

CANopen SAFETY

## Solutions for speed monitoring

TWK (Germany) has expanded its portfolio with regard to sensors for measuring position and speed. This includes different measuring systems for different types of assembly and measurement requirements. A range of interfaces is available including CANopen safety.



(Source: TWK)

Too slow, too fast, or just right? What is the speed? There are many applications where not only the position - for example a set angle - must be transmitted exactly to the controller, but also the adjustment speed - in other words, the speed of rotation as a measure of the speed. Perhaps, in the context of speed monitoring, the speed of rotation is even more important than the corresponding, momentary position. TWK explained: In addition to the property 'exact', i.e. with high accuracy, the property 'safe', i.e. reliable, is also a prerequisite for sensors in a well-designed, safely operating machine.

The company has now expanded its portfolio with regard to sensors for measuring position and speed. This includes different measuring systems for different types of assembly and measurement requirements. These measuring systems include a design of the hardware and sophisticated software in order to fulfil the criteria of functional safety according to the standards ISO 13849 as well as IEC 61508, with level PLd or SIL2, in addition to position and speed detection. Suitable for speed monitoring in critical applications. A range of interfaces is available including CANopen safety.

Typical applications are gantry cranes where the travel speed must be recorded. Often on both driven sides, so that it travels evenly. The same applies to crane bridges that travel on permanently installed rails. In addition, the trolley and the load hook must operate at a defined speed in order to reach the targeted positions. Another example is the rotors of wind turbines, which are speed-monitored. Especially with large rotors, care must be taken that they do not rotate too fast so that the rotor blades do not suffer damage. Safe speed monitoring with "overspeed shutdown" is required, explained the company.

For these and other applications, TWK has developed encoders, electronic cam switches, and rotor hub sensors in its product range - adapted to the customer's installation requirements, they said.

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