

17. Electrical Specifications

Nominal output and grid conditions

Nominal power 6600 kW
 Nominal voltage 690 V
 Power factor correction Frequency converter control
 Power factor range 0.9 capacitive to 0.9 inductive at nominal balanced voltage

Generator
 Type DFIG Asynchronous
 Maximum power 6750 kW @20°C ext. ambient

Nominal speed 1120 rpm-6p (50Hz)
 1344 rpm-6p (60Hz)

Generator Protection
 Insulation class Stator H/H
 Rotor H/H
 Winding temperatures 6 Pt 100 sensors
 Bearing temperatures 3 Pt 100
 Slip Rings 1 Pt 100
 Grounding brush On side no coupling

Generator Cooling
 Cooling system Air cooling
 Internal ventilation Air
 Control parameter Winding, Air, Bearings temperatures

Frequency Converter
 Operation 4Q B2B Partial Load
 Switching PWM
 Switching freq., grid side 2.5 kHz
 Cooling Liquid/Air

Main Circuit Protection
 Short circuit protection Circuit breaker
 Surge arrester varistors

Peak Power Levels
 10 min average Limited to nominal

Simplified Single Line Diagram

Grid Capabilities Specification

Nominal grid frequency 50 or 60 Hz
 Minimum voltage 85 % of nominal
 Maximum voltage 113 % of nominal
 Minimum frequency 92 % of nominal
 Maximum frequency 108 % of nominal
 Maximum voltage imbalance (negative sequence of component voltage) ≤5 %
 Max short circuit level at controller's grid
 Terminals (690 V) 82 KA

Power Consumption from Grid (approximately)
 At stand-by, No yawing 10 kW
 At stand-by, yawing 50 kW

Controller back-up
 UPS Controller system Online UPS, LI battery
 Back-up time 1 min
 Back-up time Scada Depend on configuration

Transformer Specification
 Transformer impedance requirement 8.5 % - 10.5 %
 Secondary voltage 690 V
 Vector group Dyn 11 or Dyn 1 (star point earthed)

Earthing Specification
 Earthing system Acc. to IEC62305-3 ED 1.0:2010
 Foundation reinforcement Must be connected to earth electrodes
 Foundation terminals Acc. to SGRE Standard

HV connection HV cable shield shall be connected to earthing system



REGIONE BASILICATA



Provincia MATERA



COMUNE DI ALIANO (MT)



PROGETTO DEFINITIVO RELATIVO ALLA REALIZZAZIONE DI UN IMPIANTO EOLICO COSTITUITO DA 6 AEROGENERATORI E DALLE RELATIVE OPERE DI CONNESSIONE ALLA R.T.N.

SCHEMI FUNZIONALI DEI SINGOLI AEROGENERATORI

ELABORATO

A.16.b.3

PROPONENTE:



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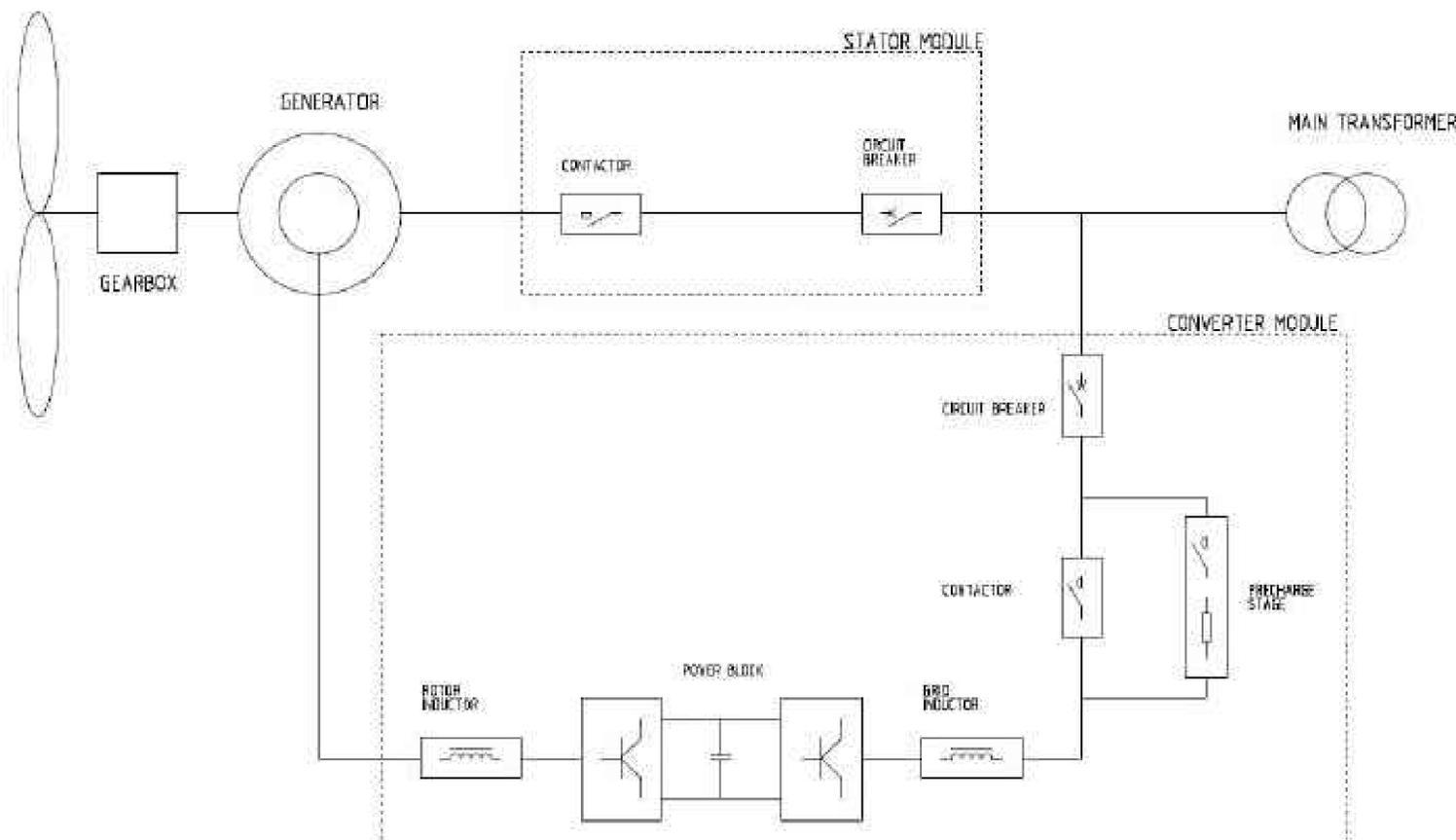


CONSULENZA:



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Simplified Single Line Diagram



0	APRILE 2022	B.C.C	A.A. - O.T.	A.A. - O.T.	Progetto Definitivo
EM./REV.	DATA	REDATTO	VERIFICATO	APPROVATO	DESCRIZIONE