

ELECTRONIC CAM CONTROLLER

For use in wind industry

TWK's Noce electronic cam switches were extended by the SIL 2 and PL d certified variant. Various flange, shaft, and interface versions (e.g. CANopen Safety) are possible.



*The electronic cam controller
Noce79/S3 is SIL 2 and PL d certified
(Source: TWK)*

For decades, TWK provided products tailored to the wind industry requirements. Vibration and rotor hub sensors are joined by electronic cam switches that detect even small rotational movements without backlash. The Noce series was extended by the 79-mm variant with the built-in safety switching contacts, the complete sensor system, and signal processing certified according to SIL 2 / PL d (safety integrity level/ performance level). A resolution of the position signal of up to 16 bits is possible. Safe-switching contacts supplement the position signal of the integrated encoder. The contacts consist of positively driven relays with a control contact and an additional standard relay connected in series. This virtually eliminates the probability of a contact not opening in the event of danger. It can be implemented in a safety chain, in which various safety components are integrated, in order to bring the application into the safe state in the event of danger. Numerous internal monitoring functions ensure that the device opens all contacts in the event of a fault and that the safe state is achieved.

A typical application is the azimuth adjustment of the nacelle of wind turbines. When the wind direction changes, the nacelle is aligned accordingly so that the rotor is always exactly in the wind. In unfavorable cases, the wind may turn in such a way that the nacelle is always readjusted in one direction. To prevent the energy cables in the mast from being torn off by twisting, the turbine must be stopped after approximately 2,5 revolutions and set back to "center". This safety task is performed by company's electronic cam switches.

The unit is equipped with a total of four galvanically isolated switching contacts: two safety switching contacts and two normal ones equipped with standard relays with a long-service life. The switching points can be set with teach-in pins in the connector. The teach-in procedure is designed in such a way that accidental changes are excluded and thus the safety criteria are fulfilled. The robust unit made of aluminum or stainless steel with IP67 protection and high EMC resistance meets the required safety standards. Various flange and shaft versions and also the interfaces IO-Link and SSI (synchronic serial interface) are possible. An additional UL certificate will be available shortly.

[of](#)