

MX-System



Invitation

The control system for wind turbines:
PC-based control

WindEnergy Hamburg
September 24–27, 2024
Hall B6, Booth 319

Flexible automation concepts for a dynamic market

Beckhoff will be appearing at WindEnergy in Hamburg from September 24 to 27, 2024 to explain how highly scalable control solutions can help manufacturers and operators of wind turbines. We will be presenting the highlights of PC- and EtherCAT-based control technology. The focus will be on the MX-System, the pluggable system solution for completely control cabinet-free automation, and PC-based control.

Our concepts for pitch and azimuth control based on the decentralized AMP8000 drive system optimize the yield of your turbines. The integrated TwinSAFE SC (Single Channel) safety solution in conjunction with corresponding EtherCAT Terminals protects against overspeed and overcurrent. You will be able to see our innovations and benefit from the extensive expertise we have gathered from over 120,000 automated wind turbines.

We look forward to seeing you in Hall B6 at Booth 319!



Use analog signals for safety functions: TwinSAFE Single Channel

- EtherCAT I/Os with TwinSAFE SC enable analog signals to be used for safety-related tasks up to category 3, PL d by TÜV SÜD available
- detailed calculation examples confirmed
- typical application scenarios: current and power monitoring, speed monitoring, temperature monitoring, level measurement, pressure measurement
- available in different signal combinations and designs

► [Learn more](#)



Even more computing power on the DIN rail: CX8200 Embedded PC

- high-performance ARM Cortex™-A53 CPU with two CPU cores, 1.2 GHz processor speed, and 64-bit architecture
- large main memory (1 GB LPDDR4 RAM) supports use as a PLC and motion control system (TC level 20)
- integrated capacitive UPS (1 s) and extended temperature range (-25°C to +65°C) for challenging operating environment

► [Learn more](#)



Significant performance enhancement for embedded PC: CX9240 with quad-core CPU

- major increase in computing power without compromising on low power consumption thanks to the high-performance ARM Cortex™-A53 CPU with four cores, 1.2 GHz processor speed, and 64-bit architecture
- main memory doubled to 2 GB LPDDR4 RAM
- variable connection options via two independent 1 Gbit Ethernet interfaces and a wide range of interface options

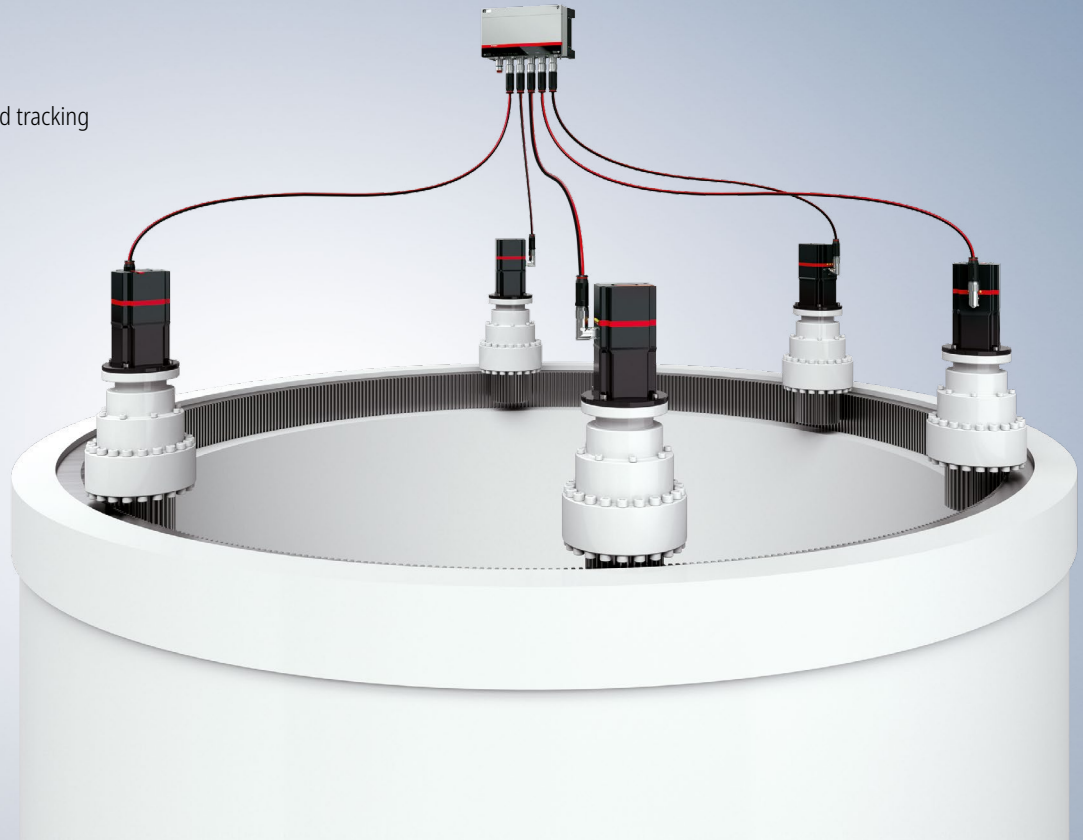
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Decentralized servomotors for azimuth and pitch control: AMP8000

- increased energy yield through more dynamic wind tracking
- servomotor with directly integrated servo drive
- saves material, space, costs, and assembly work
- convenient and fail-safe connection via EtherCAT P and decentralized supply module
- optional safety functions

► [Learn more](#)



Pluggable system solution for control cabinet-free automation

- modular system with IPC, coupler, I/O, drive, relay, and system modules on scalable baseplates for placing directly on the machine
- for control cabinet-free machine and system concepts in robust metal housings
- simple plug-and-play principle enables module exchange even by non-specialist personnel

► [Learn more](#)



reddot winner 2023
best of the best



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The Beckhoff team is looking forward to your visit!



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Opening hours:
Tuesday – Thursday: 10:00 a.m. to 6:00 p.m.
Friday: 10:00 a.m. to 4:00 p.m.

Further information:
www.beckhoff.com/windenergy-hamburg
www.windenergyhamburg.de