TwinCAT NC Error Codes

Axis Errors

Error (Hex)	Error (Dec)	Error type	Description	
4300	**17152**	parameter	**"Axis ID not allowed"** The value for the axis ID is not allowed, e.g. because it has already been assigned, is less than or equal to zero, is greater than 255, or does not exist in the current configuration.	
			Value range: [1 ... 255]	Unit: 1
4301	**17153**	parameter	**"Axis type not allowed"** The value for the axis type is unacceptable because it is not defined. Type 1: Servo Type 2: High/low speed Type 3: Stepper motor	
			Value range: [1 ... 3]	Unit: 1
4306	**17158**	parameter	**"Slow manual velocity not allowed"** The value for the slow manual velocity is not allowed.	
			Value range: [0.0, 10000.0]	Unit: e.g. m/min
4307	**17159**	parameter	**"Fast manual velocity not allowed"** The value for the fast manual velocity is not allowed.	
			Value range: [0.0, 10000.0]	Unit: e.g. m/min
4308	**17160**	parameter	**"High speed not allowed"** The value for the high speed is not allowed.	
			Value range: [0.0, 10000.0]	Unit: e.g. m/min
4309	**17161**	parameter	**"Acceleration not allowed"** The value for the axis acceleration is not allowed.	
			Value range: [0.0, 1000000.0]	Unit: e.g. m/s/s
430A	**17162**	parameter	**"Deceleration not allowed"** The value for the axis deceleration is not allowed.	
			Value range: [0.0, 1000000.0]	Unit: e.g. m/s/s
430B	**17163**	parameter	**"Jerk not allowed"** The value for the axis jerk is not allowed.	
			Value range: [0.0, 1000000.0]	Unit: e.g. m/s/s
430C	**17164**	parameter	**"Delay time between position and velocity is not allowed"** The value for the delay time between position and velocity ("idle time compensation") is not allowed.	
			Value range: [0, 0.1]	Unit: s
430D	**17165**	parameter	**„Override-Type not allowed"** The value for the velocity override type is not allowed. Type 1: With respect to the internal reduced velocity (default value) Type 2: With respect to the original external start velocity	
			Value range: [1 ... 4]	Unit: 1
430E	**17166**	parameter	**"NCI: Velo-Jump-Factor not allowed"** The value for the velo-jump-factor ("VeloJumpFactor") ist not allowed.	
			Wertebereich: [0, 1000000]	Einheit: 1
430F	**17167**	parameter	**"NCI: Radius of tolerance sphere for the auxiliary axes is invalid"** It was tried to enter an invalid value for the size of the tolerance sphere. This sphere affects only auxiliary axes!	
			Value range: [0, 1000]	Unit: e.g. mm
4310	**17168**	parameter	**"NCI: Value for maximum deviation for the auxiliary axes is invalid"** It was tried to enter an invalid value for the maximum allowed deviation. This parameter affects only auxiliary axes!	
			Value range: [0, 10000]	Unit: e.g. mm

4312	**17170**	parameter	**"Referencing velocity in direction of cam not allowed"** The value for the referencing velocity in the direction of the referencing cam is not allowed.	
			Value range: [0.0, 10000.0]	Unit: e.g. m/min
4313	**17171**	parameter	**"Referencing velocity in sync direction not allowed"** The value for the referencing velocity in the direction of the sync pulse (zero track) is not allowed.	
			Value range: [0.0, 10000.0]	Unit: e.g. m/min
4314	**17172**	parameter	**"Pulse width in positive direction not allowed"** The value for the pulse width in the positive direction is not allowed (pulsed operation). The use of the pulse width for positioning is chosen implicitly through the axis start type. Pulsed operation corresponds to positioning with a relative displacement that corresponds precisely to the pulse width.	
			Value range: [0.0, 1000000.0]	Unit: e.g. mm
4315	**17173**	parameter	**"Pulse width in negative direction not allowed"** The value for the pulse width in the negative direction is not allowed (pulsed operation). The use of the pulse width for positioning is chosen implicitly through the axis start type. Pulsed operation corresponds to positioning with a relative displacement that corresponds precisely to the pulse width.	
			Value range: [0.0, 1000000.0]	Unit: e.g. mm
4316	**17174**	parameter	**"Pulse time in positive direction not allowed"** The value for the pulse width in the positive direction is not allowed (pulsed operation).	
			Value range: [0.0, 600.0]	Unit: s
4317	**17175**	parameter	**"Pulse time in negative direction not allowed"** The value for the pulse width in the negative direction is not allowed (pulsed operation).	
			Value range: [0.0, 600.0]	Unit: s
4318	**17176**	parameter	**"Creep distance in positive direction not allowed"** The value for the creep distance in the positive direction is not allowed.	
			Value range: [0.0, 100000.0]	Unit: e.g. mm
4319	**17177**	parameter	**"Creep distance in negative direction not allowed"** The value for the creep distance in the negative direction is not allowed.	
			Value range: [0.0, 100000.0]	Unit: e.g. mm
431A	**17178**	parameter	**"Braking distance in positive direction not allowed"** The value for the braking distance in the positive direction is not allowed.	
			Value range: [0.0, 100000.0]	Unit: e.g. mm
431B	**17179**	parameter	**"Braking distance in negative direction not allowed"** The value for the braking distance in the negative direction is not allowed.	
			Value range: [0.0, 100000.0]	Unit: e.g. mm
431C	**17180**	parameter	**"Braking time in positive direction not allowed"** The value for the braking time in the positive direction is not allowed.	
			Value range: [0.0, 60.0]	Unit: s
431D	**17181**	parameter	**"Braking time in negative direction not allowed"** The value for the braking time in the negative direction is not allowed.	
			Value range: [0.0, 60.0]	Unit: s
431E	**17182**	parameter	**"Switching time from high to low speed not allowed"** The value for the time to switch from high to low speed is not allowed.	
			Value range: [0.0, 60.0]	Unit: s
431F	**17183**	parameter	**"Creep distance for stop not allowed"** The value for the creep distance for an explicit stop is not allowed.	
			Value range: [0.0, 100000.0]	Unit: e.g. mm

4320	**17184**	parameter	**"Motion monitoring not allowed"** The value for the activation of the motion monitoring is not allowed.	
			Value range: [0, 1]	Unit: 1
4321	**17185**	parameter	**"Position window monitoring not allowed"** The value for the activation of the position window monitoring is not allowed.	
			Value range: [0, 1]	Unit: 1
4322	**17186**	parameter	**"Target window monitoring not allowed"** The value for the activation of target window monitoring is not allowed.	
			Value range: [0, 1]	Unit: 1
4323	**17187**	parameter	**"Loop not allowed"** The value for the activation of loop movement is not allowed.	
			Value range: [0, 1]	Unit: 1
4324	**17188**	parameter	**"Motion monitoring time not allowed"** The value for the motion monitoring time is not allowed.	
			Value range: [0.0, 600.0]	Unit: s
4325	**17189**	parameter	**"Target window range not allowed"** The value for the target window is not allowed.	
			Value range: [0.0, 10000.0]	Unit: e.g. mm
4326	**17190**	parameter	**"Position window range not allowed"** The value for the position window is not allowed.	
			Value range: [0.0, 10000.0]	Unit: e.g. mm
4327	**17191**	parameter	**"Position window monitoring time not allowed"** The value for the position window monitoring time is not allowed.	
			Value range: [0.0, 600.0]	Unit: s
4328	**17192**	parameter	**"Loop movement not allowed"** The value for the loop movement is not allowed.	
			Value range: [0.0, 10000.0]	Unit: e.g. mm
4329	**17193**	parameter	**"Axis cycle time not allowed"** The value for the axis cycle time is not allowed.	
			Value range: [0.001, 0.1]	Unit: s
432A	**17194**	parameter	**"Stepper motor operating mode not allowed"** The value for the stepper motor operating mode is not allowed.	
			Value range: [1, 2]	Unit: 1
432B	**17195**	parameter	**"Displacement per stepper motor step not allowed"** The value for the displacement associated with one step of the stepper motor is not allowed (step scaling). Value range: [0.000001, 1000.0] Unit: e.g. mm/STEP	
			Value range: [0.000001, 1000.0]	Unit: e.g. mm/STEP
432C	**17196**	parameter	**"Minimum speed for stepper motor set value profile not allowed"** The value for the minimum speed of the stepper motor speed profile is not allowed.	
			Value range: [0.0, 1000.0]	Unit: e.g. m/min
432D	**17197**	parameter	**"Stepper motor stages for one speed stage not allowed"** The value for the number of steps for each speed stage in the set value generation is not allowed.	
			Value range: [0, 100]	Unit: 1
432E	**17198**	parameter	**"DWORD for the interpretation of the axis units not allowed"** The value that contains the flags for the interpretation of the position and velocity units is not allowed.	
			Value range: [0, 0xFFFFFFFF]	Unit: 1

432F	**17199**	parameter	**"Maximum velocity not allowed"** The value for the maximum permitted velocity is not allowed.	
			Value range: [0.0, 10000.0]	Unit: e.g. m/min
4330	**17200**	parameter	**"Motion monitoring window not allowed"** The value for the motion monitoring window is not allowed. V	
			Value range: [0.0, 10000.0]	Unit: e.g. mm
4331	**17201**	parameter	**"PEH time monitoring not allowed"** The value for the activation of the PEH time monitoring is not allowed (PEH: positioning end and halt).	
			Value range: [0, 1]	Unit: 1
4332	**17202**	parameter	**"PEH monitoring time not allowed"** The value for the PEH monitoring time (timeout) is not allowed (PEH: positioning end and halt). Default value: 5 s	
			Value range: [0.0, 600.0]	Unit: s
4333	**17203**	parameter	**"AXISERR_RANGE_DELAYBREAKRELEASE"**	
4334	**17204**	parameter	**„AXISERR_RANGE_DATAPERSISTENCE”**	
433A	**17210**	parameter	**„AXISERR_RANGE_POSDIFF_FADING_ACCELERATION”**	
433B	**17211**	parameter	**"'Fast Axis Stop Signal Type not allowed"** The value for the Signal Type of the 'Fast Axis Stop' is not allowed [0...5].	
4340	**17216**	initialization	**"Axis initialisation"** Axis has not been initialised. Although the axis has been created, the rest of the initialisation has not been performed (1. Initialisation of axis I/O, 2. Initialisation of axis, 3. Reset axis).	
4341	**17217**	address	**"Group address"** Axis does not have a group, or the group address has not been initialised (group contains the set value generation).	
4342	**17218**	address	**"Encoder address"** The axis does not have an encoder, or the encoder address has not been initialised.	
4343	**17219**	address	**"Controller address"** The axis does not have a controller, or the controller address has not been initialised.	
4344	**17220**	address	**"Drive address"** The axis does not have a drive, or the drive address has not been initialised.	
4345	**17221**	address	**"Axis interface PLC to NC address"** Axis does not have an axis interface from the PLC to the NC, or the axis interface address has not been initialised.	
4346	**17222**	address	**"Axis interface NC to PLC address"** Axis does not have an axis interface from the NC to the PLC, or the axis interface address has not been initialised.	
4347	**17223**	address	**"Size of axis interface NC to PLC is not allowed" (INTERNAL ERROR)** The size of the axis interface from NC to PLC is not allowed.	
4348	**17224**	address	**"Size of axis interface PLC to NC is not allowed" (INTERNAL ERROR)** The size of the axis interface from PLC to NC is not allowed.	
4356	**17238**	monitoring	**"Controller enable"** Controller enable for the axis is not present (see axis interface SPS®NC). This enable is required, for instance, for an axis positioning task.	
4357	**17239**	monitoring	**"Feed enable minus"** Feed enable for movement in the negative direction is not present (see axis interface SPS®NC). This enable is required, for instance, for an axis positioning task in the negative direction.	
4358	**17240**	monitoring	**"Feed enable plus"** Feed enable for movement in the positive direction is not present (see axis interface SPS®NC). This enable is required, for instance, for an axis positioning task in the positive direction.	
4359	**17241**	monitoring	**"Set velocity not allowed"** The set velocity requested for a positioning task is not allowed. This can happen if the velocity is less than or equal to zero, larger than the maximum permitted axis velocity, or, in the case of servo-drives, is larger than the reference velocity of the axis (see axis and drive parameters).	

435A	**17242**	monitoring	**"Movement smaller than one encoder increment" (INTERNAL ERROR)** The movement required of an axis is, in relation to a positioning task, smaller than one encoder increment (see scaling factor). This information is, however, handled internally in such a way that the positioning is considered to have been completed without an error message being returned.
435B	**17243**	monitoring	**"Set acceleration monitoring" (INTERNAL ERROR)** The set acceleration has exceeded the maximum permitted acceleration or deceleration parameters of the axis.
435C	**17244**	monitoring	**"PEH time monitoring"** The PEH time monitoring has detected that, after the PEH monitoring time that follows a positioning has elapsed, the target position window has not been reached. The following points must be checked: Is the PEH monitoring time, in the sense of timeout monitoring, set to a sufficiently large value (e.g. 1-5s)? The PEH monitoring time must be chosen to be significantly larger than the target position monitoring time. Have the criteria for the target position monitoring (range window and time) been set too strictly? **Remark:** The PEH time monitoring only functions when target position monitoring is active!
435D	**17245**	monitoring	"**Encoder existence monitoring** / **movement monitoring**" During the active positioning the actual encoder value has changed continuously for a default check time from NC cycle to NC cycle less than the default minimum movement limit. => Check, whether axis is mechanically blocked, or the encoder system failed, etc.. **Remark:** The check is not performed while the axis is logically standing (position control), but only at active positioning (it would make no sense if there is a mechanical holding brake at the standstill)!
435E	**17246**	monitoring	**„Looping distance less than breaking distance”** The absolute value of the looping distance is less or equal than the positive or negative breaking distance. This is not allowed.
4361	**17249**	monitoring	**„Time range exceeded (future)”** The calculated position lies too far in the future (e.g. when converting a position value in a DC time stamp).
4362	**17250**	monitoring	**„Time range exceeded (past)”** The calculated position lies too far in the past (e.g. when converting a position value in a DC time stamp).
4363	**17251**	monitoring	**„Position cannot be determined”** The requested position cannot be determined. Case 1: It was not passed through in the past. Case 2: It cannot be reached in future. A reason can be a zero velocity value or an acceleration that causes a turn back.
43A0	**17312**	internal	**"Axis consequential error"** Consequential error resulting from another causative error related to another axis. Axis consequential errors can occur in relation to master/slave couplings or with multiple axis interpolating DXD groups.