

# WindSafe® Condition Monitoring for Beckhoff Automation technology

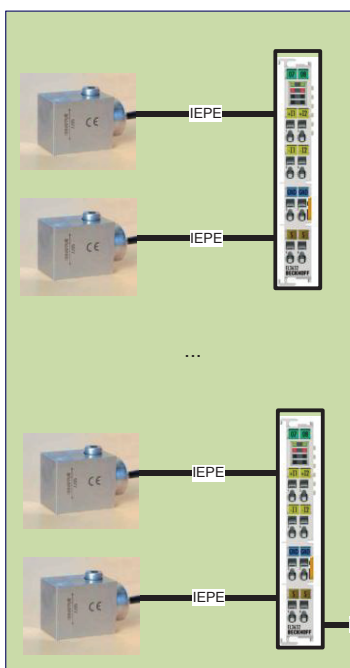
The Condition Monitoring System WindSafe®, certified by GL and AZT, is now available for the Beckhoff automatization platform. By connecting WindSafe® to TwinCAT PLC, machines can now be safely monitored without the necessity of further measuring devices.

### Advantages

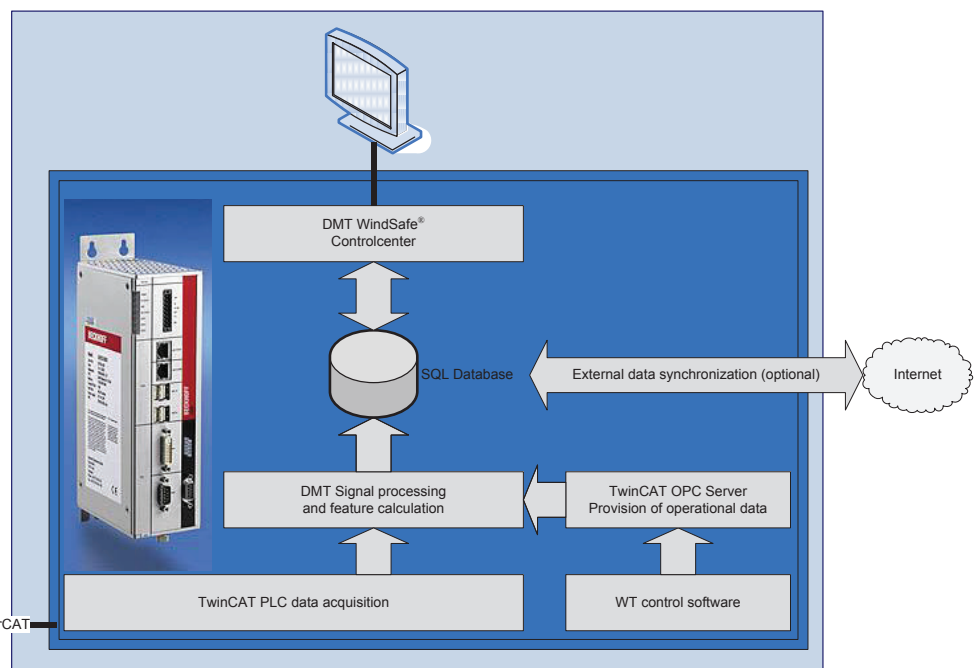
- Lower total system costs
- Compact and space-saving
- Widely applicable due to modular design

### System properties

- Data acquisition on 8-10 channels at 50 kHz
- Data analysis based on operation mode classification (power, rotation speed)
- Processing of up to 16 channels of operational data
- Sampling rates: 50 kHz, 5 kHz, 500 Hz, 50 Hz
- Spectral data of amplitude and envelope signal
- Order analysis
- Effective values and frequency-selective features
- Optional online support from DMT machine diagnosis experts



Additionally required hardware



Existing system control hardware

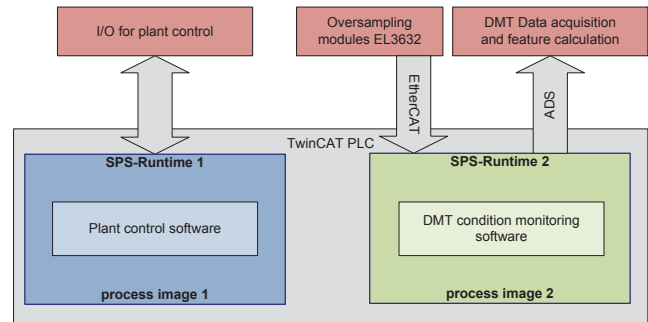
## CMS example configuration for a wind power plant

### Hard- and software

PC	Beckhoff C6920 or CX 2040
I/O	4x Beckhoff EtherCAT EL3632
Sensors	8x DMT KS11 Acceleration sensors
Data acquisition	TwinCAT PLC 2.11
Protocols	TwinCAT ADS
	TwinCAT OPC-DA Server
CMS-SW	DMT WindSafe®

### System requirements

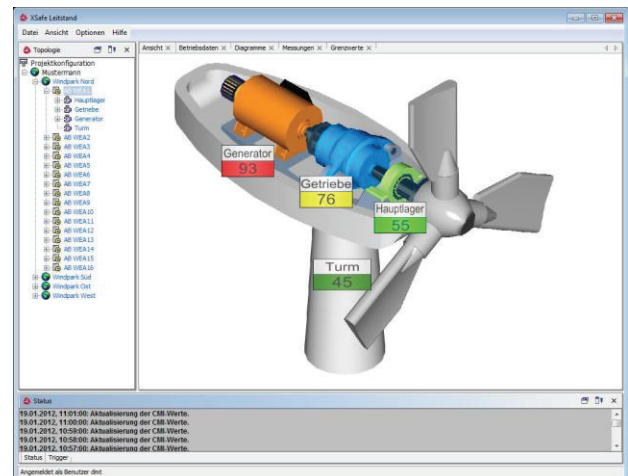
- 100 MB RAM per sensor (equivalent to data memory of up to 30 seconds)
- Processor comparable to 1.9 GHz DualCore
- 500 MB hard disk space for installation, at least 10 GB for database (equivalent to data from the last 100 days)
- Windows XP or Windows 7
- TwinCAT 2.11 with one free PLC runtime
- Java 1.6 runtime environment
- MySQL 5.1 with activated remote access
- Internet Information Server (IIS)
- Provision of operational data (power, rotation speed) via OPC
- Administrator rights for installation and configuration (firewall exceptions, IIS-setup, DMT-installations)



Separate realtime environments allow for the simultaneous execution of WindSafe® and plant control software

### DMT range of services

- Engineering
- Installation and application development
- Supervision of wind energy plants and wind parks at scalable service levels
- Signal analysis trainings
- Condition monitoring trainings
- Archival storage of machine data and recorded time signal data



Control center of WindSafe®: All key figures of the plant status at a glance

**DMT GmbH & Co. KG**  
Industry Systems

Am Technologiepark 1  
45307 Essen, Germany

Phone +49 201 172-1666  
Fax +49 201 172-1515  
is@dm.de  
www.dmt.de

Member of TÜV NORD Group

