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Analog / combined encoders: The signals of the measuring system are monitored on hardware and software level with regard to their amplitudes and signal shapes. If a signal (e.g., sin or cos) leaves the allowed range or if the signals are disturbed in such a way that a position error occurs, this error is generated.

Digital encoders: In the case of digital measuring systems, the received encoder protocol is monitored according to the manufacturer's encoder specification:

- Encoder error messages are cyclically evaluated
- Telegram CRC checksums are monitored according to specification
- Telegram failures are detected



The error can be cleared in CM (configuration mode) or upon successful reinitialization.



Since the position is no longer generated correctly when this error is detected, the encoder has to be reinitialized.



When using an incremental encoder with square-wave signals, monitoring is carried out with regard to an inadmissible edge.
On the software level, the signals of a resolver are monitored for their levels.

Cause

Remedy

Defective encoder cable or cable shielding

Check cable to measuring system and replace it, if necessary

Electromagnetic noise caused by power cable

Check and, if necessary, correct shielding of power cable

Defective encoder

Check measuring system and replace it, if necessary

Faulty mounting of measuring head in the case of linear measuring systems

Check mounting of measuring head and correct it, if necessary

Cause	Remedy
<p>During motor operation with the measuring system ACURO®link: A fault was detected in the transmission telegram of the encoder; telegram failed twice</p>	<p>Faults such as an electrostatic discharge to the shaft of the motor may lead to failure of the encoder sending telegram. Make sure that faults do not occur</p>
<p>Measuring system dirty</p>	<p>Clean or replace measuring system</p>
<p>Hardware defect on control section of drive</p>	<p>Replace control section or entire drive controller</p>
<p>Only for ACUROlink encoder of the 1st generation (0x2AE2:08 / S-0-1300.20.8 / S-0-3536="Cxx"), connected using a hybrid cable REH0804 ("single cable solution") to one of the following ctrlX DRIVE device types: XMS*-W0006...0036; XMD*-W2323; XCD*-2323 Encoder signal interferences occur in the previously mentioned constellation.</p>	<p>Mount a ferrite sleeve (snap-on ferrite) to the encoder cable of the hybrid cable: ferrite sleeve "manufacturer parts number 74272733" of Adolf Würth GmbH & Co. KG (can also be ordered with Bosch Rexroth using the material number R913082363). Please note that only a hybrid cable length of ≤10 meters is permitted for an interference suppression using so-called ferrite sleeves.</p>
<p>Only for ACUROlink encoder of the 2nd generation (0x2AE2:08 / S-0-1300.20.8 / S-0-3536="Cxx"), connected using a hybrid cable REH0804 ("single cable solution") to one of the following ctrlX DRIVE device types: XMS*-W0006...0036; XMD*-W2323; XCD*-2323 Encoder signal interferences occur in the previously mentioned constellation as the hybrid cable length exceeds 25 meters.</p>	<p>Ensure that the hybrid cable length does not exceed 25 meters.</p>

► **Attributes**

Detailed diagnostics

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