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Assessment on the subject of PV stand-alone inverters with integrated Steca Solarix PLI charger function in regards to the applicable standards

Dear Sir or Madam,

in relation to the question given by KATEK Memmingen GmbH whether for the model "Steca Solarix PLI" a grid approval according to AR-N 4105 is mandatory, we are of the opinion that there is no normative approach to test this unit according to any grid standard.

Although the device has a network connection, a connection option for photovoltaic and a connection option for batteries, an energy flow into the grid is not possible, as can be seen in the following list of operating modes:

- PV-stand alone inverter* (energy flow battery/PV → Offgrid)
- AC-gridcharger with optional PV (energy flow AC/PV → Battery)
- PV-charger with optional AC load (energy flow AC → Load | PV → Battery)
- AC-grid charger with AC Load (energy flow AC → Battery | AC → Load)

*no grid parallel operation possible

Like stated in the view above, there is no possibility for an energy flow into the public grid. Furthermore it can be concluded that in no operation mode there is any possibility that the connected battery can have influences to the public grid. Therefore the system is to be seen as an electrical load like a charger. This unit can chose between the public grid, photovoltaic or battery as the primary energy source and can create an isolated local grid or charge the connected batteries.

In addition the offgrid inverter "Steca Solarix PLI" which is built into the unit is divided from the grid connection. Since of this separation a feed-in operation is not possible.

The normative necessity for a certification of this product according to the grid standard is not given, as the wording in clause 3.1.50 of the VDE-AR-N 4100:2019-04 is definitely mentioning the feed-in operation.

An approval according to the grid standards is therefore considered as not necessary.

Kind regards

BUREAU VERITAS
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Domenik Koll
Manager Energy Systems – Electrical Safety