

Fact sheet | VACON® NXP DC/DC Converter

Feed the DC grid with DC power



Use the VACON® Select tool to select the optimal components for the application. The output of the tool comprises:

- Recommended VACON® NXP DC/DC Converter
- Recommended filter
- Recommended fuses
- Efficiency calculation
- Drawings
- Report

High power energy storage for DC grids

- Energy storage in wind, solar and grid support applications
- Load stability for fuel cells
- Electrification of the marine sector
- Industrial DC backup
- Data centers
- Emulation of DC load

Use the the VACON® NXP DC/DC Converter as a powerful tool in industrial DC backup, DC grid enablement and in increasing the power range of AC or DC energy storage systems - for distributed grids, isolated grids, or in industry.

Connect to DC sources

The VACON® NXP DC/DC Converter allows common DC bus systems or individual drives to connect their DC bus to alternate DC sources such as batteries or super capacitors to create hybrid systems.

The energy can flow bi-directionally, either from DC energy source to DC link or from DC link to energy source. By doing this, DC energy sources are utilized to back up the power supply of the system.

Features and benefits of the Danfoss hybrid solutions

| Feature | Benefit |
|---|--|
| Wide power range | Reduce variants – solutions are available for applications in a kW to MW range |
| Modular solution | Based on the VACON® NXP platform power modules, the DC bus system can be easily configured |
| Wide voltage range | Increase flexibility – Ability to integrate a wide variety of common battery bank voltages using a DC/DC converter |
| Flexibility | Easy to upgrade – The simple-to-extend VACON® NXP platform provides great system flexibility with a low additional investment |
| Scalability | Solutions can be scaled up to meet future energy requirements in terms of new energy sources, additional storage or to meet increasing demand |
| Serviceability | Lower investments – Utilizing the same VACON® NXP hardware configurations, service teams require little to no additional training |
| Industry and application knowledge | Made to last – Liquid- and air-cooled solutions based on in-depth application knowledge for the most demanding industries |
| Open approach | Faster Go-To-Market – Wide range of applications made available as foundation for building tailored solutions |
| One stop shop | Reduce procurement costs – Air- and liquid-cooled drives, AFE, NFE, DC/DC, Grid Converter, DC modules and components are available from one source |
| Partnership | Stronger together – System integrators collaborate with a vendor who has a vested interest in their success |

DC-grid

enabler

Specifications

The VACON® NXP DC/ DC Converter includes a specific licensed firmware to provide DC power conversion, based on any of the air-cooled or liquid-cooled VACON® NXP inverter modules, plus filters.

| VACON® NXP DC/DC Converter specifications | | | | Example: Power range is based on DC-Link and source voltage within range listed | | |
|---|----------------|-------------------------|--------------------|---|-------------------------|--------------------|
| Technology | Enclosure size | DC-link udc voltage [V] | Source voltage [V] | Power range [kW] | DC-link udc voltage [V] | Source voltage [V] |
| Air cooled | FR4-FR14 | 465-800 | 5-95% of udc | up to 1500 | 750 | 300-700 |
| | FR6-FR14 | 640-1100 | | up to 2000 | 1050 | 500-1000 |
| Liquid cooled | CH3-2xCH64 | 465-800 | | up to 2100 | 750 | 300-700 |
| | CH61-2xCH64 | 640-1100 | | up to 4100 | 1050 | 500-1000 |

Application examples for AC and DC grids

