Wind Solutions®

WTC6 CM60MK2

A powerful main controller for wind

Designed to meet the requirements in wind turbines, KK Wind Solutions' controller combines long lifetime and stable operation with industry-leading connectivity.

The CM60 is a core member of the sixth generation control system known as WTC6, developed by KK Wind Solutions. It is typically used as main controller in wind turbine control systems, but can be used for other applications as well.

The CM60 controller is designed to tolerate the high levels of vibration and EMC disturbances in a wind turbine.

The CM60 represents more than a standard PLC. It contains a powerful software framework, designed especially for wind turbine applications. With its standard interfaces it combines high flexibility with great power.

Key benefits

- Dedicated design for operation in wind turbines both on- and offshore
- Robust construction to tolerate high levels of vibration and EMC disturbance
- Standard interfaces for CANopen and EtherCAT
- Extended temperature range for cold-climate operation
- Fiber-based EtherCAT interface for fast communication with IO modules

Proven robustness

KK Wind Solutions' long track record of reliable design and state-of-the-art test facilities ensures that our components comply with and exceed the highest standards.

Mean time to failure

- 72.6 years at 25°c
- 44.7 years at 45°c
- 17.1 years at 70°c

Compliance with standards

KK Wind Solutions' technology complies with and is tested above limit in all relevant standards, including:

- DS/EN 61000-6-2:2005 Electromagnetic compatibility Generic standards – Immunity for industrial environment.
  Improved immunity for ESD, Burst and Surge:
  ESD tested to ±6KV Contact- and ±15KV Air Discharge.
  Burst tested to ±4KV, and Surge tested to ±2KV.
- DS/EN61000-6-2:2005 - Electromagnetic compatibility
- DS/EN 61000-6-4:2007 - Electromagnetic compatibility - Generic emission standard
- IEC 60068-2-64 Vibration - random
- IEC 60068-2-6 Vibration - sinusoidal sweep
- IEC 60068-2-27 Shock and bump

Wide range of operation

The controller is designed to withstand harsh conditions both onshore and offshore.

Temperature limitations:
- Operation: -35°C to 70°C
- Storage: -40°C to 80°C

Humidity limitations:
- Operation: 5 - 95% RH non condensing
- Storage: 5 - 95% RH non condensing

Key features

- 800 MHz processor
- 512 MB RAM with ECC
- 2 x Ethernet, RJ45 and SC
- Redundant power supply
- QNX real time OS
- Wind Turbine SW framework
- Programming in C/C++, Simulink and PLC (CODESYS V3)
- Programmable web server for diagnostics and HMI
- EtherCAT Master
- CANopen master and slave
- ModbusTCP master and slave
- IEC61400-25/MMS Server

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Contact

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About us

Building on more than 35 years of experience in electrical systems for wind, KK Wind Solutions' capabilities span development of state-of-the-art technologies, high quality lean manufacturing, cost-efficient supply chain solutions and flexible service of turbines.

We innovate to integrate®

 03/2016-EN