



## CRESLOW ENERGY SOLUTIONS

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# LIMITED WARRANTY LITHIUM BATTERY PACK

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This warranty document supersedes all previous documents.

## Energy Storage System

This LIMITED WARRANTY (hereinafter "Warranty") specified below applies to CRESLOW ENERGY SOLUTIONS Lithium battery pack (hereinafter "Products") manufactured and supplied by CRESLOW ENERGY SOLUTIONS and compatible chargers for specific products manufactured by CRESLOW ENERGY SOLUTIONS (hereinafter "CES") to End-user (hereinafter "Buyer") through Authorized Reseller

### 1. Purpose

The primary purpose of this Warranty is to clearly define the matters related to warranty policy of Products.

### 2. Warranty Condition

#### 2-1. Warranty Period

The Performance Warranty for the Products is valid for 4 years or 2,500 cycles, (design life of battery pack – 10 Years or 4,000 cycles) whichever occurs first from the initial (first) installation date (the "Term of Performance Warranty"). Unless, otherwise stated on specific products with longer Warranty period.

#### 2-2. Limitation of Warranty scope

CES liability under this Warranty shall be limited to replacement and/or repair. Replaced or repaired Products shall be warranted for the remainder of the original Term.

#### 2-3. Exclusion of Warranty

Damage to the Products resulting from any of following activities is NOT covered by this LimitedWarranty:



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- Damage due to improper transportation, storage, installation, or wiring.
- Any modification, alteration, disassembly, or repair
- Noncompliance with CES Installation manual, where applicable
- External influences including unusual physical or electrical stress (power failure surges, inrush current, regenerative power surge, lightning, flood, fire, accidental breakage, etc.)
- Use of an incompatible equipment such as inverter, rectifier, etc.
- Must be installed by a qualified electrician with COC [certificate of compliance] issued on work completed, where applicable.
- Battery pack must be charged at least once per month and do not allow battery pack to fall below SOC 10% for prolonged periods (3-days). The internal electronics will enter a dormant state. If battery is in this dormant state, then it should NOT be recharged, and battery needs to be returned or for an on-site service and cell checkup.
- Do not submerge in water or directly spray with water.
- 12V DC module (if applicable to Golf cart battery pack unit)
  - 20AMP / 240W maximum output
  - Exceeding the maximum output will result in module malfunction and will be excluded from Warranty cover.

### 3. Performance Warranty

CES warrants and represents that the Product retains at least 60% of Nominal Energy for either 4 years after the date of the initial purchase or for a minimum Energy Throughput of 2,500 cycles (whichever occurs first) when the battery system is operated under a normal use followed by the specification and the manual provided by CES.

The term "Nominal Energy" herein means the initially rated capacity of the Products as printed on the label of the Products – And must be adhered to.

The precondition of the valid 4-year Performance Warranty shall be as follows:

- I. The ambient temperature during the operation of the Products must not fall below – 0° Celsius or exceed 45° Celsius, unless otherwise stated on order acceptance.
- II. And, as listed under **Exclusion of Warranty**

Capacity measurement condition

- Ambient temperature: 25~30°C



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- Initial battery temperature from BMS: 25~30°C
- Charging / discharging method

### Battery pack

Charge: (0.5C) CC/CV (Constant voltage- V) – As per battery pack specification

Discharge: (1C *Max*) CC (Cut-off voltage - V) – As per battery pack specification

### DC/DC converter (if applicable)

Current at (MAX) 12V 20A (240W) Current and voltage measurement at battery DC side

Battery packs used in Cold storage applications.

(Must be specified before manufacture of battery packs that will be used in Cold storage application so that additional manufacturing steps will be taken for optimum battery performance.)

- Do not charge battery pack within Cold storage environment. ( $< 0^{\circ}$  Celsius)
- Do not leave machine (battery pack) in idle state (more than 30 minutes) in Cold storage environment.
  - Charge: (0.5C) CC/CV (Constant voltage- V) – As per battery pack specification @ Ambient temperature: 25~30°C
  - Discharge: (1C *Max*) CC (Cut-off voltage - V) – As per battery pack specification @ -20~30°C

## 4. Out of Warranty Policy

Product damage, which is not caused by seller, CES shall provide charged service, including all the expenses of such as material cost, labour cost, warehouse cost, transportation cost, customs duties, analysis cost, management cost, corporate profits, disposal expense (if necessary) and so on.

## 5. About Service Products/Parts

Service products/parts can be used as new or refurbished condition which performance is equal to or higher than defective Products and guaranteed by CES.

In the event the Products are not available in the market anymore, CES, at its option, may



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replace it with different kind of product with equivalent functions and performances or refund the remaining annually depreciated value of the purchase price of the Products during the Term of Performance Warranty as the Compensation Table below. The purchase price mentioned hereinabove means the net price actually paid by the Buyer for the purchase.

### **Compensation Table**

STAGE 1: 60% of the purchase price from the initial invoice date to +12<sup>th</sup> month

STAGE 2: 40% of the purchase price from 13<sup>th</sup> to 24<sup>th</sup> month

STAGE 3: 30% of the purchase price from 25<sup>th</sup> to 36<sup>th</sup> month

STAGE 4: 20% of the purchase price from 37<sup>th</sup> to 48<sup>th</sup> month

OUT OF Warranty: after 48<sup>th</sup> month

Only applicable if there are remaining cycles in warranty period.

## **6. Claim payment policy**

Claims under this Warranty must be made by notifying the Approved Reseller from whom the Products was purchased.

For a Warranty Claim to be processed, it must include following information.

- Description of the alleged defect(s)
- Proof of the original purchase
- The Product's serial number and the initial installation date
- Details of certified installer and COC [certificate of compliance] if applicable

## **7. Applicable Law**

The Warranty is subject to the law of South Africa. Products come with guarantees that cannot be excluded under the South African Consumer Law. The Buyer is entitled to a replacement or refund for major failure. No compensation for any other foreseeable loss or damage. This warranty only applies to the Buyer who have purchased the products for their own use.