



EtherCAT Error Codes Legacy

Application Note AN151

The Triamec drive generates errors, warnings and messages, which are propagated to the user through the *TwinCAT* Event mechanism. This application note describes legacy error codes for *EtherCAT* drives and suggests solutions.

This reference is valid for *ESI* files up to `Triamec1.8.xml`. Refer to AN102 for *ESI* file version `TriamecMinFw4.16.xml` and newer.

Table of Contents

1	Triamec EtherCAT Legacy Errors.....	2	Revision History.....	7
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Document AN151_TwinCAT-EtherCAT-Errors_Legacy_EP
Version 010, 2023-03-06
Source Q:\doc\ApplicationNotes\
Destination T:\doc\ApplicationNotes
Owner mx

www.triamec.com

1 Triamec EtherCAT Legacy Errors

The messages of SourceId 750 are related to legacy EtherCAT errors.

0001	Message	Position error limit (axis %1)
	Description	The position error limit of the position controller is exceeded.
	Solution	Ensure that the entire travel path of the axis is clear. Consider relaxing the limit or optimizing the controller.
	Details	Class:Alarm
0004	Message	id or iq error limit (axis %1)
	Description	The actual current exceeded a limit parameter.
	Solution	Reduce the currents or the accelerations.
	Details	Class:Alarm
0005	Message	Encoder Subresolution Error (Axis %1)
	Description	The sub-resolution of the encoder is ambiguous. Possible cause: faulty wiring.
	Solution	Check if the analog encoder signals A/B wiring is correct. See also AN107.
	Details	Class:Alarm
0006	Message	Enable no motor axis (axis %1)
	Description	Enabling of an Axis with no motor configuration is not possible.
	Solution	Set the motor parameters correctly and a valid motor type.
	Details	Class:Alarm
0007	Message	Analog encoder amplitude too low (axis %1)
	Description	Encoder works not as expected. (no or too low signal from encoder)
	Solution	Adjust the alignment of the encoder head to the scale according to the instructions of the manufacturer. Clean the scale.
	Details	Class:Alarm
0008	Message	Encoder Shorted (Axis %1)
	Description	The encoder supply is shorted.
	Solution	Check for correct wiring. Check cable conditions on previously running machines.
	Details	Class:Alarm
0009	Message	Digital Output Shorted (Axis %1)
	Description	A digital output is shorted.
	Solution	Repair the device attached to the digital output or its cable.
	Details	Class:Alarm
0010	Message	Continous Current Limit Motor (Axis %1)
	Description	The I2t limit of the motor is exceeded.
	Solution	Ensure the parameter Axes[].Parameters.Motor.CurrentSquareTime is correct. If so, reduce the currents or the accelerations or the duty cycle.
	Details	Class:Alarm



0011	Message Description Solution Details	Continous Current Limit Power Bridge (Axis %1) The I2t limit of the power bridge is exceeded. Reduce the currents or the accelerations or the duty cycle. Class:Alarm
0012	Message Description Solution Details	Peak Current limit motor (axis %1) The peak current limit of the motor is exceeded. Reduce the currents or the accelerations. Class:Alarm
0013	Message Description Solution Details	Current limit power bridge (axis %1) The peak current limit of the power bridge is exceeded. Reduce the currents or the accelerations. Class:Alarm
0014	Message Description Solution Details	Encoder Configuration Error (Axis %1) Two encoders of different type point to the same hardware. Check the encoder settings. Class:Alarm
0015	Message Description Solution Details	Option Module Failure (Axis %1) An encoder points to an option module which is not present or a present option module did not boot. Contact Triamec after verifying that the option module is installed. Class:Alarm
0016	Message Description Solution Details	Encoder Databus Error (Axis %1) Digital Encoder data bus not connected or communication failed. Check encoder databus wiring. Class:Alarm
0017	Message Description Solution Details	Encoder Not Supported (Axis %1) This encoder type is not supported. Choose a valid encoder type. Class:Alarm
0018	Message Description Solution Details	No Digital Encoder Persistency (Axis %1) The encoder does not contain persistency data. Refer to application note AN107. Class:Alarm
0019	Message Description Solution Details	Phase Short (Axis %1) A short (phase-to-phase or phase-to-earth) was detected in PWM during bridge power-up. Remove the motor connector and check if the error disappears. If not, contact Triamec Motion AG. Class:Alarm



0020	Message Description Solution Details	Synchronization Lost (Axis %1) The stream interpolaton synchronization is lost. Re-enter the coupled motion mode. The ErrorReaction depends on the setting in Parameters.PathPlanner.StreamLossAction. Class:Alarm
0021	Message Description Solution Details	Gantry Tracking Error(Axis %1) The distance between the two gantry axes was larger than the GantryDeviationLimit. Check Gantry configuration. Check motor and encoder conditions and cable conditions. Class:Alarm
0022	Message Description Solution Details	Commutation 600Hz Limit (Axis %1) The 600Hz commutation frequency limit of this product was reached Reduce the velocity or replace the product by a high-speed variant. Class:Alarm
0023	Message Description Solution Details	Unspecified Position Unit (Axis %1) The position unit is not specified or not known. Set a unit. Class:Alarm
0024	Message Description Solution Details	Motor Temperature Limit (Axis %1) The motor temperature is out of specification Check the sensor cables. Check the motor temperature. Class:Alarm
0025	Message Description Solution Details	Axis Parameter Error (Axis %1) A parameter of this axis is unknown Check for unknown parameter enums in this firmware version. Class:Alarm
0026	Message Description Solution Details	Axis Command Error (Axis %1) A command of this axis is unknown Check for unknown or illegal command enums. Class:Alarm
0065	Message Description Solution Details	No EtherCAT connection (axis %1) The fieldbus is not ready. Check the fieldbus condition and cabling. If working with EtherCAT, check the settings for Distributed Clock of the master adapter. Class:Alarm
0066	Message Description Solution Details	Computing time error (axis %1) The limit of the computing time is exceeded. Change the Tama code to reduce the computing time. Class:Alarm



0069	Message Description Solution Details	Bridge voltage error (axis %1) The DC-bus voltage is out of range. Check the power supply and the condition of the brake resistor. Check the according parameters. Check the main supply for power failure events. Class:Alarm
0070	Message Description Solution Details	Bridge overcurrent or midvoltage out of range (axis %1) The limit of the DC-bus current is exceeded. Check for shorts in the motor cable. Class:Alarm
0071	Message Description Solution Details	Temperature limit (axis %1) The limit of a temperature is exceeded. Check if the fan is working properly and ensure the cooling openings are free. Control your overall cabinet temperature. Class:Alarm
0072	Message Description Solution Details	Voltage out of range (axis %1) At least one operating voltage is out of range. Contact Triamec Motion AG. Class:Alarm
0073	Message Description Solution Details	External error (axis %1) General.Commands.ExternalError is set to True to simulate an error. Set the register value back to False. Class:Alarm
0074	Message Description Solution Details	No valid Tama code (axis %1) Running Tama without valid Tama code. Ensure using the correct Vmid and recompile the Tama program code. Find the Vmid of the target drive in the Device node information. Class:Alarm
0075	Message Description Solution Details	Persistent parameters are NOT compatible with running firmware (axis %1) This is a special firmware upgrade situation. Reload configuration and make the drive persistent again. Class:Alarm
0076	Message Description Solution Details	While executing a Tama program, the program memory became full during heap allocation (axis %1) A Tama program allocated too much heap. Check memory allocated using the command "new" in the C# code. Class:Alarm
0077	Message Description Solution Details	While executing a Tama program, an attempt was made to divide by zero (axis %1) The Tama code aborted due to a division by zero. Prevent division by zero in the program code. Class:Alarm

0078	Message	<p>While executing a Tama program, an object property was requested, but there was a null reference (axis %1)</p> <p>Description Tama null reference exception.</p> <p>Solution Ensure that objects are correctly instantiated in the program code. Consider null checks when referencing objects.</p> <p>Details Class:Alarm</p>
0079	Message	<p>While executing a Tama program, an array element index was outside the range of the array (axis %1)</p> <p>Description Tama array index out of bounds.</p> <p>Solution Limit the array index to the array size.</p> <p>Details Class:Alarm</p>
0080	Message	<p>While executing a Tama program, Tama program state was corrupted. This value is returned when an unknown operation code is encountered (axis %1)</p> <p>Description Tama execution reached a corrupted state.</p> <p>Solution Contact Triamec Motion AG.</p> <p>Details Class:Alarm</p>
0081	Message	<p>Hardware monitor on the device is not running (axis %1)</p> <p>Description Internal communication error.</p> <p>Solution Ignore and acknowledge if triggered during a firmware upgrade. Contact Triamec Motion AG if the error persists.</p> <p>Details Class:Alarm</p>
0084	Message	<p>SafeTorqueOff (STO) error (axis %1)</p> <p>Description SafeTorqueOff (STO) is active.</p> <p>Solution Disable all axes before activating STO.</p> <p>Details Class:Alarm</p>
0085	Message	<p>SafeTorqueOff (STO) is inconsistent (only one contact is closed) (axis %1)</p> <p>Description The logic levels of the STO channels are not equal.</p> <p>Solution Ensure equal logic levels for both STO inputs for normal operation. Check the STO circuit if this reoccurs.</p> <p>Details Class:Alarm</p>
0086	Message	<p>SafeTorqueOff (STO) startup test failure (axis %1)</p> <p>Description The safety module test running during startup failed.</p> <p>Solution Contact Triamec Motion AG.</p> <p>Details Class:Alarm</p>
0087	Message	<p>SafeTorqueOff (STO) pulse test failure (axis %1)</p> <p>Description SafeTorqueOff (STO) safe mode due to a Pulse-Test failure.</p> <p>Solution Contact Triamec Motion AG.</p> <p>Details Class:Alarm</p>



0088	Message	SafeTorqueOff (STO) Temperature Limit (axis %1)
	Description	SafeTorqueOff (STO) safe mode due to Temperature limit on Logic Monitor.
	Solution	Reduce the environment temperature.
	Details	Class:Alarm
0090	Message	Mid voltage out of range (axis %1)
	Description	The mid voltage is out of range
	Solution	Check motor shortage against earth. If the error persists, contact Triamec Motion AG.
	Details	Class:Alarm
0091	Message	Power lines not ok (axis %1)
	Description	Power lines are not OK. Not all power lines available or line disturbance.
	Solution	Check wiring and connector of the AC-Line input. Check wiring and connector of the brake resistor. Check the main supply for power failure events.
	Details	Class:Alarm

Revision History

Version	Date	Editor	Comment
001	2023-03-06	sm	Transferred from AN103, complete descriptions and solutions

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