

# TOPDON®

2023 VERSION



# Tornado4000

The All-In-One Battery Charger



Battery charger



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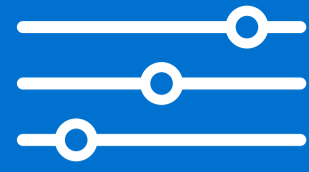
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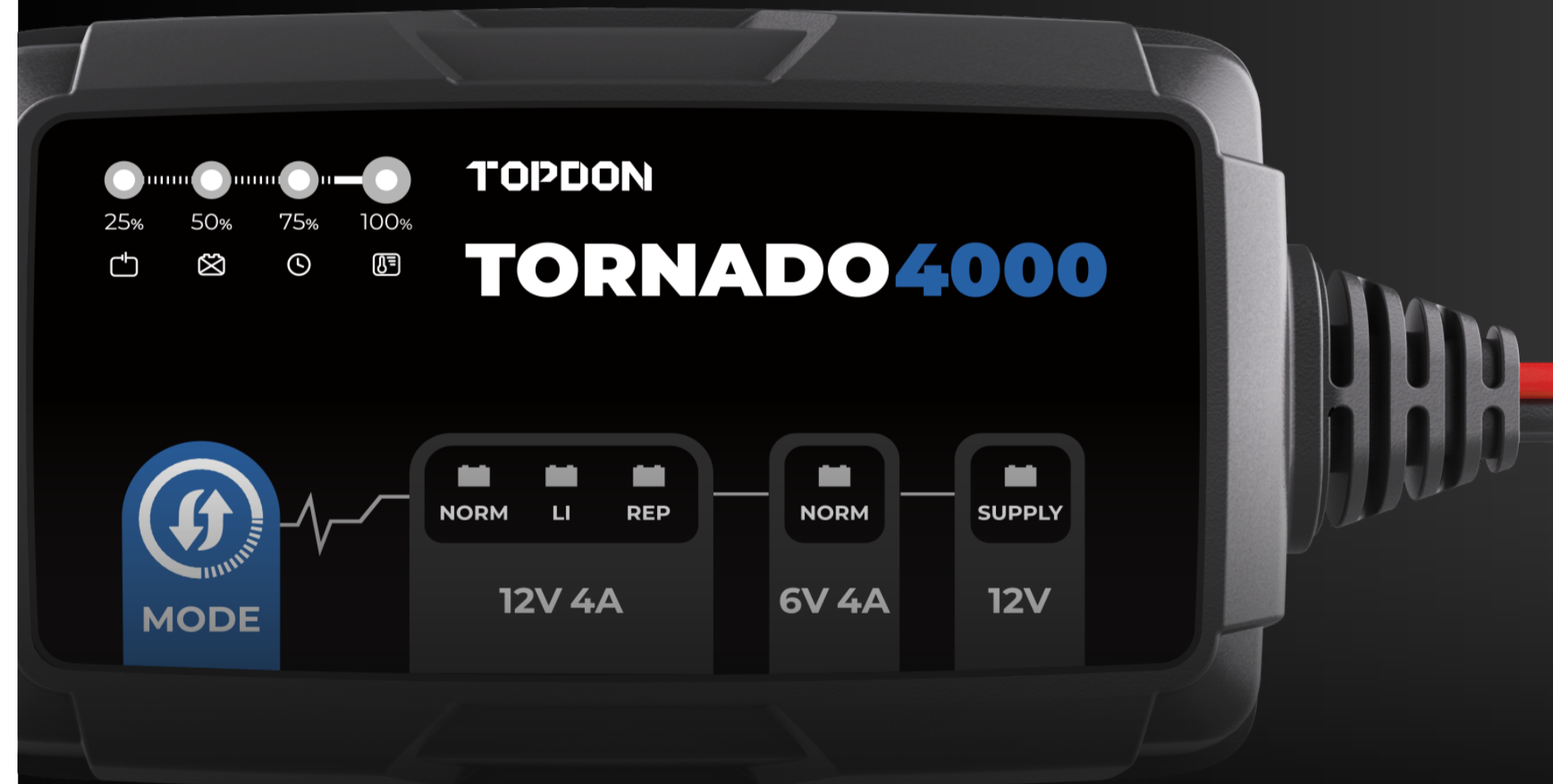
## Tornado4000

The Tornado4000 is more than just a smart compact battery charger. It's a battery maintainer, trickle charger, battery desulfator, and a DC power supply all in one. The Tornado4000 can supply a constant 13.5 volts DC to power on-board devices drawing up to 4 amps. It's compatible with 6V/12V lead-acid and 12V lithium-ion batteries up to 120Ah. 5 charging modes combined with 9-Step Smart Charging technology make the Tornado4000 highly versatile. An IP65 water-resistant enclosure and cold weather capability (down to -4°F/-20°C) ensure a wide operating environment range, while also being lightweight and portable. Operation is easy thanks to the four error indicators.





## Electrical Specifications



**Input Voltage:**

100-240V

**Output Current:**

4A Max

**Output Voltage:**

6-14.4V

**Charging Mode:**

12V NORM, 12V LI, 12V REP,  
12V SUP & 6V NORM

## Parameters

**AC Cable Length:**

2m, Input AWG18#

**Charging Method:**

9-Step Smart Charging

**DC Cable Length:**

Positive AWG14#, 1.8m

Negative AWG14#, 1.8m

**Dimension:**

13\*7.9\*5cm (5.12\*3.11\*1.97 inch)

**Weight:**

600g (1.32 lb)

**Protection Rating:**

IP65

## Battery

**Applicable Battery Capacities:**

5-120Ah

**Applicable Battery Types:**

LI, AGM, WET, GEL, MF, CAL,  
EFB and more.





Brief

## Wide Charging Capabilities

### Support for Multiple Battery Types

The Tornado4000 supports a wide selection of batteries ranging from 5Ah to 120Ah, compatible with all types of 6V & 12V lead-acid batteries, and 12V lithium batteries including LI, AGM, WET, GEL, MF, CAL, EFB.

### 5 Charging Mode

Tornado4000 offers 5 charging modes: 12V NORM, 12V LI, 12V REP, 12V SUP and 6V NORM. Simply choose the most suitable charging mode according to your battery and let the Tornado4000 go to work.

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## Stable Power Supply And Voltage Stabilizer

Providing an output supply of 13.5V and a maximum current of 4A (54W), the Tornado4000 works as voltage stabilizer for ECU programming and a power supply for 12V devices such as tire inflators, lamps, fans, etc with the 12V "SUPPLY" mode.



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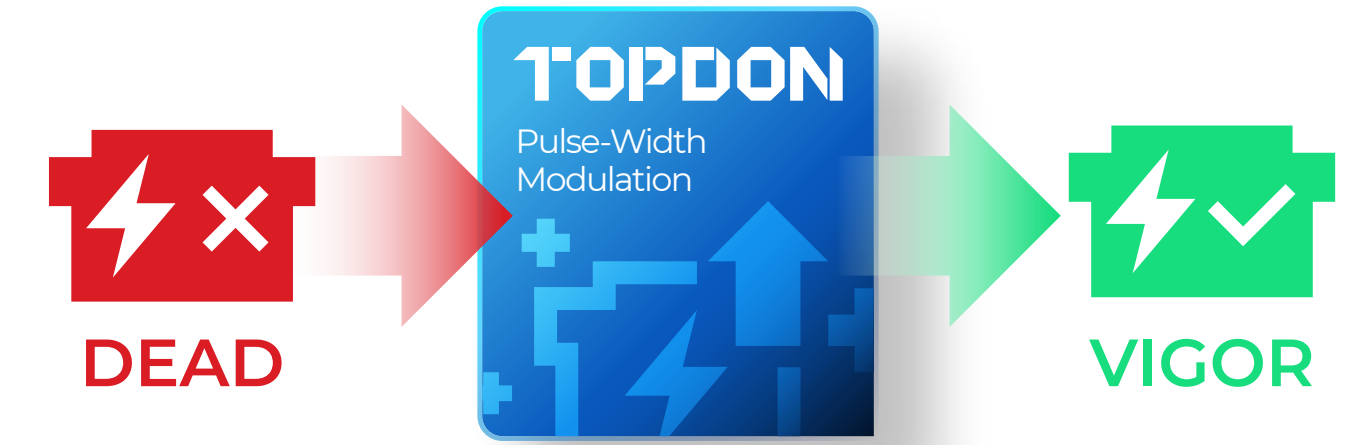




Brief

## Battery Desulfurization Capabilities

Utilizing pulse-width modulation to break down the sulfates in an aging battery, the Tornado4000 can restore the battery resistance efficiently and prolong service life, reviving the battery and bringing it back to a suitable state-of-health.



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## Safety Conscious Self-Adjusting Power

The Tornado4000 will self-adjust charging power as needed based on a variety of conditions such as temperature of the charger, or temperature of the environment as a safety measure.



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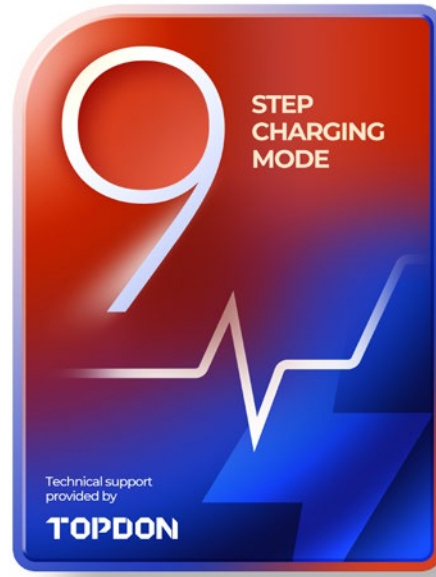
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## 9-Step Smart Charging Mode

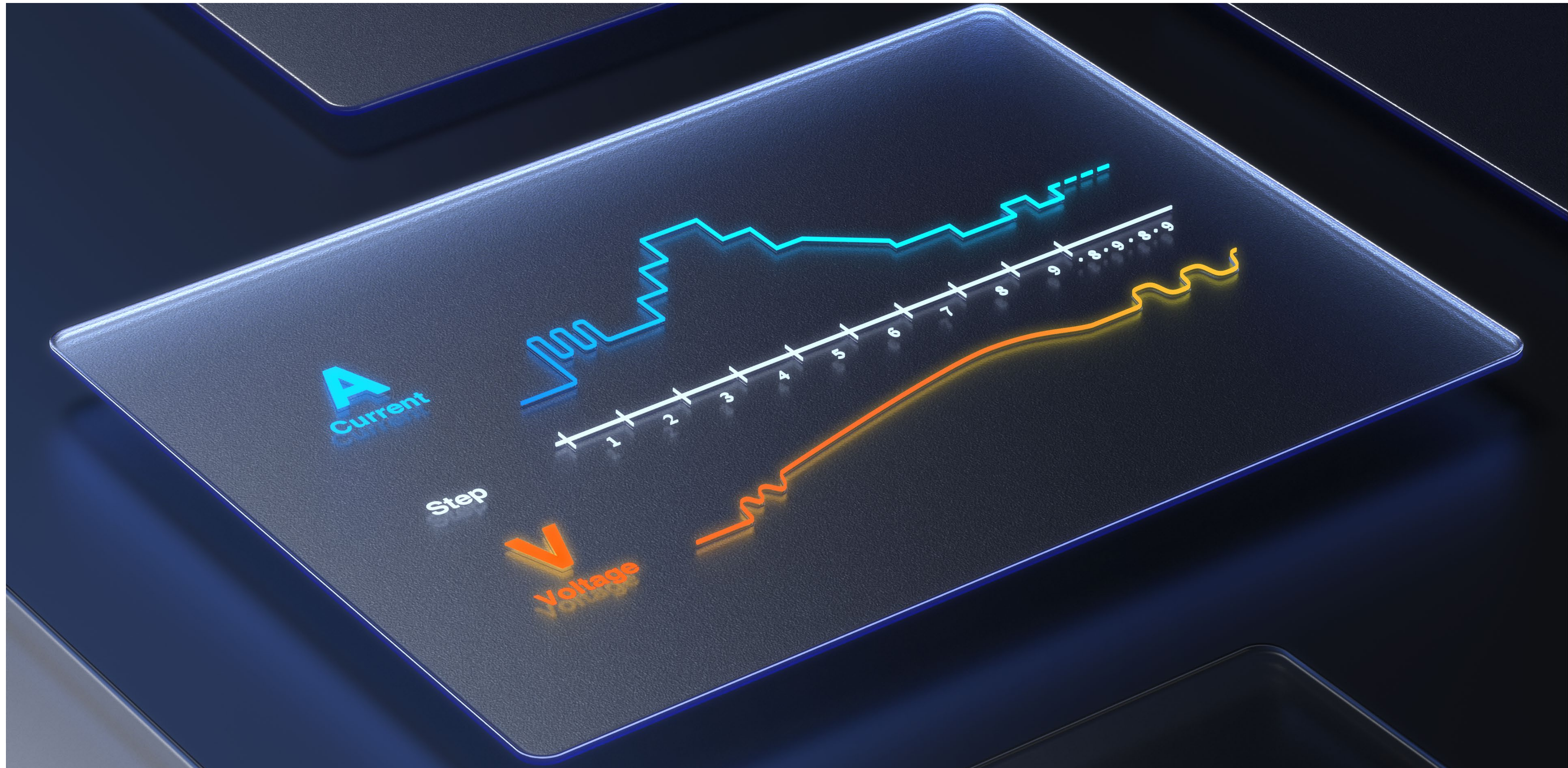
TOPDON's patented 9-step smart charging gives your lead-acid battery an optimized, maintained, and integrated charging process. When connected, not only will the Tornado4000 charge the battery, but it will act as battery maintainer to truly repair your car battery. Moreover, the Tornado4000 specializes in offering a 5-step smart charging mode for lithium batteries.

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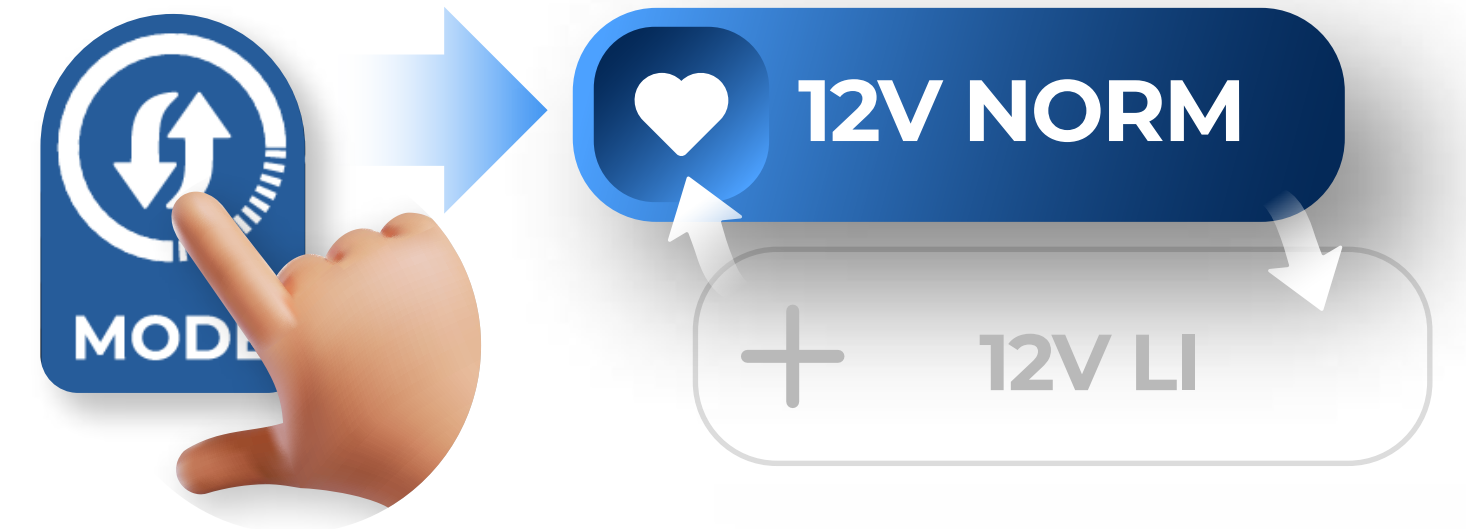


Brief

## One-tap Charging & Memory Functions

After a charging mode has been selected, the Tornado4000 will begin charging automatically without the need to select anything else.

The charger also has a memory function that will resume charging at the previously set charging mode after the charger has been switched on again after being off.



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## Four Error Indicators, Easy to Observe

Equipped with 4 error indicators, the Tornado4000 will not only display the detected voltage of device, but also clearly shows the charging status.



Reverse connection/short circuit



Bad battery (battery voltage rises abnormally)



Charging overtime (> 10h at a single stage)



Overtemperature (> 120°C/248°F)

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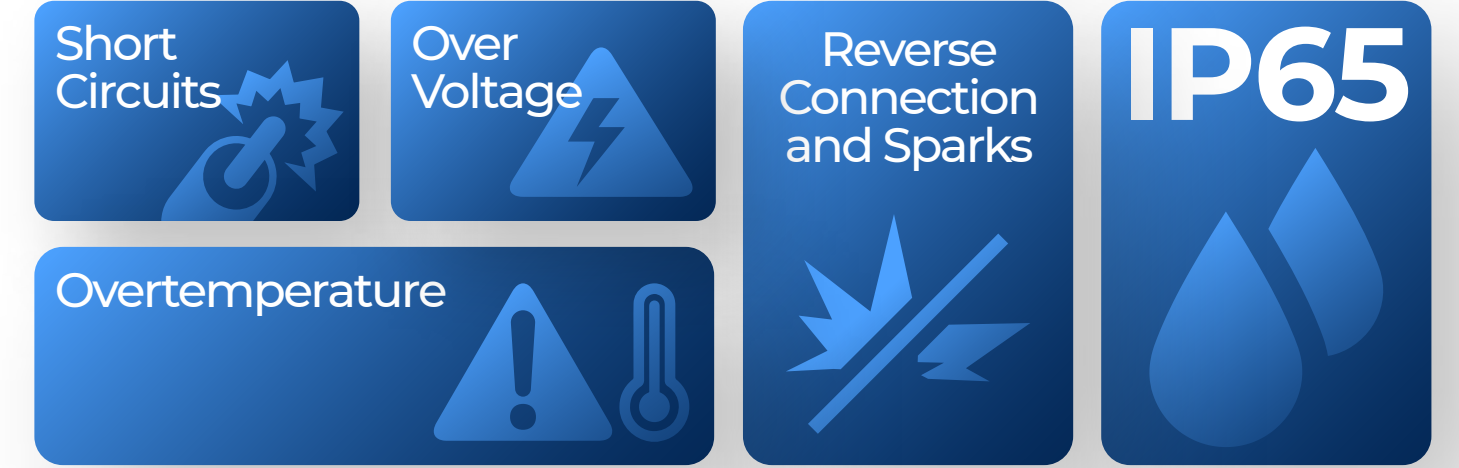
## Smart Safety Inside and Out

### Interior Safety

The Tornado4000 is equipped with built-in safety systems such as overtemperature, short circuits, over voltage, reverse connection and sparks.

### Exterior Safety

IP65 rated, and constructed of an ABS exterior housing, the Tornado4000 is dust and water resistant. It is also flame retardant and withstand temperatures up to 158°F (70°C).



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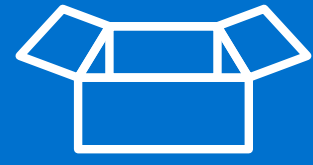
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# What's In The Box?

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<p><b>Tornado4000</b></p> 	<p><b>Package Box</b></p> 	
<p><b>SAE to O-ring terminals</b></p> 	<p><b>Battery Clamps</b></p> 	<p><b>User Manual</b></p> 

**What's In The Box?**

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Brief



## FAQs

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### Question

How do I select the charging mode?

### Answer

The charging mode is determined according to the battery type and capacity. We recommend that the current value should not be greater than 20% of the battery capacity value. For example, for a 20Ah battery, we recommend that the current should not be greater than 4A.

Features

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### Question

Will the TORNADO4000 stop charging automatically after the battery is fully charged?

### Answer

Yes. The TORNADO4000 adopts 9-step smart charging. When the battery is fully charged, the charging cycle stops to prevent overcharging. If the battery remains connected, the charger will keep monitoring the battery status and will automatically start charging when the battery voltage falls below 12.8V (Take "12V NORM" for example).

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### Question

Can the TORNADO4000 charge multiple batteries simultaneously?

### Answer

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Yes. The batteries must be connected in series or parallel before charging. If you have questions about the connection, you can consult the battery manufacturer or contact us for help.

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### Question

Is REPAIR mode applicable to all battery types?

### Answer

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No. It can't be used for lithium batteries. However, it is applicable to all types of lead-acid batteries.

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## FAQs

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### Question

Why can't some batteries be used normally after repair?

### Answer

This depends on a variety of factors. Please consult the battery manufacturer as to whether the battery is completely damaged and whether it can be repaired.

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Features

### Question

Why can't some batteries be charged?

### Answer

If the battery is not charging, you can try charging the battery via the SUPPLY mode. The battery's temperature must be monitored carefully in this mode and cannot be charged for a long period of time.

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