. Bolted connections present a short-circuit risk as well as the possibility of a loose connection becoming a hot-joint.

The display included in the Troppo Ultra battery increases safety by showing the voltage and current status of the battery at all times, including arrows indicating if the battery is charging or discharging. This is helpful when batteries are being connected in parallel, and larger balancing currents can flow if the battery voltages are not similar. Note that the BMS includes a safety feature that does not allow current to flow if the battery voltages are different by more than 2-3 volts. Bring the battery voltages closer together by charging or discharging one of the batteries before reconnecting.

The display also includes an odometer function that shows the total energy in kWh that has flowed out of the battery over its lifetime. The Troppo Ultra battery is warranted to deliver at least 28,670 kWh over its lifetime. It can also be useful for indicating if one battery in a string is not doing as much work as other batteries.

A status indicator light is also included on the battery. This is always lit when the battery circuit breaker is on, and the battery is ready for use. If the battery has shut down due to under-voltage protection shutdown, then it will not light up.

## Installation

Installation should only be performed by qualified and experienced installers who can specify the correct cable sizes and DC bus arrangement, external circuit protection, polarity checking and suitability of the design for the application.

**Note:** RedEarth provides Troppo Ultra battery compatible, factory built and tested pre-wired battery enclosures and energy storage systems designed and engineered to meet Australian standards. These can significantly simplify installation.

## Transportation

Lithium Ferro Phosphate Batteries are classed as Dangerous Goods (DG) Class 9 UN3480 and therefore safe for transport. The batteries are shipped in approved transport protection packaging in a partially discharged state with terminal protection in place and the circuit breaker off.

## Basic Safety and handling

- Battery pack is intended to be a two person lift when being installed
- Battery should not be exposed to ambient temperatures above 45°C or below 0°C
- Battery should not be installed where it is in direct sunlight, or where it can become wet
- Battery is rated IP40 and is for indoor use only
- Battery should not be exposed to strong impacts, crushed, or punctured
- **Do not** short the battery terminals or connect with reverse polarity!
- Battery should not be disassembled unless qualified and approved by RedEarth to do so
- Battery should be kept away from animals and children
- The maximum stacking height for transport is 8 batteries (4 x 2) when in RedEarth's transport box

## Damaged battery

A damaged battery must not be used and should be returned to RedEarth as soon as possible or disposed of via a recycling facility. Leaking electrolyte can cause skin irritation and chemical burns so contact should be avoided.

**Eye Contact:** Rinse gently with running water. Seek medical attention if irritation develops.
**Skin Contact:** Rinse gently with running water. Seek medical attention if irritation develops.
**Ingestion:** If ingested do not induce vomiting and contact your local poisons information center or doctor.
**Inhalation:** Evacuate area and seek professional medical attention immediately, however an inhalation hazard is not expected due to product form and nature of use.

## Fire

In the unlikely event of a fire a dry agent fire extinguisher should be available and used. DO NOT use water. Evacuate the area and call emergency services. Toxic gas may be produced if the battery catches fire.

## SDS

Note: Refer to the SDS document for more details. The SDS is available from RedEarth Energy Storage Ltd and at www.redearth.energy

## Overview

The Troppo Ultra-5156 Battery is RedEarth's own in-house developed and built lithium-ion battery, using safe LFP technology. It is an Australian-made product that is designed and assembled by RedEarth in its facility in Brisbane.

The Troppo Ultra battery's features make it one of the easiest and safest lithium-ion batteries to install and use, and you have the support of RedEarth's experienced Brisbane-based technical team behind you. You can easily raise a support ticket at www.redearth.energy.

The Troppo Ultra battery has been specifically designed to be a communicating battery. This means it can continuously communicate with the inverter while in operation. It allows for more accurate State of Charge, voltage and temperature readings and allows for intelligent real-time control. It is compatible with 40+ inverter types and RedEarth's Residential Battery Energy Storage System range.

Troppo Ultra batteries include a display that shows the battery voltage and current. It also includes an odometer that shows how many "miles" the battery has done in its lifetime (measured in total kWh delivered by the battery). It is warranted to deliver at least 28,680 kWh over its lifetime, so if it is reading 2,868 kWh, then it is only 10% of the way through its life.

Battery connectors are industry standard, safe and easy to connect Amphenol connectors. A built-in two pole circuit breaker allows for time and cost savings during installation.

The batteries can be connected in parallel to suit applications from the smallest domestic application, right through to telecommunications and commercial sized projects (note: they are not suitable for series connection).

The Troppo Ultra operates at a nominal 51.2 Vdc. It is sized to be installed in standard 19" racks, if required.

**Qualified installation person (installer)**

The installation tasks described in this manual should be carried out by a suitably qualified and skilled installer with adequate skills, qualifications, and experience. They should:

- Have a thorough understanding of operations, design, and installation principles of on- and off-grid electrical systems
- Have a thorough understanding of the risks and dangers associated with installing and using electrical equipment
- Hold all local, state and country-based qualifications to carry out such work
- Adhere to all safety and installation requirements contained in this manual.

## Product description

The Troppo Ultra battery is a communicating battery. This means it can continuously communicate with the inverter while in operation. It allows  for more accurate State of Charge, voltage and temperature readings and allows for intelligent real-time control.
The battery can be monitored by the screen on the battery face as shown below.


## Physical specification



**Battery weight:** 46.6kg

**Battery dimension:** 87.5 x 479 x 680 mm

**Package weight (with battery):** 50kg

**Package dimensions:** 160 x 530 x 770 mm

# Understanding the Troppo Ultra battery and its use

The Troppo Ultra battery is designed to be easy to install and use. It can be used in applications requiring a nominal 48 Vdc battery bank. The Troppo Ultra battery is designed for a wide range of 48 Vdc applications including but not limited to renewable energy systems, telecommunications, and mining applications.

The following sections of this manual explain characteristics, features, and options for use of the Troppo Ultra battery.

Further information can be found at www.redearth.energy, where you can also reach our technical team by raising a support ticket.

RedEarth offers a wide range of training options for our partners including regular training courses run at our Brisbane facility, on-site for our larger customers, as well as online training options.

## Battery installation - Location and environment

Observe the requirements detailed in the safety instructions at the start of this manual. The Troppo Ultra battery is approved for use in two types of systems.

### RedEarth's pre-built and certified Battery Energy Storage Systems (BESS)

RedEarth provides complete ready-to-run battery systems that use the Troppo Ultra-5156 battery. These include the BushChook, Gecko and BlackMax systems for both on and off-grid applications. Call for details, or visit www.redearth.energy


Troppo Ultra BlackMax Gecko BushChook

### Custom enclosures and installations

The Troppo Ultra battery can be installed in an electrical enclosure of your choice.
The battery is rated IP40 and is for indoor use only. If the battery is to be installed outdoors an IP rated enclosure should be used that is suitable for the environment it will be placed in.
Troppo Ultra batteries do not vent any harmful gases and do not require special ventilation or cooling.

The location of the batteries should meet the following conditions:

- The area is clean with minimal dust.
- The batteries and battery cabinets/housings are not exposed to direct sunlight.
- There is adequate physical space around the rack for maintenance, including the ability to fully extend equipment on rails. A minimum of 95 cm front clearance is recommended to allow for service access. This also allows easy access to the circuit breaker and BMS push button to turn off the system.
- There are no specific required distances of any standoff from a wall, floor or ceiling/roof however, a minimum of 5 cm of clear space around the sides and top and bottom of the enclosure is recommended where possible to allow for airflow.
- The minimum distances from direct heat sources i.e. hot water systems, gas heaters or the like, are 600 mm horizontally and 900 mm vertically.
- The minimum clearances to windows and doors are 600 mm lateral and 900 mm vertical - as per AS/NZS 5139
- A fire-rated barrier extending 600 mm to either side and 900 mm above the battery is required if mounted to a wall that backs onto a habitable room.
- There are no explosive or flammable materials nearby (refer to AS5139 and the CEC Best Practice guide (https://batterysafetyguide.com.au/ )
- The batteries are not located in a salt-air environment, e.g., by the ocean. If this is unavoidable, then appropriate air filtration should be used to prevent salt air contacting the battery.
- The temperature and humidity remain relatively constant to avoid condensation.
- Charging and discharging outside of the optimal ambient temperature range (below 0°C or above 45°C) should be limited to C5 and the battery cells should remain between the max and min operation temperature range as specified in the datasheet. (The internal BMS will stop the operation of the battery if the cell temperatures move outside their specifications)
- The Troppo Ultra battery can be installed horizontally, vertically or on its left or right side.

## Installation in a 19” rack

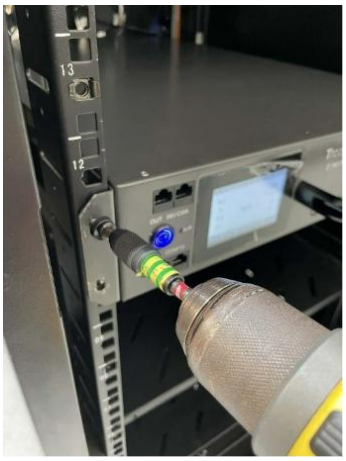
The Troppo Ultra battery is designed to fit in a conventional 19” server racking system.

The Troppo Ultra is 2 Rack Units (2RU) and weighs 45 kg. Choose rack shelves or rack rails with adequate weight rating to support the weight of the batteries similar to the ones shown below.

**Example on how to install the Troppo Ultra batteries in a 19" rack:**

1. Install the rack mounts or "wings" to the sides of the Troppo Ultra battery


2. Determine the location for the battery in the rack and mount the M6 cage nuts into the correct holes in the rack mounting strips

3. Slide the battery onto the shelf (or rails) and install the M6 cage screws into the cage nuts on the rack mounts and tighten with 6 Nm torque.
4. If required, add further Troppo Ultra batteries using additional rack shelves or rails.

# Battery connection and operation

## Additional items for installation and connection

RedEarth can provide various parts and ancillary items to assist qualified installers in completing their installations. For example:

- DC battery cable
  Each battery has a positive and negative Amphenol SurLok non keyed male connector for easy snap on connection. A full range of pre-made DC battery 16 mm$^2$ cables with specification Cu(FLEX)X-110 and mating connectors are available.

| **Surlok Plus 5.7 mm (IP67)** | | | | |
|---|---|---|---|---|
| | Type | Colour | Cable | Code |
|  | Right Angle Plug | Black | 16mm2 Cable with specification Cu(FLEX)X-110 - 5.7mm | SLPPA16BSB |
|  | Right Angle Plug | Red | 16mm2 Cable with specification Cu(FLEX)X-110- 5.7mm | SLPPA16BSR |

- BusBar
  If multiple batteries are to be connected, RedEarth can supply a Victron busbar which is rated to 1000 A. Several can be bolted together when larger numbers of batteries are required.
- Circuit breakers
  Various Noark MCCBs (Moulded Case Circuit Breakers) are available.

Contact RedEarth sales at sales@redearth.energy for more information.

## Connecting an installation with multiple batteries in parallel


When connecting multiple Troppo Ultra batteries to a single inverter/charger follow the steps below:

1. Confirm status of the batteries

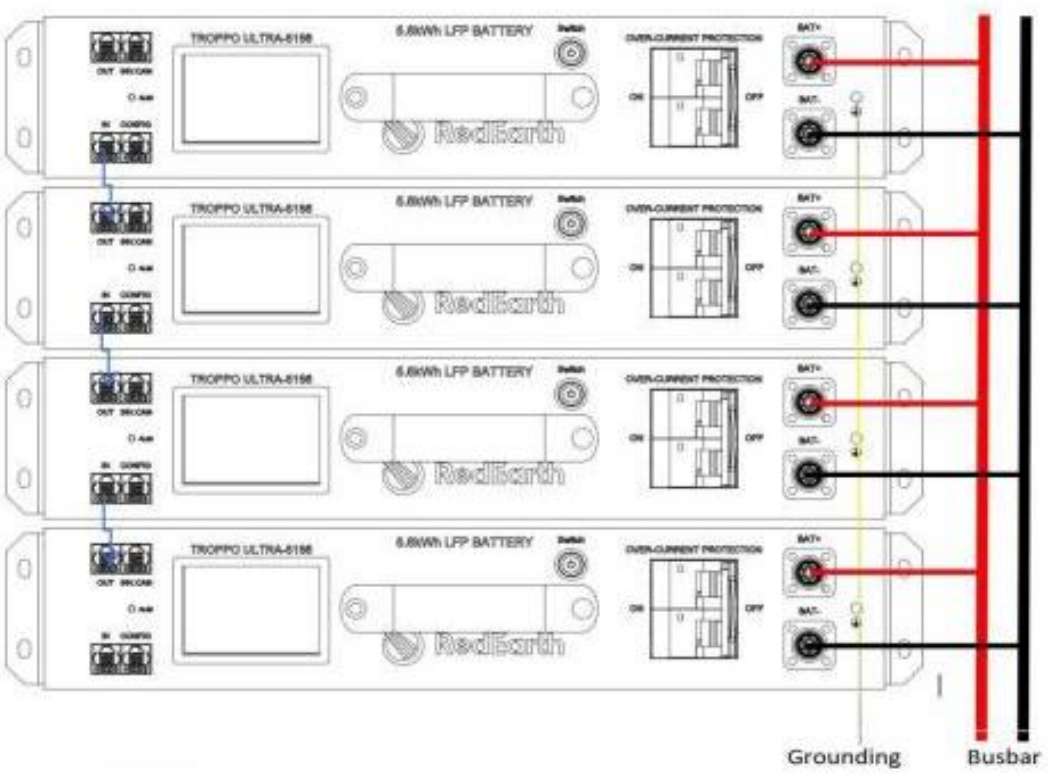
   Press the BMS display push button. This will turn on the screen and illuminate the display and blue indicator light.
   The battery voltage of each battery must be between 46.0 and 58.4 Vdc. If needed, charge or

discharge the battery to make sure the voltage is in the required range.

It is recommended that the voltages of all the batteries are within 0.5 V of each other. This avoids high current flows between the batteries once they are all connected in parallel. Note that the BMS in the batteries might not allow electrical connection if the voltage difference is too great. If needed, bring the battery voltages closer together by charging or discharging one or more of the batteries. Ensure all battery voltages are within the required range and within 0.5 V of each other before connecting in parallel.

2. Make **grounding connections** on all the batteries.
   Use the supplied earth cable to daisy chain the earthing connection between the battery packs. Ensure all battery earth link cables are connected to the battery compartment earth stud. Also, ensure the battery compartment earth stud is connected to the inverter compartment earth stud. The required tightening torque is 6 Nm.
   Note: When longer earth cables are required, use 4 mm2 green/yellow earth cable terminated with a 4 mm2 Copper Lug and 6 mm Stud. Measure and cut the earth cable to length, then strip back the insulation, exposing the copper strands. Insert the exposed cable into the lug's barrel and use a specialized crimping tool to securely fasten the lug to the cable. Fasten the lug's stud end onto the designated earth stud.

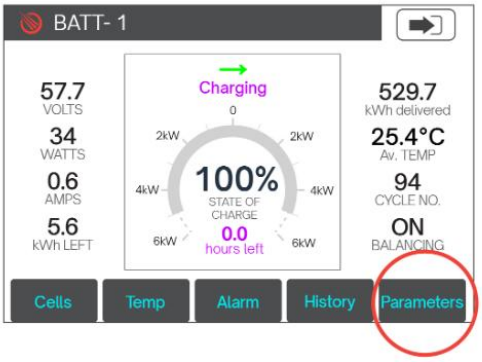
3. Connect all batteries in parallel to the main busbar using Amphenol Surlok Plus 5.7 mm connectors and same length 16 $mm^2$ cables with specification Cu(FLEX)X-110. For easy application and to ensure correctly assembled cables, RedEarth advises the use of pre-made DC battery cables, available from RedEarth.



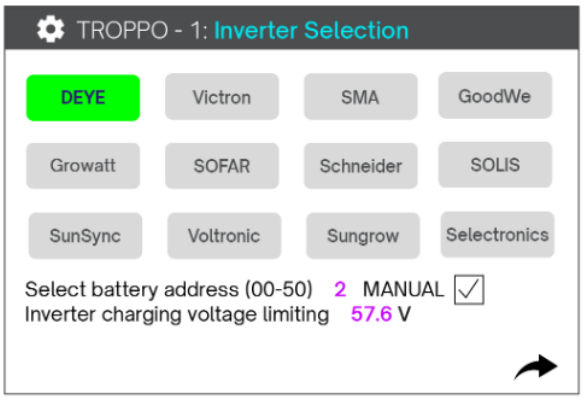

**Double check that all the battery cables are connected with the correct polarity.**

4. Connect the busbar to the inverter/charger via a separate main circuit breaker (e.g., Noark MCCB). Ensure that this main circuit breaker connected to the inverter/charger is **OFF**.

5. Setup the batteries
When 2 or more batteries are connected in parallel, one battery will be the master battery and must be connected to the inverter's BMS. The master battery needs to be assigned as '1' and the subsequent slave batteries need to be assigned '2' onwards.
To assign the number to each battery




5.1 Click on Parameters on the touchscreen of the battery.
5.2 Enter the password = 1981
5.3 Select the Inverter to connect to e.g. Deye. This will automatically set up the correct communication protocol and pinout for the inverter.




5.4 Select the Manual checkbox on this screen.
5.5 Tap on the number after 'Select battery address (00-50)' and set it to 1 for the master battery.
5.6 Repeat these steps for each battery and set the number for each slave battery 2, 3, 4.... and so on.
Ensure that no two batteries are assigned the same battery address.

Note: all Troppo Ultra Batteries that come as part of a RedEarth BESS system will already have this configuration done, simplifying the installation process.

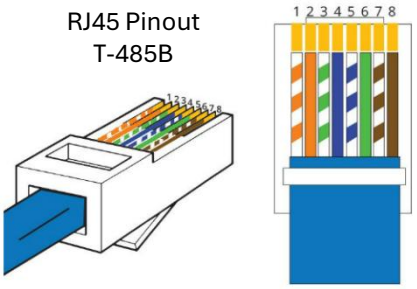
6. Connect the battery to battery communication.
Connect the OUT-network port of the master battery to the IN-network port of 'Slave 1' battery with the provided Ethernet cables. Connect the OUT-network port of 'Slave 1' port to the IN-network port of 'Slave 2' battery and so on. When longer cables are required, use a standard RJ45 ethernet cable of the required length. (A standard ethernet cable is a non-crossover type with all 8 internal wires connected.)

7. Connect the master battery to inverter communication
Connect the INV.CAN port of the master battery to the 'BMS IN Port' of the inverter. Use a standard RJ45 ethernet cable of the required length. (A standard ethernet cable is a non-crossover type with

all 8 internal wires connected.)
Note: The master battery's IN network port should be left unused.
When wiring an RJ45 cable use the following default pinout:

| Pin | Definition |
|---|---|
| 1 | 485_B |
| 2 | 485_A |
| 3 | / |
| 4 | CAN-H |
| 5 | CAN-L |
| 6 | GND-485 |
| 7 | 485-A |
| 8 | 485-B |

RJ45 Pinout
T-485B




8. Switch **ON** all the OVERCURRENT PROTECTION Miniature Circuit Breakers of the batteries and monitor the displays to ensure the voltages are similar for each battery. The BMS will limit current to maximum 10 A until voltages are similar for all batteries.
9. Switch **ON** the main circuit breaker.
   The inverter/charger should power-up depending on the type.

**Note:** If you have purchased a RedEarth system with the RedEarth remote monitoring option, you can contact RedEarth now. RedEarth will log into your system and confirm that everything is operating correctly.

## Connecting a single battery installation

The steps to connecting a single Troppo Ultra battery to a single inverter/charger are very similar to the installation of multiple batteries, treating the single battery as the master:

1. Confirm status of the battery.
   Press the BMS display push button. This will turn on the screen and illuminate the display and blue indicator light. The battery voltage must be between 46.0 and 58.4 Vdc. If needed, charge or discharge the battery to make sure the voltage is in the required range.
2. Make **grounding connections** on the battery.
   Use the supplied earth cable to connect to the battery compartment earth stud. Also, ensure the battery compartment earth stud is connected to the inverter compartment earth stud.
   The required tightening torque is 6 Nm.

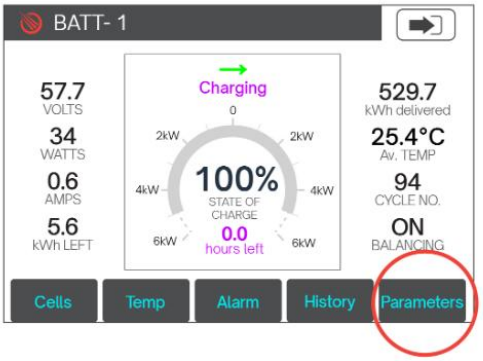
   Note: When longer earth cables are required, use 4 $mm^2$ green/yellow earth cable terminated with a 4 $mm^2$ Copper Lug and 6 mm Stud. Measure and cut the earth cable to length, then strip back the insulation, exposing the copper strands. Insert the exposed cable into the lug's barrel and use a specialized crimping tool to securely fasten the lug to the cable. Fasten the lug's stud end onto the designated earth stud.

3. Connect the battery to the inverter/charger via a separate main circuit breaker (e.g., Noark MCCB). Ensure that this main circuit breaker connected to the inverter/charger is **OFF**. Use Amphenol Surlok Plus 5.7 mm connectors and 16 $mm^2$ cables with specification Cu(FLEX)X-110. For easy application and to ensure correctly assembled cables, RedEarth advises the use of pre-made DC battery cables, available from RedEarth.

   **Double check that the battery cables are connected with the correct polarity.**

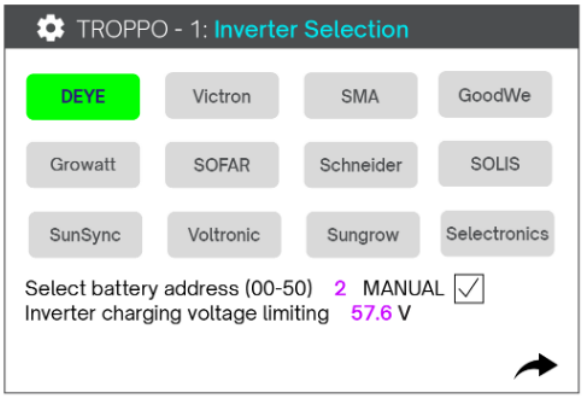
4. Set up the battery

4.1 Click on Parameters on the touchscreen of the battery.




4.2 Enter the password = 1981

4.3 Select the Inverter to connect to e.g. Deye. This will automatically set up the correct communication protocol and pinout for the inverter.



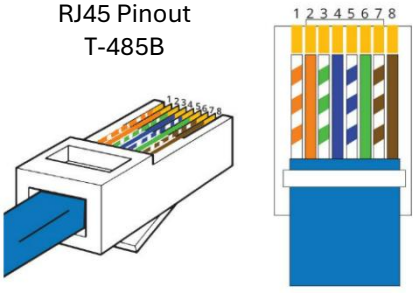

4.4 Select the Manual checkbox on this screen.

4.5 Tap on the number after 'Select battery address (00-50)' and set it to 1.

5. Connect the battery to inverter communication:
Connect the INV.CAN port of the battery to the 'BMS IN Port' of the inverter.
Use a standard RJ45 ethernet cable of the required length. (A standard ethernet cable is a non-crossover type with all 8 internal wires connected.
**Note:** The master battery's IN network port should be left unused.
When wiring an RJ45 cable use the following default pinout:

| Pin | Definition |
|---|---|
| 1 | 485_B |
| 2 | 485_A |
| 3 | / |
| 4 | CAN-H |
| 5 | CAN-L |
| 6 | GND-485 |
| 7 | 485-A |
| 8 | 485-B |

RJ45 Pinout
T-485B




6. Switch **ON** the OVERCURRENT PROTECTION Miniature Circuit Breakers of the battery.

7. Switch **ON** the main circuit breaker.
   The inverter/charger should power-up depending on the type.

## Monitoring the batteries

Depending on your installation, there are three ways to monitor your batteries:

1. When the battery is on, it can always be monitored via the screen on the battery face.
2. When communication with the inverter is connected, the batteries can also be monitored via the inverter screen, depending on the type of inverter installed.
3. When the batteries are used in a RedEarth system with the RedEarth remote monitoring option enabled, you can also monitor the batteries through RedEarth's EMU app, available for both Apple and Android devices. Please refer to the installation manual of your RedEarth system.

## Adding additional batteries to an installation

It is possible to add additional batteries to an existing Troppo Ultra installation at a later date.

Before adding the new Troppo Ultra battery, the original battery bank and the new battery must be brought to a similar voltage (within 0.5 volts as shown on the battery displays). This is achieved by discharging or recharging the existing battery until it is the same voltage as the new battery. The new battery can then be connected to the existing batteries and configured with a serial number via the previous steps.

## Battery shutdown and start up procedure

**Turn on procedure:**

- Press the BMS push button to turn the battery ON. The switch will illuminate on.
- Switch the Overprotection MCB On.

**Turn off procedure:**

- Press the BMS push button to turn the battery OFF. The switch light will turn off.
- Switch the Overprotection MCB Off.

## Transportation

Individual batteries are shipped in Dangerous Goods approved shipping carton that include the required shipping labels for land transportation in Australia. Up to eight batteries can be shipped on a pallet.


**The batteries are shipped with:**

- The built-in battery switch in the off position (no voltage on the battery terminals)
- The batteries in a partial state of charge, as required for shipping in Australia. (<30% SOC)
- Plastic caps over the battery terminals for additional protection

# Troubleshooting

## Repairable Troppo Ultra

The Troppo Ultra battery is designed to be repairable, however this is only able to be done by RedEarth. Please contact RedEarth when the battery needs repairing.

Attempting to repair the RedEarth Troppo Ultra will void the warranty.

# Maintenance

The battery system should be checked regularly as part of your system maintenance cycle, or at least every 6 months. These checks include:

- Check the battery Display to confirm all batteries are operating as expected. Current and odometer readings are similar in each battery (within +/-5%)
- All LED indicators on the batteries are on.
- Check for any obstructions placed around the battery that may reduce ventilation.
- Check for animals, insects or creatures nesting in or around the battery system.
- Check for build-up of any foreign objects in or around the cabinet.
- Check battery connections and cables for secure fitting or cable damage. (e.g., rats eating the cables)

## Warranty

RedEarth provides a 10-year repair/replace warranty for the battery. Refer to RedEarth's warranty document for details. These four actions will void your warranty:

1. Incorrect battery wiring (e.g., connecting with reverse polarity or connecting batteries in series instead of in parallel)
2. Connecting the battery to incompatible equipment (e.g., 12 V battery charger)
3. Incorrect comms connection between inverter and battery
4. Incorrect battery bank sizing, e.g., too few batteries for the size of the inverter

RedEarth does not warrant for damage or defects caused by or from the following:

- Incorrect storage or transportation
- Incorrect installation and wiring
- Not installed according to this manual
- Incorrect operation of the battery
- Inappropriate environmental conditions when operating the battery
- Failure to follow safety requirements
- Tampering with the battery
- Unauthorised repairs or modifications to the battery
- External influences such as physical damage, over-charging or electrical damage
- Use outside of warranty terms and conditions

## Recycling and end of life

When a Troppo Ultra battery reaches its end of life, please return to RedEarth for recycling. Recycling is done domestically through RedEarth partner in Victoria who reuse valuable minerals in the battery and correctly dispose of any dangerous materials. Note that the Troppo Ultra battery is designed to be repairable by RedEarth, unlike most other similar batteries, which is much more environmentally effective. This is also made possible as the battery is made in Brisbane.

# Support from RedEarth

## Technical Support

RedEarth's technical support team are available to provide assistance and guidance during installation.

In order to receive onsite technical support, please contact our team **prior to the installation date** to ensure availability. Direct communication with us is possible from Monday to Friday, between **9am and 5pm AEST across Australia**.

If you require assistance outside of these hours, please make arrangements with our friendly tech support staff.

## Customer support and warranty claims

At RedEarth, we stand by the quality of our products. Supported by our dedicated Australian service team, we're committed to making sure your system delivers reliable performance – and that you always feel supported.

If you encounter a problem with your system, please follow the steps below:

1. **Contact your certified installer or authorised reseller**
   If you are experiencing any issues with your RedEarth system, your first point of contact should be your installer or authorised reseller who sold you your RedEarth System.

2. **Contact RedEarth**
   If you did not purchase your RedEarth system from a certified installer or an authorised reseller, or if you purchased it directly from RedEarth, you should contact RedEarth by going to **our website** and click on the **"Raise a ticket"** button in our site header.

   *You will need to include:*

- Proof of original purchase of your battery system from RedEarth, a certified installer or an authorised reseller**.**
- Your RedEarth System serial number.
- Your name and the date and location of original installation.
- The name and contact details of the authorised installer who installed your RedEarth System.

3. **Next steps**
   Your support ticket will be logged. RedEarth will first endeavour to diagnose and repair your system remotely. If necessary RedEarth may require a technician to repair the system on-site.

Power yourself.