

Large hollow shaft encoders with Industrial Ethernet

The C_H802 series from TR-Electronic.

Directly assembling shaft encoders with a continuous hollow shaft is a very effective method of reliably detecting the absolute angular position of drive shafts across many revolutions. No special shaft ends on motors, no clutches. High torque drive trains require shafts with a correspondingly large diameter. The absolute multi-turn shaft encoders C_H802 provide precise position information for shafts up to a diameter of 27 mm.

The C_H802 is part of the latest, internally modularly mounted shaft encoder series from TR-Electronic. The hollow shaft mechanism uses the latest interface technology of the standard industry sizes. Users will benefit from the latest features enabled by modern Industrial Ethernet interfaces. The latest bus protocols provide the higher-level control system with position and velocity information in real time. The actual shaft encoder value is updated (depending on the interface) after a maximum of 100 µs. A fast control system enables a correspondingly quick position control. The output is scalable: Fractional gearbox parameters can (numerator/denominator) represent almost any gearbox factor, even exactly detecting closed rotary axes. The C_H802 fully meets the respective user organization parameterization standards. Currently, PROFINET, Ethernet/IP and EtherCAT have been implemented. You will be immediately at home in your familiar programming and system configuring software when accessing standard parameters. The free configuration of the C_H802 also provides access to additional TR-specific functions and parameters. The shaft or drive speed can be determined in the encoder and output as a value. The time base for determining the speed can be freely set between one millisecond and one second.

C_H802 only uses state-of-the-art chip families. These support the latest communication standards for Industry 4.0. Therefore, each installed C_H802 contributes to better knowing the overall condition of a machine or plant.

Hollow shaft encoders are supported by the shaft they sit on. Only a pin connection or a flexible torque restraining system connects them with the static part of the system. This enables greater degrees of freedom – as the encoder can “move with” non-circular shafts and the loads on the internal encoder bearings are reduced. In principle, hollow shaft encoders are therefore also suitable for more robust applications. The C_H802 of TR-Electronic extends the availability of the state-of-the-art Industrial Ethernet variants PROFINET, Ethernet/IP and EtherCAT to these outstanding applications. Naturally, traditional field buses such as PROFIBUS, CANopen and Interbus-S are also available.

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Absolute rotary encoder with hollow through shaft up to 27 mm and Industrial Ethernet made by TR-Electronic.