

Inclinometer measures rotational speed

TWK (Germany) offers the NBN66 inclinometer. It is able to measure the current alignment (i.e. inclination or angular position) as well as the rotating speed of three axes (x, y, z).

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NBN66 inclinometer (Source: TWK)

The NBN66 supports the CANopen Safety profile EN 50325-5 (former CiA 304) and is certified for the SIL 2 (safety integration level). Furthermore, it supports the CiA 410 (v. 1.2) CANopen device profile for inclinometers. The device measures the values by means of Mems-based sensors. It integrates three accelerometers (position measurement) and three gyroscopes (speed measurement) thus building a six-DOF (degree-of-freedom) inertial measurement unit (IMU). After digitalization and linearization, the values are transmitted to the control system via CANopen. Direction of rotation, zero point, and distance to the axis of rotation can be parameterized. A special version detects the distance to the rotary axis automatically. In principle, the function corresponds to an encoder for position and speed measurements. For example, the device allows monitoring of large, slow-turning rotors, in which a control system or slip ring body is already integrated. The inclinometer with an aluminum housing is mounted in the rotating part. One electrical connection is realized using the M12 connector.

The company also manufactures such CANopen-enabled products as rotary encoders, inclinometers, vibration sensors, linear transducers and scanners, switching cam encoders as well as draw-wire sensors.

Similar inclinometer devices are also available from ifm, and other companies (see news and reports links below).

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