

ENGINEERING
TOMORROW

Danfoss

MyDrive Select Report

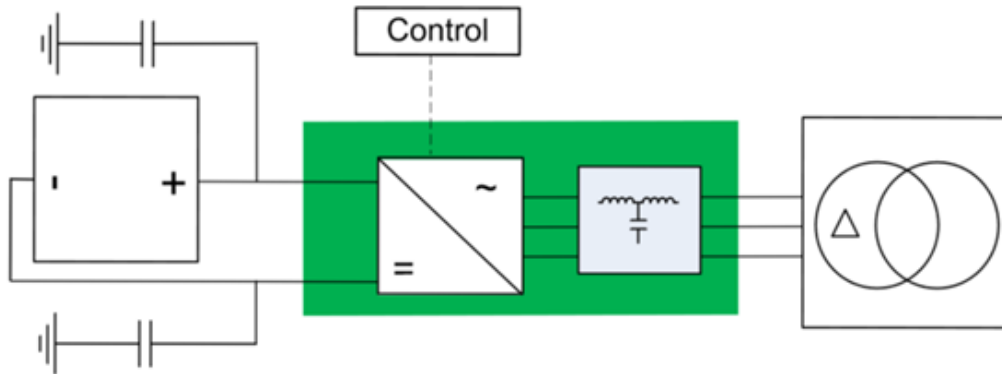
Grid converter - Battery discharger - Max performance 1050V



Introduction

This document provides guidance in sizing the VACON NXP DC/AC-Converter power unit. Based on customer application parameters etc. source voltage and current or power profile, the selection of power unit is greatly affected. Document provides guidance on selecting appropriate filter and fuses but the responsibility of these components is within customer or source component providers side. Also efficiency- and PQ-graph of the system in given application is shown.

Results are indicating the continuous loading situations. Derating or overload situations are similar to standard VACON NXP converter ratings.



Project

Unit system Metric

Type Electrification

Application

Product VACON NXP® Grid Converter 1

Grid converter

Designation NXA_0325_6

Enclosure FI10

Cooling method Air

Configuration Single

AC fuse type PC73UD13C450TF

AC fuse amount 3

DC fuse type 170M6496

DC fuse amount 2

Continuous AC current HO 261 [A]

Apparent current 325 [A]

Max AC voltage 600 [V]

Active current 261 [A]

Maximum DC voltage 1100 [V]

Min AC voltage 220 [V]

Minimum DC voltage 640 [V]

Overcurrent trip level 951 [A]

LCL filter type code LCL-0325-6

Filter amount 1

Max AC voltage with specified source voltage 629 [V]

Min DC voltage with specified AC voltage 1002 [V]

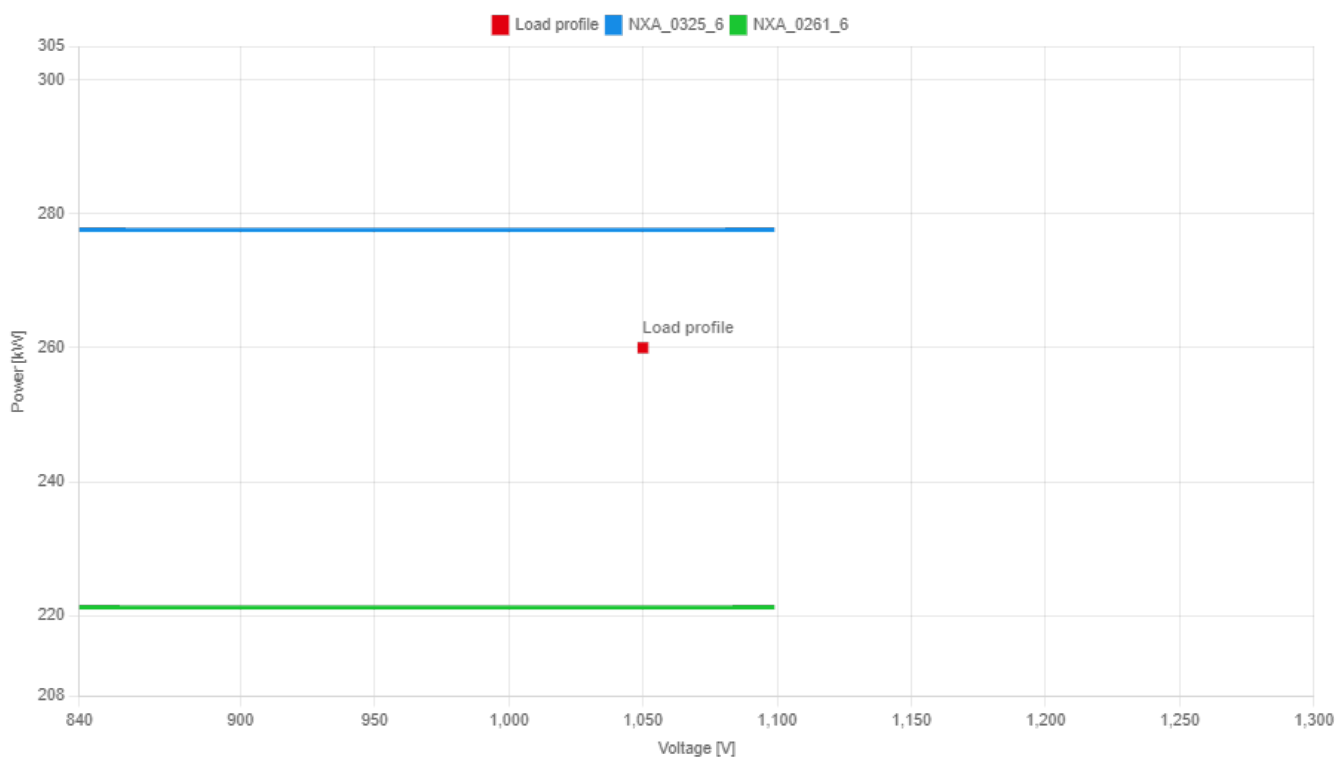
Design parameters

Cooling method Air

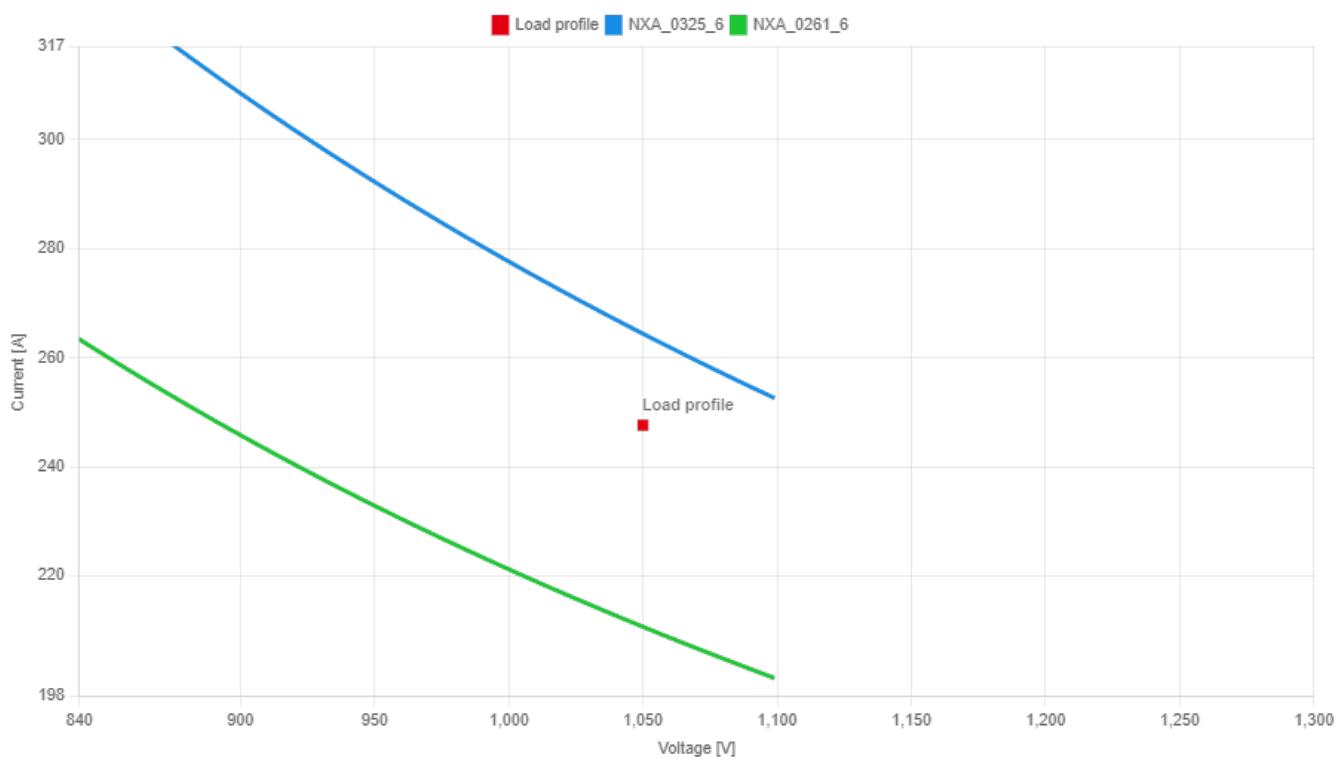
Design parameters

Source sizing criteria	Power
Altitude	0 [m]
Voltage level (Vdc)	Fixed
Nominal DC voltage	1050 [V]
Power at nominal DC voltage	260 [kW]
DC current at nominal DC voltage	248 [A]
Power direction	From grid to source
Ambient temperature	40 [°C]
Inverter output voltage	613 [V]
AC filter type	LCL filter
Grid AC voltage [Vac]	600 [V]
AC current	256 [A]
Modulator type	Grid Converter Modulator
Operation mode	AFE
Power factor	1
Negative AC voltage tolerance (%)	10
Positive AC voltage tolerance (%)	10
Switching frequency	3.6 [kHz]

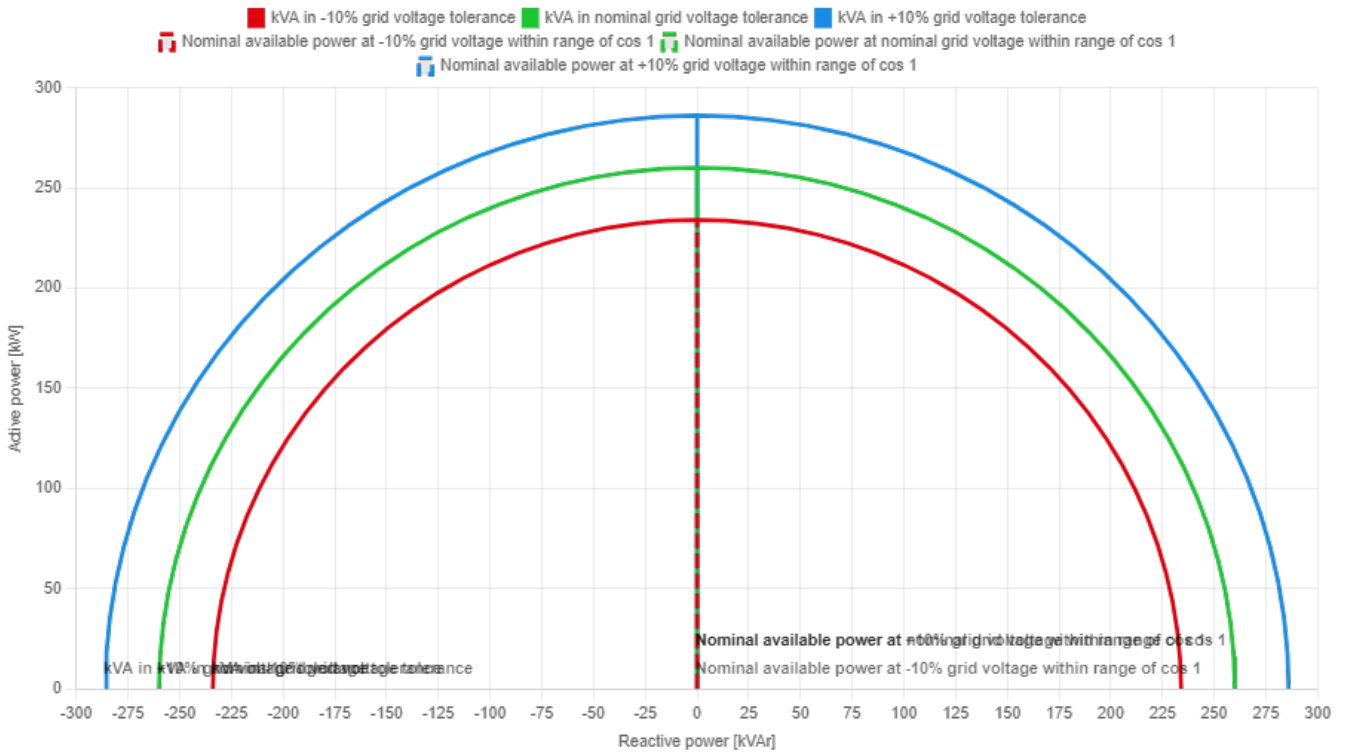
Grid converter power profile



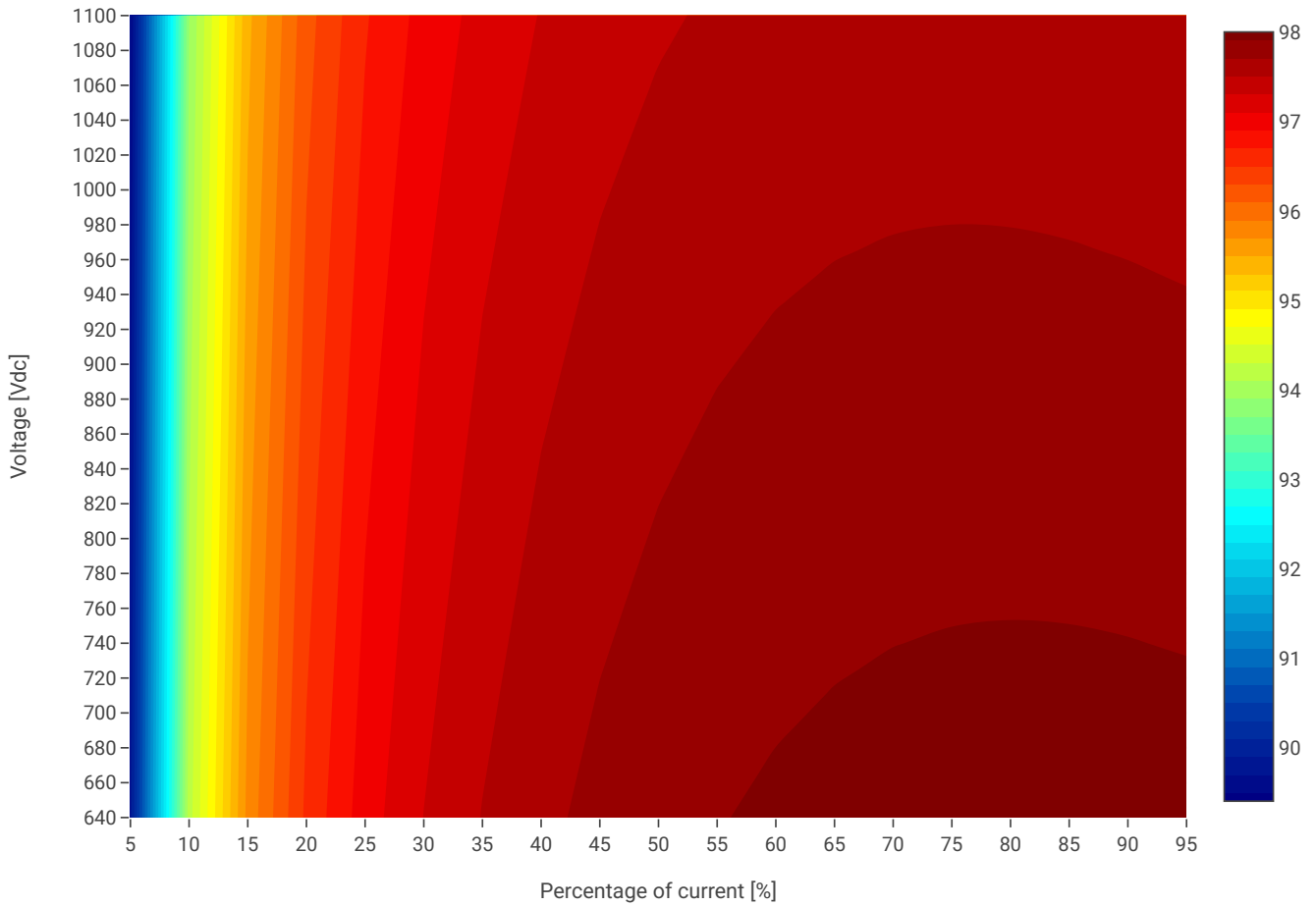
Grid converter current profile



PQ diagram



Efficiency, drive and filter



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