

## Datahighway Industry 4.0 at low price

### Robust magnetic encoder CM\_582 with PROFINET

Everything the application needs – no more and no less.

13 bit resolution within one revolution (singleturn), 12 bit revolutions (multiturn), optionally 16 bit. Output up to 256000 revolutions.

A comprehensive range of shaft and flange combinations is available for standard and special installation situations.

Suitable for quick position control with less than 1ms encoder actual value updating for the bus output.

Fractional gearbox parameters (numerator/denominator) for almost any reproduction of gearbox factors. Also for exact detection of closed rotary axes.

TR absolute rotary encoders fulfill the standards of the respective user organizations for parameterization. Users can thus navigate the standard parameters without difficulty. The free configuration also offers easy access to all functions which are available in addition to the standard functions.

The time base for the speed evaluation can be freely set within a range of one millisecond to one second and can also be scaled in any units.

The new C\_\_582 generation of industrial standard rotary encoders is rigorously equipped with state-of-the-art chip families.

The PROFINET variant therefore uses cutting-edge technology with long-term availability and is absolutely compliant with the latest standards of the PI User Organization. Real-time synchronization (IRT) enables precisely synchronized positioning of several axes.

Preset values will also be transmitted via the real-time capable process image area for Profinet in future. This means that absolute adjustments (also called "preset" or "offset adjustment") can be performed synchronously with the control cycle even while the system is in operation. No more axis stops necessary.

At 50 ms, the new CM\_582 Profinet starts faster than any other bus rotary encoder. Once configured a stable, valid absolute position value is available in the PROFINET control just a few instants after restoration of supply. System startup is greatly accelerated and modular machine concepts in particular (with periodically decoupled modules) benefit directly from this technology.

The PROFINET interface of the CM\_582 supports the innovative Media Redundancy Protocol MRP. Normally PROFINET only supports a linear/tree structure. A redundant connection is not primarily provided as standard. MRP significantly increases availability with one simple device! Branches are connected to a ring with an additional line from the last node to the next switch. The appropriately configured nodes detect this. One of the nodes now disconnects this ring, by "ignoring" the second connection. If a connection fails (due to cable breakage or failure of a node), the nodes detect this and attempt to find another way to the rest of the system. The previously opened connection is now closed and all nodes are reconnected to the network.

Decision between fast startup and media redundancy protocol is taken by

the user at setup.

Mechanical variations are also increased with the C\_\_582. Blind shaft encoders can now take shafts with a diameter of up to 15mm (15H7). The available mounting flanges with different torque supports or driving pins are suitable for almost any installation situation. The new generation of absolute rotary encoders also offers the usual variety in the shaft mounting design.

Small but beautiful: We have been asked to enable a potential equalization outside signal or supply lines, especially for applications with electromagnetic interference. The PE connection point in the form of an M4 thread is a pragmatic connection solution, even for PE conductors with larger cross-sections.

The status of the network communication and the encoder electronics are displayed directly on the device for a local device analysis.

Alarms and pre-failure messages for speed, position and temperature are available for preventive maintenance in the automation network.

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*TR-Electronic - Sacklochwellengeber mit radialem Anschlussfeld.jpg*

Absolute rotary encoder made by TR-Electronic with radial connectors and blind shaft.



*TR-Electronic Drehgeber Vollwelle Anschlussfeld axial.jpg*

Absolute rotary encoder made by TR-Electronic with axial connectors and solid shaft.