

Self-use with backup

Backup power supply in the event of grid failure

As any grid-tied inverter, the PowerRouter needs to comply with the local requirements for grid connection. As a safety precaution the inverter is required to disconnect from the grid when the grid fails (anti-island protection). This results in loss of revenues and having no access to the self-generated energy, while solar energy is available. The PowerRouter with connected batteries comes with a unique feature that enables to supply backup power in the event of grid failure. This gives a greater independence from the grid.

How it works

Unlike other inverters, the PowerRouter is provided with an additional output, referenced “local out”. This output operates in “island mode”. When the grid fails, you may re-direct the load to the “local out” (see fig. 1.) supplying a stable 230Vac power to the connected loads. Generated solar energy and energy stored in batteries keep the loads running.

The PowerRouter is provided with two user-selectable relays in the connection areas (see fig. 2). These relays are controlled by the PowerRouter. During a grid failure, the actual load is redirected via an external relay (PowerRouter accessory - see fig. 3). When the grid has recovered, the relay switches back automatically. Note: peak power is limited to system power.

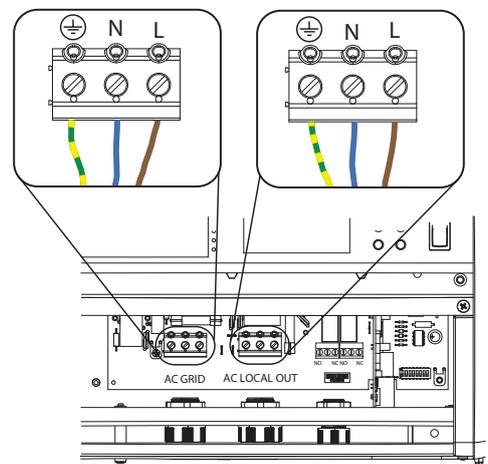


Figure 1. “Local out” connection

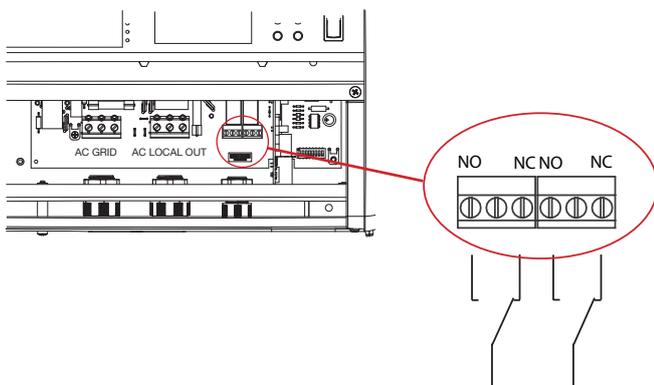


Figure 2. User-selectable relays

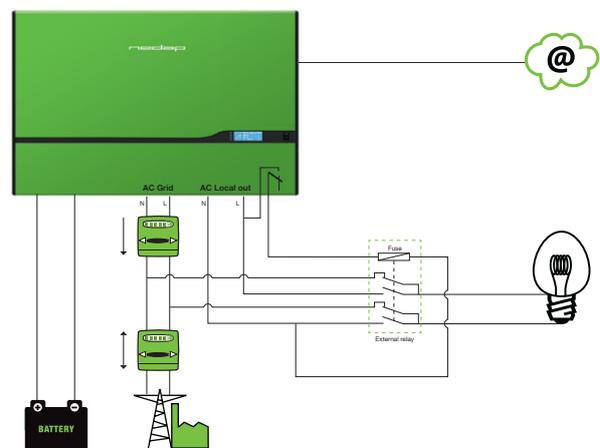


Figure 3. Installation schematic with external relay

Activation of backup power supply

To activate the feature “backup power supply”, the PowerRouter software installation tool is needed. The following settings within the software installation tool are necessary to activate backup power supply:

- > Select the relay for this application
- > Set the setting to “grid connection”

Availability

PowerRouter	Type	Required accessory	Firmware*
PowerRouter Solar Battery - self-use (3.0, 3.7 and 5.0 kW)	PR30/37/50SB-BS	External Relay p/n PRA1RLY	Firmware 4.0 or higher

**Please note: This feature requires firmware revision 4.0 or higher. If the PowerRouter is not provided with this firmware revision, upgrade the PowerRouter to the latest firmware revision. Check the firmware revision via the display under menu “service”, sub menu “revision” or by checking the PowerRouter software installation tool. More information about the latest software can be found on the website www.PowerRouter.com.*