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NC reaction on error

.NC reaction on error

.General information

To avoid damage to the machine, some applications require that the master (e.g. NC) retains control of the travel profile of the axes in the case of error, too, and decelerates the machine axes in a coordinated way. For this case, the "NC reaction on error" option was implemented which can be activated via P-0-0117.

With NC reaction on error, the drive initially continues to follow the externally specified command values even in the case of an error and does not immediately perform the best possible deceleration. After the set NC reaction time has elapsed, the drive then performs the best possible deceleration, depending on the error class, and no longer follows the external command values.

The master is informed of an error in the drive controller via the drive status word (see S-0-0135) so that the master can decelerate the machine axes in a coordinated way and therefore avoid possible damage.

NC reaction on error is not possible for F8xxx!

.Relevance for the user

Relevant for axes that cannot be decelerated individually, such as Gantry drives.

.Application-related information for project planning

During project planning, it has to be ensured that the NC reaction time is sufficiently low to promptly trigger the error reaction in the axis group in the case of communication failure apart from the error detection.

.Commissioning

The following dialog is available for parameterizing the NC reaction on error in ctrlX DRIVE Engineering:

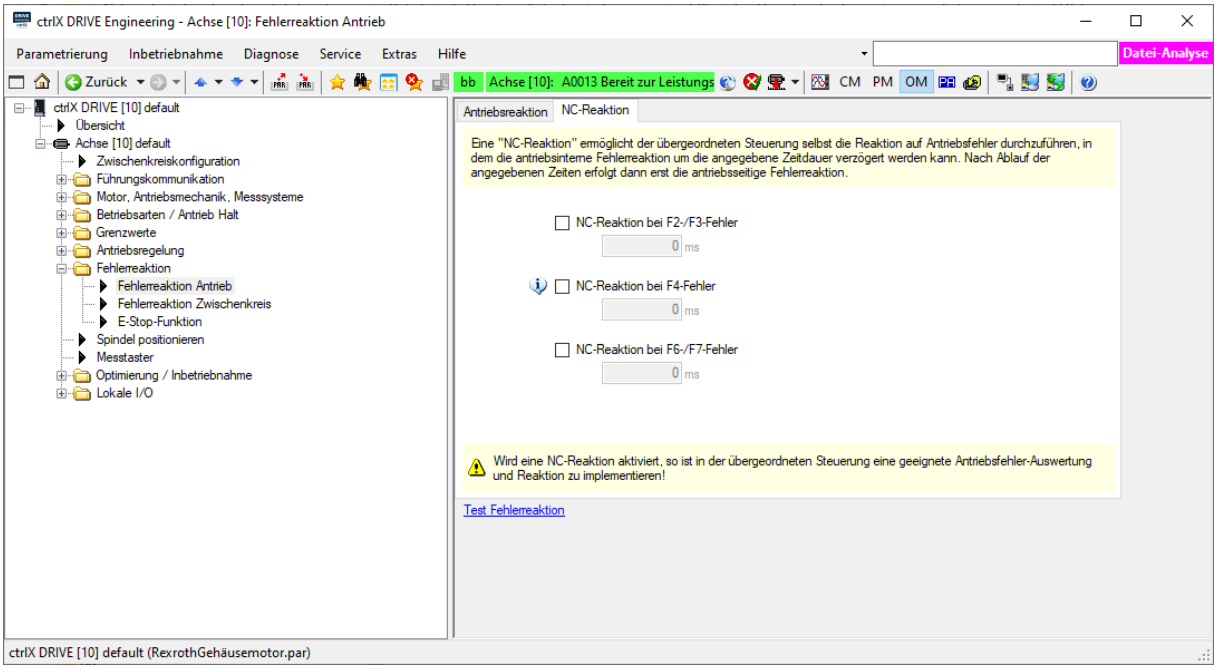

Fig. 337: Parameterizing the NC reaction on error

For further information about the commissioning process "How-to", "All about ctrlX AUTOMATION - FAQs, Examples, Technotes and How-tos" please follow this link:

https://www.ctrlx-automation.com/community

.Additional information and details

.Activating the NC reaction

The NC reaction on error is activated in parameter "P-0-0117, Activation of NC reaction on error".

The activation of "NC reaction on error" only makes sense for masters that have the respective procedure for the case of error.

In the case of NC reaction on error, the axis reporting the error still is provided with the command values preset by the master and follows them, even in the case of error, for a time that can be set in P-0-0117.0.1/P-0-0117.0.2. To achieve this, the function has to be activated so that the defined time delay becomes effective between the detection of the error and the drive-side reaction.

If the error message is deleted within this waiting time after detection of the error, the drive reaction set in P-0-0119 is **not** executed.

.Parameters involved

- S-0-0135, Drive status
- P-0-0117, Activation of NC reaction on error
- P-0-0119, Best possible deceleration
- P-0-0117.0.1, NC reaction time F2/F3
- P-0-0117.0.2, NC reaction time F4/F6/F7