

FSPC-0300K

FULL SCALE POWER CONVERTER



Product Description

ASELSAN's Wind Turbine Power Converter Series is a family of wind turbine power converters for various power levels, developed from a unique technology platform. The 300 kW Wind Turbine Power Converter is a high performance and highly intelligent wind turbine power converter unit suitable for use with Asynchronous, Synchronous and Permanent Magnet Synchronous Generators.

The 300 kW Wind Turbine Power Converter consists of a Generator Side Converter (GSC), Line Side Converter (LSC) and Control Cabinet. The system has a full-scale back-to-back converter topology and its design is based on modular power electronic components and a high performance state-of-the-art control system. The 300 kW Wind Turbine Power Converter can be adapted to meet customer specific requirements.

Application Area

Medium Scale Wind Turbines

Features

- Adjustable reactive power support
- Islanding detection
- Internal DC bus chopper
- Robust and automatic grid synchronization
- On-grid onshore and offshore applications
- Optional off-grid applications
- High performance vector control
- Efficient switching methods
- Flexible and advanced control algorithm development architecture
- CAN, RS422/485 and Ethernet interface options
- Overvoltage, overcurrent and over-temperature protection
- Built-in test and soft start
- Complies with EMC requirements



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General Specifications

- Operating Temperature : 0°C / +40°C
- Storage Temperature : -40°C / +70°C
- Protection Class : IP20 according to IEC60529 (standard)
- Cooling : Forced Air Cooling
- Dimensions (W x L x H)
 - Generator Side Converter Cabinet: 100 x 60 x 200cm
 - Line Side Converter Cabinet : 100 x 60 x 200 cm
 - Control Cabinet : 70 x 60 x 200 cm
- Weight : 1330 kg

Electrical Data

- Grid Voltage Range : 400 VAC, $\pm 10\%$
- Grid Frequency Range : 45-66 Hz
- Grid Active Power Injection (Continuous): 315 kW
- Grid Active Power Injection (Peak): 400 kW (30 sec)
- Grid Power Factor Range : 0.9 capacitive to 0.9 inductive
- Grid Current THD : < 5%
- Generator Voltage Range : 0 - 750 VAC
- Generator Frequency Range : up to 200 Hz
- DC Bus Voltage : 750 VDC (rated), 1000 VDC (maximum)
- Switching Frequency : 2.5 kHz (no derating)
- Efficiency : > 95%
- Auxiliary Supply Out : 24 VDC/1A

Grid Compliance

- Configurable according to local grid codes.

