

Technical Product Notes

Multi-Inverter Battery Configurations

DATE CREATED:	TN NUMBER:	PREPARED BY:
11/24/2025	002	Patrick Honegger

The following are Battery Connection Requirements for NV12KAC/NV16KAC Systems and NVPlus-10.2 Batteries.

This guidance applies to installations with two to three NV12KAC or NV16KAC inverters and up to six NVPlus-10.2 batteries. These configurations require custom battery cables and a common DC bus to interconnect the inverters and batteries.

- Since NV12KAC and NV16KAC inverters have high discharge currents, a minimum battery bank size is necessary to ensure full inverter performance.

Minimum Battery Configurations

- NV12KAC
 - 2 × NV12KAC → Minimum 2 × NVPlus-10.2 batteries
 - 3 × NV12KAC → Minimum 3 × NVPlus-10.2 batteries
- NV16KAC
 - 2 × NV16KAC → Minimum 3 × NVPlus-10.2 batteries
 - 3 × NV16KAC → Minimum 4 × NVPlus-10.2 batteries

Installation Notes

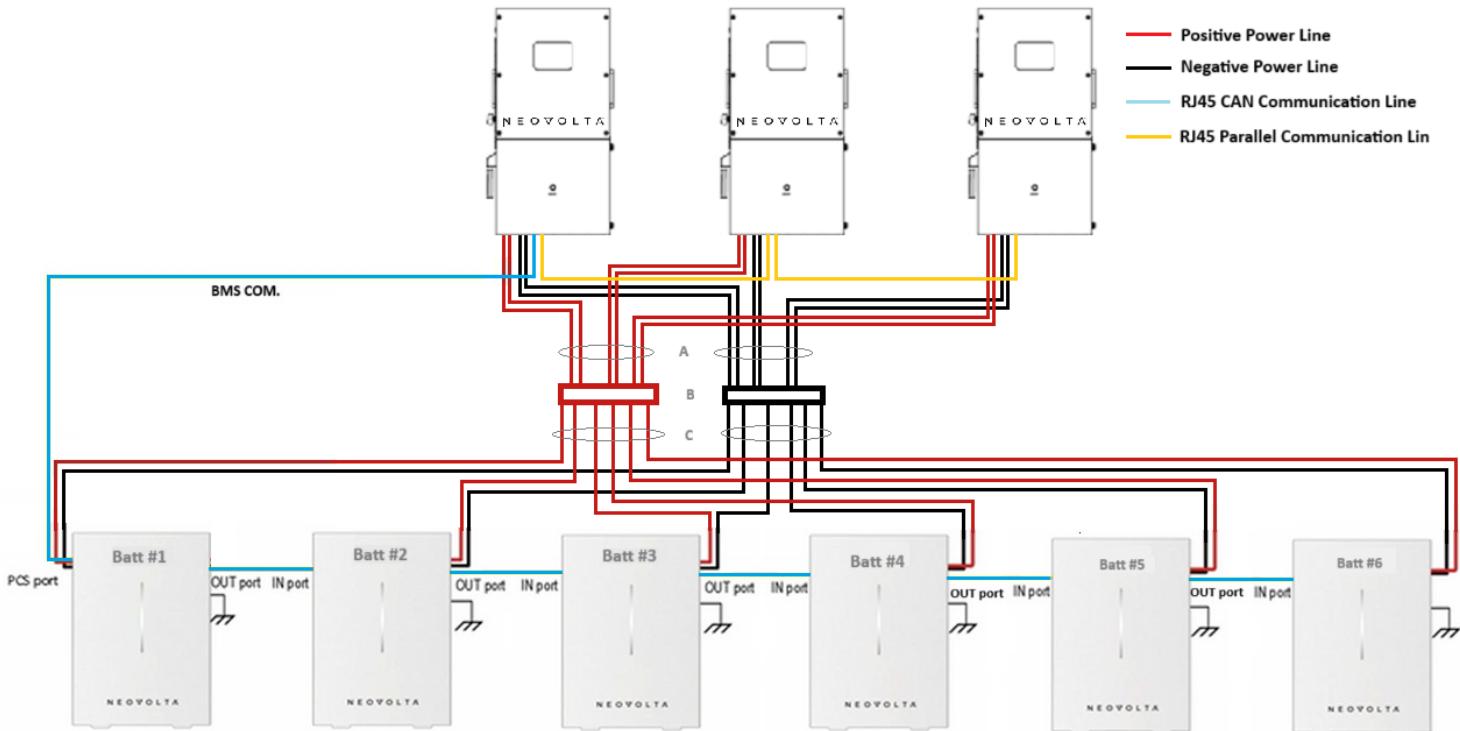
- Battery cables from inverters to the common DC bus must be identical in material, length, and gauge.
- To support the full charge/discharge capability, install two sets of 2/0 battery cables per inverter.
- Battery cables from the DC bus to the batteries must also be equal in length and size.
- Use copper battery cables, proper crimp lugs, and the correct crimping tool for secure connections.

Follow these guidelines to ensure balanced power distribution and optimal system performance.



Technical Product Notes

2-3 Inverter with 6 Batteries:



Battery Cable and DC Bus Specifications

A. Inverter to DC Bus Connections

- Use two sets of 2/0 AWG battery cables per inverter (2 × POS and 2 × NEG) to connect the inverter battery terminals to the common DC bus.
- All inverter cables must be identical in material, length, and gauge to ensure balanced current flow.

B. DC Bus Rating

- The common DC bus bar must be rated for 1,000 amps of continuous current.

C. Battery to DC Bus Connections

- Use custom 2/0 AWG battery cables to connect each battery to the common DC bus.
- All battery cables must be equal in material, length, and gauge for proper load sharing.
(Note: Battery cables do not need to match the length of inverter cables.)

Version	Revision Date	Brief Description of Change
V1.0	12/8/2025	Document Published