

# **Application Note: Discharge limitations On Inverter**

# Discharge limitations on inverter

This inverter has an automatic or manual discharge limitation that can be set. This limitation allows the inverter to be used safely with smaller battery banks without damaging the battery by over current.

This limitation is either set by the BMS of the battery or requires manual input from the installer when commissioning the inverter.

Once the limitation is active, it will allow the batter to discharge past the set amount of current for a short period of time before switching off the inverter to prevent further discharge of the battery. Some inverter models will reset and restart to provide power to the load again after a set period of time. Other inverters will require a manual restart.

If the inverter switches off to prevent further discharge, depending on the make and model of the battery, the following might occur:

- Battery will have a communication error, since the inverter has suddenly switched off – this will require a manual restart.
- Battery will enter a 'sleep mode' and require a 'wake up' signal from the battery.
- Battery will switch off in response to loss of communication for protection reasons – this will require a manual restart.

To ensure the inverter does not use more than the maximum current available from the battery, it is best to install a breaker on the output side such as the [CBi electric QA\(13\) series miniature circuit breakers](#). The breaker will then trip if there is a larger than expected load.

Alternatively, only a set amount of load items should be connected to the inverter's output side. This will ensure that only the loads connected can consume power safely without using too much current from the batteries.

For more information on this for the following inverter brands please consult the manuals.

Kodak

- OG-10, page 23
- OG-7.2, page 28

ATESS

- HPS range
- Page 40-45 on the manual, also available in the [app note](#)

Solis

- RHI-3P(3-10)K-HVES-5G

Page 24 for all BMS Information. Page 30 for Battery Select (compatible batteries), and settable Battery min SOC/max over-discharge (the inverter will not discharge the battery when the OverDischg SOC is reached.). Page 33 for Battery Time Charging Mode - where one can define the charge/discharge current as well as when to charge/discharge the battery). This inverter is limited by a 25A max discharge current.