Precise acquisition of rotation angle of large hollow shafts

C_H1102 absolute rotary encoder with "all" interfaces

When transferring high torques or for shafts that contain lines and media hoses, large shaft diameters are required. Decoupling of the movement is not always possible for a rotary encoder with a traditional coupling using a second shaft end. In this case the rotary encoder must be large enough to take the drive shaft. The C_H1102 absolute multiturn encoders take shafts up to 50 mm in diameter, making them an excellent choice for these tasks in heavy machinery construction, machine tool manufacturing and wireless technology. With a resolution per revolution of 15 or 18 bits and 256000 absolute scanned revolutions, C_H1102 encoders offer high precision combined with a large measuring range.

The output value can be converted using fractional scaling factors. Thus a smooth measuring range transition is also achieved with rotary axes, without a rounding error developing.

If the rotary encoder is mounted so that it is seated on the shaft, it is very tolerant with regard to eccentricity of the shaft, which can occur with large, powerful drives. The bearings of the encoder carry only the encoder's own weight. Uneven running of the shaft thus has little influence on the service life of the rotary encoder. A groove/pin connection or a spring steel torque support secures the encoder against rotation.

The modular design of the latest series of rotary encoders from TR-Electronic means that the C_H1102 can be equipped with all the interfaces available for the smaller TR 582 and 802 series. The spectrum extends from IO-Link and classic field buses through to the widely used Industrial Ethernet PROFINET, EtherCAT, Ethernet/IP and also includes interfaces like INTERBUS and DRIVECLiQ.

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C_H1102 – Rotary encoders with big hollow shafts and nearly all interfaces used in automation industry.