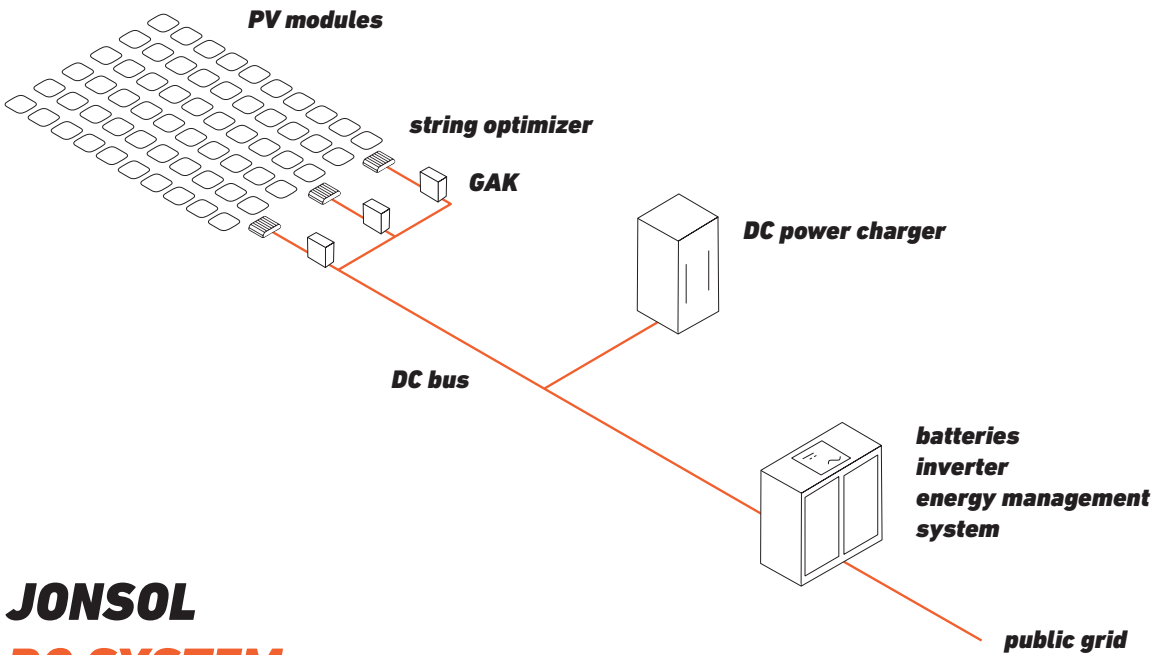


JONSOL
DC SYSTEM

The high quality and reliability of JONSOL are based on many years of production and industry experience as well as a sophisticated product design. The result is guaranteed high-performance JONSOL solutions for renewable energy.

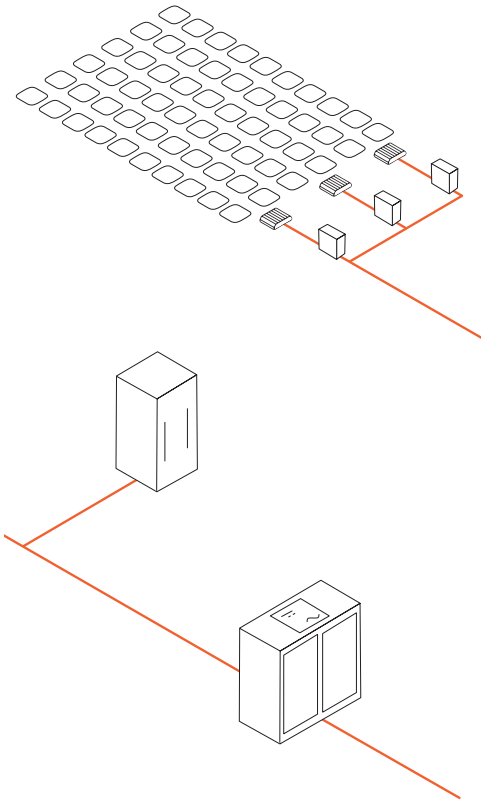
This DC grid with photovoltaics and string optimizers offers an efficient, scalable and sustainable solution for energy supply and storage in various applications, from households to industrial plants, with the additional option of feeding surplus energy into the public grid.

Advantages of the DC grid with pv modules and string optimizers

- ***Higher efficiency***: String optimizers ensure optimal power output from each solar module, which increases the overall efficiency of the system.
- ***Reduced conversion losses***: As energy generation and distribution is based on direct current, there are no losses due to AC/DC conversions.
- ***Flexibility and scalability***: The system can be easily expanded by adding additional PV modules and batteries.
- ***Reliability***: Batteries provide a buffer capacity that ensures a continuous energy supply, even with fluctuating solar power generation.
- ***Grid feed-in***: surplus energy can be fed into the public grid, providing additional income or credits.
- ***Sustainability***: The use of renewable solar energy reduces CO_2 emissions and contributes to environmental friendliness.

JONSOL
DC SYSTEM

A DC grid with photovoltaics (PV) and string optimizers is an efficient system for generating, storing and using solar energy. In this system, the direct current (DC) generated is used directly, stored or converted into alternating current (AC) to be fed into the public grid.



Components of the DC grid

- ***PV modules and string optimizer***:
  PV modules are configured in strings and equipped with string optimizers. The optimizers are attached to each string to generate a DC output.
- ***Connection to the DC bus***:
  The common output of the string optimizers is connected to the DC bus. The DC bus acts as a central distributor for the generated DC power.
- ***DC power charger and batteries***:
  The DC bus is directly connected to DC power chargers and batteries. DC power chargers supply the connected devices directly with power. Batteries store excess energy that is not consumed immediately.
- ***Inverter and grid connection***:
  The DC bus is connected to an inverter that converts the direct current (DC) into alternating current (AC).
  The inverter feeds the converted electricity into the public grid when more energy is generated than is needed.
- ***Energy management system EMS***:
  The EMS is integrated into the network and monitors energy generation, storage and consumption.
  It controls the charging and discharging cycles of the batteries and optimizes energy distribution.