Ignore AC input using the Generator Assistant

Introduction

Ignoring AC input will force a Multi or Quattro into inverter-mode on certain conditions, even though there is mains or generator power available. For example to force the system to run 100% on battery and solar power.

Ignoring the AC input was first introduced on the Virtual switch tab. It is much easier to use the Virtual switch to configure this, however if you must disable the Virtual switch due to another necessary assistants then it is possible to use an alternative way.

Other solutions

Instead of using the Generator start/stop Assistant, there are other solutions:

1. Use the Virtual switch
2. For systems with recent hardware, which has the new-type microprocessor (the 7 digit firmware numbers starts with 26 or 27, instead of 19 or 20) you could use the the Self-consumption Hub-2 v3 assistant - however this is now depreciated.

Making AC Ignore by using the Generator start/stop and the General flag assistant

The most common (or only?!) system where below assistant configuration makes sense is an AC-coupled PV installation, using Multis or Quattros with the old-type microprocessor (the 7 digit firmware numbers starts with 19 or 20, instead of 26 or 27).

Below screenshot shows a configuration for an AC-coupled PV system. It is running on an old-type microprocessor (19xxxxx or 20xxxxx) and can therefore not be configured using the Self-consumption Hub-2 v3 assistant.

There are three assistants used:

1. Generator start and stop, which is not used to start a real genset, but to define the logic for ignoring the ac input. This is done by setting it to drive the general flag.
2. General flag, which picks up the result of the generator start/stop logic. It uses the outcome to Ignore the ac input
3. PV Inverter support, which regulates the output of the PV inverter by changing the AC output frequency while in inverter mode.

Note that the order in which the assistants are is important!

Information

generator start and stop (size:243)
*)   Use the general flag
*)   Open relay to start generator.
*)   Start generator when load higher than 3500 Watt for 1 seconds
        and stop generator when load lower than 1500 Watt for 5 seconds.
*)   Start generator when DC input voltage
        is lower than 46.00 volt for 5 seconds.
*)   Stop generator 300 seconds after bulk charge phase is finished.
*)   The generator is not stopped by AC input.

general flag user (size:5)
*)   Use general flag to ignore AC input 1

grid converter support (size:465)
*)   Other
*)   The solar converter disconnects at 53.00 Hz.
*)   Relative solar power is 2880 Watts.
*)   Keep voltage constant at 57.00 Volts during Absorption.
        Absorption phase ends after 120 minutes.
*)   Keep battery voltage constant at 55.20V during Float.
*)   When, at any time during the process, the battery voltage becomes lower than
        51.00 Volts for 60 seconds, the charge process is reset.
*)   When the bulk phase ends, set the state of charge to 85 %.
*)   Maximum 60.0 Amp solar "charge" current.

Total size of all assistants including the required
(hidden) system assistants is: 785

OK

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Last update: **2019-01-22 10:16**