

IDS[®] WIND CONVERTER

IDS[®] AERO DFG Converter Series

1500 kW to 3000 kW for Double Fed Generator (DFG)



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- Compact Converter Including Latest Technology for DFG
- High Efficiency: 99%
- Enhanced Temperature Range: -40°C to +50°C
- Altitude up to 3500m above Sea Level (High Altitude Version HAV)
- Offshore installation types available
- Various Fault Ride Through Codes

The IDS AERO DFG wind turbine converter series with liquid cooling is used in grid connected wind energy applications. To minimize power loss during the conversion process, the IDS AERO DFG converter's switching technology uses IGBTs. IDS technology is approved in many years of grid feeding applications especially in weak grid regions. All components and control algorithms have proven high efficiency and stability under demanding conditions. The IDS AERO DFG converters are delivered fully parameterized and ready for use.

Features

- Available within a power range of 1.5 MW – 3 MW
- Power factor at nominal power adjustable from 0.9 to 1 (inductive / capacitive)
- Grid: 690 VAC nominal voltage and 1255 A to 2625 A nominal current
- Efficiency > 99.0 %
- Remote Diagnostics (24h / 7d) increases the reliability of the system by monitoring its parameter
- Fault Ride Through (FRT) function included and available for different country codes



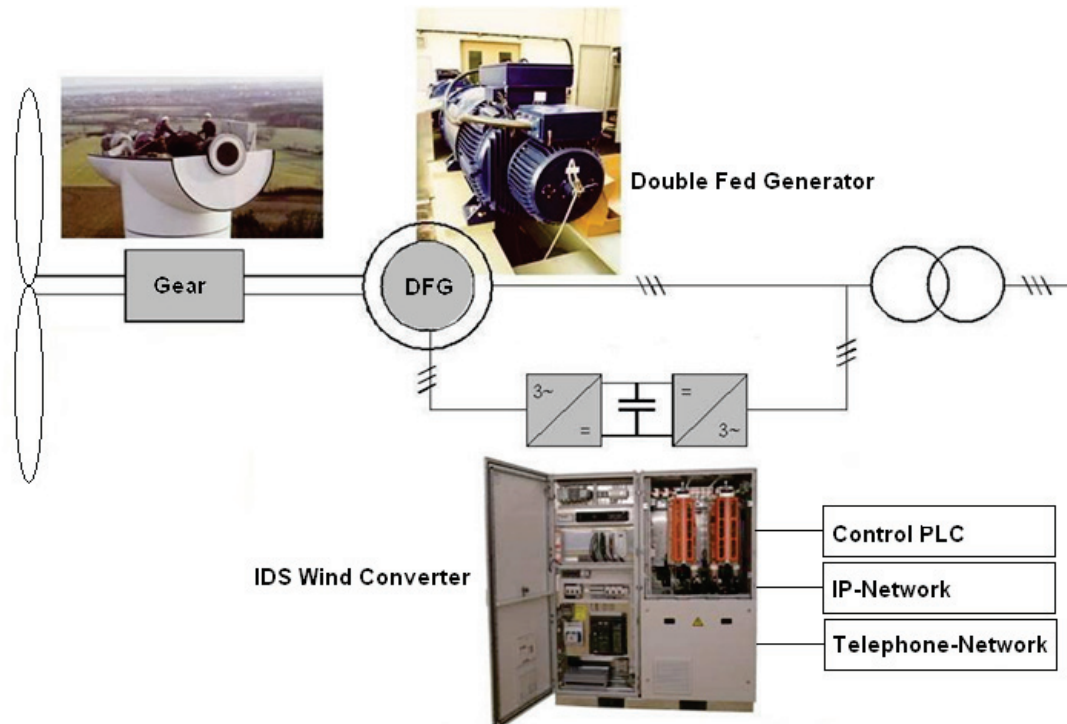
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IDS[®] AERO DFG System



System Advantages

- Active drive train compensation for mechanical oscillation damping
- Active grid harmonics compensation
- Automatic grid voltage control (AVR)
- Power factor control (leading and lagging)
- High system efficiency due to double fed generator topology
- Tested with a wide range of generator suppliers
- System compatibility with energy storage systems
- Monitored surge protectors on line side
- Residual current protection
- Wide voltage operation range
- Highly reliable due to advanced control strategies
- Monitoring, diagnostics and parameter setting by communication interface
- Internal or external power supply for control
- Operation password protected in several access levels
- Variable rotor voltage / frequency control by the converter
- The stator is directly connected to the grid after synchronisation
- No inrush current during grid connection
- The converter controls power and torque of the generator following a torque set point from the turbine control system (PLC)

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Converter Advantages

- State of the art topology
- Broad scope of supply including main circuit breaker
- Compact cabinet
- Extended ambient temperature range (-40°C...+50°C)
- Liquid cooled system supports installation in high altitude and high temperatures environment
- Minimal heat load inside the tower or nacelle due to liquid cooled system
- Protection class IP44,54,65 optionally according to customer requirements
- High altitude version for installation height up to 3500 m above sea level without derating
- Offshore installation types available
- Variable communication interfaces: CANopen, Interbus, Profibus, Anybus.
- Remote Diagnostics (RDS) 24h/7d increases the availability of the system
- Customer tailored service and maintenance contract

Options

- Stator contactor or electronic stator switch
- Line side inverter contactor
- Monitoring interface: TCP/IP, GSM or line modem
- Liquid cooling system with heat exchanger

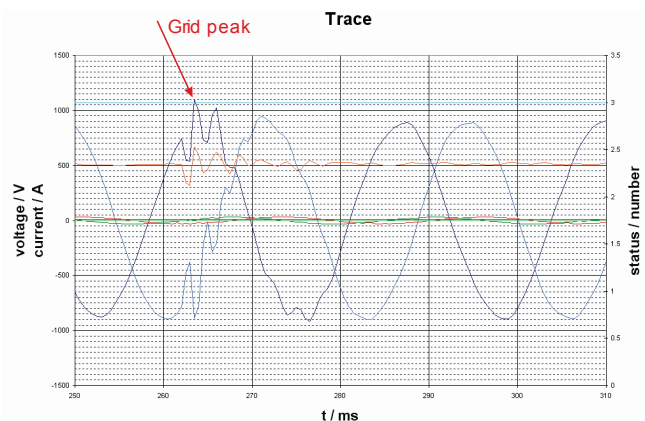
Remote Diagnostics, 24 hours / 7 days possible

The IDS AERO converter is designed to work maintenance free over the lifetime in the specified wide working range. Nevertheless experience with the grid quality shows that extreme situations can occur.

IDS offers a full service to guarantee the highest possible system availability. You do not have to worry about warning messages of your inverter. IDS experts continuously monitor your system remotely and start adequate actions. Many problems can even be diagnosed before a system actually fails.



IDS - Remote Diagnostics Center



Example of a Fault Record with Grid Voltage Peaks

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IDS[®] MMI and Remote Diagnostics

IDS IntegralDrive32 software running on a laptop computer communicates with the DCS control unit, thus enabling parameter setting and diagnostics. The IDS Remote Diagnostic System communicates with the DCS control unit via a communication interface. Power yield, parameters and system status can be read out from a Remote Diagnostic Center.

Available Versions

Converter Types	Nominal System Power [kW]	Nominal Grid Voltage [V AC]	Dimensions L x W x H [mm]	Weight [tons]
AERO 1500 DFG	1500	690	1800 x 800 x 2100	1.2
AERO 1500 DFG-HAV	1500	690	1800 x 800 x 2100	1.2
AERO 1500 DFG-OS	1500	690	1800 x 800 x 2100	1.2
AERO 2500 DFG	2500	690	1200 x 1200 x 2100	2.4
AERO 2500 DFG-HAV	2500	690	1200 x 1200 x 2100	2.4
AERO 2500 DFG-OS	2500	690	1200 x 1200 x 2100	2.4
AERO 3000 DFG	3000	690	1200 x 1200 x 2100	2.7
AERO 3000 DFG-HAV	3000	690	1200 x 1200 x 2100	2.7
AERO 3000 DFG-OS	3000	690	1200 x 1200 x 2100	2.7

Note:

DFG: for Double Fed Generator

HAV: for High Altitude Version (extended elevation range up to 3500m)

OS: for offshore installations

Subject to change, August 2010

Ordering Information

For technical or commercial information please contact the IDS sales office

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