

Abstract

Device for identifying the direction of rotation and testing plausibility in absolute angular position encoders, especially with serial transmission of detected actual position values

A first value (V), which corresponds to the angular units covered during two actual position values successively transmitted via the data transmission link at the maximum rotational speed of the encoder shaft (W), and a second value (D) which corresponds to the difference between the maximum travel of the angular position encoder (MAX) and the first value (V), are stored in a store. A processing unit determines the direction of rotation of the shaft (W) depending on whether two actual position values (X11, X12; X21, X22; X31, X32) lie in the range between the zero point (NP) of the angular position encoder and an actual position value (L2) corresponding to the magnitude of the first stored value (V), or in the range between an actual position value (L1) corresponding to the magnitude of the second stored value (D) and the maximum travel (MAX), or outside these ranges. The invention has the advantage that, in spite of the possible occurrence of unexpected or fault-induced large changes in magnitude in the detected actual angular position values, the direction of rotation of the shaft of the angular position encoder can be ascertained correctly in each case.

FIG 1