



FPC 750 – 6000 kW



100% purpose-built for wind

The Switch full-power converters (FPC) are optimized to work with our permanent magnet generators. Designed for the highest-level performance in wind power generation, the robust line inverters ensure future-proof electricity quality to meet the ever-stricter network requirements for harmonics, flicker and fault ride-through (FRT).

The Switch FPCs enable easy power factor control. This means that all the current can be used for active or reactive power generation, allowing a 100% reactive power feed, even in the absence of wind. Because The Switch FPCs are not as sensitive to changes in the network as traditional converters, they offer advantageous control flexibility for adapting to ever-changing operating conditions.

Features	Advantages
Modular design	Matches all wind conditions and power requirements with quick power adaption
Generator inverter	Adjusts generator power factor using an active rectifier and maximizes generator efficiency
Line inverter	Outstanding fault tolerance and grid support through FRT functionality for stable and high-quality electricity
Grid filter	Specifically designed for line filter matching strictest grid harmonic requirements
Control unit	Various field bus options for easy integration with turbine controller
Rugged IP54-class cabinet	Designed for harsh conditions and easy access

Technical specifications

Different power levels are possible by using similar mechanical designs. The power can be increased simply by duplicating the number of cabinets. This modularity allows easy handling during setup, replacement and maintenance.

	FPC750	FPC1000	FPC1500	FPC2000	FPC2500	FPC3000	FPC4500	FPC5000	FPC6000
Frame	1 x 20	1 x 20	1 x 26	2 x 20	2 x 26	2 x 26	3 x 26	4 x 26	4 x 26
Power class [MW]	0.75	1	1.5	2	2.5	3	4.5	5	6
Line current [A]	750	1000	1500	2000	2500	3000	4500	5000	6000
Generator current [A]	820	1060	1600	2120	2750	3200	4800	5500	6400
Weight [kg]	1700	1700	1900	2 x 1700	2 x 1900	2 x 1900	3 x 1900	4 x 1900	4 x 1900
Dimensions for one cabinet [mm]	W 2110 H 2200 D 675	W 2110 H 2200 D 675	W 2710 H 2200 D 675	W 2110 H 2200 D 675	W 2710 H 2200 D 675	W 2710 H 2200 D 675	W 2710 H 2200 D 675	W 2710 H 2200 D 675	W 2710 H 2200 D 675
Nominal voltage	690 V								
Line frequency	50/60 Hz +/- 5 Hz								
Power factor range	0.9 cap ... 0.86 ind, with rated active power and grid voltage								
Reactive power production	Dynamic mode, voltage control, power factor control								
Efficiency	97% at rated point								
Coolant temperature	Max. 45 °C with rated currents, 45 - 55 °C with de-rated capacity								
Protection class	IP54								
Cooling connection	Bottom entry/exit available								
Cabling connection	Top or bottom entry/exit available								
Grid harmonics	Special designs for different grid requirements available								
Dynamic electric brake	Light duty and heavy duty solutions available								
FRT - Symmetric and asymmetric voltage dips	Minimum residual voltage 0%, complies with the strictest grid requirements								
FRT - Reactive current support	Up to rated current, complies with the strictest grid requirements								
Fieldbus connectivity	All industrial standards supported (e.g. Profibus DP, CANOpen, Modbus RTU, Modbus TCP/IP, EtherCAT, Profinet, Interbus)								
Remote management	Via Ethernet								
PC tools	Via RS-232								

Technical drawing

The modular design allows full redundancy. Failure of one converter does not cause any turbine downtime. The turbine continues operation at a lower power production rate.

