

Dynamic Current Configuration

CSB Number	855-0024 REV A
Date	March 17 th , 2026

URGENCY

HIGH:
Action immediately

MEDIUM:
Action when possible

LOW:
Action if necessary

INFORMATION ONLY

This is not a failure condition. This update is recommended to improve system performance, enhance closed-loop communication accuracy, and ensure optimal integration with inverter platforms.

Changelog

- Changed
 - The Charge Current setting has been added to PylonLV and Aebus Charger and tracked in the Charge Target Settings so that all charge targets are now calculated the same way.
 - Dynamic Current is the default for all closed loop protocols.
- Added
 - Charge control filtering at high current to reduce oscillation on the charge current target.

PRODUCTS AFFECTED

Battery with BMS firmware 4.11.0 or earlier, and LYNK II with firmware 2.5 or earlier.

SYMPTOM OBSERVED

In Dynamic Voltage mode, some inverters may overshoot the battery's charge-voltage target. This can result in inverter-generated over-voltage alarms, DC-bus protection warnings, and inconsistent or unstable charging behavior.

POSSIBLE CAUSE

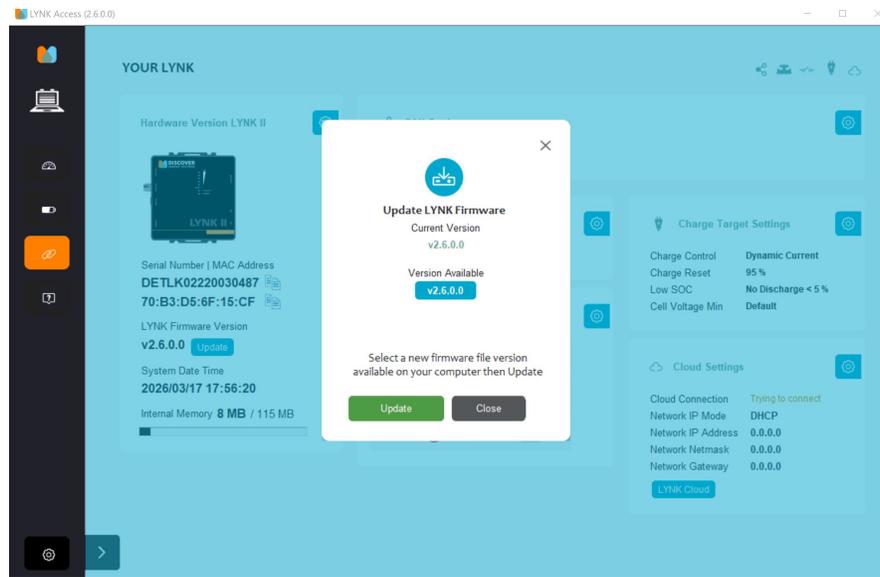
During Dynamic Voltage control, the battery continuously adjusts its charge-voltage (CV) target as it approaches full SOC. Some inverter models have narrow DC-bus tolerances and cannot accurately track these shifting CV values. When the inverter's CC/CV control loop reacts too slowly or aggressively to a changing voltage target, it can momentarily drive the DC bus above the requested CV value. This inverter-side overshoot produces over-voltage alarms and unstable charging behavior, even though the battery is operating normally.

FIELD CORRECTIVE ACTIONS

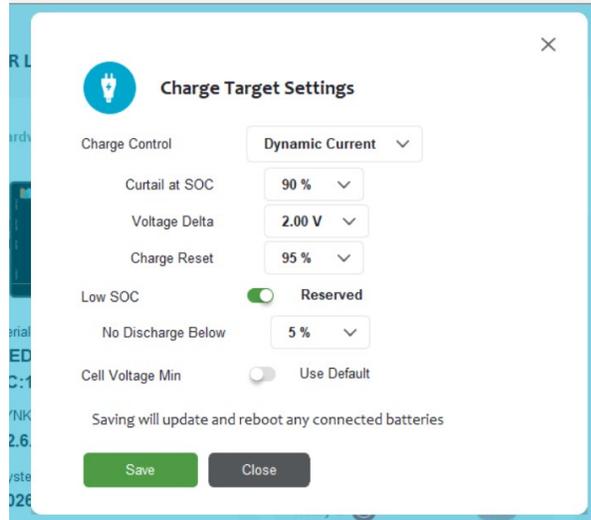
To eliminate inverter overshoot, the system now supports Dynamic Current control, which is especially relevant at a higher SOC. When you use dynamic current control, instead of tracking a shifting CV target, the inverter follows a stable, battery-defined current limit that it can regulate accurately. This removes reliance on the inverter's CC/CV voltage loop, prevents DC-bus overshoot, and stops over-voltage alarms. Dynamic Current is included in the current firmware and **is now the default control method on all Closed-Loop protocols.**

ORDER OF OPERATION

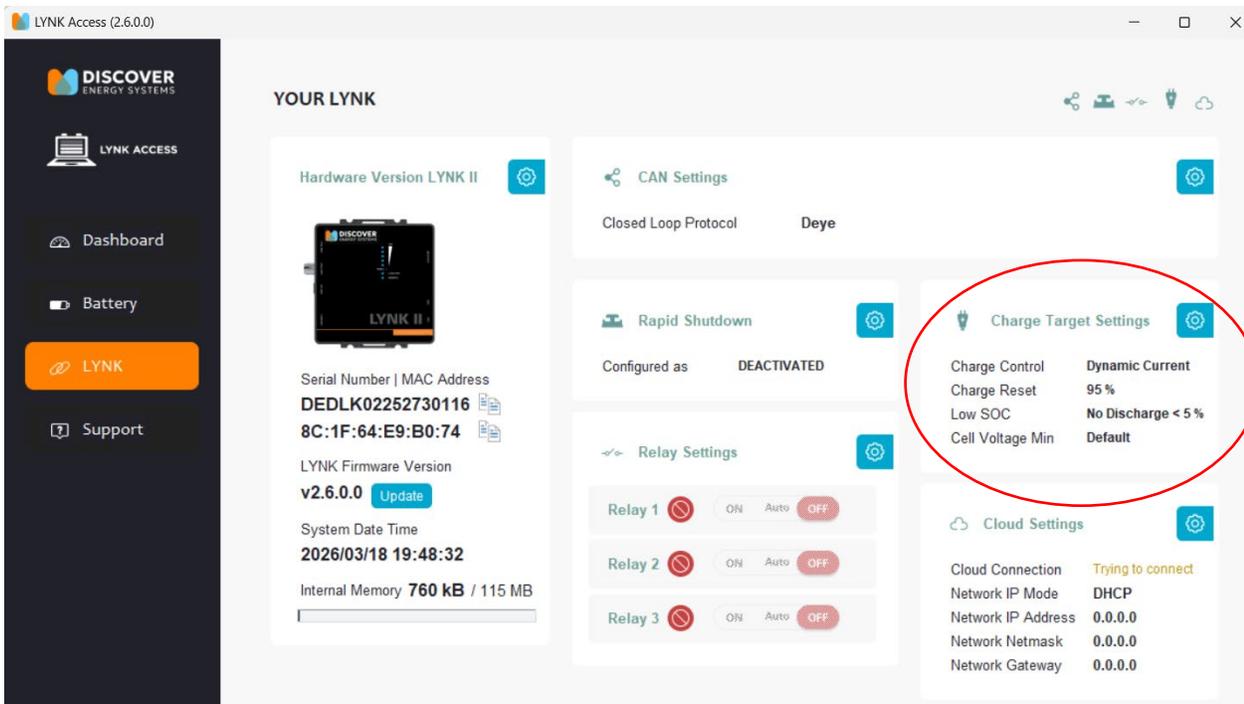
1. Connect to the battery (or LYNK II Gateway if used in the system) and open LYNK Access.
 - a. Update LYNK ACCESS to 2.6 or later.
 - b. Update LYNK II firmware to 2.6 or later (if the site uses a Gateway device)
 - c. Update HELIOS firmware to v4.11.1 or later.
 - d. NOTE: [Click here to download the resources](#)
 - e. The following screenshots are for the LYNK II Gateway.



2. On the LYNK page:
 - a. Click the gear icon on the Charge Target Settings box.
 - b. **The default Dynamic Current settings are compatible with most devices.** Only change the default values if required by your equipment. Click Save.



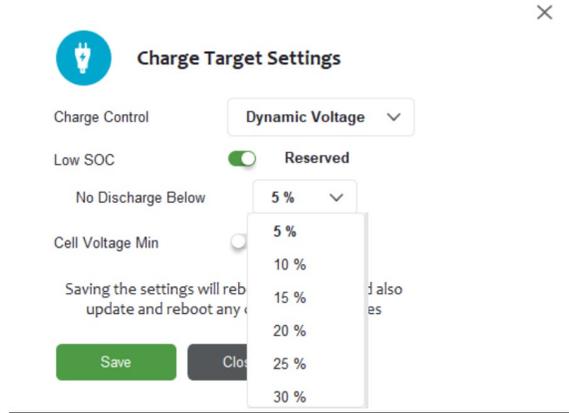
- If you want to use Dynamic Voltage, from the Charge Target Settings drop-down list, select Dynamic Voltage.



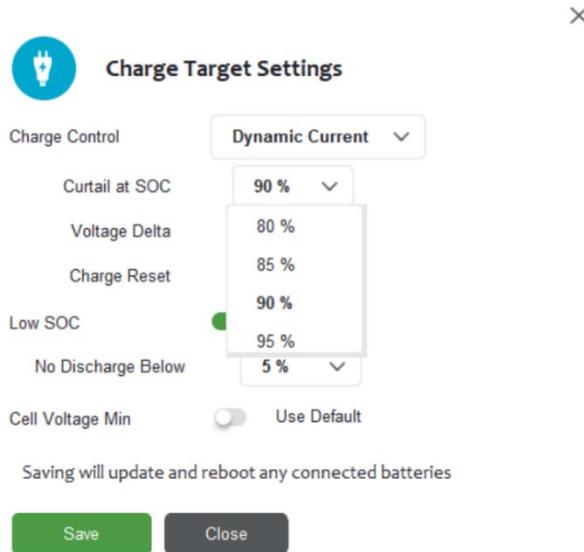
Selecting Dynamic Voltage. Select the bottom-end discharge level.

Note 1: Older inverters designed for lead-acid batteries work best with Dynamic Voltage.

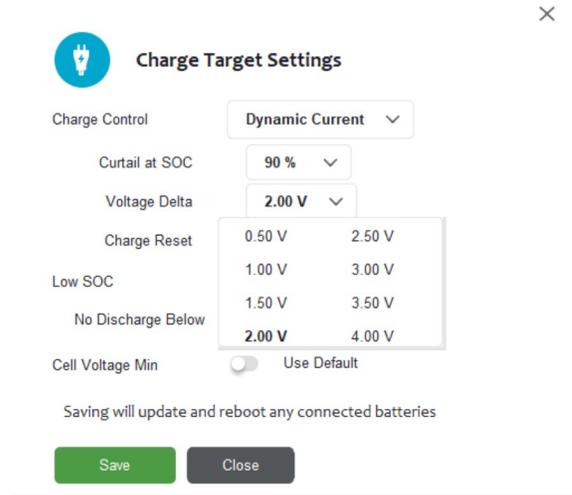
Note 2: At this setting, the battery will send a “no-discharge” request to the inverter, which should turn off the AC output and prevent the battery from reaching BMS shutdown.



- a. Choose the SOC when charging should slow down or stop. Use 80-85% for high charge currents, or up to 95% for lower charge currents. The default setting of 90% is suitable for most installations.



- b. Voltage Delta. This controls how quickly the charge current tapers based on the difference between the pack voltage and the algorithm's target voltage (56.0 V). The default value is 2.00 V and **should not be changed unless you are certain about the adjustment.** **NOTE: Higher values produce a slower current-taper response. Lower values produce a faster taper. Adjust only if you are certain the change is required for the application.**



Charge Target Settings

Charge Control: Dynamic Current

Curtail at SOC: 90 %

Voltage Delta: 2.00 V

Charge Reset: 0.50 V, 2.50 V, 1.00 V, 3.00 V, 1.50 V, 3.50 V, 2.00 V, 4.00 V

Low SOC: 2.00 V

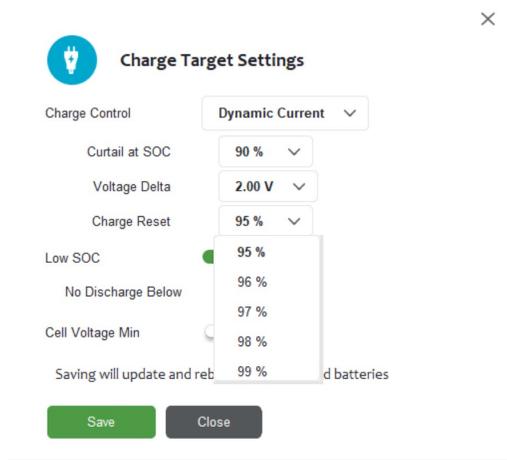
No Discharge Below: 4.00 V

Cell Voltage Min: Use Default

Saving will update and reboot any connected batteries

Save Close

- c. The Charge Reset value defines the SOC hysteresis used to restart charging after a full charge cycle. When the battery falls below this SOC threshold, the system resumes charging. This ensures the battery does not repeatedly cycle at the top of charge.



Charge Target Settings

Charge Control: Dynamic Current

Curtail at SOC: 90 %

Voltage Delta: 2.00 V

Charge Reset: 95 %

Low SOC: 95 %

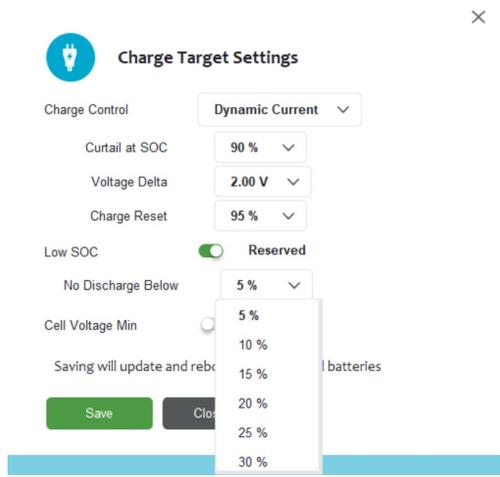
No Discharge Below: 96 %, 97 %, 98 %, 99 %

Cell Voltage Min: Use Default

Saving will update and reboot any connected batteries

Save Close

- d. LV-BMS Low SOC is independent of the Dynamic Current setting and can be adjusted. The bottom-end discharge level defines the reserve capacity and instructs the inverter to stop discharging by setting the discharge current request to zero and issuing a “no-discharge” command. The function is intended to prevent deep discharge events that would otherwise require manual recovery.



4. Save the settings. This will restart the LYNK II and/or the Helios battery.
5. The screenshot below is an example of LYNK ACCESS with a HELIOS battery connected to the computer through a USB-C cable. Click the gear icon on the Charge Target Settings box if you need to make adjustments. Default settings are best for most systems.

