

Analog with remote teach-in

Absolute rotary encoder with analog interface

TR-Electronic offers a multifunctional analog interface in the latest encoder series. The 16-bit D / A converter processes the multiturn position signal and thus supplies an output signal proportional to the angle of rotation. The speed signal can also be used, with which a speed feedback can be implemented e.g. for a controller.

The position signal is scaled by setting the start and end point fitting to the mechanics - this means that the maximum bandwidth of the analog signal is always used for the desired mechanical movement range. Up to now, such a teach-in has taken place with a button on the device. During normal operation, the button is protected by a screw connection. However, it is not always possible to reach the encoder during commissioning in such a way that the teach-in can be carried out directly on the device.

In such cases, encoders with an analog interface are now also available with remote teach-in. Two additional digital inputs can be configured as teach-in signals for the start and end of the measuring range. The expanded pin assignment and a suitable eight-core cable enable additional, efficient options for commissioning and adaptation to changed machine configurations.

The signal output is either a voltage (0... 10V, -10... 10V) or a forced current (0... 20mA, 4... 20mA). The current interface with a minimum current of 4 mA ("live zero") offers the highest level of reliability - a voltage drop is compensated and an interruption in the line is reliably detected.

Like most interfaces, the analog interface with teach-in function is available in all mechanical versions of the current generation of encoders: size 58 with solid shaft, blind and hollow shaft up to 15 mm, in size 80 with through hollow shaft up to 27 mm, in size 110 with through hollow shaft up to 50 mm.

The analog interface is still widespread even in the age of Industrial Ethernet. On the control side, it offers a very inexpensive alternative to easily receive a position or speed-proportional feedback. The analog interface is thus asserting itself in the age of Industrial Ethernet, IO-Link and Industry 4.0 and is used in new systems and devices.

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Our products: <https://www.tr-electronic.com/s/S022876>

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Rotary encoder in sizes 58 to 110 mm by TR-Electronic.