EMERSON
Industrial Automation

SSB Wind Systems®
Be consistent.

Unlimited control:
The MPC converter series.

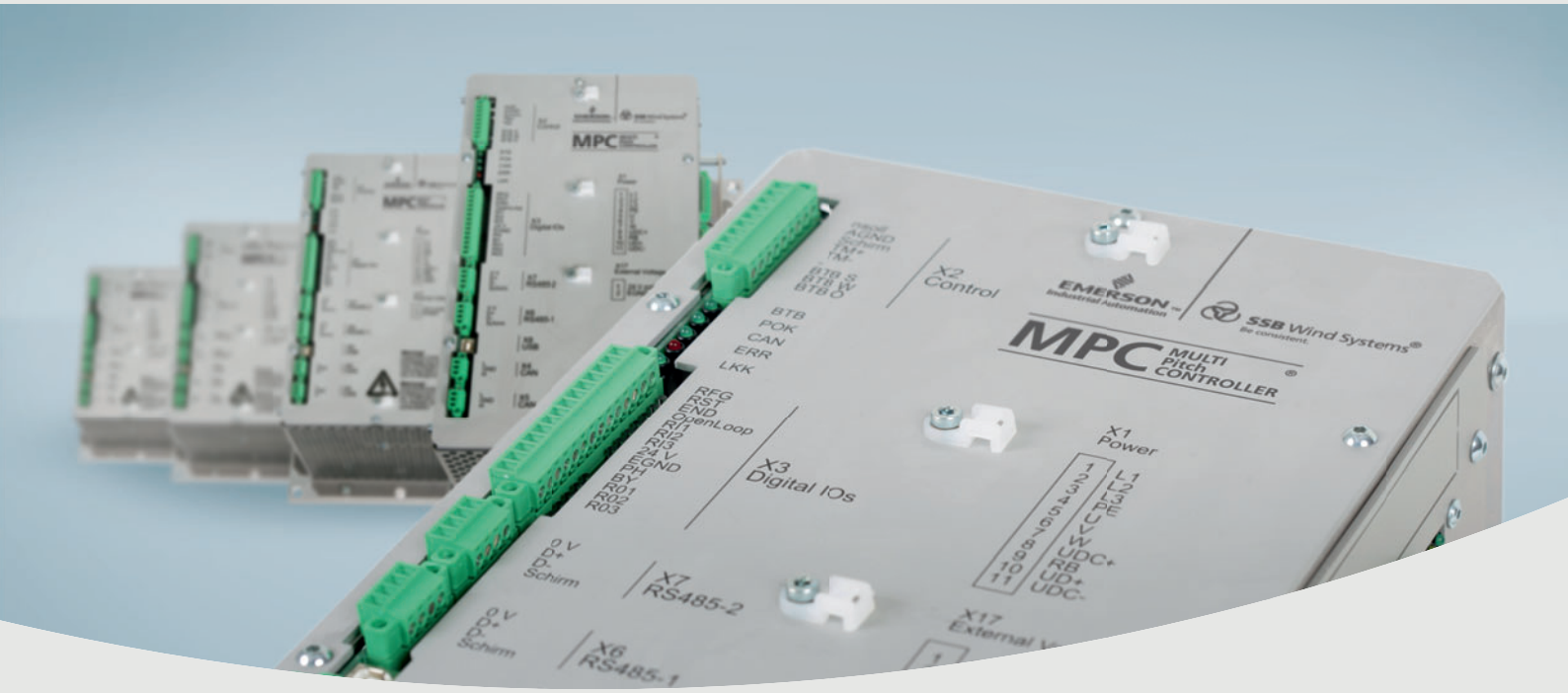
Pitch systems

Switch and control cabinets

Service

“And” instead of “or”: Fully modular integrated technology.

The MULTI Pitch CONTROLLERS developed for challenging operating conditions in rotor hubs with speed and blade angle actual value feedback provide an impressive amount of technical refinements. From the integrated positioning card to digital signal processing. Based on a modular technology that allows the replacement of individual components.



Answers instead of questions: The analysis option.

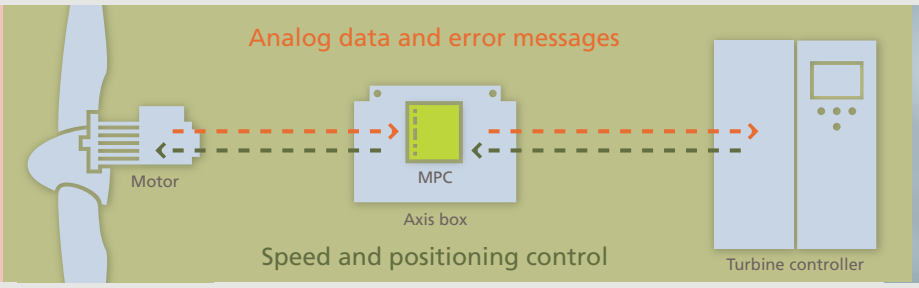
Apart from energy, WTGs also produce a considerable amount of data. For instance when the main controller of the WTG communicates with the encoder system of the pitch motor, which it does continually. But the MPC does not only pass on the control data to the pitch system. It also records all data that is provided by the pitch system itself. Apart from potential faults these are also all analog data. Because of this bi-directional communication all data can be used at any time for the analysis of the pitch system.

Application features of the MPC series:

- MULTI Pitch CONTROLLER with speed and blade angle actual value feedback
- Positioning control can be enabled
- Formation of speed actual values by means of sine/cosine signals
- Speed control in closed-loop and open-loop mode
- Highly prioritized emergency moves in feathering position
- Heavy-duty mode for enabling a defined current-time profile

Advantage offered by the system:

Fully bi-directional communication.



Added value instead of figures: Technical specification.

Device:	MPC 30 DC	MPC 60 DC	MPC 75 DC	MPC 125 DC
Grid connection	230 V AC -20% to 440 V AC + 10%; -20%, 50 / 60 Hz			
DC bus connection	100 V ... 620 V DC			
Output voltage	DC +/- 9 ... 400 V			
Continuous current	30 A	60 A	75 A	125 A
Peak current (min. 6s)	60 A	120 A	150 A	250 A
Rated power @ 400 V	12 kW	24 kW	30 kW	50 kW
Short-time	24 kW	48 kW	60 kW	100 kW

Device:	MPC 20 AC	MPC 35 AC	MPC 55 AC	MPC 75 AC
Grid connection	230 V AC -20% to 440 V AC + 10%; -20%, 50 / 60 Hz			
DC bus connection	100 V ... 620 V DC			
Output voltage	AC 3~ 0 ... 400 V			
Continuous current	20 A	35 A	55 A	75 A
Peak current (min. 6s)	40 A	70 A	110 A	150 A
Rated power @ 400 V	13 kVA	24 kVA	38 kVA	52 kVA
Short-time	27 kVA	48 kVA	76 kVA	104 kVA

Flexibility instead of standstill: Modularity.

All MPCs are to a considerable extent developed and constructed in-house. The result is optimum reliability and also a considerable amount of modularity. Where required, the positioning card as well as the bus communication and application module are exchangeable. Consequently not only the functionality of each MPC can be customized but the replacement of an individual faulty component also often prevents expensive replacement of the complete converter.

1A instead of 08/15: Our quality.

Each MULTI Pitch CONTROLLER has been designed for heavy-duty operation and a service life of 150 million rotational movements, at -40 °C as well as at +70 °C. And of course also at temperatures falling within this range.

Technical features for all models:

- AC and DC variants
- Integrated positioning card for signal processing and evaluation
- Battery Pitch Profile
- Usable from -40 °C to +70 °C
- Interfaces: USB, 2xRS 485, CANopen, further interfaces via Busmaster possible
- Additional inputs: 12 digital, 4 analog inputs
- Additional outputs: 8 digital outputs

Any questions? Here are the answers.

Our people.

- 400 highly motivated employees (including more than 50 developers)

Our services.

- Consulting, planning, development, construction, testing
- Continuous process and job production for switch and control cabinets

Our products.

- Pitch systems for wind turbines of all onshore and offshore performance classes
- Switch and control cabinets, pitch drive control and hub simulation boxes, special solutions, prototypes
- Technical service and spare parts management

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