

UP TO 14-BIT RESOLUTION

Rotary encoders approved for SIL 2 applications

The CANopen-connectible TBN/TRN-S4 magnetic encoder series by TWK Elektronik (Germany) received the SIL 2 (safety integrity level) certification by TÜV (German Technical Inspection Association).



For example, the rotary encoder TRN58/S4 offers a 14-bit resolution with 16 384 steps per revolution (single-turn mode). The measurement of up to 4 096 revolutions is possible in multi-turn applications. The encoder integrates a 32-bit Cortex micro-controller. It integrates a CANopen interface compliant to CiA 406 version 4.0.2. Additionally, the device supports the CANopen Safety profile EN 50325-5 (former CiA 304) and achieves the SIL 2. The safe position value, as well as the safe speed signal can be generated. The CAN network and the aluminum device housing are galvanically isolated. The CANopen interface is realized using the 5-pin M12 connector. The IP66-protected encoder can be used in a temperature range from -40 °C to +85 °C. An option of encapsulating the entire housing is available to meet the requirements of IP69K applications.

The TRN encoders are available from large and robust versions to miniature versions with various mechanical features. The radial and axial shaft load is ≥ 250 N. Versions with a shock load of up to 500 g are implemented for harsh industrial conditions. In addition to the versions made of seawater-resistant aluminum, the housing can be supplied in a stainless-steel version e.g. for off-shore applications or to fulfill requirements of the food industry.

For over 50 years, TWK develops and manufactures sensors with focus on functional safety for applications in sensitive and hazardous areas.

The TRN58 encoder comes with a CANopen interface compliant to CiA 406 version 4.0.2 (Source: TWK Elektronik)

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