

## Table of contents

- F2042 Encoder 2: Encoder signals incorrect

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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

Measuring system dirty

Replace measuring system

Hardware defect on control section of drive controller

Replace control section or entire drive controller

► Attributes