

AERO 5000

Wind Converter 5000 kW for Synchronous Generator (SG)

Datasheet



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Type	AERO 5000 SG	IC-69-100-SG
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Grid Data

Grid power nominal	P_{nom}	5000 kW; +10 % (continuously)
Grid voltage nominal	U_{nom}	3x 690 V; +10 % / -15 %
Grid current nominal	I_{nom}	5000A
Grid frequency nominal	f_{nom}	50 Hz (47-53 Hz max. fluctuation 17% /s) (60 Hz option)
Grid structure		TN-C (L1, L2, L3, PEN); IT (L1, L2, L3, PE) on request
Surge protection		Yes
Harmonic distortion	%THD (I_{AC})	< 4 % (at nominal power)
Power factor	$\cos \varphi$	0.9 capacitive ... 0.9 inductive
Converter efficiency at rated power	η	97.2 %
IGBT switching frequency	f_{IGBT}	~ 2.5 kHz
dv/dt		< 1000 V / μ s
Auxiliary supply voltage / power consumption		230 VAC; 50 Hz (60 Hz option); TN-S / 7.5 kW

Line Side Inverter Data

Inverter power	P_{lin}	5500 kVA; +10 % (continuously)
Inverter voltage	U_{lin}	690 V; +10 % / -15 %

Generator Side Inverter Data

Inverter power	P_{lin}	5625 kVA; +10 % (continuously)
Inverter voltage	U_{lin}	0..690 V; +10 %
Inverter frequency	f_{lin}	0..50 Hz

User Interface

Emergency stop input / output	Digital input 24 Vdc (± 10 %) / Normally closed contact for 24 Vac/dc, 20 mA
Monitoring Interface converter	TCP/IP, VCU Display, GSM- or line modem customized
Communication interface customer	CANopen, Interbus, Profibus customized

Cabinet and Ambient Conditions

Cabinet dimensions (without socket)	L x W x H	1460 x 1340 x 2090 mm
Socket height	H	110 mm
Weight	m	6100 kg (approx.)
Ambient temperature range	T_{amb}	Standard: -30 °C ... +40 °C / Extended: -40 °C ... +50 °C
Survival temperature range	T_{sur}	-40 °C ... +70 °C
relative Humidity		15 ... 95 %, non condensing
Protection Class		IP54
Maximum elevation above sea level		Standard: 2'000 m ; High Altitude Version: 3'500 m without derating

**WIND TURBINE CONVERTER
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Heat Exchanger and Cooling

Nominal dissipation power	P	102 kW
Nominal liquid flow	l/min	330 l/min
Air inlet temperature range	T _{hex}	Standard: -30 °C ... +40 °C; Extended: -40 °C ... +50 °C
Max. cooling fluid temperature	T _{fluid}	55°C
Max. elevation above converter	h	3 m
Cooling fluid / frost protection		Standard: 55% water, 45% glycol / down to -30 °C Extended cooling: 50% water, 50% glycol / down to -40 °C
Static pressure of cooling liquid	p	1.4 bar (±0.3 bar) above ambient

Fault Ride Through

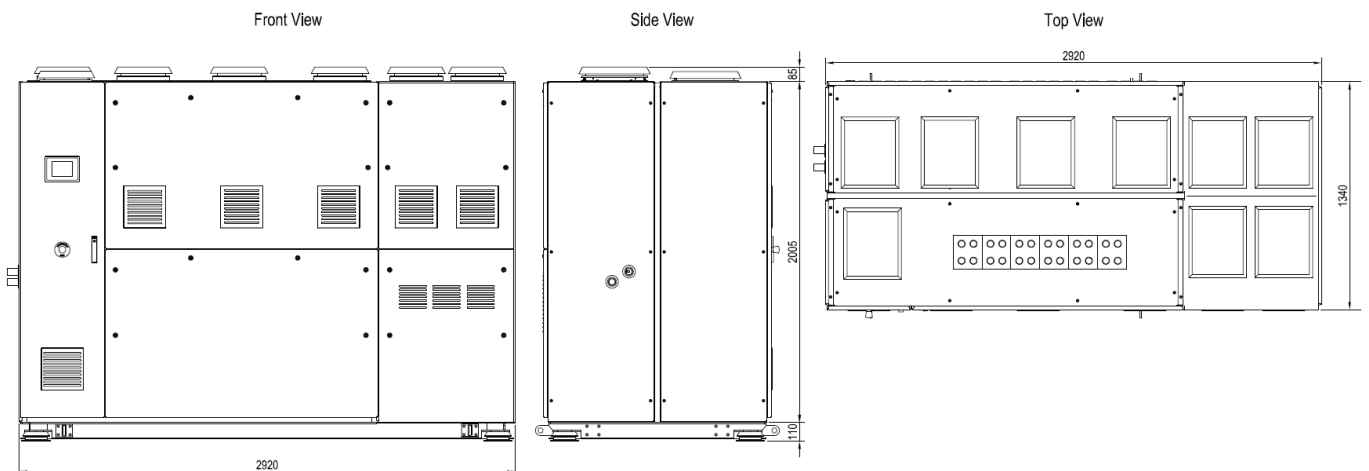
Fault ride through codes		EON 2003, EON 2006, Spain, Portugal, EDF France, National grid UK, Italy, Poland, Turkey, U.S., China. etc.
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Standards

CE conformity / EMC		Yes / EN50178, EN 61000-6-2, EN 61000-6-4
Grid monitoring		VDEW

Options

Communication: Interbus, Profibus / Monitoring Interface: GSM- or line modem
Extended elevation: 3500m (High altitude version HAV)
Line configuration IT (L1, L2, L3, PE) on request / Line frequency: 60 Hz



Subject to change, June 2010

Ordering Information

For technical or commercial information please contact the IDS sales office

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