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■ F2028 Excessive deviation

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If the position control loop is closed, the drive monitors whether or not it can follow the preset position command value. For this purpose, a model position feedback value is calculated in the drive and compared to the actual position feedback value. If the difference between the calculated and actual position feedback value exceeds the value parameterized in "Position controller, monitor: Following error window" (0x6065:00 / S-0-0159 / --), the drive apparently cannot follow the preset command value and the error **F2028** is generated.



The monitoring function as to whether or not the drive can follow the preset position command value is switched off by parameterizing "Position controller, monitor: Following error window" (0x6065:00 / S-0-0159 / --) with "0".



The maximum deviation between the calculated and the real actual position value can be read in "Position controller, monitor: Max. model deviation" (0x220B:02 / P-0-0098 / --).

Cause	Remedy
Parameterized monitoring window is too small	Check and, if necessary, correct "Position controller, monitor: Following error window" (0x6065:00 / S-0-0159 / --)
Command acceleration too high due to incorrect command value input by control unit	Reduce acceleration input of control unit (see control unit manual)
Parameterized bipolar torque/force limit value too small	Check "Torque/force limitation: Limit value, bipolar" (0x230C:03 / S-0-0092 / --) and set it to maximum value allowed for the application
Axis is blocked or sluggish	Check mechanics and remove sluggishness

Cause	Remedy
Faulty or non-optimized control loop parameters	Check control loop setting, e.g.: ■ "Position controller: Proportional gain" (0x220A:01 / S-0-0104 / --) ■ "Velocity controller: Proportional gain" (0x2220:01 / S-0-0100 / --) ■ "Axis configuration: Word" (0x2200:01 / P-0-0556 / --)
Drive acceleration capacity was exceeded	Check drive sizing

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