SINUMERIK 840C
SIMODRIVE 611–D

Diagnostics Guide

User Documentation

07.97 Edition
SINUMERIK 840C/OEM Version for Windows

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SIEMENS

SINUERIK 840C
SIMODRIVE 611–D

Diagnostics Guide
User Documentation

Valid for

<table>
<thead>
<tr>
<th>Control</th>
<th>Drive</th>
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</thead>
<tbody>
<tr>
<td>SINUMERIK 840C/CE</td>
<td>SIMODRIVE 611–D</td>
</tr>
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<td>Software Version</td>
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<td>Software Version</td>
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<td>6.x</td>
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07.97 Edition
SINUMERIK® documentation

Printing history

Brief details of this edition and previous editions are listed below.

The status of each edition is shown by the code in the “Remarks” column.

*Status code in the “Remarks” column:*

A . . . . New documentation.
B . . . . Unrevised reprint with new Order No.
C . . . . Revised edition with new status.

If factual changes have been made on the page since the last edition, this is indicated by a new edition coding in the header on that page.

<table>
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This manual is included in the documentation on CD–ROM (DOCONCD)

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<td>C</td>
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</table>

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Other functions not described in this documentation might be executable in the control. This does not, however, represent an obligation to supply such functions with a new control or when servicing.

We have checked that the contents of this document correspond to the hardware and software described. Nonetheless, differences might exist and therefore we cannot guarantee that they are completely identical. The information contained in this document is, however, reviewed regularly and any necessary changes will be included in the next edition. We welcome suggestions for improvement.

Subject to change without prior notice.
### Preliminary notes

This Guide serves as a reference work. It allows the machine tool user:

- to assess irregularities during operation at the machine correctly
- to obtain information about the response of the system to the irregularity
- to make use of the options for continuing operation after the irregularity

### Scope

This description lists the diagnostics options of the PLC and the alarms of the MMC, NCK, servo and drive (SIMODRIVE 611–D) areas.

### Sequence

In the Diagnostics Guide the alarms are sorted in ascending order of alarm numbers. The numbers are not necessarily contiguous.

### Safety

**Danger**

Please assess the condition of your plant carefully against the description of the alarm that has occurred. Eliminate the cause of the alarm and acknowledge it as described. If alarms are ignored, danger to the machine, workpiece, stored settings, and in certain cases, to your health, could result.
1 Alarms

1.1 Alarm groups

**NC alarms**
The alarms are divided into alarm groups.

- General alarms
- Computer link alarms
- Axis-specific alarms
- Spindle-specific alarms
- Channel-specific alarms

At POWER ON RESET (switching on control), all NC alarms are cancelled.

The CANCEL alarms can be deleted in the associated operating area only.

**PLC alarms**
The PLC alarms are assigned error numbers 6000 to 9999. The alarm text, alarm action and deletion conditions are configured by the machine manufacturer.

**MMC alarms**
MMC alarms do not interrupt an active NC program. The alarms are acknowledged automatically provided the correct sequence of operations is adhered to or via softkeys.
# 1.2 Alarm numbers/cancellation of alarms

<table>
<thead>
<tr>
<th>Alarm number</th>
<th>Kind of alarm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General alarms</td>
</tr>
<tr>
<td>2 to 15</td>
<td>General alarms</td>
</tr>
<tr>
<td>16 to 36</td>
<td>Computer link alarms</td>
</tr>
<tr>
<td>43 to 110</td>
<td>General alarms</td>
</tr>
<tr>
<td>1000 to 1211</td>
<td>Axis-specific alarms</td>
</tr>
<tr>
<td>1240 to 1251</td>
<td>Axis-specific alarms</td>
</tr>
<tr>
<td>1280 to 1371</td>
<td>Axis-specific alarms</td>
</tr>
<tr>
<td>1440 to 1971</td>
<td>Axis-specific alarms</td>
</tr>
<tr>
<td>2000 to 2193</td>
<td>General alarms</td>
</tr>
<tr>
<td>2250 to 2263</td>
<td>Spindle-specific alarms</td>
</tr>
<tr>
<td>2270 to 2273</td>
<td>Spindle-specific alarms</td>
</tr>
<tr>
<td>2280 to 2283</td>
<td>Spindle-specific alarms</td>
</tr>
<tr>
<td>3000 to 3220</td>
<td>General alarms</td>
</tr>
<tr>
<td>4000 to 4299</td>
<td>Cycle alarms</td>
</tr>
<tr>
<td>4000 to 4299</td>
<td>PLC error messages or PLC operational messages</td>
</tr>
<tr>
<td>5000 to 5299</td>
<td>Free area</td>
</tr>
<tr>
<td>6000 to 9999</td>
<td>PLC error messages or PLC operational messages</td>
</tr>
<tr>
<td>10000 to 12031</td>
<td>Axis-specific alarms</td>
</tr>
<tr>
<td>20000 to 20309</td>
<td>Spindle-specific alarms</td>
</tr>
<tr>
<td>100000 to 169999</td>
<td>MMC alarms</td>
</tr>
<tr>
<td>200000 to 209999</td>
<td>PLC dialogs</td>
</tr>
<tr>
<td>210000 to 219999</td>
<td>Free area</td>
</tr>
<tr>
<td>300000 to 399999</td>
<td>611D alarms</td>
</tr>
</tbody>
</table>
### 1.2 Alarm numbers/cancellation of alarms

<table>
<thead>
<tr>
<th>Key</th>
<th>Effect of cancelling alarms</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Acknowledgement" /></td>
<td>An active NC program is not aborted but only stopped. After eliminating the error, it is possible to continue execution of the NC program from the point at which it was stopped.</td>
</tr>
<tr>
<td><img src="image" alt="Reset" /></td>
<td>Execution of an active NC program is aborted. After eliminating the error, the NC program must be restarted.</td>
</tr>
<tr>
<td><img src="image" alt="POWER ON" /></td>
<td>Execution of the active NC program is aborted. After eliminating the error, the NC program must be restarted and the reference points must be reapproached. <strong>Caution!</strong> On switching off the control, the contents of the NCK part program memory are lost.</td>
</tr>
</tbody>
</table>

POWER ON means switching off the control and switching it on again.

Please note the information provided by the machine tool manufacturer.
1.3 Display of the alarms in the alarm line

Messages from the monitoring system are displayed in the alarm line. Existing comments are overwritten by alarm texts. The alarm line is the second display line from the top.

There are three types of display representation for alarm messages: Types A, B and C.

Example of display representation Type A:
### Example of display Alarm display in block number order representation Type B:

<table>
<thead>
<tr>
<th>Machine</th>
<th>Parameter</th>
<th>Programm.</th>
<th>Services</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000</td>
<td>1 N0045</td>
<td>General programming error</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- max. 5 characters for block number
- E.g.: the error has occurred in block N0045.
- 1 character for channel number
- max. 5 characters for alarm number
- max. 38 characters for explanatory text (for single-line alarm)

### Example of display representation Type C:

<table>
<thead>
<tr>
<th>Machine</th>
<th>Parameter</th>
<th>Programm.</th>
<th>Services</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>6000</td>
<td></td>
<td>Hydraulic oil min.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- max. 4 characters for alarm number
- max. 47 characters for explanatory text (for single-line alarm)
1.4 Display of the alarms as dialog box

The machine tool manufacturer can configure whether the alarm messages are displayed in the alarm line or in a dialog box. MMC messages are displayed as a dialog box.

There are 3 types of dialog box:

**Dialog box with empty softkey bar**

The dialog must be acknowledged from a configured application.

![Example dialog box](image)

**Fig. 1.1 Example 1 dialog box**
**Dialog box with OK softkey**

The dialog box can be acknowledged with the OK key.

![Example 2 dialog box](image1)

**Fig. 1.2 Example 2 dialog box**

**Dialog box with OK softkey and HIDE softkey**

The dialog box can either be acknowledged with the OK key or it can be with the HIDE softkey without being acknowledged.

![Example 3 dialog box](image2)

**Fig. 1.3 Example 3 dialog box**
1.5 Priority of alarms

Only one alarm can be displayed in the alarm line and the following priorities apply:

<table>
<thead>
<tr>
<th>Priority range</th>
<th>Alarm type</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 100</td>
<td>Power on</td>
</tr>
<tr>
<td>101 – 200</td>
<td>Reset</td>
</tr>
<tr>
<td>201 – 300</td>
<td>Cancel</td>
</tr>
<tr>
<td>301 – 500</td>
<td>Message</td>
</tr>
<tr>
<td>301 – 500</td>
<td>PLC alarm</td>
</tr>
<tr>
<td>1000</td>
<td>Diagnosis</td>
</tr>
</tbody>
</table>

Within the alarm groups, the priority is in accordance with the alarm number or priority range, i.e. the lowest alarm number/priority range has the highest priority. The alarm priorities can be configured by the machine tool manufacturer.

An arrow on the right in the alarm line indicates that further alarms exist. These alarms are displayed if you select the alarm overview display in the DIAGNOSIS area.

1.5.1 Alarm description

The alarms are described in a uniform style. The column alarm heading boxes show the alarm number, alarm text and the means of cancellation.

<table>
<thead>
<tr>
<th>Alarm number</th>
<th>Alarm text</th>
<th>Means of cancel.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scan:</td>
<td>Specifies in which state the alarm occurs.</td>
<td></td>
</tr>
<tr>
<td>Effect:</td>
<td>Specifies the sphere of influence of processing.</td>
<td></td>
</tr>
<tr>
<td>Explanation:</td>
<td>States the reasons for the alarm.</td>
<td></td>
</tr>
<tr>
<td>Remedy:</td>
<td>Instructions for eliminating the alarm state.</td>
<td></td>
</tr>
</tbody>
</table>
1 Battery: Data loss at power off! Acknowledgement key

**Scan**  
POWER ON

**Effect**  
Data is not battery-backed after power off.

\- During operation: Do not interrupt the production process. Data will be lost if the control is switched off.

\- Run-up: Data has been lost. Obligatory re-installation is activated.

**Explanation**  
Backup battery is empty.

**Remedy**  
Replace the battery when the control is switched on
If data has been lost the whole NCK/PLC unit must be re-installed.

2 Overtemperature Acknowledgement key

**Scan**  
POWER ON

**Effect**  
The second temperature monitoring threshold has been triggered because the ambient temperature is too high.

NC program is not interrupted.

Safe functioning of the hardware can no longer be guaranteed, serious damage to hardware may result.

Processing is not interrupted directly. A contact is opened on the CSB which the NC user must use to take the appropriate measures.

A low temperature level will eliminate the error.
Switch off control (hardware damage possible).

3 Fan failure Acknowledgement key

**Scan**  
POWER ON

**Effect**  
Fan monitoring is triggered because of incorrect fan functioning.

Safe functioning of the hardware can no longer be guaranteed, serious damage to hardware may result.

Processing is not interrupted directly. A contact is opened on the CSB which the NC user must use to take the appropriate measures.

Eliminate the fan fault, e.g. by replacing the fan.
Switch off control (hardware damage possible).

4 System of units not allowed

**Scan**  
POWER ON

**Effect**  
Interlocking of NC READY
Interlocking of NC START
Interlocking of Mode Group Ready
Machining stops

An illegal combination of machine data MD 18000 display resolution and MD 5002 input resolution has been selected. Both data must use the same system of units.

For rotary axes with a position control resolution smaller than $= 0.5 \times 10^{-4}$ degrees, the function bit "High-resolution rotary axis" must be set.

Check and correct machine data combinations. Then cancel the alarm with POWER ON.

5 Power failure protection / data loss Acknowledgement key

**Scan**  
POWER ON

**Effect**  
The power failure protection integrated in the software could not be executed correctly because of a hardware fault.

Data loss in the NCK unit.
Obligatory re-installation is activated.

The whole NCK unit must be re-installed.
Eliminate hardware fault.
### 6 Start-up due to system error

**Scan**: POWER ON 

**Effect**: Start-up of the control shows that a fatal error was present before reset/power off (e.g., obligatory re-installation is activated. Alarm 5 can be set in conjunction with alarm 6. EPROM error, DRAM error, processor exceptions).

**Explanation**: Re-installation is necessary as data loss or corruption is to be expected (no data consistency).

**Remedy**: The NCK unit must be completely re-installed. Cause of error can be eliminated as follows: 
- a) Replace hardware 
- b) Report the software error leading to the processor exception to the manufacturer of the control.

### 7 15 V undervoltage

**Scan**: POWER ON Cyclic 

**Effect**: Activates 15V voltage monitoring 

**Explanation**: Safe operation of the NC is no longer possible so NC Ready is cancelled.

**Remedy**: Eliminate hardware fault

### 8 Wrong axis/spindle assignment

**Scan**: After modification of machine data 

- On POWER ON

**Effect**: Interlocking of NC START 

- Removal of Mode Group Ready 

- NC Ready relay drops out 

- Machining stops

**Explanation**: The NC machine data for axis assignment MD200* or spindle assignment MD400* have been input incorrectly or transposed. If error in MD 461* C axis definition: 
- C axis must not be fictitious (MD 564*, bit 6) 

- C axis must be defined (MD 564*, bit 7) 

- Mode group numbers of C axis and spindle must be same (MD 360*, MD 453*)

**Remedy**: Check and correct machine data for axis and spindle assignment. Cancel alarm with POWER ON.

### 9 Not enough memory for UMS

**Scan**: At POWER ON in normal mode, not in start-up mode 

**Effect**: None

**Explanation**: The RAM area reserved on the NC is too small for the UMS address lists for the modified system area.

**Remedy**: Describe fewer elements (displays/texts) in modified system area (merge). 

**Note**: Applies up to SW 2 only

### 9 Overflow in altered system area

**Scan**: When powering up the control 

**Effect**: The UMS does not function

**Explanation**: In the UMS, an altered system area has been configured that exceeds the memory area.

**Remedy**: Configure UMS properly

**Note**: Applies as from SW 4
10 **UMS error**

**Scan**
- At POWER ON

**Effect**
- Interlocking of NC START

**Explanation**
The UMS loaded in NCK has a faulty internal structure.

**Remedy**
Reinstall UMS on hard disk.

**Note**
Applies up to SW 2 only

10 **Startup after software upgrade**

**Scan**
- At POWER ON

**Effect**
- The NCK–internal static memory has been deleted.

**Explanation**
There are two causes for the alarm:
- A new NCK software version has been loaded (only when booting for the first time after software upgrade)
- The NCK–internal static RAM has failed (e.g. because of an empty back-up battery); alarm 5 is then displayed additionally.

**Remedy**
The complete NCK unit must be started up again.

**Note**
Applies as from SW 6

11 **Undervoltage on secondary side**

**Scan**
POWER ON

**Effect**
Cyclic
- Short circuit on secondary side or overloading of 5V voltage
- Caution: The error may have been signalled during initial start-up without the error being present (hardware wiring).

**Explanation**
When the error occurs the shutdown routine is activated to achieve a safe state.
- Restart: Data loss has occurred, obligatory re-installation is activated

**Remedy**
Eliminate the hardware error
- Re-install

20 **Cam activation wrong**

**Scan**
POWER ON

**Effect**
- Interlocking of NC start
- Interlocking of Mode Group Ready

**Explanation**
Software cams can only be used for linear axes.

**Remedy**
Correct the PLC user program

26 **Part program block >120 char. V.24**

**Scan**
- On reading data into the NC via the computer link

**Effect**
- Computer link transmission interrupted
- Last block declared invalid

**Explanation**
The part program block that has been read in contains more than 120 characters. Only the characters actually stored are counted (no spaces, no CR, etc.)

**Remedy**
Divide the block into two or more blocks. The number of the faulty block is displayed.

**Note**
Applies up to SW 2 only
<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>Data input disabled V.24</td>
<td>On reading data into the NC via the computer link</td>
<td>No data has been read in</td>
<td>The “Cycle lock” interface signal (DB 48 D0.11) is present</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>An attempt has been made to read in NC machine data in normal mode</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>An attempt has been made to transfer UMS data to the NC although the UMS was not enabled or not plugged in.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Reset DB 48 DW 0 bit 11 via PLC STATUS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Enter new NC machine data</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Applies up to SW 2 only</td>
</tr>
<tr>
<td>29</td>
<td>Block &gt;254 characters V.24</td>
<td>On reading tool data into the NC via the computer link</td>
<td>Computer link transmission interrupted</td>
<td>The block read in has more than 254 characters (counting all characters read in, including blanks, CR, LF, etc.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Divide the block into two or more blocks. The number of the faulty block is displayed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Applies up to SW 2 only</td>
</tr>
<tr>
<td>30</td>
<td>Part program memory overflow V.24</td>
<td>While reading programs in via the computer link of the NC</td>
<td>Computer link transmission interrupted</td>
<td>The maximum memory space for part programs is already assigned</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Delete old programs to release memory for the reading in of new programs. The number of the faulty block is displayed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Applies up to SW 2 only</td>
</tr>
<tr>
<td>31</td>
<td>No more part program input V.24</td>
<td>On reading in via computer link</td>
<td>No data has been read in</td>
<td>The part program memory available has been used up.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Read and delete old part programs no longer required in order to provide more memory.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Applies up to SW 2 only</td>
</tr>
<tr>
<td>32</td>
<td>Data format error V.24</td>
<td>On reading data into the NC via the computer link</td>
<td>Computer link transmission interrupted</td>
<td>The number of decades used after an address is not permissible</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The decimal point occurs in the wrong place</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Part programs or subroutines are not defined or concluded correctly (check header)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Check the program to be read in. The number of the faulty block is displayed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Applies up to SW 2 only</td>
</tr>
</tbody>
</table>
### 33 Programs different V.24

**Scan**
- On reading part programs into the NC memory via the computer link of the NC

**Effect**
- No data is read in/stored

**Explanation**
- If a new program is to be read in with the same program number as one already stored in the NC, the program to be read in is compared. If they are different, an NC alarm occurs. The point of disagreement is shown in the data input display. The new program is not stored.

**Remedy**
- Delete the old program or rename it in the NC so that the new program can be read in.

**Note**
- Applies up to SW 2 only

### 43 PLC–CPU not ready for operation

**Scan**
- Cyclic or on Restart

**Effect**
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready relay
- Processing is terminated

**Explanation**
- Hardware or software error in PLC or general data interface link
- PLC machine data error or not in agreement with user program
- Error in the PLC user program
- Selection of error fine coding

**Remedy**
- Remove cause of error
- Check detailed error coding in PLC service menu
- Read out ISTACK
- Ascertain cause of error using the error list in the installation lists

### 45 Cam signal output wrong

**Scan**
- POWER ON

**Effect**
- Interlocking of NC START
- Interlocking of Mode Group Ready

**Explanation**
- Incorrect values in NC MD 310, 311 Interface output via MIXED I/O selected without the corresponding hardware

**Remedy**
- Slot in the MIXED I/O before switching on the control.

### 46 Invalid TO parameter number

**Scan**
- After altering machine data and then formatting user memory or when powering up if MD 13 (as from SW 4 MD 60006) is not correct.

**Effect**
- Function not usable
- Interlocking of NC START

**Explanation**
- On installation, a value greater than 32 or less than 10 has been specified for machine data 13, “Number of TO parameters”.
- “Extended tool parameter for type 50..59” deselected: 10 – 32
- “Extended tool parameter for type 50..59” selected: 10 – 32

**Remedy**
- Correct machine data
- Format user memory or, in General Reset mode, format the area for the TO data
### 47 Wrong TO assignment lists

#### Scan
- At POWER ON after modifying machine data

#### Effect
- Interlocking of NC START

#### Explanation
- Value of machine data 210, “Number of TO areas”, is greater than 4
- TO start numbers in NC MD211 to 214 have not been entered in ascending order
- Input value in channel-specific NC MD 1040 to 1043 is greater than the number of TO areas under MD 210 or is specified as 0 in the TO area

#### Remedy
- Correct machine data
- Where appropriate format user memory if machine data were input correctly or format the TO data in General Reset mode
- POWER ON

### 48 Data link to PLC not ready

#### Effect
- Interlocking of NC START
- Interlocking of NC Ready relay
- Interlocking of Mode Group Ready
- Machining stops

#### Explanation
During the start-up synchronization or data exchange between interface-CPU (IFC) and PLC CPU an error was established, leading to the alarm. Data exchange between NC and PLC is still possible but the link to the programmer via the interface is not possible.

#### Remedy
Error fine coding can give information on further error sources; in addition, check whether alarm 43 is present.

#### Note
Applies up to SW 2 only

### 49 NC in general reset

#### Effect
None

#### Explanation
The software has recognized that the control is in general reset mode.

#### Remedy
Leave general reset mode

### 50 Flex. memory incorrectly configured

#### Scan
On pressing NC Start

#### Effect
Interlocking of machining
Interlocking of “NC Start”

#### Explanation
1. The channel-specific machine data 6100* that defines the number of block buffers in a channel is not in the permissible range.
2. No memory has been made available (MD 60014) for loading of drive software (MD 60003 or 60004).

#### Remedy
Check and correct the values of the machine data.

#### Note
Alarm Insufficient memory for block buffer (with SW 4 and higher)
Alarm Flex. memory incorrectly configured (with SW 5.4 and higher)

### 57 Drive link failure

#### Scan
Cyclic

#### Effect
Interlocking of NC Ready, NC Start, Mode Group Ready, NC Stop

#### Explanation
Internal software error or ring programming for GI or gantry axes.

#### Remedy
- Eliminate ring programming for GI or gantry axes
- Notify service
### Alarms

<table>
<thead>
<tr>
<th>Alarm</th>
<th>Description</th>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>Internal software error</td>
<td>Internal software error</td>
<td>Cyclic</td>
<td>The software has recognized an internal error but cannot rectify it.</td>
<td>Notify service.</td>
</tr>
<tr>
<td>67</td>
<td>1st computer link not ready for operation</td>
<td>Internal software error</td>
<td>Cyclic or after POWER ON</td>
<td>Message frame transfer between host computer and NC is not possible. Host computer and NC are not synchronized owing to an incorrect input or a fault in the interface module. This means that message frame transfer is not possible.</td>
<td>Check programming of interface module, Check machine data settings for computer link, Check whether host computer is ready or connected</td>
</tr>
<tr>
<td>68</td>
<td>2nd computer link not ready for operation</td>
<td>Internal software error</td>
<td>Cyclic or after POWER ON</td>
<td>Message frame transfer between host computer and NC is not possible. Host computer and NC are not synchronized owing to an incorrect input or a fault in the interface module. This means that message frame transfer is not possible.</td>
<td>Check programming of interface module, Check machine data settings for computer link, Check whether host computer is ready or connected</td>
</tr>
<tr>
<td>70</td>
<td>Define at least one channel</td>
<td>Internal software error</td>
<td>At POWER ON</td>
<td>At start-up, an incorrect assignment of machine data was made. The NC will not work without channel assignment.</td>
<td>Check and correct machine data for channel assignment, POWER ON</td>
</tr>
<tr>
<td>71</td>
<td>Too many real axes</td>
<td>Internal software error</td>
<td>At POWER ON</td>
<td>More real axes than are permitted were defined in axis-specific machine data bits $564^*$ at the time of start-up. The machine data MD 60013 (memory for real axes) is not within the permissible range or has been set too small.</td>
<td>Correct axis-specific machine data bits $564^*$. Correct MD 60013.</td>
</tr>
<tr>
<td>Scan</td>
<td>Effect</td>
<td>Explanation</td>
<td>Remedy</td>
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</tr>
<tr>
<td>72</td>
<td>Too many fictitious axes</td>
<td>POWER ON</td>
<td>At POWER ON or warm restart</td>
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<tr>
<td></td>
<td>• Interlocking of NC START</td>
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<td></td>
<td>• Interlocking of Mode Group Ready</td>
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<td></td>
<td>• Interlocking of NC Ready relay</td>
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<td></td>
<td>• Machining stops</td>
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<tr>
<td></td>
<td>Explanation</td>
<td>More fictitious axes than are permitted were defined in axis-specific machine data bits 564* during installation.</td>
<td>Correct axis-specific machine data bits 564*.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>73</td>
<td>Axis preset in wrong mode group</td>
<td>POWER ON</td>
<td>At POWER ON or warm restart</td>
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<tr>
<td></td>
<td>• Interlocking of NC START</td>
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<td>• Interlocking of Mode Group Ready</td>
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<td>• Interlocking of NC Ready relay</td>
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<td></td>
<td>• Machining not possible</td>
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<tr>
<td></td>
<td>Explanation</td>
<td>At start-up, an incorrect assignment of NC machine data was made or the assignment of axis selector switch with 2 machine control panels is incorrect or a wrong axis is set in the program.</td>
<td>Check and correct NC machine data “Axis valid in mode group”.</td>
<td></td>
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<tr>
<td></td>
<td>Remedy</td>
<td>Correct program</td>
<td>POWER ON</td>
<td></td>
<td></td>
</tr>
<tr>
<td>74</td>
<td>Too many drives</td>
<td>POWER ON</td>
<td>At POWER ON or warm restart</td>
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<tr>
<td></td>
<td>• Interlocking of NC START</td>
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<td>• Interlocking of Mode Group Ready</td>
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<td>• Interlocking of NC Ready relay</td>
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<tr>
<td></td>
<td>• Machining stops</td>
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<tr>
<td></td>
<td>Explanation</td>
<td>The total number of spindles and real axes defined during installation is greater than permitted.</td>
<td>Correct axis-specific machine data bits 564* and spindle-specific machine data bits 521*.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>Max. number of meas. circuits exceeded</td>
<td>POWER ON</td>
<td>Output of alarm if too many axes and spindles are defined.</td>
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<tr>
<td></td>
<td>• Interlocking of NC START</td>
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<td></td>
<td>• Interlocking of Mode Group Ready</td>
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<td>• Interlocking of NC Ready relay</td>
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<td></td>
<td>• Machining stops</td>
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<tr>
<td></td>
<td>Explanation</td>
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<tr>
<td></td>
<td>Remedy</td>
<td>Reduce the number of axes (MD 564*) and spindles (MD 512*).</td>
<td>Axes/spindles that are not assigned to a measuring circuit are included in the number of measuring circuits.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>77</td>
<td>Mode group no. of axis invalid</td>
<td>POWER ON</td>
<td>Check and correct machine data for axis assignment and spindle assignment.</td>
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<tr>
<td></td>
<td>• Interlocking of NC START</td>
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<td></td>
<td>• Interlocking of Mode Group Ready</td>
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<td></td>
<td>• Interlocking of NC Ready relay</td>
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<tr>
<td></td>
<td>• Interlocking of machining</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Explanation</td>
<td>Check and correct machine data for “Axis valid in mode group”</td>
<td>Perform POWER ON</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Mode group no. of spindle invalid  

**Scan**  
At POWER ON

**Effect**  
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready relay
- Interlocking of machining

**Explanation**  
Check and correct machine data for axis assignment and spindle assignment.

**Remedy**  
- Check and correct machine data for “Mode group of spindle”
- Perform POWER ON

Mode group no. of channel invalid  

**Scan**  
At POWER ON

**Effect**  
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready relay
- Interlocking of machining

**Explanation**  
An incorrect assignment (e.g. channel gap) has been made in the channel-specific machine data for “Channel valid in mode group”.

**Remedy**  
- Check machine data
- Perform POWER ON

Error in C axis definition  

**Scan**  
At POWER ON and warm restart

**Effect**  
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready relay
- Machining stops
- If C axes and spindles are incorrectly assigned, the spindle does not appear in the service display.

**Explanation**  
The C axes assigned to the spindles were either defined as non-existent or fictitious during installation, or the spindle and assigned C axis mode groups are not identical.

**Remedy**  
Check and correct axis-specific machine data bits 564*, axis-specific machine data 360* and spindle-specific machine data 453* and 461*.

Coupled motion grouping defined wrong  

**Scan**  
At POWER ON

**Effect**  
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of machining

**Explanation**  
An illegal coupled axis grouping has been set for the assignment of coupled axes in machine data, e.g.:
- The axes do not belong to the same mode group
- The axes have different position control resolutions
- The axes are of different types (linear axis/rotary axis)
- The axes are declared as being not present
- The axes are fictitious
- The leading axis is defined as a coupled axis

**Remedy**  
Correct machine data using the “Coupled motion” function and perform a warm restart (see Start-up Guide).
<table>
<thead>
<tr>
<th>Alarm</th>
<th>Description</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>Coupled-motion combination wrong</td>
<td>POWER ON</td>
<td>An undefined combination has been input in NC machine data for the coupled axis combination.</td>
<td>Correct machine data and perform a warm restart (see Start-up Guide).</td>
<td>Applies up to SW 2 only</td>
</tr>
<tr>
<td>87</td>
<td>Illegal software limit switch</td>
<td>POWER ON</td>
<td>An excessively large value has been entered in the NC machine data for the software limit switch. The maximum traversing range of the individual axes results from the axis-specific position control resolution set and the input resolution. With alarm 87, the control has automatically entered the maximum permissible value in the appropriate NC machine data.</td>
<td>Check machine data for software limit switch and where appropriate correct.</td>
<td>Applies up to SW 2 only</td>
</tr>
<tr>
<td>88</td>
<td>Interpolation greater than 3D</td>
<td>POWER ON</td>
<td>More than 3 axes have been programmed in one block in the part program block of the NC, or the “5D” function is not active.</td>
<td>Modify part program</td>
<td></td>
</tr>
<tr>
<td>89</td>
<td>More than two 3D interpolations</td>
<td>POWER ON</td>
<td>More than 3 axes have been programmed in more than 2 channels in the NC in one program block in each case.</td>
<td>Modify program</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>Customer UMS invalid</td>
<td>POWER ON</td>
<td>Customer UMS faulty or &gt;512 KB.</td>
<td>Check customer UMS.</td>
<td></td>
</tr>
<tr>
<td>91</td>
<td>ID no. in UMS header faulty</td>
<td>POWER ON</td>
<td>The programmed ID number in the UMS header, which is evaluated by the system software, is incorrect or has been read incorrectly because the UMS submodules were plugged in incorrectly.</td>
<td>Check WS 800A software version.</td>
<td></td>
</tr>
<tr>
<td>Alarm</td>
<td>Description</td>
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<tr>
<td>91</td>
<td><strong>UMS invalid</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Scan</strong></td>
<td>At POWER ON and activated UMS data</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Effect</strong></td>
<td>Interlocking of NC START until alarm is acknowledged.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>The configured identifying number in the UMS header, evaluated by the system software, is incorrect or no UMS has been loaded because the memory reserved for this (MD 60000) is smaller than the UMS to be loaded.</td>
<td></td>
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</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Check MD 60000 or install the correct UMS.</td>
<td></td>
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</tr>
<tr>
<td><strong>Note</strong></td>
<td>Applies as from SW 4</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>93</td>
<td><strong>Wrong UMS selector</strong></td>
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</tr>
<tr>
<td><strong>Scan</strong></td>
<td>At POWER ON and with activated UMS data</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td><strong>Effect</strong></td>
<td>Interlocking of NC START until alarm is acknowledged.</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>The address lists preset by the NC workstation do not contain the set selectors required for error-free processing of a UMS.</td>
<td></td>
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</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Check the system software of the NC workstation, or have it checked.</td>
<td></td>
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<tr>
<td>94</td>
<td><strong>Wrong UMS identifier</strong></td>
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<tr>
<td><strong>Scan</strong></td>
<td>At POWER ON and with activated UMS data</td>
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</tr>
<tr>
<td><strong>Effect</strong></td>
<td>Interlocking of NC START until alarm is acknowledged.</td>
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</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>An incorrect identifier is programmed in the UMS.</td>
<td></td>
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</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Check UMS and NC workstation software.</td>
<td></td>
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</tr>
<tr>
<td>95</td>
<td><strong>Wrong number in GSB</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Scan</strong></td>
<td>At POWER ON and with activated UMS data</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Effect</strong></td>
<td>Interlocking of NC START until alarm is acknowledged.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>Numbers have been used in the modified system area (GSB) which are outside the reserved areas.</td>
<td></td>
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</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Check the numbers used in the modified system area.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>96</td>
<td><strong>Language in UMS not available</strong></td>
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</tr>
<tr>
<td><strong>Scan</strong></td>
<td>At UMS analysis (POWER ON of control not during start-up)</td>
<td></td>
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</tr>
<tr>
<td><strong>Effect</strong></td>
<td>UMS is connected in its basic language</td>
<td></td>
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</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>Two-language UMS does not contain the language activated in the control</td>
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<tr>
<td><strong>Remedy</strong></td>
<td>Put correct UMS in control</td>
<td></td>
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<tr>
<td><strong>Note</strong></td>
<td>Applies up to SW 1 only</td>
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<tr>
<td>101</td>
<td><strong>Prewarning replace battery</strong></td>
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</tr>
<tr>
<td><strong>Scan</strong></td>
<td>POWER ON Cyclic</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Effect</strong></td>
<td>Battery monitoring is activated if battery voltage falls below the advance warning voltage threshold.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>The working process is not interrupted</td>
<td></td>
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</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>User is advised to replace the backup battery to avoid the risk of data loss – see alarm 1.</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Acknowledgement key**

Replace battery when control is switched on.
102  **Prewarning overtemperature**  
**Scan**  
POWER ON  
**Cyclic**

**Effect**  
The first temperature monitoring threshold on the CBS module is activated because the ambient temperature is too high.

**Explanation**  
User is given advance warning.  
The working process is not interrupted.

**Remedy**  
A lower temperature level is required to eliminate the fault.

---

103  **Initializing error NCK FB**  
**Scan**  
When powering up the control

**Effect**  
Interlocking of NC START  
Follow-up mode  
Removal of Mode Group Ready

**Explanation**  
The initialization routine of the NCK FB has returned a value which is not equal to zero. The return value is output in the alarm as block number N.

**Remedy**  
Check the NCK FB.

**Continuation**  
The alarm is initiated when powering up the control. No program can be started. Acknowledge alarm by POWER ON.

**Note**  
- Alarm 103 is output only if appropriately configured by the machine manufacturer. An error has occurred in the safety NCK–FB. For more information and remedy, refer to the manufacturer’s documentation. Applies as from SW 5.4.
- Applies as from SW 5.4.

---

104  **Error in machine data**

**Scan**  
When powering up the control  
After a warm start  
After changing a machine data

**Effect**  
Interlocking of NC START  
Follow-up mode  
Removal of Mode Group Ready

**Explanation**  
A machine data contains an implausible value. The machine data error is output in the alarm as block number N.

**Remedy**  
Evaluate the block number and correct the corresponding machine data.

**Continuation**  
The alarm is initiated when powering up the control. No program can be started. Acknowledge alarm by POWER ON.

**Note**  
Applies as from SW 5.4

---

105  **Error in NCK FB**

**Scan**  
During cyclic operation of control

**Effect**  
Interlocking of NC START  
Follow-up mode  
Removal of Mode Group Ready  
Interruption of machining

**Explanation**  
The cyclic routines of the NCK FB have returned a value which is not equal to zero.

**Remedy**  
Evaluate the block number and check the NCK FB.

**Continuation**  
No program can be started. Acknowledge alarm by POWER ON.

**Note**  
- Alarm 105 is output only if appropriately configured by the machine manufacturer. An error has occurred in the safety NCK–FB. For more information and remedy, refer to the manufacturer’s documentation.
- Applies as from SW 5.4
110 Checksum error safe monitorings  
**Scan**  
When powering up the control  
**Effect**  
Interlocking of NC START  
**Explanation**  
The MDs for the safety system are protected by a checksum after acceptance of the control. The alarm indicates that the current checksum no longer matches the stored checksum, i.e. either an MD value has been changed without authorization or a data is defective.  
**Remedy**  
Check the MDs. Inspect the safety functions again. Have the checksum calculated again.  
**Continuation**  
The alarm is initiated when powering up the control. No program can be started. Alarm acknowledgement only possible by POWER ON.  
**Note**  
Applies as from SW 5.4

111 Error in collision monitoring data  
**Scan**  
At POWER ON  
**Parameters:**  
| Block number (4-digit) Nxxxs: | 00–09 | Protection zone 1–20  
3rd and 4th digit: Number of protection zone  
1st and 2nd digit: Error identifier  
Nibble 3,4: Error identifier:  
| 01 | Motion axis does not exist  
| 02 | Motion axes not in same mode group  
| 03 | Error in monitoring relation  
| 04 | Protection zone dimensions not available (all dimensions=0)  
| 05 | Negative protection zone dimension  
| 06 | Protection zones not defined in same plane |

**Effect**  
Machining standstill; interlocking of machining (NC Start);  
BAG=BB=0; NC=Ready=0  
**Explanation**  
| Error identifiers |  
| 01 | Motion axis does not exist  
| 02 | Motion axes not in same mode group  
| 03 | Error in monitoring relation  
| 04 | Protection zone dimensions not available  
| 05 | Negative protection zone dimension  
| 06 | Protection zones not defined in same plane  
| A non-existing axis has been specified in the machine data 3800*, 3802*, 3804*.  
| Axes that are not in same mode group have been specified in the machine data 3800*, 3802*, 3804*.  
| The mutual deselection of the protection zone monitoring in the MD bits 38803+s*3 has not been executed correctly.  
| Deselection of monitoring of protection zone 2 in the machine data of protection zone 2 causes the deselection of monitoring of protection zone 1 in the machine data of protection zone 2, i.e. deselection must always be carried out mutually.  
| The protection zone dimensions specified in the machine data 3812*, 3814*, 3816* are all=0.  
| At least one of the protection zone dimensions specified in the machine data 3812*, 3814*, 3816* is negative. But only positive dimensions are allowed.  
| The protection zone specified is 2-dimensional. It is related to another 2-dimensional protection zone, which is defined in another plane. But 2-dimensional protection zones that are in a monitoring relation must lie in the same plane.  
| The protection zone defined in the machine data 3812*, 3814*, 3816* is not identical with the planes of the other protection zones to be monitored.  
| The protection zone should not monitor the protection zones in other planes, i.e. the protection zone relation must be corrected in the machine data bits 38803–38815 (monitoring relation).  

**Remedy**  
Correct machine data and execute POWER ON.  
**Note**  
Applies as from SW 6
100*  Leadscr. err. comp.-illegal grid spacg.  POWER ON

Scan   • After POWER ON
Effect  • Interlocking of NC START
         • Interlocking of Mode Group Ready

Explanation  Leadscrew error compensation with rotary axes in NC machine data “Distance between 2 values” has been entered for the appropriate axis with a value which cannot be divided into 360 degrees to give an integer, i.e. grid spacing is not equal; e.g.
   • Correct: NC–MD= 10 (rotary axis)
   • Results in: 360/10 = 36 grid points
   • Incorrect: NC–MD= 11
   • Would give: 360/11 = 32.7 grid points

The compensation value chosen is too large compared with the distance between two leadscrew error compensation points (valid for rotary and linear axes).

Remedy  Modify NC machine data “Distance between 2 values” – check NC MD 324* and 328*.
         • The compensation value in NC MD 328* must be less than NC MD 324*.

104*  Speed setpoint value warning limit responded  Reset key

Scan   • Cyclic
Effect  • Interlocking of NC START

Explanation  For analog measuring circuit: The DAC set value entered is higher than in NC machine data 268* “Maximum setpoint speed (DAC)”. It is not possible to increase the set value further.

Remedy  • Traverse more slowly
         • Check actual values (encoder)
         • Check NC machine data “Maximum setpoint speed (DAC)”
         • Check the drive actuator

112*  Zero-speed control  Reset key

Scan   • When accelerating
       • When stopped
       • When clamping
       • When decelerating (delay)

Effect  • Interlocking of NC START
         • Interlocking of Mode group READY
         • Setpoint 0
         • The control enable is removed after the time stored in NC machine data “Control enable cutout delay” has elapsed
         • Follow-up operation

Explanation  The following error could not be cleared faster than the time entered in NC machine data “Control enable cutout delay” during positioning
   • On clamping, the limit defined in NC machine data “Zero speed monitoring” was exceeded
   • A mechanically clamped axis has been pushed out of position
   • Fault in the control device (actuator), at the tacho, at the motor, in the CNC measuring circuit hardware or at/on the pulse encoder
   • Incorrect specification on assigning the set value output
   • At start-up: wrong position control direction

Remedy  • NC machine data “Zero speed monitoring” must be greater than “Coarse exact positioning limit”
         • NC machine data “Control enable cutout delay” must be large enough for the following error to be removed within this time (only applies if NC machine data “Zero speed monitoring delay” = 0)
         • NC machine data “Zero speed monitoring delay” must be large enough for the following error of the individual axis to be removed within the time entered
         • Check actual values (encoder) and position control direction
116* Contour monitoring

**Scan**
- In all modes
  - When decelerating
  - When accelerating
  - At velocities greater than in NC machine data “Contour threshold speed”

**Effect**
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Setpoint 0
- The control enable is removed after the time stored in NC machine data “Control enable cutout delay”
- Follow-up operation

**Explanation**
- At a velocity greater than in NC machine data “Contour threshold speed”, the NC machine data “Tolerance band contour monitoring” was exceeded
- When accelerating or decelerating the axis has not reached the new speed within the time defined by the K_V factor

**Remedy**
- Increase NC machine data “Tolerance band contour monitoring”
- Check K_V (servo gain) factor
- Check the optimization of the speed controller
- Check the actual values (pulse encoder)
- Check the free movement of the axes
- Reduce acceleration

120* Axis specification illegal

**Scan**
- At POWER ON

**Effect**
- Axis is not processed
- Controller disable for the relevant axis
- Mode Group Ready removed
- Interlocking of NC START

**Explanation**
- Specification of MD200x or MD384x in the relevant axis missing.
  - Example: MD2000 = 01020101 and MD384 = 00000000
- Specification of module number in MD200x or MD384 is greater than the number of measuring circuit modules present.
  - Example: MD2000 = 04010000 and 3 measuring circuit modules are plugged in.
- Specification of the connection number in MD200x or MD384 is greater than the number of connections on the relevant module.
  - Example: MD3840 = 02070000; the 2nd measuring circuit module is a SPC module and therefore has only 6 connections.
- Connection number for an input is assigned to an output and vice versa.
  - Example: MD3840 = 01030000; the 1st measuring circuit module is a HMS module and connection number 3 there is an input connection.
- Input or output assignment is not compatible with the plug-in submodule.
  - Example: MD2000 = 01040101; the 1st measuring circuit module is a HMS module with output submodule Servo-Command 6FX1132–SBAxx on its submodule slot 1.

**Remedy**
- Check and correct MD200x and MD384x of the relevant axis. Both these machine data must be specified or must be zero. In addition, they must agree with the hardware configuration.

**Note**
Applies up to SW 2 only

128* Measuring circuit not available

**Scan**: At POWER ON

**Effect**
- Axis is not processed
- Control disable for the axis concerned
- NC Ready 2 removed
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC RDY relay

**Explanation**
- MD200x or MD384x indicates an empty slot on a measuring circuit module containing submodules.
  - Example: MD3840 = 01090000; the 1st measuring circuit module is a HMS module with submodule slot 2 empty.
- Measuring circuit module removed or defective.

**Remedy**
- Compare and correct MD200x or MD384x with hardware configuration.
132* Closed-loop system hardware axis

Scan
- Cyclic

Effect
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Setpoint = 0
- The control enable is removed after the time stored in NC machine data “Control enable cutout delay” has elapsed
- Follow-up operation

Explanation
The measuring circuit difference signals.
- Are not in phase
- Have a fault to earth
- Are completely missing

Remedy
- Check whether the measuring circuit connector has been plugged in
- By plugging in the measuring circuit short-circuit connector it is possible to check whether the measuring circuit group is in working order
- Check the difference signals using an oscilloscope
- Replace the encoders
- Check NC MD 200*, 384*

The alarm can only be cancelled by POWER ON.

136* Contamination measuring system axis

Scan
- Cyclic

Effect
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Machining stops

Explanation
On measuring systems with a contamination signal (e.g. EXE) an error is sent to the NC from the measuring system.

Remedy
Check the measuring system in accordance with the manufacturer’s instructions.

140* Pulse code monitoring

Scan
- Cyclic

Effect
- Interlocking of Mode Group Ready
- Interlocking of NC START
- Alarm leads to machining stop

Explanation
- Transmission errors or noise from encoder

Remedy
- Check encoder, cable, connector

144* Zero mark monitoring responded

Scan
- Cyclic

Effect
- Interlocking of NC START

Explanation
Transmission errors, noise or excessive speed have caused pulses to be lost relating to an encoder revolution

Remedy
- Check encoder pulses
- Check transmission path
- Switch off monitoring system briefly with MD 1820* bit 1=0

148* SW limit switch plus

Scan
- With each axis movement

Effect
- Machining stops
- Interlocking of NC START

Explanation
The software limit switch only becomes active after approach to reference point.
- Depending on the PLC interface signal “Second software limit switch active”, the first or the second limit switch has been approached.

Remedy
- Traverse away from the limit switch in the opposite direction in JOG mode.
- Check the values in machine data for software limit switches.
**152* SW limit switch minus**

**Scan**
- On each axis movement
- Machining stops
- Interlocking of "NC START"

**Explanation**
- The software limit switch becomes active only after reference point approach has taken place.
- The first or second software limit switch has been approached, according to the PLC interface signal "Second software limit switch active".

**Remedy**
- Travel away from the software limit switch in the opposite direction using JOG mode.
- Check NC machine data for 1st software limit switch minus or 2nd software limit switch minus.

**156* Speed set val. alarm limit responded**

**Scan** Cyclic

**Effect**
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Setpoint 0
- The control enable is removed after the time stored in NC machine data “Control enable cutout delay” has elapsed
- Follow-up operation

**Explanation**
- A higher set speed value has been output within the control than set in NC machine data “Threshold for drive errors”.
- The motor could not follow the setting of the speed set value.
- On installation: wrong position control direction

**Remedy**
- Check whether the value in NC machine data “Threshold for drive errors” is greater than the value in NC machine data “Max. speed setpoint (DAC)”
- Check the drive
- Check the position control direction
- Check the speed set value cable
- Check actual values (encoder)

**160* Drift too high**

**Scan** Where there is semi-automatic drift compensation and changes to MDs

**Effect**
- Interlocking of NC START
- "Position not yet reached" is displayed
- No traversing movement is possible

**Explanation**
- The drift to be compensated by the NC automatically has risen beyond approximately 500 mV.

**Remedy**
- Carry out drift compensation in NC machine data “Drift compensation”
- Check whether the drift on the drive unit has been set correctly

**164* Coupled-motion axis programmed**

**Scan** When executing a part program

**Effect**
- Machining is interrupted
- Interlocking of NC START

**Explanation**
- The axis-specific alarm appears if a coupled axis is assigned several times in one part program block or if an axis is "Leading axis" and coupled axis at the same time in one part program block.

**Remedy**
- Check and correct program

**168* Servo enable traversing axis**

**Scan** With each axis movement

**Effect**
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Setpoint 0
- The control enable is removed after the time stored in NC machine data “Control enable cutout delay” has elapsed
- Follow-up operation

**Explanation**
- The axis-specific controller enable has been removed by the PLC during a traversing movement.

**Remedy**
- Check the PLC program
<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>172*</td>
<td>Working area limitation plus</td>
<td>Reset key</td>
<td>When executing a part program</td>
<td>Interlocking of NC START, Machining stops</td>
</tr>
<tr>
<td>176*</td>
<td>Working area limitation minus</td>
<td>Reset key</td>
<td>When executing a part program</td>
<td>Machining stops, Interlocking of NC START</td>
</tr>
<tr>
<td>180*</td>
<td>Axis active in several channels</td>
<td>Reset key</td>
<td>When executing a part program</td>
<td>Interlocking of NC START, Machining stops</td>
</tr>
<tr>
<td>188*</td>
<td>HW limit switch plus</td>
<td>Reset key</td>
<td>Cyclic</td>
<td>Interlocking of NC START, Direction key in the direction of approach disabled, Machining stops</td>
</tr>
<tr>
<td>192*</td>
<td>HW limit switch minus</td>
<td>Reset key</td>
<td>Cyclic</td>
<td>Machining stops, Interlocking of NC START, Direction key disabled in approach direction</td>
</tr>
</tbody>
</table>
196* Coupled-motion axis assigned twice  
Reset key

Scan  When executing a part program
Effect  • Interlocking of NC START
         • Machining is interrupted
Explanation  • 2 leading axes have been programmed whose coupled axes are the same.
            Axis X → Axis Y
            Axis Z → Axis Y
         • 2 leading axes have been programmed with one leading axis also being the coupled axis of the other leading
            axis.
            Axis X → Axis Y
            Axis Y → Axis Z
Remedy  • Correct program

2000 Emergency Stop  
POWER ON
Scan  Cyclic
Effect  • Interlocking of NC START
         • Setpoint 0
         • Follow-up operation as internal setting
Explanation  The “EMERGENCY STOP” signal is output to the NC from the PLC.
Remedy  • Check with PLC STATUS
         • Check whether “EMERGENCY STOP” cam has been approached or “EMERGENCY STOP” button has been
            actuated
         • Check the PLC user program
Note  On selecting Start-up mode, there is always an Emergency Stop message.

2021 Contour violation with tool radius compensation  
Reset key
Scan  When executing a part program, with active TRC
Not:  in the selection block
       in the deselection block
Effect  The tool radius compensation has recognized a contour violation. Processing of the part program is interrupted
          (depending on MD 5024, bit 0), the alarm is cancelled with RESET.
Explanation  – The contour calculation results in a traversing movement which is opposite to the programmed movement
              (e.g. when machining an internal circle, where the milling radius is larger than the circle radius).
              – Between two blocks in the TRC plane, too many blocks have been programmed outside the TRC plane (see
                also Programming Guide, Section 11.11). In this case, the block number displayed indicates the 4th block
                outside the TRC plane.
Remedy  • Check program specifications
         • Deselect compensation at the respective point and select it again
         • Check used tool against the specifications (tool radius too large?)
Note  • Alarm is displayed with reference to block and channel.

2022 Plane not defined for TO type  
Reset key
Scan  When executing a part program
Effect  • Interlocking of NC START
         • Machining stops
Explanation  On selecting a D No. of tool type 50..59, the CRC plane and the length compensations were not defined with G16.
Remedy  Define CRC plane and length compensations with G16!
Note  Applies as from SW 4
Note  • Alarm is displayed with reference to block and channel
1 Alarms

1.5.1 Alarm description

2023 Invalid type of tool
Scan When executing a part program
Effect • Interlocking of NC START
Explanation A tool has been selected with unknown tool type (0, >59), or a tool of type 50..59 has been selected, even though the tool offset memory has been formatted with fewer than 12 parameters.
Remedy Enter a permissible tool type for the selected tool.
Note Applies as from SW 4
Note Alarm is displayed with reference to block and channel

2031 Weighting factor too large/small
Scan When executing a part program
Effect • Interlocking of NC START
• Machining stops
• Deletion of part setpoint
Explanation The actual axis velocity has become so large, as a result of recalculation with the specified weighting factor, that the maximum permissible velocity with the axis-specific position control resolution set has been exceeded.
Remedy • Check NC machine data “Weighting factor” (MD 388*)
• Program a lower velocity
• Reduce the feedrate or rapid override

2036 G35 pitch decrease too high
Scan When thread cutting
Effect • Interlocking of NC START
• Machining stops
Explanation The lead decrease in the thread is so large that a lead greater than or equal to 0 would result at the end of the thread.
Remedy • Program a smaller lead decrease or a shorter thread
Note Channel-specific

2037 Programmed S value too high
Scan When executing a part program
Effect None; for information only
Explanation • The programmed spindle speed in AUTOMATIC/MDA is too high.
• Resulting velocity too high for thread, see Installation and Start–up Guide, Section 10.2.
Remedy • Program lower spindle speed

2038 Path feed too great
Scan When executing a part program
Effect • Machining is interrupted
• Interlocking of NC START
• Axes go into follow-up mode, servo-enable is cancelled
Explanation The axis velocity has been made so large by the programmed path feedrate that the maximum permissible axis velocity with the position control resolution set has been exceeded.
Remedy • Program a smaller path feedrate
• Check interpolation combinations in the part program block
Note Channel-specific
### 2039 Reference point not reached

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>When executing a part program</td>
<td>Interlocking of &quot;NC START&quot;</td>
<td>The reference point has not been approached by at least one axis and NC START has been pressed in MDA or AUTOMATIC mode. Nockensignale wurden aktiviert, ohne daß für diese &quot;Referenzpunkt erreicht&quot; war.</td>
<td>Approach reference point</td>
<td>Alarm does not occur if the NC machine data &quot;NC START without reference point&quot; is set</td>
</tr>
</tbody>
</table>

### 2040 Program disabled

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>When executing a part program</td>
<td>Machining stop</td>
<td>The program (MPF, SPF) called has not been enabled for processing.</td>
<td>Enable</td>
<td>Alarm is displayed with reference to channel</td>
</tr>
</tbody>
</table>

### 2041 Program does not exist in memory

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>When specifying a program number and then pressing NC START</td>
<td>Interlocking of NC START</td>
<td>The preselected program is not in the memory</td>
<td>Check program</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Machining stops</td>
<td>A non-existent subroutine is called in the main program</td>
<td></td>
<td>Channel-specific</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The contour for the stock removal cycle does not exist</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Select “Overview”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 2042 Parity error in memory

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>When executing a part program</td>
<td>Interlocking of NC START</td>
<td>One or more characters in the memory have been corrupted so that they can no longer be recognized</td>
<td>Clear part program block and re-enter</td>
<td>Channel-specific</td>
</tr>
<tr>
<td></td>
<td>Machining stops</td>
<td>These characters are displayed in the “Correction block” or in the part program under “Programming” as “?”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 2043 Program error in transformation

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>When executing a part program</td>
<td>Interlocking of NC START</td>
<td>Programming actual axes with transformation selected</td>
<td>Correct program</td>
<td>Channel-specific</td>
</tr>
<tr>
<td></td>
<td>Machining is interrupted</td>
<td>Programming fictitious axes with transformation deselected</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Selecting transformation although transformation has already been selected</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Programming traversing movements in the selection block of transformation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Effect</td>
<td>Explanation</td>
<td>Remedy</td>
<td>Note</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>-------------</td>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>Scan</td>
<td>Effect</td>
<td>Explanation</td>
<td>Remedy</td>
<td>Note</td>
</tr>
<tr>
<td>Scan</td>
<td>Effect</td>
<td>Explanation</td>
<td>Remedy</td>
<td>Note</td>
</tr>
<tr>
<td>Scan</td>
<td>Effect</td>
<td>Explanation</td>
<td>Remedy</td>
<td>Note</td>
</tr>
<tr>
<td>Scan</td>
<td>Effect</td>
<td>Explanation</td>
<td>Remedy</td>
<td>Note</td>
</tr>
</tbody>
</table>

**2044  Error execution external**

- **Scan**: When starting a program from external
- **Effect**: NC START is interrupted
- **Explanation**: The alarm is displayed
  - When the selected program from external is already being processed in another channel
  - When an interface (file transfer) is to be addressed in several channels
  - When an interface is to be addressed which is already busy
  - When an interface is to be addressed while an alarm is present
  - When "Location receiver" or "Logical peer receiver" are unknown at the beginning of the file transfer.
- **Remedy**: Check machine data 130*
  - Check the active interfaces
  - Check machine data 5148 – 5152

**2046  Block > 120 characters**

- **Scan**: When executing a part program
- **Effect**: Interlocking of NC START
  - Machining stops
- **Explanation**: An “L F” in the memory is corrupted so that a block of more than 120 characters has resulted.
- **Remedy**: Insert “L F” without deleting the whole block

**2047  Option not available**

- **Scan**: After presetting or programming a function which is not present
- **Effect**: Interlocking of NC START
  - Machining stops
- **Explanation**: A function has been programmed which is not included in the function set of the control.
- **Remedy**: Correct program
  - Check NC machine data
  - Have Service Dept. check function options

**2048  Circle end point error**

- **Scan**: When processing a circle block in AUTOMATIC or MDA
- **Effect**: Interlocking of NC START
  - Machining stops
- **Explanation**: The programmed circle end point is not on the circle.
  - The end point is further out than the limit input in NC machine data “Circle end point monitoring”
- **Remedy**: Correct program

**2049  Axis/spindle converter not available**

- **Scan**: After presetting or programming the axis/spindle converter function which has not been implemented
- **Effect**: Interlocking of NC START
  - Machining stops
- **Explanation**: The axis/spindle converter function has been programmed which is not included in the function set of the control.
- **Remedy**: Correct program
  - Check NC–MD
  - Have Service Dept. check function options

**Note**

- Alarm is displayed with reference to block and channel
### 2050 Rotary axis path is too small with G98

**Scan** When executing a part program  
**Effect**  
- Machining stops  
- Interlocking of NC start  
**Explanation** The traversed distance to go of the rotary axis in G98 is so small (or 0) that it is not possible to calculate a path feedrate for the linear axes to be traversed.  
**Remedy** Check the programmed values in the block. If the rotary axis has to traverse a distance to go, path feed (G94) should be used in this block.  
**Note** Alarm is displayed with reference to channel

### 2056 Travel through transformation center

**Scan** When executing a part program  
**Effect**  
- Interlocking of NC START  
- Machining is interrupted  
**Explanation** With TRANSMIT transformation selected, a part program block which brings about a movement directly through the transformation centre has been programmed.  
**Remedy**  
- Check program  
- Check whether the function “Travel through transformation center” can be used.  
**Note** Alarm is displayed with reference to block and channel

### 2057 Thread/revolutional feedrate missing

**Scan** When executing a part program  
**Effect**  
- Machining is not started or is terminated  
- Interlocking of NC START  
**Erläuterung**  
- A thread has been programmed with G33, G34, G35 although this function has not been implemented in the control.  
- Revolutional feedrate G95 has been programmed  
- With 840 T, the NC machine data “Revolutional feedrate” has not been set  
- A program not included in the function set of the control has been programmed  
**Remedy**  
- Check program  
- Check NC machine data  
- Have function options upgraded.  
**Alarm is displayed with reference to block and channel.**

### 2058 3D interpolation missing

**Scan** When executing a part program  
**Effect**  
- Machining stops  
- Interlocking of NC START  
**Explanation** More than two axes have been programmed in one block in a program, or a function has been selected which may result in additional axes from the programming, e.g. when setting the coordinate rotation  
**Remedy**  
- Check program  
- Have function option retrofitted if possible  
**Note** Alarm is displayed with reference to block and channel.

### 2059 Programming error with G92

**Scan** When executing a part program  
**Effect**  
- Machining is not started or is terminated  
- Interlocking of NC START  
**Explanation**  
- An illegal address letter has been used  
- The unit and working diameter factor is ZERO  
**Remedy**  
- Check program block  
- Check machine data  
**Note** Alarm is displayed with reference to block and channel.
### 2060 Programming error with TO or ZO

**Scan**  When executing a part program  
**Effect**  • Machining is interrupted  
• Interlocking of NC START  
**Explanation**  • Tool type is 0 (i.e. no tool)  
• A tool offset number which is not present has been selected  
• The values in the zero offsets or tool offsets selected are too large  
**Remedy**  • Check and correct specifications of tool offsets and zero offsets  
• Check and correct program  
**Note**  Alarm is displayed with reference to block and channel

### 2061 General programming error

**Scan**  When executing a part program  
**Effect**  • Machining is stopped or is not started  
• Interlocking of NC START  
**Explanation**  • The programmed distance to go has exceeded the permissible distance to go. This is dependent on the input resolution, for example.  
• G63 was not programmed together with G01 (G63 has no effect with G0).  
• An axis for which mirroring is active has been programmed with G220 or @736.  
• A thread block has been programmed with thread lead 0 or distance to go 0.  
• G02/G03 has been programmed together with G63.  
**Remedy**  • Check the program part and correct the incorrect setting  
• Check the input resolution selected  
**Note**  Alarm is displayed with reference to block and channel

### 2062 Feed is missing

**Scan**  When executing a part program  
**Effect**  • Machining stops  
• Interlocking of NC START  
**Explanation**  • Revolutionl feedrate G95 greater than 50 mm/min. has been programmed  
• No revolutionl feedrate has been programmed  
• No feedrate value (F value) has been programmed  
• Feedrate is missing for soft approach and retraction  
• Setting in machine data MD 280* for max. speed of an axis has been given the value 0  
**Remedy**  • Check settings in program block  
• Check machine data settings  
• Cancel alarm using RESET key  
**Note**  Alarm is displayed with reference to block and channel

### 2063 Thread pitch too large

**Scan**  When thread cutting with G33  
**Effect**  • Machining stops  
• Interlocking of NC START  
**Explanation**  • The thread lead can be specified in the program under I, J or K. The programmed set value exceeds the permissible value depending on the preset display resolution.  
**Remedy**  • Correct program block whose block number and channel number are specified in the alarm display  
• Cancel alarm using RESET  
**Note**  Alarm is displayed with reference to block and channel
2064  Wrong programming of rounding axis

**Scan**  When executing a part program

**Effect**  
- Interlocking of NC START
- Programmed path is not exited
- Machining stops

**Explanation**  If a rotary axis is rounded to a half or whole degree, then the control monitors whether the rounding has been maintained for the programmed positions.

**Remedy**  
- Program correct position in the rotary axis
- Check the machine data “Whole/half degree” and “Rotary axis”
- Check whether the interface signal “Clear distance to go” has been set, in which case no automatic rounding takes place.

**Note**  In the JOG modes, the control automatically rounds to valid values. In AUTOMATIC or MDA, the control only monitors the programmed positions without itself carrying out rounding.

**Note**  Alarm is displayed with reference to block and channel

2065  Progr. position behind SW limit switch

**Scan**  When executing a part program

**Effect**  
- Interlocking of NC START
- Programmed path is not traversed
- Machining stops

**Explanation**  The programmed end point of the block is beyond the software limit switch.

**Remedy**  
- Correct program
- Machine data “1st software limit switch plus”
- Machine data “1st software limit switch minus”
- Machine data “2nd software limit switch plus”
- Check machine data “2nd software limit switch minus” depending on the PLC interface signal “2nd software limit switch active”

**Note**  Alarm is displayed with reference to block and channel

2066  Thread increase/decrease too high

**Scan**  When executing a part program

**Effect**  
- Interlocking of NC START
- Machining stops

**Explanation**  A thread or lead increase or decrease of more than 16 mm/revolution (0.6 inches/revolution) has been programmed.

**Remedy**  
- Program smaller lead increase/decrease

**Note**  Alarm is displayed with reference to block and channel

2068  Position behind working area limitation

**Scan**  When executing a part program

**Effect**  
- Interlocking of NC START
- Programmed path is not traversed
- Machining stops

**Explanation**  The programmed end point of the block is beyond the working area limitation.

**Remedy**  
- Correct program

**Note**  Alarm is displayed with reference to block and channel
### 2069 5D tool length comp. not possible

**Scan**  When executing a part program

**Effect**  
- Machining is interrupted or not performed
- Interlocking of NC START

**Explanation**  
- Cutter radius compensation has been selected
- No linear interpolation has been selected
- Function is not enabled
- Machine data have been entered incorrectly
- Export version

**Remedy**  
- Check program
- Check machine data

**Note**  Alarm is displayed with reference to block and channel

### 2070 5D interpolation missing

**Scan**  When executing a part program

**Effect**  
- Machine stops
- Interlocking of NC START

**Explanation**  More than three axes have been programmed in one block in a program, or a function has been selected which may result in additional axes from the programming, e.g. when specifying the coordinate rotation.

**Remedy**  
- Check program
- Have function option retrofitted if possible

**Note**  Alarm is displayed with reference to block and channel

### 2072 Wrong input value contour definition

**Scan**  When working in AUTOMATIC or MDA

**Effect**  
- Machining is not performed or is terminated
- Interlocking of NC START

**Explanation**  When programming, an input which cannot be calculated was specified for contour definition calculation.

**Remedy**  
- Check program and correct input values
- Cancel alarm using “RESET”

**Note**  Alarm is displayed with reference to block and channel

### 2073 No intersection contour definition

**Scan**  When working in AUTOMATIC

**Effect**  
- Machining is not performed or is terminated
- Interlocking of NC START

**Explanation**  In calculating the contour definition with the programmed values, no intersection results.

**Remedy**  
- Check program settings
- Cancel alarm using “RESET”

**Note**  Alarm is displayed with reference to block and channel

### 2074 Wrong angle value contour definition

**Scan**  When working in AUTOMATIC or MDA

**Effect**  
- Interlocking of NC START
- Machining stops

**Explanation**  
- Angle > or = 360 degrees has been programmed
- Value of angle for the contour described is meaningless

**Remedy**  
- Check and correct program settings
- Cancel alarm using “RESET”

**Note**  Alarm is displayed with reference to block and channel
### 2075 Wrong radius angle contour definition

**Scan**
- When working in AUTOMATIC or MDA

**Effect**
- Interlocking of NC START
- Machining stops

**Explanation**
- Radius value too large
- Radius value not permitted with the contour described

**Remedy**
- Check program
- Cancel alarm using Reset

**Note**
Alarm is displayed with reference to block and channel

### 2076 Wrong G02/G03 contour definition

**Scan**
- When working in AUTOMATIC or MDA

**Effect**
- Interlocking of NC START
- Machining stops

**Explanation**
- Circle direction with the contour described is not possible

**Remedy**
- Correct program
- Cancel alarm using "RESET"

**Note**
Alarm is displayed with reference to block and channel

### 2077 Wrong block sequence contour def

**Scan**
- When processing part programs in AUTOMATIC

**Effect**
- Machining is terminated
- Interlocking of NC START

**Explanation**
- In calculating the contour definition several blocks are required.
- Block sequence cannot be correct
- Inadequate information is available (under-defined)

**Remedy**
- Check program
- Cancel alarm using Reset

**Note**
Alarm is displayed with reference to block and channel

### 2078 Wrong input parameters contour def.

**Scan**
- When processing part programs in AUTOMATIC or MDA

**Effect**
- Machining stops
- Interlocking of NC START

**Explanation**
- Programmed parameter sequence is not permitted
- Parameter sequence is incomplete with the contour described

**Example:**
N10... X60 B15 Lf (Z axis missing
N20... X90 B10 Lf

**Remedy**
- Check program
- Cancel alarm using Reset

**Note**
Alarm is displayed with reference to block and channel

### 2081 Block not allowed with TRC

**Scan**
- When processing in AUTOMATIC

**Effect**
- Machining is stopped
- Interlocking of NC START

**Explanation**
- With TRC selected, the following functions may not be programmed:
  - G33, G34, G35, G58, G59, G92, @714 and all the functions that trigger an @714. e.g. G74, G200

**Remedy**
- Program G40 beforehand
- Deselection of TRC with G41, G42 D00

**Note**
Alarm is displayed with reference to block and channel
2082 TRC plane cannot be defined

Scan
When processing a part program in AUTOMATIC

Effect
- Machining is stopped
- Interlocking of NC START

Explanation
The axes of the TRC plane selected do not exist.

Remedy
- Machine data “Abscissa for prog. G16”
- Machine data “Ordinate for prog. G16”
- Machine data “Applicate for prog. G16”
- Select correct plane using G16

Note
Alarm is displayed with reference to block and channel

2083 Contour violation with TRC

Scan
When TRC is selected in AUTOMATIC
Not: in the selection block
in the deselection block

Effect
A contour violation may have occurred on the workpiece. The program is continued if MD 5024, bit 0, is set or machining is aborted. This also depends on whether the alarm has been acknowledged with the Acknowledgement key or the Reset key.

Explanation
The calculated compensation results in a direction of travel that is opposite to the programmed direction.

Remedy
- Check the program
- Deselect the compensation at a suitable point and reselect

Note
Alarm is displayed with reference to block and channel

2087 Coordinate rotation/ZO not allowed

Scan
When working in AUTOMATIC or MDA

Effect
- Interlocking of NC START
- Machining is interrupted

Explanation
- After selecting coordinate rotation (G54 to G59) a circular movement (G02, G03) was programmed in the following block.
- After selecting coordinate rotation (angle ≠ 0 degrees) the settable zero offset (G54 to G57) was changed.
- After selecting coordinate rotation (angle ≠ 0 degrees) the plane (G16, G17, G18, G19) was changed.

Remedy
- Correct program
- The plane can only be changed if the angle of rotation is 0 degrees.
- The settable zero offset (G54 to G57) can only be changed if the angle of rotation is 0 degrees.
- Set angle of rotation in the settable zero offsets (G54 to G57) to 0 degrees and work only with G58 and G59.

Note
Alarm is displayed with reference to block and channel

2160 Illegal scale factor

Scan
When working in AUTOMATIC or MDA

Effect
- Interlocking of NC START
- Machining is interrupted

Explanation
The scale factor has exceeded the valid range of values:
+ P is negative
+ P = 0
+ P > 99.9999

Remedy
Note the valid range of values for scale factor:
(P = 0.00001 to 99.9999)

Note
Alarm is displayed with reference to block and channel
### 2161 Illegal scale modification

**Scan**
When working in AUTOMATIC or MDA

**Effect**
- Interlocking of NC START
- Machining is interrupted

**Explanation**
With a scale factor of $\geq 1$, an axis position was programmed which was so large that internal representation is no longer possible.

**Remedy**
- Check programmed axis position
- Reduce scale factor

**Note**
Alarm is displayed with reference to block and channel

---

### 2171 Approach not possible

**Scan**
When working in AUTOMATIC or MDA

**Effect**
- Machining is interrupted

**Explanation**
In the block after approach, no axis for the selected plane (G16, G17, G18, G19) has been programmed, so that a vector to the tangential approach cannot be calculated.
- In the selection block, or in the following block for soft approach, @714 has been programmed.

**Remedy**
- Correct program (G147, G247, G347), programming at least one axis of the selected plane in the block after the approach.

**Note**
Alarm is displayed with reference to block and channel

---

### 2172 Retraction not possible

**Scan**
When working in AUTOMATIC or MDA

**Effect**
- Machining is interrupted

**Explanation**
In the block before retraction no axis for the selected plane (G16, G17, G18, G19) has been programmed, so that a vector to the tangential exit cannot be calculated.
- In the deselection block or in the previous block @714 has been programmed
- G48 programmed without previous selection
- More than 5 axes are traversed in the deselection block because 1 axis has been added to the plane.

**Remedy**
- Correct program (G148, G248, G348, G48), programming at least one axis of the selected plane in the block before the retraction movement.

**Note**
Alarm is displayed with reference to block and channel

---

### 2173 Approach/retraction plane wrong

**Scan**
When executing a part program

**Effect**
- Machining is interrupted

**Explanation**
A plane change is programmed in the block after selection (G16, G17, G18, G19)
- A plane change is programmed in the deselection block

**Remedy**
- Correct program (plane change)

**Note**
Alarm is displayed with reference to block and channel

---

### 2184 M fct. for C axis switchover not allowed

**Scan**
Cyclic

**Effect**
None

**Explanation**
M function for C axis ON/OFF (MD 260, MD 261) has been given a value reserved by the system.

**Remedy**
Enter the correct value
### 2189 Transformation not defined

<table>
<thead>
<tr>
<th>Scan</th>
<th>On transformation selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Interlocking of NC START</td>
</tr>
<tr>
<td></td>
<td>Machining stops</td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>The type of transformation is not defined</td>
</tr>
<tr>
<td></td>
<td>The transformation axes are in different mode groups</td>
</tr>
<tr>
<td></td>
<td>The option of selecting transformation is not available</td>
</tr>
<tr>
<td></td>
<td>Transformation has been selected in an illegal channel</td>
</tr>
<tr>
<td></td>
<td>Transformation is defined several times or wrongly</td>
</tr>
<tr>
<td></td>
<td>Transformation data block has been declared invalid by alarm 3087 (error in transformation data)</td>
</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Check transformation data block</td>
</tr>
<tr>
<td></td>
<td>Check program</td>
</tr>
<tr>
<td></td>
<td>Order option</td>
</tr>
<tr>
<td></td>
<td>Check channel number</td>
</tr>
</tbody>
</table>

**Note** Alarm is displayed with reference to block and channel

### 2190 Transformation axes assigned

<table>
<thead>
<tr>
<th>Scan</th>
<th>On transformation selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Interlocking of NC START</td>
</tr>
<tr>
<td></td>
<td>Machining stops</td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>A transformation has been selected whose actual axes are also used in another channel in a parallel transforma-</td>
</tr>
<tr>
<td></td>
<td>tion.</td>
</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Wait until transformation is deselected in the parallel channel</td>
</tr>
<tr>
<td></td>
<td>Check program</td>
</tr>
</tbody>
</table>

**Note** Alarm is displayed with reference to block and channel

### 2191 Transformation in zero

<table>
<thead>
<tr>
<th>Scan</th>
<th>On selecting transformation in AUTOMATIC or MDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Interlocking of NC START</td>
</tr>
<tr>
<td></td>
<td>Machining is interrupted</td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>Transformation was selected at a time when one or more axes involved in transformation have the actual position</td>
</tr>
<tr>
<td></td>
<td>ZERO.</td>
</tr>
<tr>
<td></td>
<td>When selecting TRANSMIT, the X axis (transverse axis) must not have the actual position ZERO.</td>
</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Before selecting transformation, set the actual axes of the transformation to be selected to permissible actual posi-</td>
</tr>
<tr>
<td></td>
<td>tions. (With TRANSMIT set the X axis to X ≠ 0)</td>
</tr>
</tbody>
</table>

**Note** Alarm is displayed with reference to block and channel

### 2192 Following error comp. not possible

<table>
<thead>
<tr>
<th>Scan</th>
<th>At the beginning of a threading block, if the option has been selected.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Machining is stopped and NC START is interlocked</td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>The servo gain (Kv) factors of the axes involved in thread cutting are too small.</td>
</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Check the servo gain factors of the axes involved in thread cutting and correct if necessary--</td>
</tr>
</tbody>
</table>

### 2193 Wrong axis/spindle operation

<table>
<thead>
<tr>
<th>Scan</th>
<th>When switching over from C axis to spindle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Machining stops</td>
</tr>
<tr>
<td></td>
<td>Interlocking of NC START</td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>A spindle has been programmed in C axis mode or a C axis has been programmed in spindle mode</td>
</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Change C axis/spindle mode</td>
</tr>
</tbody>
</table>

**Note** Applies up to SW 2
2194  There is no FIFO  Reset key
Scan  After POWER ON or warm start
Effect  • Function is not executed
        • Interlocking of NC START
Explanation  FIFO has been assigned to a channel but has not been activated.
Remedy  • Correct program
         • Check NC MD
         • Have service personnel check the function option
         • Have function option retrofitted
Note  Applies up to SW 2

2195  Too many FIFO channels defined  Reset key
Scan  At POWER ON or warm restart
Effect  • Interlocking of NC START
        • Machining not possible
Explanation  The FIFO memory can be assigned to a maximum of two channels
Remedy  • Check NC MD
Note  Applies up to SW 2

2260  Incorrect parameters “Ext. stop”  Reset key
Scan  When configuring G421–6.
Effect  • Machining stops
Explanation  1. Axis/spindle already involved in extended stopping and retraction.
2. Axis/spindle already involved through G422/5/6 in extended stopping and retraction.
Remedy  Check and modify programming/parameterization.
Note  Applies as from SW 4. Alarm is displayed with reference to channel

2500  Program is being edited  Acknowledgement key
Scan  At NC START
Effect  • Interlocking of NC START
        • Machine stops
Explanation  NC START calls a program which is in the process of being edited
Remedy  Terminate editing

2501  Program is being read-in  Acknowledgement key
Scan  At NC START
Effect  • Function is not executed
        • Interlocking of NC START
Explanation  NC START calls a program which is in the process of being read in through the computer link or from disk from the MMC.
Remedy  Wait for the end of the read-in process

2502  Program already exists  Reset key
Scan  When starting a program from external
Effect  • NC START is interrupted
Explanation  The alarm is displayed
        • If a program with the same program no. as the program to be processed externally is already in the part program memory.
Remedy  • Rename or delete the program which already exists
Note  Channel-specific
2503 Not enough memory available
Scan When starting a program from external
Effect • NC START is interrupted
Explanation The alarm is displayed
• When the memory set in MD30 is not available for the program to be processed externally.
Remedy • Make sufficient part program memory available (delete part programs)
• Lower value in MD30
Note Channel-specific

2504 Emergency retract triggered
Scan Cyclic in the servo cycle when LINK_ON for the following axis (from servo).
Effect Machining interrupt, interlocking of NC START; removal of Mode Group Ready.
Explanation The threshold MD “Emergency retraction threshold” programmed for monitoring of synchronism has been exceeded and emergency retraction triggered.
Remedy Prerequisite: Enable by means of PLC IS “Emergency retraction enabled”.
• Inspect the drives; check the velocity and acceleration limit values of the following axis/spindle; check the emergency retraction threshold; check the link factors.
Note Applies as from SW 3. Alarm is displayed with reference to channel

2505 Error in NCK FB
Scan During cyclic operation of control
Effect Interlocking of NC START
Follow-up mode Removal of Mode Group Ready
Interruption of machining
Explanation The machine data for the SGE/SGA input/output allocations (46000 – 47999) have been entered incorrectly. The incorrect MD No. is output in the alarm as block no. Nxxxxx.
Remedy Correct the indicated machine data.
Continuation No program can be started. Acknowledge alarm by RESET.
Note • The alarm 2505 is only output if configured correspondingly by the machine manufacturer. An error has occurred in the Safety–NCK–FB. For explanation and remedy, please refer to the machine manufacturer’s documentation.
• Applies as from SW 5.4

2506 Extended function outp. in target block
Scan During block preprocessing in AUTOMATIC or MDA
Effect Interlocking of NC–START
Explanation The target block during block preprocessing cannot be a G511/G522 block, as the output of accumulated miscellaneous functions and the extended output of the G511/G522 block collide functionally.
Remedy Select another target block.
Note Channel–specific reset alarm (as from SW 5.4), alarm is displayed with reference to channel
3000 General programming error

Explanation
- A general programming error which cannot properly be explained has been made in one block in the program.
- Division by 0
- A G function which does not exist has been programmed
- An R parameter which does not exist has been programmed
- No +, -, \( / \), " has been programmed in the R parameter chaining
- Range of values has been exceeded with R parameter calculation
- Number of decades exceeded (M, S, T, D, H, L, P, F)
- Subroutine number of passes P not programmed directly behind L
- Main block ":" programmed in subroutine
- Two decimal points programmed
- Decimal point programmed with M, S, T, D, H, L, P
- More than 8 decades programmed
- The programmed axis values exceed the travel range limits with the set input resolution
- Auxiliary functions D, F, S or T are programmed with a minus sign.
- SW 3 and higher, block search to a spline interpolation coefficient block
- The F word in G501 exceeds the value range or is negative.

Remedy
- Check the incorrect block in the “Correction block” display
- The cursor is placed on the incorrect word, if possible
- The block number of the incorrect block is positioned behind the alarm number in the alarm line.
- Correct the F word accordingly.

Example:

<table>
<thead>
<tr>
<th>3000</th>
<th>1</th>
<th>N0010</th>
<th>General programming error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm number</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel number</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block number “N10” which contains errors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alarm text</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note
Alarm is displayed with reference to channel
3001 Number of geometry parameters > 5

**Scan**
When executing a part program

**Effect**
- Machining stops

**Explanation**
- More than 2 radii or more than 2 angles have been programmed in the block
- More than 5 geometry parameters such as axes, interpolation parameters, radii, angles, etc. have been programmed in the block

**Remedy**
- Check the faulty block in the “Correction block” display
- If possible the cursor is positioned in front of the faulty word
- The number of the faulty block is after the alarm number in the alarm line

**Example:**
3000 1 N0010 General programming error
3000 – Alarm number
1 – Channel number
N0010 – Block number “N10” containing errors.

**Note**
Alarm is displayed with reference to block and channel

---

3002 Polar coordinates/radius error

**Scan**
When executing a part program

**Effect**
- Machining stops
- Interlocking of NC START

**Explanation**
- When programming circle/radius, full circle programmed.
- For cylindrical interpolation if:
  - Calculated interpolation parameters in the C axis are too large or P factor is too small
  - P factor or axial distance to go of the rotary axis for cylindrical interpolation too large

**Remedy**
- Check the faulty block in the “Correction block” display
- If possible the cursor is positioned in front of the faulty word
- The number of the faulty block is after the alarm number in the alarm line
3003 Invalid address programmed

**Scan**
When executing a part program

**Effect**
- Machining stops

**Explanation**
An address has been programmed other than that entered in NC machine data.

The error can also occur when invalid values for G functions are entered in the channel-specific MD as from 108* (delete position specification for G channel-specific functions).

**Example:**
Wrong: \[N20 \text{ G0} \text{ C100 L} F\] (rapid traverse for fourth axis)
However, the fourth axis is defined by the address Q in the NC machine data.

Correct: \[N20 \text{ G0} \text{ Q100 L} F\]

**Remedy**
- Check the faulty block in the “Correction block” display
- If possible, the cursor is positioned in front of the faulty word
- The number of the faulty block is after the alarm number in the alarm line

**Note**
Alarm is displayed with reference to block and channel

3004 Error in CL800 programming

**Effect**
Machining stops

**Explanation**
Formal errors
- Machining stops
- Incorrectly entered characters (0...9 and a...f are possible)
- @ number is greater than the decades for a text-type message
- @ number or @ function not implemented with SINUMERIK 840
- @ number or @ function cannot be programmed in CL800 or are not defined

Input errors with address letters and numerical values
- Incorrect address letters (K, R and P are permitted)
- Number of decades too high (max. K 8 decades permitted)
- Number of decades too high (max. R 4 decades permitted)
- Number of decades too high (P 4 decades permitted)
- R parameter number not defined or too high
- Point programmed in R parameter number
- Point programmed in P parameter number
- Incorrect number of words

Input errors with specific @ functions:
- Program branching
- Error in the block number (programmed point, block number greater than four decades)

Data transfer system line – R parameter
- Constant or R parameter contents programmed too large for information such as: axis number, channel number, TO area, NC/PLC machine data, NC setting data, D number, P number, group for zero offsets, preset “COARSE/FINE” alarm number
- Bit number too large (0 to 7 are permitted)
- System line non-existent
- Incorrect value input for system line

Mathematical and logical functions
- Value selected too high for square root
  \[ (+/– 00 000 001...99 999 999 \text{ permitted})\]
- Incorrect angle selected for sine \([-360 (0) + 360 \text{ permitted})\]
- Two constants used for:
  Angle from two vector components, OR, EXOR, AND, NAND
- Incorrect characters input for logical functions \((0, 1 \text{ permitted})\) (Only bits and bytes) (max. eight bits)

NC specific functions
- Incorrect address letter used for number of axes
- Number of axes selected too high (max. 3 axes permitted per block)
- No axis name programmed (0)

**Note**
Alarm is displayed with reference to block and channel
3005  Error in contour definition  Acknowledgement key
Scan  When executing a part program
Effect  • Machining stops
Explanation  The coordinates in the contour description have been defined so that there is no intersection.
  • Too many geometry values have been programmed
Remedy  • Check the faulty block in the “Correction block” display
  • If possible the cursor is positioned in front of the faulty word
  • The number of the faulty block is after the alarm number in the alarm line
Note  Alarm is displayed with reference to block and channel

3006  Wrong block structure  Acknowledgement key
Scan  When executing a part program
Effect  • Machining stops
  • Interlocking of NC START
Explanation  • Approach to reference point with program and specification of the wrong G function or more than one axis, or an impermissible axis.
  • Wrong thread lead parameters with G33
  • More than 3 M functions in the block
  • More than 1 S function in the block
  • More than 1 T function in the block
  • More than 1 H function in the block
  • More than 4 auxiliary functions in the block
  • More than 6 axes + geometry parameters
  • More than 5 axes with G00, G01, G02, G03
  • More than 2 axes with G10, G12, G13, G110, G111, G112
  • More than one radius/angle with G10, G11, G12, G13, G110, G111, G112
  • Negative radius with G10, G11, G12, G13
  • First programming of polar coordinates G10, G11, G12, G13 or angle/radius
  • More than two axes with G02, G03 (circle radius programming)
  • G04 programmed with addresses other than X, F or S
  • G04 is not programmed in the block by itself
  • M19 S is programmed with other functions
  • Incorrect circle parameters with G02, G03 axes
  • Axis missing with circle radius programming
  • Before the first G110 block in the program, a G10/G11 block must have been programmed
  • G110 may not be programmed with axes
  • Incorrect programming in connection with G176 freeze function
  • Either too few measured value memories or none at all have been defined for G720/721/722 via the flexible memory configuration
  • On G511/G522
    • An F word does not immediately follow G511/G522
    • G511/G522 is superfluous, because neither a miscellaneous function nor a program coordination command or an F word output to the PLC is programmed.
Remedy  • Check the faulty block in the “Correction block” display
  • If possible the cursor is positioned in front of the faulty word
  • The number of the faulty block is after the alarm number in the alarm line
  • Re G511/G522
    • Place the F word immediately after G511/G522
    • Delete G511/G522 F...
Note  Alarm is displayed with reference to block and channel
### 3007 Error in programming setting data

**Scan**
- When executing a part program

**Effect**
- Machining stops

**Explanation**
- M19 without S word
- Spindle not present
- Illegal setting data programmed, e.g. G92 X... Y..., G92 D, T, A, I, J
- Error in parameterization of handwheel pulse weighting for G27 (SD 564*)

**Remedy**
- Check the faulty block in the “Correction block” display
- If possible the cursor is positioned in front of the faulty word
- The number of the faulty block is after the alarm number in the alarm line

**Note**
- Alarm is displayed with reference to block and channel

### 3008 Subroutine error

**Scan**
- When executing a part program

**Effect**
- Machining stops

**Explanation**
- M17 not in the subroutine
- M02, M30 in the subroutine
- M17 in the main program
- More than 3 subroutine levels

**Remedy**
- Check the faulty block in the “Correction block” display
- If possible the cursor is positioned in front of the faulty word
- The number of the faulty block is after the alarm number in the alarm line
- SW 3 and higher, number of permissible subroutine levels exceeded
- Subroutine call in the block with M2, M30 or M17

**Note**
- Alarm is displayed with reference to block and channel

### 3009 Program disabled

**Scan**
- On NC START, or when editing a program during machining

**Effect**
- Machining stops

**Explanation**
- Pressing “NC START” calls a program which was disabled by being opened, by “Copy” or by “Rename”. While a program is being edited it may not be called by “NC START”.

**Remedy**
- Once editing is complete, the locked program must be enabled.

**Note**
- Alarm is displayed with reference to block and channel

### 3010 Intersection error

**Scan**
- When executing a part program

**Effect**
- Machining stops

**Explanation**
- A mistake has been discovered during reference processing in conjunction with the calculation of intersection. Possible causes are:
  - Contour program without G00, G01, G03
  - Contour program with “Empty buffer memory” (@714)
  - Contour program with “Empty buffer memory” (@714)
  - Programmed axes are not the same as the plane selected
  - No intersection found
  - Stock removal path circular
  - R parameter number not available

**Remedy**
- Check program in which contour is stored.

**Note**
- Alarm is displayed with reference to block and channel
### 1 Alarms

#### 1.5.1 Alarm description

<table>
<thead>
<tr>
<th>No.</th>
<th>Alarm</th>
<th>Acknowledgement key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3011</td>
<td>Axis twice or too many axes</td>
<td>Acknowledgement key</td>
<td>When executing a part program</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>An axis has been programmed twice in the same block</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Check the faulty block in the “Correction block” display</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The number of the faulty block is after the alarm number in the alarm line</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alarm is displayed with reference to block and channel</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Alarm</th>
<th>Reset key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3012</td>
<td>Block does not exist in memory</td>
<td>Reset key</td>
<td>On block search or jumps in the part program</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>On block search, the block number is not available in the program.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Program which does not conclude with M30, M17</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– if a forward jump has been programmed outside the maximum memory area with “Execution from external”, (The target of the jump cannot be read in to the available memory area)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– Check the part program as regards the correct block number target or the correct program conclusion with M30/M02 or M17.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– Reduce jump distance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alarm is displayed with reference to block and channel</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Alarm</th>
<th>Acknowledgement key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3014</td>
<td>Axis disabled in channel</td>
<td>Acknowledgement key</td>
<td>When executing a part program</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The programmed axis is disabled for this channel by means of the NC machine data “Axis not valid for channel 1, 2, 3 or 4”.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Observe the programming notes of the machine manufacturer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alarm is displayed with reference to block and channel</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Alarm</th>
<th>Acknowledgement key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3015</td>
<td>Main block not in memory</td>
<td>Acknowledgement key</td>
<td>On automatic block search</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No main block was found in front of the target block during an automatic block search.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Check target block</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alarm is displayed with reference to block and channel</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Note</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Channel-specific</td>
</tr>
<tr>
<td></td>
<td>Applies up to SW 2 only</td>
</tr>
</tbody>
</table>
3016 Error in external data input

**Scan**
- On entering data from the PLC to the NC

**Effect**
- Machining stops

**Explanation**
With external data input from PLC and NC:
- The code is incorrect
- The value is too high
- The dimension ID is not valid

**Remedy**
- Check PLC program

3017 Part program available twice

**Scan**
- At POWER ON

**Effect**
- Machining stops

**Explanation**
The UMS contains a part program which is already stored in the part program memory of the NC (with the same ID).

**Remedy**
- Delete or rename the program in the part program memory
- Use a different UMS

**Note**
Applies up to SW 2 only

3018 Distance to contour too large

**Scan**
- With AUTO interrupt in the circle block and travelling away from the point of interruption

**Effect**
- Machining stops
- Additional alarm 2048

**Explanation**
If AUTOMATIC mode is interrupted while processing a circle block and the axes are positioned in a range, for example for tool change, outside the permissible tolerance for reapproach (scratching) (MD9), this alarm is triggered. To prevent incorrect positioning, the additional alarm 2048 – circle end point error – is set. Reapproach is only possible after a Reset.

**Remedy**
- Cancel alarms and perform a block search as far as the point of interruption. If necessary, check whether the MD9 setting can be made larger.

**Note**
Alarm is displayed with reference to channel

3020 Option not available

**Scan**
- On specifying a non-existent function

**Effect**
- Function is not processed

**Explanation**
A function not included or not enabled in the control has been programmed or selected.

**Remedy**
- Have function option retrofitted or set function enable bit.

**Note**
Alarm is displayed with reference to channel

3021 Contour violation with tool radius comp.

**Scan**
- When executing a part program, with active TRC

**Not:**
- In the selection block
- In the deselection block

**Effect**
A contour violation has occurred on the workpiece. The program is continued, nevertheless (see MD 5024, bit 0). The alarm can be cancelled with the acknowledge key.

**Explanation**
- The contour calculation results in a traversing movement which is opposite to the programmed movement (e.g. when machining an internal circle, where the milling radius is larger than the circle radius).
- Between two blocks in the TRC plane, too many blocks have been programmed outside the TRC plane (see also Programming Guide, Section 11.11). In this case, the block number displayed indicates the 4th block outside the TRC plane.

**Remedy**
- Check programming.
- Deselect correction at a suitable point and select it again.
- Check tool used against specifications (tool radius too large?).

**Note**
Alarm is displayed with reference to channel
- In the case of an error, the block number indicated refers to the 4th block outside the compensation plane (TRC). See Programming Guide Section 11.1.
### Alarm Description

<table>
<thead>
<tr>
<th>Alarm</th>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>3022</td>
<td>Too many spindles programmed</td>
<td>When executing part program blocks in AUTOMATIC or MDA</td>
<td>Function is not executed</td>
<td>Reset key: Divide spindle programming into two or more blocks.</td>
</tr>
<tr>
<td>3023</td>
<td>Wrong spindle position in setting data</td>
<td>The alarm is output if M19 is programmed without an S value with MDA or in a part program and if an illegal value is set in the spindle setting data for oriented spindle stop (M19).</td>
<td>Interlocking of NC START; Machining stops</td>
<td>Reset key: Enter legal value in setting data; permissible range 0 – 359.99</td>
</tr>
<tr>
<td>3024</td>
<td>Display description missing</td>
<td>On display selection</td>
<td>Selected display does not appear</td>
<td>Acknowledgement key: Using a programmed softkey, an attempt has been made to select a display not available in the UMS or system memory.</td>
</tr>
<tr>
<td>3025</td>
<td>Display description has errors</td>
<td>On display selection</td>
<td>Selected display does not appear</td>
<td>Acknowledgement key: Using the NC workstation, check the display description with the NC workstation, in particular the information for data group, data type and format.</td>
</tr>
<tr>
<td>3026</td>
<td>Fixed-text component too large</td>
<td>On display selection via softkey</td>
<td>Not all fixed texts are displayed</td>
<td>Acknowledgement key: Using the NC workstation, reduce the fixed text part of the display or split up the contents over several displays.</td>
</tr>
<tr>
<td>3027</td>
<td>Graphics section too large</td>
<td>On display selection</td>
<td>No graphics display</td>
<td>Acknowledgement key: Using the NC workstation, reduce the fixed text part of the display or split up the contents over several displays.</td>
</tr>
</tbody>
</table>
### 3029 Window beyond configuring area

**Scan**
- On display selection

**Effect**
Display build-up is aborted when the window of a display being configured is outside the configuring area.

**Explanation**
Additional subdisplays can be configured in a screen. The subdisplay windows can be moved in the configuring area. As a result the window may have been moved outside the configuring area → configuring error.

**Remedy**
Configure the window movement so that it does not leave the configuring area (see also alarm 3037).

### 3030 Cursor memory not available

**Scan**
- On display selection

**Effect**
The display selected is treated as though there were no cursor memory.

**Explanation**
The cursor memory programmed in the selected display is incorrect (illegal number, or too large).

**Remedy**
Redefine cursor memory with NC workstation, since the cursor memory has the task, when a display is recalled, of putting the cursor back where it was when the display was removed.

### 3031 Too many part programs

**Scan**
On display selection

**Effect**
Slower display build-up and processing time may result.

**Explanation**
The configuring engineer has called up too many display descriptions with part program parts

**Remedy**
Only incorporate a maximum of 5 part programs in the display descriptions if possible. The alarm need not be acknowledged as it is only for information.

**Note**
Applies to SW 1 only

### 3031 Error: NCK softkey text to MMC

**Scan**
- When selecting the menu

**Effect**
The softkey text is not displayed

**Explanation**
An error has occurred while transferring the softkey text from NCK to MMC.

**Remedy**
Activate notebook for I code and send message to System support together with notebook entry (system program change required)

**Note**
Applies as from SW 2

### 3032 Variable component too large

**Scan**
- When selecting a display with a softkey

**Effect**
None

**Explanation**
The programmed variable display part of the display description is too large.

**Remedy**
- Check display with NC workstation, and if necessary regenerate
- Reduce variable display part

### 3033 There is no display text

**Scan**
- Cyclic

**Effect**
Display text not displayed

**Explanation**
The display text generated at the NC workstation has not been transferred to the link list.

**Remedy**
Check the link list and relink to the NC workstation; watch out for linking errors.
### 3034 There is no special text

**Scan**
- On display selection

**Effect**
- Special text not displayed

**Explanation**
The following texts have not been inserted or have been inserted incorrectly:
- Menu texts
- Dialog texts
- Mode texts

**Remedy**
Check the display generated with NC workstation and where appropriate regenerate.

### 3035 Indirect addressing faulty

**Scan**
- Cyclic

**Effect**
- Variable values/texts not displayed

**Explanation**
The display description for indirect addressing is incorrect. This affects the details in the display header for:
- data group,
- data type,
- data number and
- data block.
- Information for number of indirect elements of the list/display (IEL) is incorrect.
- Variable text is selected but status or offset is not cancelled.
- Variable value has been selected but status not cancelled.

**Remedy**
Check the information for:
- Start of range pointer,
- Length of range pointer and
- Cursor pointer
and check their relationship to one another
- Check deselection of status or offset

### 3036 Variable status faulty

**Scan**
- Cyclic

**Effect**
- Status taken from display description

**Explanation**
In the display description form variable status, which can only be selected by the PLC, an incorrect data group has been specified or variable status has not been cancelled.

**Remedy**
The display description must be modified with the aid of the NC workstation.

### 3037 User window faulty

**Scan**
- On control power-up

**Effect**
Displays to be shown in incorrect user windows are not displayed.

**Explanation**
User windows can be defined in the UMS. These must lie within the configuring area, otherwise an alarm is given.

**Remedy**
Check and correct user window in the UMS.

### 3038 Double call of display

**Scan**
- On selecting the display

**Effect**
Display build-up is aborted with the display that is repeatedly called in the same path.

**Explanation**
In a display, additional subdisplays can be configured which themselves can have subdisplays. If a display is called which does not correspond to a display already configured, recursion results. This is prevented by aborting the display build-up and issuing an alarm.

**Remedy**
Avoid subdirplay linking which can lead to recursion.
<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>3039</td>
<td>No multichannel display option</td>
<td>• Cyclic</td>
<td>Acknowledgement key</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fixed display parts only are displayed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>If data which is reserved for multi-channel display is configured in a display, it can be displayed correctly only if the multi-channel display option is available.</td>
<td>Set multi-channel display option.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>3040</td>
<td>Field/variable cannot be displayed</td>
<td>• Cyclic</td>
<td>Acknowledgement key</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Not all variable values/texts are displayed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field/variable incorrectly configured (data group not available)</td>
<td>Check field/variable with NC workstation and if appropriate delete and re-enter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field/variable programmed with too few places</td>
<td>If the alarm occurs with standard displays then the value range has been exceeded.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field/variable overflow (value range exceeded)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Format error; format cannot be changed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Illegal pointer</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>3041</td>
<td>Too many fields/variables</td>
<td>• Cyclic</td>
<td>Acknowledgement key</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Not all values/texts are displayed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The display description is too long so that the internal buffer is no longer adequate for processing the display.</td>
<td>Configure only one display with data selector in conjunction with other displays.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• More than one display (main displays/secondary displays) have been configured with data selector.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>3042</td>
<td>Error in dynamic graphics section</td>
<td>• Cyclic</td>
<td>Acknowledgement key</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dynamic graphics (columns) not entirely displayed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The column graphics configured at the NC workstation are too extensive. A maximum of 4 Kbytes are available for the whole cyclic part of the display (variable part of display including dynamic graphics) for all displays and insets.</td>
<td>Reconfigure the display at the NC workstation, reduce the variable display parts and dynamic graphics.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>3043</td>
<td>Error: NCK fixed display to MMC</td>
<td>• On display selection</td>
<td>Acknowledgement key</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Not all fixed texts are displayed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>An error has occurred during transmission of fixed texts e.g.: delete window, fixed texts, etc. from NCK to MMC.</td>
<td>Activate notebook for I code and send message to System Support (system program change required)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>3044</td>
<td>Error: NCK display update to MMC</td>
<td>• Cyclic</td>
<td>Acknowledgement key</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• No dynamic display parts are displayed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>An error has occurred during transmission of dynamic display parts such as variable values/texts from the NCK to MMC.</td>
<td>Activate notebook for I code and send message together with notebook entry to System Support (system program change required)</td>
</tr>
</tbody>
</table>
1 Alarms

1.5.1 Alarm description

3045  Error: NCK fixed graphics to MMC
Scan  •  On selecting the display
Effect •  Not all fixed graphics parts of the display description are shown on the screen
Explanation  An error has occurred during transmission of the graphics part of the display from NCK to MMC.
Remedy  Activate notebook for I code and send message together with notebook entry to System Support (system program change required)

3046  Faulty variable
Scan  •  On selecting the display
Effect •  Not all variable values/texts are displayed
Explanation  In the display description, a variable text has been programmed without an end identifier because of an error in the NC workstation software. This produces a transfer format error.
Remedy  •  Check NC workstation
The error must be at the point of interruption of the subsequent elements which are no longer displayed.

3047  Read data selector from harddisk
Scan  •  Cyclic if there is no response from the MMC approximately 5 seconds after the harddisk has requested the data selector.
Effect  The data selector does not switch over to the disk directory.
Explanation  There is no response from the MMC to the request for the data selector from the harddisk.
Remedy  Switch the control off and then on again.

3061  Processing sections cannot be loaded
Scan  When processing a program with execution from external in AUTOMATIC while reloading a section
Effect  Processing stops
Explanation  The program section which is to be read in no longer fits in the circular buffer for execution from external
Remedy  The program can be continued with NC START although processing may be interrupted when the program is re-loaded.
Increase the size of the circular buffer for execution from external
Note  Applies to SW 2 only

3072  Alarm text not available
Scan  •  If an alarm occurs without alarm text
Effect  •  None
Explanation  •  When generating cycles, alarms have been provided for which no text was programmed
•  NC alarms which are not provided with a text in the system have been triggered
Remedy  Look at the complete listing of alarm displays and check off alarm numbers without text.
With cycle alarms, program an appropriate text.
With system alarms, notify your Systems Support.
Note  Applies to SW 1 only

3073  Error: NCK input line to MMC
Scan  •  On input
Effect •  Input line is not displayed
Explanation  An error has occurred during transmission of the input line from NCK to MMC.
Remedy  Activate notebook for I code and send message together with notebook entry to System Support (system program change required)
### 3081 CRC not selected at approach/retraction

**Scan**
- When executing a part program

**Effect**
Machine stop does **not** occur but the program is executed without the approach element.

**Explanation**
- CRC/TNRC (G41/G42) was not selected in or before the approach block.
- CRC/TNRC was not deselected in or after the exit block.
- Soft approach/exit is only possible when CRC/TNRC is selected because it is only then possible to calculate the programmed compensation movement exactly.

**Remedy**
- Correct program (G41/G42)
- Program with G41/G42 DO if necessary

**Note**
Alarm is displayed with reference to block and channel

### 3084 Illegal working area limitation

**Scan**
- Cyclic

**Effect**
The control automatically enters the maximum possible value in accordance with the traversing range in the working area limitation.

**Explanation**
A value outside the permissible traversing area of the respective axis has been entered in the minimum or maximum axis-specific working area limitation.

**Remedy**
- Check input
- Check program (G25, G26, @..)
- For maximum traversing range, refer to table (combination of axis-specific position control resolution and input resolution)

**Note**
Channel-specific
Applies up to SW 2 only

### 3085 NC–CPU time watchdog

**Scan**
- Cyclic

**Effect**
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of machining
- Interlocking of NC Ready relay

**Explanation**
The NC–CPU is overloaded with respect to time by a parallel program operation or by the selection of functions such as
- Transformation (TRANSMIT, etc.)
- Coupled axis motion
- GI ring links

**Remedy**
- Increase IPO/servo cycles, check the GI configuration.

**Note**
Channel-specific

### 3086 Illegal transformation selection

**Scan**
- On selecting or deselecting transformation via the command channel of the PLC

**Effect**
- Interlocking of NC Start

**Explanation**
An illegal value has been transferred from the PLC via the command channel. Evaluation is in the error byte in the PLC.

**Remedy**
Check PLC user program

### 3087 Error in transformation data

**Scan**
- At POWER ON
- On warm restart

**Effect**
Selected transformation data block is locked

**Explanation**
An NC machine data with an illegal value is present in the selected transformation data block. The invalid NC machine data number is entered in the block number of alarm 3087.

**Remedy**
- Check NC machine data for transformation data (block number of alarm 3087)

**Note**
Alarm is displayed with reference to block and channel
### 3088  
**F collapse at block change**

**Scan**
- Processing in a channel with FIFO memory

**Effect**
- None

**Explanation**
The programmed feedrate is too high. The control has not yet prepared the next block for processing.

**Remedy**
- Decrease feedrate
- Program G171 (to bridge the critical point with a rapid block change)

---

### 3091  
**Reduction on SW prelimit switch**

**Scan**
- In AUTOMATIC or MDA when processing a part program block or when positioning the axes in JOG

**Effect**
- Speed reduction to the value set in the machine data

**Explanation**
- The software prelimit switch has been exceeded and the axis speed is decelerated to the reduction speed (MD1).
- If a position behind the software prelimit switch is taken with rapid traverse G00, the alarm “Reduction on SW prelimit switch” is not output. But the reduction is executed.

**Remedy**
- Check the traversing block
- Check value in NC machine data 1100 “Prelimit switch”
- Position axis beyond the prelimit switch range and cancel the alarm by means of “Acknowledgement”.

---

### 3092  
**Specified velocity too high**

**Scan**
- When traversing by the program in AUTOMATIC or MDA

**Effect**
- Machining stops

**Explanation**
The specified speed (either programmed or by setting an override) is greater than the path speeds resulting from the maximum speeds of the axes.
- In a circle block, the path velocity is reduced to the smallest velocity of the axes involved.

**Remedy**
- Program a lower path speed or check override
- Check NC machine data “Maximum velocity”
- Program a smaller spindle speed with G95

---

### 3093  
**G171 not allowed**

**Scan**
- After programming G171

**Effect**
- Function is not executed

**Explanation**
- G171 is illegal for the following reasons:
  - No FIFO has been assigned to the current channel
  - “FIFO” has not been activated.

**Remedy**
- Program a lower path speed or check override
- Check NC machine data “Maximum speed”
- Program a smaller spindle speed with G95

**Note**
- Channel-specific
- Applies up to SW 2

---

### 3094  
**Error in compensation data**

**Scan**
- On POWER ON/warm restart

**Effect**
- Interpolatory compensation (IKA) is not executed, an IKA already active is ended.

**Explanation**
- It is not possible to convert the error curves because the input data are incorrect.
  - Only one of the start and end pointers is 0. Both must be 0 or <> 0.
  - End pointer is not greater than start pointer
  - Within an error curve section, the interpolation position (n+1) is less than or equal to the interpolation position (n)
  - The straight line slope within an error curve section is >= 45 degrees

**Remedy**
- Correct the compensation data
3095  Handwheel 1 – wire breakage  
**Scan**  
Cyclic  
**Effect**  
It is no longer possible to traverse the axes in the normal way using the handwheel.  
**Explanation**  
The alarm is only relevant for handwheels with differential signal evaluation  
**Remedy**  
Check the handwheels  
Eliminate the hardware fault  
If necessary, connect wire jumper on CSB, if handwheel is not connected, to avoid triggering alarm.

3096  Handwheel 2 – wire breakage  
**Scan**  
Cyclic  
**Effect**  
It is no longer possible to traverse the axes in the normal way using the handwheel.  
**Explanation**  
The alarm is only relevant for handwheels with differential signal evaluation  
**Remedy**  
Check the handwheels  
Eliminate the hardware fault  
If necessary, connect wire jumper on CSB, if handwheel is not connected, to avoid triggering alarm.

3097  Illegal handwheel function  
**Scan**  
G27 programmed with active DRF  
Setting data 564* not provided with values  
**Effect**  
Interlocking of NC START  
**Remedy**  
Deselect DRF  
**Note**  
Alarm is displayed with reference to channel.

3098  Error in IKA input/output data  
**Scan**  
On changing input/output assignment of the IKA with inactive relationship (input screen or @40C), not G411.  
**Effect**  
None  
**Explanation**  
A check is made to determine whether the input/output assignment of an IKA relationship contains permissible data, and in particular whether the pairs T2/T20, T25/T25, T3/T33 contain compatible values. An error fine coding ensues relating to block and channel number as follows:

<table>
<thead>
<tr>
<th>Error fine coding</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>“Wrong group”</td>
<td>Enter the correct values</td>
</tr>
<tr>
<td>2</td>
<td>“Illegal type of axis”</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>“Wrong axis number”</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>“Axis not available”</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>“Not a real axis”</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>“Wrong R parameter number”</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>“Illegal type of axis”</td>
<td></td>
</tr>
</tbody>
</table>
3100 Transfer buffer already assigned

**Scan**
- During computer link operation

**Effect**
- No data transfer between NC and host computer

**Explanation**
This alarm is *not* displayed but only sent from the NC to the host computer when data is to be transferred from the computer but the transfer buffer is still occupied.

3101 Program not in memory

**Scan**
- When calling a program via computer link

**Effect**
- None

**Explanation**
A program has been requested for read-out but is not located in the NC memory. This alarm is not displayed in the message line but is only indicated in the operator display.

**Remedy**
- Check whether program request is correct

3102 Data input disabled FTR

**Scan**
When reading in programs via FTR

**Effect**
FTR is aborted

**Explanation**
- You have tried to read in a part program via FTR which has already been edited and executed NC internally.
- “Execution from external”
  - A program with the same number as the program to be executed from external already exists

**Remedy**
Stop execution or delete program in the case of “Execution from external”.

3110 Wrong block structure for axis-specific override

(2nd step)

**Scan**
When G160 and G161 commands are not programmed alone in a block

**Effect**
- Interlocking of NC START

**Remedy**
- Alter the part program

**Note**
Applies to SW 2 only

3111 Wrong block struct. for delete dist-to-go

**Scan**
- When @736 has not been programmed after the programmed axis movements
- If the axis concerned has not been programmed

**Explanation**
- Interlocking of NC START

**Remedy**
- Alter the part program

**Note**
Alarm is displayed with reference to block and channel

3112 Wrong block structure for reciprocation

**Scan**
- Reciprocation incorrectly programmed (syntax, reciprocation parameters)
- Too many reciprocation movements in the block

**Explanation**
- Interlocking of NC START

**Remedy**
- Alter the part program

**Note**
Applies to SW 2 only
### 3113 Error on accessing mixed I/O or CSB

**Scan**
- MIXED I/O module does not exist or is faulty

**Explanation**
- Attempt made to output to CSB without output driver (wrong hardware) or defective CSB output driver, NC MD 312–321 refer to non-existent modules or inputs.
- Interlocking of NC START
- PLC attempts to read from a non-existing module via fast data channel

**Remedy**
- Slot in MIXED I/O module
- Check MIXED I/O module
- Replace the CSB module
- Correct NC MD 312 to 321

### 3157 Stop in thread

**Explanation**
- During thread cutting a stop has occurred in the revolution feedrate which has destroyed the thread.

**Remedy**
- Check axis-specific feedrate lock (DB32)

### 3158 PLC number not allowed

**Scan**
- On selecting via softkey in a configured display

**Effect**
- None

**Explanation**
- Configured field shows a non-existent PLC number; SINUMERIK 840C has only 1 PLC.

**Remedy**
- Check assignments using NC workstation and correct

### 3159 There is no data block

**Scan**
- On selecting via softkey in a configured display

**Effect**
- None

**Explanation**
- Configured field indicates a non-existent data block.

**Remedy**
- Check assignments using NC workstation and correct

### 3164 Axis conversion error

**Scan**
- While executing in AUTOMATIC, MDA or Teach In mode

**Effect**
- Machining stops
- Interlocking of NC START

**Explanation**
- The alarm is displayed in channel and block.
- Wrong entries in axis converter list (SD)
  - Axis name not entered
  - Axis does not exist

**Remedy**
- Correct axis converter list

**Note**
- Alarm is displayed with reference to block and channel

### 3166 Program coordination wrong

**Scan**
- While executing a part program

**Effect**
- Machining stops

**Explanation**
- Addressed channel has not been defined or is not enabled

**Remedy**
- Change channel addressing
- Define or enable channel

**Note**
- Alarm is displayed with reference to block and channel
1 Alarms

1.5.1 Alarm description

3167  T/H word not acknowledged
Scan  Cyclic
Effect  None
Explanation
  - The target channel is not enabled in the PLC MD (signals from channel)
  - Routing in target channel has not yet been acknowledged by the user
Remedy The current routing and/or error must be acknowledged through the PLC program before the next routing is assigned.

3200  Program coordination syntax wrong
Scan  When executing a part program
Effect  Interlocking of machining
Explanation Syntax error: invalid command mnemonics
invalid modification parameters
Remedy Correct the faulty command
Note Alarm is displayed with reference to block and channel

3201  Program coord. too many parameters
Scan  When executing a part program
Effect  Interlocking of machining
Explanation More command parameters have been programmed than are permitted in the command description.
Remedy Correct the faulty command
Note Channel-specific

3202  Program coordination area violation
Scan  When executing a part program
Effect  Interlocking of machining
Explanation One or more command parameters violate the permitted lower and upper limit values
Remedy Correct the faulty command
Note Alarm is displayed with reference to block and channel

3203  Program coord. illegal character
Scan  When executing a part program
Effect  Interlocking of machining
Explanation Illegal separators are in the coordination command.
Remedy Correct the faulty command
Note Alarm is displayed with reference to block and channel

3204  Program coord. command incomplete
Scan  When executing a part program
Effect  Interlocking of machining
Explanation Parameters or closing brackets are missing in the programmed command or channel no. = 0
Remedy Correct the faulty command
Note Alarm is displayed with reference to block and channel
### 3205  Program coord. R parameter error

**Scan**  
When executing a part program

**Effect**  
Interlocking of machining

**Explanation**  
- An error occurred while programmed R parameters were being substituted

**Remedy**  
Correct the faulty command

**Note**  
Alarm is displayed with reference to block and channel

### 3206  Program coord. symbol. paras. not allowed

**Scan**  
When executing a part program

**Effect**  
Interlocking of machining

**Explanation**  
With the exception of the R parameters, no symbol. parameters are permitted

**Remedy**  
Correct the faulty command

**Note**  
Alarm is displayed with reference to block and channel

### 3220  Change from G176 → G175

**Scan**  
When executing a part program

**Effect**  
Activated freeze function is terminated leading to G175 function.

**Explanation**  
During an activated freeze function for angle of rotation, zero offset or length compensation, the ZO group was changed or the D No. was changed, an angle of rotation offset was activated or a G53 programmed. These functions result in termination of the "Freeze" function and a change to the G175 function.

**Remedy**  
- Check program blocks and correct

**Note**  
Channel-specific

### 3225  Invalid plane specification

**Scan**  
Before executing a part program

**Effect**  
Processing stops

**Explanation**  
The plane assignment (cube) and the axis definitions in the channel do not correspond.

**Remedy**  
Check NC MD 548* 550*552*

**Note**  
Alarm is displayed with reference to channel

### 3226  Invalid G function initial setting

**Scan**  
Before processing the first block in AUTOMATIC or MDA

**Effect**  
Processing stops

**Explanation**  
Invalid G function initial settings positions have been entered in the channel-specific machine data.

**Remedy**  
Check NC MD 108* to 122*

**Note**  
Alarm is displayed with reference to channel

### 3233  Approach reference point not allowed

**Scan**  
In "AUTOMATIC interrupted" state.

**Effect**  
No referencing possible.

**Explanation**  
If a program is interrupted with the NC STOP key or when changing from AUTOMATIC to JOG mode, it must not be possible to activate the submode of JOG, REFPOINT. (Safety function)

**Remedy**  
- Reference in program (G74)
  - Abort program and reference using keys
### 3234  There is no target block

**Scan**  
When block search function is being applied

**Effect**  
- Machining stops
- Interlocking of NC START

**Explanation**  
Block being sought is not in the part program or is to be found after M30

**Remedy**  
Check entered block number

**Note**  
Applies as from SW 2

**Note**  
Alarm is displayed with reference to channel

### 3235  End of program missing

**Scan**  
When executing a part program

**Effect**  
Machining stops

**Explanation**  
The program end M30 is missing in the part program.

**Remedy**  
Check the part program

**Note**  
Channel-specific

### 3236  Illegal pole specification

**Scan**  
When executing a part program

**Effect**  
Machining stop

**Explanation**  
Illegal pole programming with polar coordinates when:
- G110, G111, G112 programmed without having specified a pole plane
- Programmed pole plane with G110, G111, G112 does not correspond to the current pole plane
- G110, G111, G112 programmed with axes and with angles and radii
- Pole displacement (by way of G9 programming) with G10, G11, G12, G13 does not correspond to the current pole plane
- G10, G11, G12, G13 programmed for the first time without axis specification
- G10, G11, G12, G13 programmed for the first time with G91
- G91 programmed before the angle

**Remedy**  
- Check the incorrect block in the “Correction block” display.
- The cursor is positioned in front of the incorrect word, if possible.

**Note**  
Alarm is displayed with reference to block and channel

### 3237  Program is being edited

**Scan**  
When starting read-out via the computer link

**Effect**  
Part program is not output

**Explanation**  
The control tries to output via the computer link a part program which is in the process of being edited.

**Remedy**  
Terminate editing and repeat read-out process

### 3238  Program being read-in

**Scan**  
When starting read-out via the computer link

**Effect**  
Part program is not read out

**Explanation**  
The control tries to output via the computer link a part program which is in the process of being read in via the computer link

**Remedy**  
Wait for the end of the read-in process and repeat read-out.
### Scan
When reading in subroutines via the computer link.

### Effect
Cycle replaced by subroutine.

### Explanation
At least one subroutine has been read in which has the same number as an existing cycle. The cycle can therefore no longer be called from a part program. The first cycle to be overwritten is displayed in the N number.

### Remedy
- Delete the read in subroutine to save the cycle.
- To prevent overwriting generally, set MD 5147, bit 3 to 1 on file transfer.

### Note
Channel-specific

---

### Scan
When reading in subroutines via computer link.

### Effect
At least one subroutine has not been read.

### Explanation
The control has attempted to read in at least one subroutine which has the same number as an existing UMS cycle. The first subroutine not to be read in is displayed in the N number.

### Remedy
- If the UMS cycle is to be replaced by a subroutine, the MD 5147, bit 3 must be set to 0 on file transfer.

### Note
Channel-specific

---

### Scan
On decoding G421–6.

### Effect
Decoding stop.

### Explanation
When programming G421–6, it is found that the required behaviour requested through the program has been locked by the machine data parameterization.

### Remedy
- Perform no programming or check MD parameterization.

### Note
- Applies as from SW 4
- Alarm is displayed with reference to channel

---

### Scan
At Power On and active MD “Load workpiece last active after Power On”.

### Effect
The workpiece selected in the program pointer cannot be transferred from MMC to NCK.

### Explanation
In the volatile NCK part program memory, a workpiece directory has been opened and not saved to harddisk before Power Off. After Power On, it is therefore not possible to transfer the workpiece entered in the program pointer from harddisk to the NCK part program memory.

### Remedy
- Select existing workpiece
- Preselect part program for execution (which means that the program pointer will automatically be assigned to the workpiece belonging to the preselected part program).

### Note
- Applies as from SW 4
- Alarm is displayed with reference to channel
3262 Error in NCK FB

**Scan**  During cyclic operation of control

**Effect**  None

**Explanation**  The cyclic routines of the NCK FB have returned a value which is not equal to zero, and have requested the CAN-CEL alarm class. The return value is output in the alarm as block number N.

**Remedy**  Evaluate the block number and check the NCK FB.

**Continuation**  Acknowledge the alarm with the Acknowledgement key

**Note**
- Alarm 3262 is output only if appropriately configured by the machine manufacturer. An error has occurred in the safety NCK–FB. For more information and remedy, refer to the manufacturer’s documentation.
- Applies as from SW 5.4.

3263 Impermissible axis position

**Scan**  When executing a part program

**Effect**  Interlocking of NC START
Machining stops

**Explanation**  The position of the material entry coordinate is outside the travel range of the block.

**Remedy**  Modify the part program.

**Continuation**  Acknowledge the alarm with the Acknowledgement key

**Note**  Applies as from SW 5.4

**Note**  Alarm is displayed with reference to channel

3264 NC STOP is effective at the end of block

**Scan**  When pressing NC STOP with active G04 S..., G14 and G24 with set MD bit "No NC STOP in the dwell block”.

**Effect**  NC–STOP is delayed until the end of block

**Explanation**  NC STOP has been pressed in a dwell block in which NC STOP is not to become effective. Processing of the dwell block continues, NS STOP becomes effective only at the end of the block.

**Remedy**  The message is deleted when the NC STOP has become effective at the end of the block or when the NC STOP request has been cancelled with NC START.

**Note**
- Alarm channel-specific
- Applies as from SW 5.4

3265 IKA link disconnected

**Scan**  Cyclically in IPO cycle

**Effect**  Feed stop of "slave axis" (IKA output variable)

**Explanation**  The IKA link has been disconnected because the IKA output variable (normally an axis) was stopped for safety reasons (e.g. feed disable, follow-up mode, override, controller enable).

**Remedy**  Remove the reason for the feed stop.
Caution: If the reason for the feed stop is no longer present, the IKA link is automatically reactivated. As a result, the "following error” that has been built up in the meantime is reduced again. The "reduction” is executed with the modification limit of the IKA.

**Note**  Applies as from SW 6

3280 NC start disable

**Scan**  On NC START

**Effect**  None

**Explanation**  Interlocking of NC START set internally. User has operated NC START.

**Remedy**  Change to the required operating mode or enable the function (e.g. Teach in).
### 3281 Set-up disable

**Scan**
While operating the manual travel keys

**Effect**
None

**Explanation**
Set-up disable has been set internally. The user wishes to move an axis with the manual travel keys.

**Remedy**
Change to the required operating mode or enable the function (e.g. Teach in).

### 3282 Data not available

**Scan**
While reading in machine data or setting data into the NCK

**Effect**
None

**Explanation**
A machine data or setting data which does not exist (or which no longer exists in the present software version) has been read in.

**Remedy**
Remove invalid machine data or setting data from file.

### 4000 Delete alarm

### 4220 Parallel straight lines

This area is reserved for measuring cycle messages. The messages are listed in the publication SINUMERIK 840C MEASURING CYCLES.

### 1000* Terminal assigned more than once

**Scan**
- When inputting machine data for axis assignment

**Effect**
- No machining of the axes for which the connection number concerned has been assigned more than once
- Servo disable for the axis concerned
- Mode Group Ready removed
- Interlocking of NC START
- Interlocking of NC RDY relay

**Explanation**
- A connection number of a measuring circuit module has been specified more than once under MD200x or MD384x.
  Example: MD3840 = 01060000, MD3845 = 01060000. Connection number 6 of the 1st measuring circuit module has thus been assigned more than once.

**Remedy**
- Check and correct MD200x or MD384x

**Note**
Applies up to SW 2

### 1000* Terminal assigned more than once

**Scan**
- Cyclic for digital drives if double assignment of setpoint output via MD is permissible.

**Effect**
- As before

**Explanation**
- Two NC axes assigned the same digital setpoint output are being controlled at the same time. This simultaneous output of setpoints at the same drive is not allowed.

**Remedy**
- One of the NC axes must be disconnected from the control loop (servo enable, follow-up mode, parking axis).

**Note**
Applies as from SW 3
### 1004* Permissible feed/limit frequency exceeded

**Scan**
- Cyclic

**Effect**
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Setpoint 0
- Servo enable is cancelled after the time in NC MD “Cutout delay”
- Follow-up mode

**Explanation**
The maximum value set in the NC MD “Encoder frequency” has been exceeded. Is only activated for C axes to spindles (assignment via NC MD 461*).
If the service number 309 is indicated here, the reason for the alarm is a format overflow, which can be avoided by reduction of the resolution.

**Remedy**
- Check feedrate and NC MD “Encoder limit frequency” MD 308*.

### 1008* Speed controller limitation

**Scan**
- POWER ON and warm restart

**Effect**
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Alarm causes machining stop

**Explanation**
- Speed alarm limit has been reached

**Remedy**
- Check current controller
- Set speed control loop to a slower rate
- Increase parameters
- Check mechanical parts

### 1012* Parameterization error drive MD (SW 3)

### 1012* Parameterization error NC–MD (SW 4 and higher)

**Scan**
- At POWER ON and warm restart

**Effect**
- Corresponding axes switched to follow-up operation
- Machining stops
- Interlocking of NC START
- Mode Group Ready is removed

**Explanation**
Setting error in the NC machine data, e.g.
- Too large a ratio between interpolator clockrate and position control clockrate, because MD160>8
- Too large an internal KV (servo gain) factor by specification of
  - KV factor (252*)
  - Multgain (260*)
  - Pulse weighting
- Ratio of cycle rate (MD165) to setting for fine interpolation (MD160) or check of MDS84* “Identifier of auxiliary axes” is not a whole number
- Incorrect measuring system adjustment with MD364* to MD368* (values chosen too large)
- General parameter error in a drive MD
- An illegal value has been entered for the pulse multiplication in connection with the high-resolution measuring system. Permissible values are: 1, 2, 4, 8, 16, 32, 64 and 128.
- Error in parameterization of the SI machine data.

**Remedy**
- Check and new input of the corresponding machine data.
- The AXIS service display shows the service number for the parameterization errors and therefore the exact cause. (see Diagnostics Guide, Section Parameterization errors spindle/axis).

**Note**
- Alarm “Parameterization error drive MD”: up to SW 3
- Alarm “Parameterization error NC–MD”: as from SW 4
### 1016* MS switchover not possible

**Scan** When the PLC requests a measuring system switchover

<table>
<thead>
<tr>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Interlocking of NC START</td>
<td>The difference between measuring system 1 and measuring system 2 is greater than the tolerance specified in MD 1216*.</td>
<td>Check the mechanical parts and find out the reason for the differences in the measuring value acquisition via the 1st and the 2nd measuring systems. Check sign change actual value 2nd measuring system MD 1824* bit 4, if necessary.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Interlocking of Mode Group Ready</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Setpoint 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Servo enable is withdrawn after the time in NC–MD “Cutout delay controller enable” has elapsed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Follow-up mode</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 1028* Unable to set reference dimension

**Scan** Negative edge of signal DB32, DL K+1, bit 6, (“Set reference dimension”)

<table>
<thead>
<tr>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Interlock of NC Start</td>
<td>If the “Set reference dimension” could not be performed (axis not stationary), the “Reference point reached” signal is no longer set and also the axis-specific RESET alarm 1028* “Unable to set reference dimension” is triggered.</td>
<td>Make sure that the axes are stationary.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Setpoint 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• No servo enable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Follow-up mode</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 1040* Absolute encoder defective

**Scan** POWER ON

<table>
<thead>
<tr>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Interlocking of NC START</td>
<td>If a SIPOS absolute encoder with absolute submodule is fitted and the absolute encoder function is selected in MD 1808*, bit 0, the absolute position is requested by the control on POWER ON. If it is not possible to transmit an absolute position from the encoder without any errors, this alarm is released.</td>
<td>Check the encoder hardware (encoder, cable, connectors, absolute submodule). The SIPOS encoder must remain stationary during transmission of the absolute value, the axis must therefore be held by the brake if necessary.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Interlocking of Mode Group Ready</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Machining stops</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 1044* Battery absolute module

**Scan** Cyclic, every 10 minutes

<table>
<thead>
<tr>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>The SIPOS encoder has a battery back-up on the absolute submodule so that the absolute position is not lost even when switched off. The remaining capacity of this battery is checked by the absolute module approximately every 10 minutes and an alarm is released if a critical minimum limit is reached.</td>
<td>Replace the battery on the absolute module (see SIPOS absolute encoder description)</td>
</tr>
</tbody>
</table>

### 1052* Drive fault

<table>
<thead>
<tr>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 611–D alarm 300100 “Drive link off”</td>
<td>Further detailed information on the cause are given in the MMC diagnosis display</td>
<td></td>
</tr>
<tr>
<td>• Power On / Reset alarms (ZK1) from 611–D</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Interlocking of NC START</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Interlocking of Mode Group Ready</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Setpoint 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Servo enable cancelled after the time set in NC MD “Switchoff delay servo enable” has passed (not with alarm “Drive link off”)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Follow-up mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 611–D status signals “Drive ready” and “Drive connected” are reset</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Note

Applies as from SW 3
**1056** Programmed axis is slave

**Scan**
- Setpoint specified for a slave axis
- Travel to fixed stop with a slave axis

**Effect**
- Interlocking of NC START
- Follow-up mode
- Cancellation of Mode Group Ready
- Processing interrupt

**Explanation**
The designated axis is coupled to its master axis through a speed setpoint coupling. Setpoints should therefore not be specified.

**Remedy**
Setpoints should not be specified for the slave axis.

**Note**
Applies as from SW 4.4

---

**1064** Output not available

**Scan**
- Setpoint incorrectly assigned

**Effect**
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready
- Setpoint 0
- No servo enable
- Follow up mode

**Explanation**
A digital setpoint output which does not exist has been assigned

**Remedy**
Check the setpoint assignment machine data

**Note**
Applies as from SW 3

---

**1068** Drive fault

**Scan**
- 611–D alarms
  - Drive configuration faulty
  - Ramp-up error (error on 611–D ramp-up. Adjusting data has caused errors)
  - Fault along transmission line

**Effect**
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready
- Setpoint 0
- Servo enable cancelled after the time set in NC MD "Switch off delay servo enable" has passed
- Follow-up mode

**Explanation**
Further detailed information on the cause in MMC diagnosis display

**Note**
Applies as from SW 3

---

**1076** Measure hardware

**Scan**
Once only after incorrect operator action/function selection

**Effect**
- Machining stops
- NC Start disable
- Removal of Mode Group Ready

**Explanation**
- Invalid measuring circuit assignment
- Pushbutton 2 programmed for SPC/HMS
- Alternating edges programmed for SPC/HMS
- Positive edge programmed for SPC/HMS
- Measuring system change during extended measurement

**Remedy**
Check and rectify possible causes of error.
### 1164* Emergency retraction triggered

**Scan**
Cyclic in servo cycle when LINK ON is set for following axis (from servo).

**Effect**
Machining interrupted, interlocking of NC START; Mode Group Ready cancelled.

**Explanation**
The threshold MD “Emergency retraction threshold” programmed for synchronism monitoring has been exceeded and “Emergency retraction triggered”.
Condition: enable via PLC interface signal emergency retraction enabled.

**Remedy**
Check the drives; check the speed and acceleration limit values of the following axis/spindle; check the emergency retraction threshold; check the link factors.

**Note**
Applies as from SW 3

### 1168* Overlay of FA not enabled

**Scan**
Path defined for following axis (NCK).

**Effect**
Setpoint not output, i.e. overlay not executed.

**Explanation**
Overlaid offset of following axis although the PLC interface signal “Enable FA overlay” has not been set.

**Remedy**
Traverse the following axis with the fictitious leading axis or set PLC interface signal “Enable FA overlay”

**Note**
Applies as from SW 3

### 1172* Speed limit exceeded

**Scan**
Cyclic in servo cycle when LINK ON has been set for the following axis (from servo)

**Effect**
No reaction, machining not interrupted; the speed of the following axis is limited to the programmed maximum value; the setpoint determined by the compensatory controller is not used in the calculation.

**Explanation**
The maximum value set for the following axis/spindle has been exceeded. Synchronism is in danger.

**Remedy**
Reduce feedrate or speed of leading axes. Check the speed limit value. Check the link factors.

**Note**
Applies as from SW 3

### 1176* Acceleration limit exceeded

**Scan**
Cyclic in servo cycle when LINK ON has been set for the following axis and MD bit “Suppression of acceleration limitation” is not set (from servo).

**Effect**
No reaction. Machining is not interrupted; when interface signal “Acceleration limitation synchronous” is set; travel is continued at maximum acceleration; any suppressed partial setpoints are traversed afterwards; If interface signal “Acceleration limit synchronous” has not been set; any suppressed partial setpoints are not traversed. The setpoint determined by the compensatory controller is not used in the calculation.

**Explanation**
The maximum value programmed for the following axis has been exceeded. Synchronism is in danger.

**Remedy**
Reduce the acceleration of the leading axes. Check the acceleration limit value. Check the link factors. Set MD bit “Suppress acceleration limitation”.

**Note**
Applies as from SW 3

### 1180* Following spindle corrected autom.

**Scan**
An error has occurred that has cancelled “Mode Group Ready”.

**Scan**
Cyclic in servo cycle when LINK ON is set

**Effect**
Machining is interrupted. Interlocking of NC START; switchover to actual position link.

**Explanation**
An error has occurred for an axis/spindle in the mode group which usually causes a switch over to follow-up mode. As long as the following axis is not affected by the fault, the link is maintained until “Delay controlled follow-up” has been executed.

**Remedy**
Remove error from faulty axis/spindle.

**Note**
Applies as from SW 3
### 1192* Centering edge violated

**Scan**  
Cyclic in IPO cycle when LINK ON and PLC interface signal “Semi-automatic centring is active” are set.

**Effect**  
Interlocking of NC START, any movement towards edges already recognized are suppressed.

**Explanation**  
The alarm is set when the axis tries to traverse across an edge that has already been recognized or if PLC interface signal “Semi-automatic centring on” and “First edge approached” have been set without first traversing the following axis.

**Remedy**  
Move following axis away from the edge (in opposite direction to approach direction: if necessary remove interface signal “x edge approached” traverse at least 1 increment between interface signal “Semi-automatic centring on” and “First edge approached”.

**Note**  
Applies as from SW 3 up to SW 4.3

### 1192* No synchronous/switching positions defined

**Scan**  
When synchronizing or switching on in relation to a position from PLC.

**Effect**  
Interlocking of NC START, MACHINING STOP.

**Explanation**  
An attempt has been made to synchronize master and slave axes/spindles from PLC, or to switch on with reference to a position, without there being any valid switching or synchronizing positions. Synchronization or switching on with reference to a position is therefore not possible.

**Remedy**  
For example, specified positions through the GI input display.

**Note**  
Applies as from SW 4.4

### 1196* Reconfiguration not allowed

**Scan**  
When RECONFIGURING with G function (G401), i.e. when adding, removing a leading axis or changing the link structure or on CLEAR configuration (from NCK).

**Effect**  
Interlocking of NC START.

**Explanation**  
“Reconfiguration allowed” is not set (MD 1844, bit 1)

**Remedy**  
Correct input, set MD bit.

**Note**  
Applies as from SW 3

### 1200* Division wrong

**Scan**  
Cyclic

**Effect**  
Interlocking of NC START

**Explanation**  
The “Division from PLC” function is not possible because:
- NC machine data “Number of divisions” has an invalid value
- NC machine data “Absolute division increment” has an invalid value
- NC machine data “Division offset” has an invalid value
- Indexing axis has been defined as a rounding axis, which is impermissible.

**Remedy**  
Check and correct the relevant machine data.

### 1204* Traversing range limits exceeded

**Scan**  
Cyclic (only with linear axes)

**Effect**  
Interlocking of NC START

**Explanation**  
If no software limit switches or working area limitations are active, it is theoretically possible to exceed the maximum possible traversing range (set by the combination of axis-specific position control resolution and input resolution). As this would lead to traversing errors, however, the traversing range limit is monitored and, when it is exceeded, alarm 1204* is set.

**Remedy**  
Traverse back into the permissible range in the opposite direction using INC or JOG mode.
<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1208*</td>
<td>Link factor KF not allowed</td>
<td>When entering a new link factor via the G function (from NCK).</td>
<td>Command is not executed, the previous link factor is maintained. Interlocking of NC start.</td>
<td>Correct link factor</td>
</tr>
<tr>
<td>1212*</td>
<td>Overwriting of pos. not allowed</td>
<td>When programming a position with GI command.</td>
<td>G command is not executed: interlocking of NC START</td>
<td>GI positions must not be overwritten (enabled with MD 1844 *, bit 3)</td>
</tr>
<tr>
<td>1216*</td>
<td>Reconfiguration/deletion not allowed</td>
<td>When RECONFIGURING with G function (G401), i.e. when a leading axis is added or removed or when the link structure is altered or on DELETE CONFIGURATION (from NCK)</td>
<td>Interlocking of NC START, NC STOP, i.e. channel is stopped: command is not executed: JOG mode still possible.</td>
<td>RECONFIGURATION or DELETE CONFIGURATION is not possible until LINK OFF has been set.</td>
</tr>
<tr>
<td>1220*</td>
<td>GI configuration not allowed</td>
<td>When programming DEFINE CONFIGURATION with G function. (From NCK)</td>
<td>Command is not executed. Interlocking of NC START</td>
<td>Possible causes:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Do leading and following axes have a position measuring system (encoders)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Is the following axis linked to itself as a leading axis?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Can the axis be a following axis (MD 1844*)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Link structure switchover not permissible (MD 1844*)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Link type for the LA/LS not allowed (MD 1456*/496*)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• The following axes must always be real available axes, i.e. a measuring circuit (POS encoder) must be defined. A measuring circuit must be defined for leading axes/spindles with link structure K2 (actual position link).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Leading axes/spindles and following axis are not in the same mode group.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Not exactly one leading spindle defined for following spindle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• One of the axes in the GI grouping is a fictitious transformation axis.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• No synchronous positions have been defined for on-the-fly synchronization.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(G401); following axis already exists.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Application only possible after DELETE CONFIGURATION. Program a new configuration block</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1224*</td>
<td>Change of KF not allowed</td>
<td>When a new link factor is entered via G function (from NCK).</td>
<td>The command is not executed, the previous link factor is kept. Interlocking of NC START</td>
<td>Change link factor default setting must not be changed (MD 1844*).</td>
</tr>
</tbody>
</table>
### 1228* Link factor KF not allowed

**Scan**
When entering a new link factor via G function (from NCK).

**Effect**
Command is not executed, the previous link factor remains. Interlocking of NC START; NC STOP. Channel stop; JOG mode still possible.

**Explanation**
The entered link factor does not lie within the range $0.00000001 \leq KF \leq 10.000000$ or denominator $J = 0$ or the individual values are so high that internal overflows are the result.

**Remedy**
Correct or shorten link factor KF

**Note**
Applies as from SW 3

### 1232* Change of link factor KF not allowed

**Scan**
When entering a new link factor via G function (from NCK).

**Effect**
Command is not executed, the previous link factor remains. Interlocking of NC START; NC STOP. Channel stop; JOG mode still possible.

**Explanation**
The link factor default setting must not be changed (MD 1844*).

**Remedy**
Change default setting if necessary.

**Note**
Applies as from SW 3

### 1236* GI configuration not allowed

**Scan**
When programming DEFINE CONFIGURATION via G function. (From NCK)

**Effect**
Command is not executed. Interlocking of NC START; NC STOP, channel stopped; JOG mode still possible.

**Explanation**
Possible causes:
- Do leading and following axes have a position measuring system (encoders)?
- Is the following axis linked to itself as a leading axis?
- Can the axis be a following axis (MD 1844*)?
- Link structure switchover not permissible (MD 1844*)
- Link type for the LA/LS not allowed (MD 1456*/496*)?
- The following axes must always be real available axes, i.e. a measuring circuit (POS encoder) must be defined. A measuring circuit must be defined for leading axes/spindles with link structure K2 (actual position link).
- Leading axes/spindles and following axes are not in the same mode group.
- Not exactly one leading spindle defined for following spindle.
- One of the axes in the GI grouping is a fictitious transformation axis.
- No synchronous positions have been defined for on-the-fly synchronization.

**Remedy**
Check configuration

**Note**
Applies as from SW 3

### 1240* Following axis not defined

**Scan**
When programming an axis as a following axis which is not defined as such (from NCK).

**Effect**
G command is not executed. Interlocking of NC START; NC STOP, channel is stopped; JOG mode still possible.

**Explanation**
A GI grouping with the stated axis defined as a following axis does not exist.

**Remedy**
Correct input.

**Note**
Applies as from SW 3

### 1244* Axis not in C axis mode

**Scan**
The following axis is a C axis, is however not in axis mode.

**Effect**
G command is not executed

**Explanation**
Interlocking of NC START; NC STOP, channel is stopped; JOG mode still possible.

**Remedy**
Correct input.

**Note**
Applies as from SW 3
### 1.5.1 Alarm description

<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1248*</td>
<td>Leading axis not defined</td>
<td>Command is not executed. Interlocking of NC START; NC STOP, channel stopped: JOG mode still possible.</td>
<td>A GI grouping with the stated axis defined as a leading axis does not exist.</td>
</tr>
<tr>
<td>1252*</td>
<td>Overwriting of GI position not allowed</td>
<td>GI command is not executed. Interlocking of NC START; NC STOP, channel stopped: JOG mode still possible.</td>
<td>The GI positions cannot be overwritten (enable with MD 1844*, bit 3)</td>
</tr>
<tr>
<td>1256*</td>
<td>Retraction axis is following axis</td>
<td>Alarm occurs when a following axis is defined as retraction axis because the link is violated by the retraction. Also, the overlay must be enabled by the PLC.</td>
<td>Select another retraction axis.</td>
</tr>
<tr>
<td>1260*</td>
<td>Retraction axis in several channels</td>
<td>An axis has been programmed as retraction axis that has already been selected in another channel for retraction.</td>
<td>Remove axis from the retraction block.</td>
</tr>
<tr>
<td>1264*</td>
<td>Sel./desel. endl. rot. axis illegal</td>
<td>An endlessly rotating rotary axis programmed for a retraction operation should be switched over to normal axis operation.</td>
<td>Before deselecting the endless rotary axis, write a G block without this rotary axis.</td>
</tr>
<tr>
<td>1268*</td>
<td>IKA path reconfiguration illegal</td>
<td>An IKA path has been defined that is already configured. An attempt has been made to delete with G411 an IKA path that is still active.</td>
<td>Activate an IKA path that is not yet configured. On deselection: Switch IKA inactive.</td>
</tr>
</tbody>
</table>
1 Alarms

1.5.1 Alarm description

1272* Error in IKA path input/output  
Scan When programming G401/411/G412  
Effect Interlocking of NC Start, NC Stop  
Explanation If an input/output value is specified with G410/G411/G412 that does not correspond to the configuration or is not permissible, this alarm is triggered.  
Remedy Specify input/output correctly or omit I/O designation with G410.  

1276* Illegal software limit switch  
Scan • After changing MD  
Effect • Interlocking of NC START  
• Interlocking of Mode Group Ready  
• Interlocking of machining stops  
Explanation An impermissibly high value has been entered in the software limit switch NC MD. The maximum traversing range of the individual axes is determined by the set axis-specific position control resolution and the input resolution. The control entered the maximum permissible value in the relevant NC MD when alarm 87 was triggered.  
Remedy Check software limit switch machine data and correct if necessary.  
Note Applies as from SW 3

1280* Illegal working area limitation  
Scan • Cyclic  
Effect The control automatically enters the maximum possible value for the traversing range in the working area limitation.  
Explanation A value has been entered in the minimum or maximum axis-specific working area limitation which is outside the permissible traversing range of the axis in question.  
Remedy • Check input  
• Check program (G25, G26, @..)  
• Take maximum traversing range from table (combination of axis-specific position control resolution and input resolution).  
Note Applies as from SW 3

1284* Fixed stop not reached  
Scan In the block or on every block change  
Effect • Alarm is triggered  
• Machining stops  
Explanation Alarm 1284* is output when the fixed stop is not between the starting and target position in the selection block and no R parameter has been programmed for function acknowledgement in the selection block.  
Remedy Ensure that the fixed stop is between the starting and target position in the selection block. Also enter the R parameter number for the function acknowledgement in the selection block.  
Note Applies as from SW 3

1288* No fixed stop axis  
Scan In a block or on every block change  
Effect • Programmed path in block is not traversed  
• Machining stops  
Explanation The function, Move Against Fixed Stop, has been selected for an axis which cannot traverse to the fixed stop.  
Remedy Select the function Move Against Fixed Stop for an axis which is able to. Set MD 1804* for the axis which is to move against the fixed stop.  
Note Applies as from SW 3
1292* Axis at fixed stop
Scan In a block or on every block change
Effect Path programmed in block is not traversed
Explanation The axes which have moved to the fixed stop cannot be included in an interpolation grouping while the function Move Against Fixed Stop is active.
Remedy Deselect the function move against fixed stop for the axis which is to be part of an interpolation grouping.
Note Applies as from SW 3

1296* Clamping tolerance exceeded
Scan While moving against fixed stop
Effect • Interlocking of NC START
• Setpoint 0
• No servo enable
• Follow-up mode
Explanation The alarm is triggered if the fixed stop is moved away from by more than the tolerance set in MD 1284*.
Remedy Check parameter settings
Note Applies as from SW 3

1300* Progr. axis is not a rotary axis
Scan When executing AUTOMATIC, MDA and TEACH IN
Effect • Interlocking of NC START
• Machining stop
Explanation G[...]103, G[...]104, G[...]105, G[...]119, G195, G295 not programmed in connection with a rotary axis.
Remedy Correct the block!
Note Applies as from SW 4; alarm is channel-specific and block-specific!

1304* Axis turning endlessly
Scan On block search with calculation
Effect • Cancellation of the block search
Explanation An endlessly rotating rotary axis is programmed as contouring axis although the axis is still rotating endlessly.
Remedy Stop the endlessly rotating rotary axis and start the block search again.
Note Applies as from SW 4; alarm is channel-specific and block-specific!

1308* Error in progr. of sim. axis
Scan When executing a part program
Effect • Machining abort
Explanation The "Endlessley rotating rotary axis" is programmed with G[...]119P[..]. without the endless rotation being switched on.
Remedy Correct the block!
Note Applies as from SW 4; alarm is channel-specific and block-specific!

1312* Error in progr. of sim. axis
Scan When executing a part program
Effect • Machining abort
Explanation The "Endlessly rotating rotary axis" has been incorrectly programmed.
Remedy Correct the block!
Note Applies as from SW 4; alarm is channel-specific and block-specific!
1316* Programmed position behind SW limit switch

Scan When executing a part program

Effect Processing stops at indicated block.

Explanation The programmed end point of the displayed axis (incl. the active offsets) lies behind the software limit switch.

Remedy
- Correct program
- Check MD "1st and 2nd software limit switch plus/minus"
- Check PLC interface signal "2nd software limit switch active"

Alarm is displayed axis-specifically, for the block and channel in question.

Note Alarm applies as from SW 5

1320* Axis not in C axis mode

Scan When traversing a C axis that is in spindle mode.

Effect Axis is not traversed.

Explanation A C axis has been programmed in spindle mode.
The alarm is only output if MD 5025.5 is set.

Remedy Switch C axis to C axis mode.

1324* Tolerance for safe standstill exceeded

Scan After selection of safe standstill
After initiation of STOP C, D, E and expired timer

Effect Display of the alarm
Initiation of STOP B and A

Explanation The axis has moved too far from the set position, i.e. further than permitted in MD 4180*: (standstill tolerance for safe operation).

Remedy Check the tolerance of the standstill monitoring:
If the value does not match the accuracy and dynamic control response of the axis -> increase the tolerance.
If the value matches the accuracy and dynamic control response of the axis -> inspect the machine for damage and repair the damage.

Note Applies as from SW 5.4.

1328* Safe speed exceeded

Scan After selection of safe speed

Effect Display of the alarm
Initiation of STOP C, D, E (depending on configuration)

Explanation The axis has moved too quickly, i.e. faster than permitted in MD 4184*, 4188*, 4192*, 4196*: (limit value for safe speed 1, 2, 3, 4).

Remedy If no apparent operating error occurred:
Check the input value of the MD, check the SGEs: of the 4 available speeds, was the correct one selected? If MDs and SGEs are correct, inspect the machine for damage and repair the damage.

Note Applies as from SW 5.4.

1332* Safe end position exceeded

Scan After enabling of the safe end position function

Effect Display of the alarm
Initiation of STOP C, D, E (depending on configuration)

Explanation The axis has traveled beyond the end position entered in MD 4200*, 4204*: (upper limit for safe end position 1, 2) or MD 4208*, 4212*: (lower limit for safe end position 1, 2).

Remedy If no apparent operating error occurred:
Check the input value of the MD, check the SGEs: of the 2 end positions, was the correct one selected? If MDs and SGEs are correct, inspect the machine for damage and repair the damage.

Continuation Cancel the user enable for this axis. Then activate the RESET key. The program is aborted and the alarm is cleared. Move the axis into the valid travel range in JOG mode. When the error in the NC program has been remedied and the position of the axis has been checked, the user enable can be reactivated and the program started.

Note Applies as from SW 5.4.
**1336* Failure in a monitoring channel**  
Reset key

**Scan**  
After selection of at least one safety function

**Effect**  
Display of the alarm  
NC START interlock  
STOP F  
STOP B and A on active SI function

**Explanation**  
The comparison of both monitoring channels has uncovered a difference between the input data or the monitoring results. One of the monitoring functions is no longer operating reliably, i.e. safe monitored operation is no longer possible.

**Remedy**  
Find the difference between the monitoring channels. The error code that indicates the cause appears in the following machine data:
- on 840C MD 301: diagnostics for STOP F (SI service display)
- on 611D MD 1395: diagnostics for STOP F (SI drive display)

The meaning of the error code can be found in the error code table for STOP F on the 840C. It is possible that the safety–related machine data are no longer identical (load them again if necessary) or that the SGEs do not have the same signal level (measure again or check in the SI service display). If no such error is found, an error may have occurred in the CPU, such as a corrupt memory cell. This error can be transient (remedied by POWER ON) or permanent (reoccurs after POWER ON, in this case replace the hardware).

**Continuation**  
Remedy the error, and press the RESET key. The program is aborted. If safe monitoring was active, STOP B was also initiated automatically. In this case, it is necessary to switch the control off and on (POWER ON).

**Note**  
Applies as from SW 5.4.
### Table: Error codes for STOP F on 840C

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Explanation</th>
<th>Cause, Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No error</td>
<td>There is no error in this channel, however an error may have occurred in another channel.</td>
<td>Find the cause in the other channel and interpret the error code</td>
</tr>
<tr>
<td>1</td>
<td>Result list 1</td>
<td>Differences in the evaluation of the safe standstill/safe speed/safe end position functions in the NCK and drive monitoring channel</td>
<td>e.g. through unbalanced activation of the functions via the SGEs</td>
</tr>
<tr>
<td>2</td>
<td>Result list 2</td>
<td>Differences in the evaluation of the SN function in the NCK and drive monitoring channel</td>
<td>Check the tolerance of the cams</td>
</tr>
<tr>
<td>3</td>
<td>Actual position value</td>
<td>The difference between the actual position value in the NCK and drive monitoring channel is greater than the actual value cross-comparison tolerance specified in MD 4256* or MD 1342</td>
<td>Incorrect encoder evaluation (check MDs)</td>
</tr>
<tr>
<td>4</td>
<td>No cross-comparison</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Function enables</td>
<td>MD 4500*, 4504* and MD 1301 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>6</td>
<td>Limit value for SG1</td>
<td>MD 4184* and MD 1331 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>7</td>
<td>Limit value for SG2</td>
<td>MD 4188* and MD 1331 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>8</td>
<td>Limit value for SG3</td>
<td>MD 4192* and MD 1331 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>9</td>
<td>Limit value for SG4</td>
<td>MD 4196* and MD 1331 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>10</td>
<td>Standstill tolerance</td>
<td>MD 4180* and MD 1330 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>11</td>
<td>Upper limit SE1</td>
<td>MD 4200* and MD 1334 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>12</td>
<td>Lower limit SE1</td>
<td>MD 4208* and MD 1335 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>13</td>
<td>Upper limit SE2</td>
<td>MD 4204* and MD 1334 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>14</td>
<td>Lower limit SE2</td>
<td>MD 4212* and MD 1335 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>15</td>
<td>Safe cam 1+ (+ Tolerance)</td>
<td>MD 4216* + MD 4248* and MD 1336 + MD 1340 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>16</td>
<td>Safe cam 1+</td>
<td>MD 4216* and MD 1336 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>17</td>
<td>Safe cam 1– (+ Tolerance)</td>
<td>MD 4232* + MD 4248* and MD 1337 + MD 1340 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>18</td>
<td>Safe cam 1–</td>
<td>MD 4232* and MD 1337 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>19</td>
<td>Safe cam 2+ (+ Tolerance)</td>
<td>MD 4220* + MD 4248* and MD 1336 + MD 1340 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>20</td>
<td>Safe cam 2+</td>
<td>MD 4220* and MD 1336 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>21</td>
<td>Safe cam 2– (+ Tolerance)</td>
<td>MD 4236* + MD 4248* and MD 1337 + MD 1340 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>22</td>
<td>Safe cam 2–</td>
<td>MD 4236* and MD 1337 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>23</td>
<td>Safe cam 3+ (+ Tolerance)</td>
<td>MD 4224* + MD 4248* and MD 1336 + MD 1340 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>24</td>
<td>Safe cam 3+</td>
<td>MD 4224* and MD 1336 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>25</td>
<td>Safe cam 3– (+ Tolerance)</td>
<td>MD 4240* + MD 4248* and MD 1337 + MD 1340 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>26</td>
<td>Safe cam 3–</td>
<td>MD 4240* and MD 1337 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>27</td>
<td>Safe cam 4+ (+ Tolerance)</td>
<td>MD 4228* + MD 4248* and MD 1336 + MD 1340 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>28</td>
<td>Safe cam 4+</td>
<td>MD 4228* and MD 1336 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>29</td>
<td>Safe cam 4– (+ Tolerance)</td>
<td>MD 4244* + MD 4248* and MD 1337 + MD 1340 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>30</td>
<td>Safe cam 4–</td>
<td>MD 4244* and MD 1337 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>31</td>
<td>Position tolerance</td>
<td>MD 4256* and MD 1342 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>32</td>
<td>Reference position tolerance</td>
<td>MD 4252* and MD 1344 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>33</td>
<td>Time/velocity switchover</td>
<td>MD 4264* and MD 1351 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>34</td>
<td>Tolerance time/SGE switchover</td>
<td>MD 4260* and MD 1350 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Explanation</td>
<td>Cause, Remedy</td>
</tr>
<tr>
<td>-----</td>
<td>------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>35</td>
<td>Delay time pulse deletion</td>
<td>MD 4268* and MD 1356 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>36</td>
<td>Time for pulse deletion check</td>
<td>MD 4272* and MD 1357 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>37</td>
<td>Transition time STOP C to SBH</td>
<td>MD 4276* and MD 1352 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>38</td>
<td>Transition time STOP D to SBH</td>
<td>MD 4280* and MD 1353 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>39</td>
<td>Transition time STOP E to SBH</td>
<td>MD 4284* and MD 1354 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>40</td>
<td>Stop reaction after SG</td>
<td>MD 4508*.4,4508*.5 and MD 1361 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>41</td>
<td>Stop reaction after SE</td>
<td>MD 4508*.2,4508*.3 and MD 1362 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>42</td>
<td>Shut–down speed pulse deletion</td>
<td>MD 4288* and MD 1360 are not identical</td>
<td>Enter the same MD values</td>
</tr>
<tr>
<td>43</td>
<td>Memory test stop reaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Explanation</td>
<td>Cause, Remedy</td>
</tr>
<tr>
<td>-----</td>
<td>------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>73</td>
<td>SG correction factor 15</td>
<td>MD 1301 bit 5 is not 0</td>
<td>--</td>
</tr>
<tr>
<td>74</td>
<td>SG correction factor 16</td>
<td>MD 1301 bit 5 is not 0</td>
<td>--</td>
</tr>
<tr>
<td>75</td>
<td>Velocity limit (n_x)</td>
<td>MD 4292* and MD 1346 not equal</td>
<td>Enter MDs equal</td>
</tr>
<tr>
<td>76</td>
<td>Stop reaction with SG1</td>
<td>MD 4508*.4, 4508*.5 and MD 1361 not equal</td>
<td>Enter MDs equal</td>
</tr>
<tr>
<td>77</td>
<td>Stop reaction with SG2</td>
<td>MD 4508*.4, 4508*.5 and MD 1361 not equal</td>
<td>Enter MDs equal</td>
</tr>
<tr>
<td>78</td>
<td>Stop reaction with SG3</td>
<td>MD 4508*.4, 4508*.5 and MD 1361 not equal</td>
<td>Enter MDs equal</td>
</tr>
<tr>
<td>79</td>
<td>Stop reaction with SG4</td>
<td>MD 4508*.4, 4508*.5 and MD 1361 not equal</td>
<td>Enter MDs equal</td>
</tr>
<tr>
<td>80</td>
<td>SI modulo value for SN</td>
<td>MD 1367 is not 0</td>
<td>Enter MDs equal</td>
</tr>
<tr>
<td>81</td>
<td>Speed tolerance for SBR</td>
<td>MD 4296* and MD 1348 not equal</td>
<td>Enter MDs equal</td>
</tr>
<tr>
<td>1000</td>
<td>Control timer expired</td>
<td>The SGE modification timer did not expire within the time of the control timer (i.e. too many switching operations in SGEs).</td>
<td>e.g. contact problems (loose contact)</td>
</tr>
<tr>
<td>1001</td>
<td>Control timer initialization error</td>
<td>The SGE modification timer did not start the control timer.</td>
<td>--</td>
</tr>
<tr>
<td>1002</td>
<td>User enable timer expired</td>
<td>Different status of user enable from drive and NCK</td>
<td>--</td>
</tr>
<tr>
<td>1003</td>
<td>Reference tolerance violated</td>
<td>The comparison of stored standstill position and current position has a greater deviation than specified in MD 4252*: actual value tolerance (referencing) or MD 1344</td>
<td>--</td>
</tr>
<tr>
<td>1004</td>
<td>Plausibility violation of user enable</td>
<td>The user enable has been specified for an axis which is already referenced -- not yet referenced</td>
<td>--</td>
</tr>
<tr>
<td>1005</td>
<td>Pulses already deleted on test stop selection</td>
<td>The &quot;pulses are deleted&quot; signal is already active on test stop selection</td>
<td>Test stop selection on pulse enable error during wiring of the &quot;pulses are deleted&quot; SGE</td>
</tr>
<tr>
<td>1006</td>
<td>Error on SGA forced dynamic response</td>
<td>An error was detected on the cyclic check of the SGAs.</td>
<td>--</td>
</tr>
<tr>
<td>1007</td>
<td>Breakdown of the communication between PLC and drive</td>
<td>If the drive releases a breakdown in communication, either the PLC or the NC has broken down.</td>
<td>--</td>
</tr>
<tr>
<td>1008</td>
<td>Erroneous data transfer between PLC and drive</td>
<td>The data transfer of the SGEs/SGAs between PLC and drive is guaranteed by a checksum. In the event of an error, the calculated checksum does not coincide with the transferred checksum. If the stop is released by the drive, either the PLC or the NC has broken down.</td>
<td>--</td>
</tr>
</tbody>
</table>

**Note:**
If the value 12 is stored in this value, the cross-comparison has detected a difference in the MD for lower limit SE1 in the NCK and drive monitoring channel.
**1340**  Axis has not been referenced safely
*Scan*  After selection of SE/SN
*Effect*  Display of the alarm
The “axis has been referenced safely” SGA is not enabled
The safe end positions are not active
The safe cams are output, but are not safe
*Explanation*  1. The axis has not been referenced, or
2. The user enable for this axis is missing or has been canceled. This can occur, for example, if the axis is moved after the machine is switched off, with the result that the standstill position, which was stored before the machine was switched off, is no longer correct.
*Remedy*  for 1. Reference the axis
for 2. Activate the user enable
The alarm disappears automatically when the enable has been activated
*Warning!*  If the axis has not been referenced safely, and the user enable is not active:
- The safe cams are active but not yet active
- The safe end positions are not yet active
*Note*  Applies as from SW 5.4.

**1344**  Test stop running
*Scan*  After selection of at least one safety function
*Effect*  Display of the alarm
*Explanation*  The correct operation of the shut-down path is tested by enabling the “test stop selection” SGE.
*Remedy*  One is not necessary. It is used exclusively to inform the operator. The alarm disappears automatically when the delay time defined in MD 4272*: (time for checking pulse deletion) expires, if the control detects pulse deletion, i.e. if the test was successfully completed.
*Note*  Applies as from SW 5.4.

**1348**  Stop E triggered
*Scan*  After selection of SG, SE
*Effect*  Interlocking of NC START
Activation of SBH
Initiation of ESR
Follow-up mode for all axes of this mode group
Removal of Mode Group Ready
Interruption of machining
*Explanation*  This alarm occurs with the alarms “safe speed exceeded” or “safe position exceeded” (when configured accordingly in MD 4508* Bit 4: (STOP D/E selection for SG) or MD 4508* Bit 2: (STOP D/E selection for SE). It indicates the initiation of a configured ESR and the internal activation of safe standstill.
*Remedy*  Remedy the causes of "safe speed exceeded" or "safe end position exceeded" (see description of the alarms).
*Continuation*  Remedy the error and press the RESET key (the program is aborted and must be restarted).
*Note*  Applies as from SW 5.4.

**1352**  Stop D triggered
*Scan*  After selection of SG, SE
*Effect*  Interlocking of NC START
Braking on the path
Activation of SBH
Interuption of machining
*Explanation*  This alarm occurs with the alarms “safe speed exceeded” or “safe position exceeded” (when configured accordingly in MD 4508* Bit 4: (STOP D/E selection for SG) or MD 4508* Bit 2: (STOP D/E selection for SE). It indicates the initiation of “braking on the path” and the internal activation of “safe standstill monitoring”.
*Remedy*  Remedy the causes of "safe speed exceeded" or "safe end position exceeded" (see description of the alarms).
*Continuation*  Remedy the error and press the RESET key (the program is aborted and must be restarted).
*Note*  Applies as from SW 5.4.
### 1356* Stop C triggered

**Scan**
- After selection of SG, SE

**Effect**
- Interlocking of NC START
- Follow-up mode for all axes of this mode group
- Removal of Mode Group Ready
- Interruption of machining

**Explanation**
This alarm occurs with the alarms "safe speed exceeded" or "safe position exceeded" (when configured accordingly in MD 4508* Bit 4: (STOP D/E selection for SG) or MD 4508* Bit 2: (STOP D/E selection for SE). It indicates the initiation of "braking at the current limit" and the internal activation of the "safe standstill".

**Remedy**
Remedy the causes of "safe speed exceeded" or "safe end position exceeded" (see description of the alarms).

**Continuation**
Remedy the error and press the RESET key (the program is aborted and must be restarted).

**Note**
Applies as from SW 5.4.

### 1360* Stop B triggered

**Scan**
- After selection of SG, SE after selection of SBH
- After initiation of STOP C, D, E
- After initiation of STOP F and activated SBH/SG or SE, SN

**Effect**
- Interlocking of NC START
- Follow-up mode for all axes of this mode group
- Removal of Mode Group Ready
- Interruption of machining
- Pulse deletion after timer expires (SGA)

**Explanation**
This alarm occurs with the alarm "tolerance for safe standstill exceeded" or alarm "STOP F triggered". It indicates the initiation of "braking at the current limit" and the internal activation of the timer for switchover to STOP A (see MD 4268*: (pulse deletion delay time).

**Remedy**
Remedy the causes of "tolerance for safe standstill exceeded" or for "STOP F triggered" (see description of the alarms).

**Continuation**
Not possible. Acknowledgement of the alarm only possible by POWER ON.

**Note**
Applies as from SW 5.4.

### 1364* Stop A triggered

**Scan**
- After selection of SBH
- After initiation of STOP B

**Effect**
- Interlocking of NC START
- Removal of Mode Group Ready
- Interruption of machining
- Immediate pulse deletion (SGA)

**Explanation**
This alarm occurs with the alarm "tolerance for safe standstill exceeded" or as a result of STOP B or an unsuccessful test stop. It indicates the initiation of a "pulse deletion".

**Remedy**
Remedy the causes of "tolerance for safe standstill exceeded" or for "STOP F triggered" (see description of the alarms).

**Continuation**
Not possible. Acknowledgement of the alarm only possible by POWER ON.

**Note**
Applies as from SW 5.4.

### 1368* Protection zone collision plus

**Scan**
Cyclic with active function "Collision monitoring"

**Parameters**
- Axis number

**Effect**
- Machining standstill; disabling of NC Start

**Explanation**
Overlap of two protection zones has been recognized

**Remedy**
Travel free and trigger mode group reset

**Note**
Applies as from SW 6.
### 1372* Protection zone collision minus

**Reset**

**Scan**
Cyclic with active function "Collision monitoring"

**Parameters**
Axis number

**Effect**
Machining standstill; disabling of NC Start

**Explanation**
Overlap of two protection zones has been recognized

**Remedy**
Travel free and trigger mode group reset

**Note**
Applies as from SW 6.

### 1376* Check absolute value encoder position

**Cancel key**

**Scan**
- Loading of complete NC MD files
- Absolute value encoder available and range expansion of Endat absolute value encoder parameterized

**Effect**
None

**Explanation**
Startup, which is to be performed by loading an NC MD file, has possibly not yet been terminated on an axis with absolute value encoder. The start-up engineer must then decide whether further startup steps have to be carried out. This alarm remains present even after Power Off.

**Remedy**
- Bring axes to closed-loop control mode (terminate possible initial clear mode) and check the actual position displayed.
- If the actual position is not correct (e.g. after loss of data in SRAM through hardware replacement), startup steps must be carried out.
- Acknowledge alarm (not possible in initial clear mode!)

### 2000* LEC – grid spacing illegal

**POWER ON**

**Scan**
Cyclic

**Effect**
Removal of NC START

**Explanation**
In the case of the spindle (e.g. synchronous spindle mode), a modulo value has been entered for the axis concerned which cannot be divided exactly into 360°, which means that the grid spacing is not equal.

**Remedy**
Check NC MD* 3440*

**Note**
Applies as from SW 3

### 2001* Speed setpoint warning limit responded

**Reset key**

**Scan**
Cyclic

**Effect**
Interlocking of NC START

**Explanation**
- The setpoint on the DAC is higher than entered in NC MD 268* "Max. speed setpoint (DAC)". It is not possible to increase the setpoint any further.
- The alarm 2001* "Speed setpoint warning limit" can occur when an M19 positioning is requested while the drive unit is not ready (e.g. setpoint cable break: actuator switched off; actuator not enabled by PLC).
- An incorrect feedback polarity has been parameterized in the spindle positioning mode (sign error).

**Remedy**
- Traverse at slower speed
- Check the actual values (encoder)
- Check NC MD "Max. speed setpoint (DAC)"
- Check the drive actuator

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SINUMERIK 840C / SIMODRIVE 611–D (DA)
### 2003* Zero speed monitoring

**Scan**
- When accelerating
- When at zero speed
- When clamped
- When decelerating (delay)

**Effect**
- Interlock of NC START
- Interlock of Mode Group Ready
- Setpoint 0
- Servo enable is removed on expiry of the time in NC–MD “Cutoff delay servo enable”
- Follow-up mode

**Explanation**
- When positioning, the following error could not be eliminated faster than the time given in NC–MD “Cutoff delay servo enable”.
- When clamped, the limit defined in the NC–MD “Zero speed monitoring” has been exceeded.
- Mechanically clamped spindle has been pushed out of position.
- Error on the activating device, on the tacho, on the motor, in the mechanical construction, in the CNC measuring circuit hardware or on/in the encoder.
- Wrong setpoint output assignment specified
- When starting up: wrong sense of position control

**Remedy**
- NC–MD “Zero speed monitoring” must be greater than NC–MD “Exact stop limit coarse”.
- NC–MD “Cutoff delay servo enable” must be great enough for the following error to be eliminated within this time (applies only when NC–MD “Delay zero speed monitoring” = 0).
- NC–MD “Delay zero speed monitoring” must be great enough for the following error of the various spindles to be eliminated within the time entered.
- Check actual values (encoder) and sense of position control.

### 2007* There is no measuring circuit

**Scan**
- On POWER ON

**Effect**
- Spindle is not processed
- Servo disable of spindle concerned
- Removal of Mode Group Ready
- Interlocking of NC START
- Interlocking of NC RDY relay

**Explanation**
- MD 400* and/or MD 460* indicates an empty submodule slot on a measuring circuit module with submodules. Example: MD 460* = 01090000, the first measuring circuit module is an HMS module with empty submodule slot 2.
- Measuring circuit module has been removed or is defective.

**Remedy**
- Compare MD 400* and/or MD 460* with the hardware configuration and correct.

### 2008* Closed-loop hardware spindle

**Scan**
- Cyclic

**Effect**
- Interlocking of NC START
- Setpoint relay drops out, setpoint 0
- Removal of Mode Group Ready
- Spindle servo enable is removed after the time in MD “Delay for servo enable” has elapsed.

**Explanation**
- The measuring circuit difference signals
  - are not in phase
  - have a short circuit to ground
  - are absent

**Remedy**
- Check whether the measuring circuit connector has been inserted
- The measuring circuit short circuit connector can be slotted in to check whether the measuring circuit module is functioning correctly.
- Check the difference signals with the oscilloscope
- Replace the encoder/cable

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SINUMERIK 840C / SIMODRIVE 611–D (DA)
2009* Contamination measuring system spindle
Scan  •  Cyclic
Effect  •  Interlocking of NC START
        •  Interlocking of Mode Group Ready
Explanations  •  Where measuring systems have a contamination signal (e.g. EXE) an error is sent to the NC from the measuring system.
Remedy  •  Check the measuring system against the manufacturer’s specifications.

2010* Pulse code monitoring
Scan  •  Cyclic
Effect  •  Interlocking of Mode Group Ready
        •  Interlocking of NC START
        •  Alarm causes machining stop
Explanations  •  Transmission error or interference from encoder
Remedy  •  Check encoder, cable, connector

2011* Zero marks monitoring has responded
Scan  •  Cyclic, depending on the tolerance band set for the difference pulses
Effect  •  Interlocking of NC START
        •  Machining stops
Explanations  •  Pulses have been lost per encoder revolution, above the permitted tolerance band, due to transmission errors, interference or too high speed. The reference counter checks this zero mark.
Remedy  •  Check the encoder pulses
        •  Check transmission path

2014* Setpoint or actual speed alarm limit exceeded
2014* Speed setpoint value alarm limit responded
Scan  •  Cyclic
Effect  •  Interlocking of NC START
        •  Interlocking of Mode Group Ready
        •  Setpoint 0
        •  Servo enable is removed after the time in NC MD “Cutout delay servo enable” has elapsed
        •  Follow-up mode
Explanations  •  The motor could not follow the entered speed setpoint.
        •  During start-up: incorrect position control direction, incorrect spindle multgain
        •  The speed actual value exceeds the maximum spindle speed + tolerance
If the service number 309 is indicated here, the reason for the alarm is a format overflow, which can be avoided by reduction of the resolution. Another reason can also be the resolution of the C axis assigned.
Remedy  •  Check the drive
        •  Check position control direction
        •  Match spindle multgain (MD 468*)
        •  Check speed setpoint cable
        •  Check actual values (pulse encoder)
        •  Increase spindle speed tolerance (MD 445*)
        •  Increase acceleration time constant (MD 419* – 426*)
Note  •  Alarm “Setpoint or actual speed alarm limit exceeded”: up to SW 3
        •  Alarm “Speed setpoint alarm limit actuated”: as from SW 4

2015* Drift too high
Scan  •  With input of NC MD 401* or with semi-automatic drift compensation (axis only)
Effect  •  Interlocking of NC START
Explanations  •  The entered drift is greater than approx. 500 mV. In the case of semi-automatic drift compensation, the drift to be compensated for by the NC has risen to above approx. 500 mV.
Remedy  •  Check whether the drift has been compensated for correctly at the driving unit.
1 Alarms

1.5.1 Alarm description

**Terminal assigned more than once**

*POWER ON*

**Scan**
- During machine data input for spindle assignment

**Effect**
- No processing of the spindles of which the corresponding connection number has been assigned more than once.
- Servo disable for the spindle in question

**Explanation**
- Removal of Mode Group Ready
- Interlocking of NC START
- Interlocking of NC RDY relay

**Remedy**
- A connection number of a measuring circuit module is entered several times in MD 400* and/or MD 460*.
  Example: MD 4600 = 01060000, MD 4605 = 01060000. Connection number 6 of the 1st measuring circuit module is thus assigned several times.
- Check and correct MD 400* and/or MD 460*.

**Speed controller limitation**

*Reset key*

**Scan**
- Cyclic

**Effect**
- Interlocking of Mode Group Ready
- Interlocking of NC START
- Alarm causes machining to stop

**Explanation**
- Speed controller limitation triggered

**Remedy**
- Check current control. Set speed control loop slower.
- Check SIMODRIVE
- Check machine
Parameterization error NC MD

2019*

Scan
- At POWER ON or warm restart

Effect
- The spindles concerned are switched to follow-up mode
- Machining stops
- Interlocking of NC START
- Mode Group Ready removed

Explanation
Input error in machine data, e.g.
- Ratio of interpolator pulse to position control pulse too great because MD 160 > 80
- Internal servo gain (Ku) factor too large due to
  - Servo gain factor (469*)
  - Multgain (468*)
- Pulse weighting
- No whole-number ratio between entry in MD 165 (timing ratio) and MD 160 (fine interpolation)
- Incorrect measuring system adaptation in MD 455* to MD 456* (values selected too large)
- General parameterization error of a drive MD

Remedy
- The pulse multiplication value entered for the high-resolution measuring system is impermissible. The following values are permissible: 1, 2, 4, 8, 16, 32, 64 and 128.
- Check and new input of the corresponding machine data.
- Error in parameterization of the SI machine data.
- The SPINDLE service display displays the service number for parameterization errors and with it the exact cause (see Diagnostics Guide, Section Parameterization errors spindle/axis).

Note
- Alarm “Parameterization error drive MD”: up to SW 3
- Alarm “Parameterization error NC–MD”: as from SW 4

Spindle not synchronized

2021*

Scan
On execution of an M19 command

Effect
Machining stops

Explanation
M19 was used to approach a spindle position, although the spindle had not yet been synchronized.

Remedy
Synchronize the spindle; execute the M19 again.

MD M19 not selected

2028*

Scan
When executing in AUTOMATIC mode or input in MDA or external

Effect
Machining stops

Explanation
“M19 S...” has been programmed in the part program although this function is not implemented in the control.

Remedy
Check program
Check NC MD
1 Alarms

1.5.1 Alarm description

2029* Drive fault

Scan
- 611–D alarm 300100 “Drive link off”
- Power On / Reset alarms (ZK1) from 611–D

Remedy
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Setpoint 0
- Setpoint enable is removed after the time set in NC MD “Switch off delay servo enable” (not with alarm “Drive link off”)
- Follow up mode
- 611–D status signals “Drive ready” and “Drive connected” are reset
- Further detailed information on the cause in MMC diagnosis display

Note
Applies as from SW 3

2030* Spindle speed too high

Scan
Only when NC MD “Encoder available” is set

Effect
- Machining stops
- Interlocking of NC START
- Interlocking of Mode Group Ready

Explanation
The spindle speed is higher than defined in the machine data or setting data.

Remedy
- Program a smaller S value
- NC MD “Max spindle speed for 1st to 8th gearing”
- NC MD “Tolerance band of max. spindle speed”
- NC MD “Max. spindle speed”
- Check PLC gear speed
- Check G92 S... at “v = constant”
- Check setting data of spindle speed limitation
- Program G26 S...

2032* Output not available

Scan
When setpoint incorrectly assigned

Effect
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready
- Setpoint 0
- No servo enable
- Follow-up mode

Explanation
A digital setpoint output that does not exist has been assigned

Remedy
Check the setpoint output machine data

Note
Applies as from SW 3

2033* Drive fault

Scan
- 611–D alarms
  - Drive configuration description incorrect
    - Drive number
    - Drive type (FDD/MSD)
    - Module type (single-axis/double-axis module)
  - Ramp up error (error during 611–D rump-up, error during data matching)
  - Transmission line fault (CRC, bus timeout)

Effect
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready
- Setpoint 0
- Servo enable removed after time set in NC MD “Switchoff delay servo enable” has passed
- Follow-up mode

Remedy
Additional detailed information about the cause is given in the MMC diagnosis display

Note
Applies as from SW 3
### 2057*  Emergency retraction triggered

**Scan**
Cyclic in servo cycle, when LINK ON is set for the following spindle (from servo).

**Effect**
Machining interrupted, interlocking of NC START; Mode Group Ready cancelled

**Explanation**
The threshold MD “Emergency retraction threshold” programmed for synchronism monitoring has been exceeded and emergency retraction triggered.
Prerequisite: Enable with PLC interface signal “Emergency retraction enabled”.

**Remedy**
Check the drives; check the speed and acceleration limit values of the following spindle; check the emergency retraction threshold; check the link factors.

**Note**
Applies as from SW 3

### 2058*  Overlay of following axis not enabled

**Scan**
When path for following axis defined (NCK).

**Effect**
Setpoint is not output, i.e. the overlay is not executed.

**Explanation**
Overlaid offset of the following spindle although the PLC interface signal “Enable FA overlay” is not set.

**Remedy**
Traverse a following axis with fictitious leading axis or set PLC interface signal “Enable FA overlay”.

**Note**
Applies as from SW 3

### 2059*  Speed limit exceeded

**Scan**
Cyclic in servo cycle, when LINK ON is set for following spindle (from servo)

**Effect**
- No reaction
- Machining is not interrupted

The speed of the following spindle is limited to the programmed maximum value; the setpoint determined by the compensatory controller is not included in the calculation.

**Explanation**
The maximum value programmed for the following spindle has been exceeded. Synchronism at risk

**Remedy**
- Reduce feedrate or speed of leading spindles
- Check the speed limit value
- Check the link factors

**Note**
Applies as from SW 3

### 2060*  Acceleration limit exceeded

**Scan**
Cyclic in servo cycle, when LINK ON is set for the following spindle and MD bit “Suppress acceleration limitation” (MD 526*) is not set (from servo).

**Effect**
- No reaction
- Machining is not interrupted

Interface signal “Acceleration limitation synchronous” is set, spindle continues to travel at maximum acceleration; any suppressed TSW are traversed afterwards. If interface signal “Acceleration limitation synchronous” is not set, suppressed partial setpoints are not traversed. The setpoint determined by the compensatory controller is not included in the calculation.

**Explanation**
Maximum value programmed for the following spindle has been exceeded. Synchronism at risk.

**Remedy**
- Reduce the acceleration of the leading spindles
- Check the acceleration limit value
- Check the link factors

**Note**
Applies as from SW 3
1.5.1 Alarm description

**2061**  
**Cause** Aut. contr. corr. of following spindle  
**Scan** An error has occurred which has cancelled "Mode group ready".  
**Effect** Cyclic in servo cycle when LINK ON is set  
**Explanation**  
Machining is interrupted  
Interlocking of NC START  
Switchover to actual position link  
**Remedy** An axis/spindle within the mode group is subject to an error which usually results in switchover to follow-up mode. As long as the following axis is not affected by this fault, the link is maintained until the "Delay controlled follow-up" has come to an end.  
**Note** Rectify axis/spindle error.  

**2065**  
**Cause** Reconfiguration not allowed  
**Scan** With RECONFIGURATION using the G function (G401), i.e. when a leading axis is added or removed, the link structure is altered or with CLEAR CONFIGURATION (from NCK).  
**Effect** Interlocking of NC START  
**Explanation** Reconfiguration permitted not set (MD 525*, bit 1)  
**Remedy** Correct input, set MD bit  
**Note** Applies as from SW 3  

**2066**  
**Cause** GI configuration not allowed  
**Scan** When programming DEFINE CONFIGURATION with G function (from NCK).  
**Effect** Command is not executed  
**Explanation** Possible causes:  
- Do leading and following axes have a position measuring system (encoders)?  
- Is the following axis linked to itself as a leading axis?  
- Can the axis be a following axis (MD 1844*)?  
- Link structure switchover not permissible (MD 1844*)  
- Link type for the LA/LS not allowed (MD 1456*)  
- The following axes must always be real available axes, i.e. a measuring circuit (POS encoder) must be defined. A measuring circuit must be defined for leading axes/spindles with link structure K2 (actual position link).  
- Leading axes/spindles and following axis are not in the same mode group.  
- Not exactly one leading spindle defined for following spindle.  
- One of the axes in the GI grouping is a fictitious transformation axis.  
- No synchronous positions have been defined for on-the-fly synchronization.  
**Remedy** Check configuration  
**Note** Applies as from SW 3  

**2067**  
**Cause** Change of KF not allowed  
**Scan** When entering a new link factor via G function (from NCK).  
**Effect** Command is not executed, the previous link factor is maintained  
**Explanation** The link factor default setting must not be changed (MD 525*, bit 2).  
**Remedy** Change default setting if necessary.  
**Note** Applies as from SW 3
<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>2068*</td>
<td>Link factor KF illegal</td>
<td>When entering a new link factor via G function (from NCK).</td>
<td>Command is not executed, the previous link factor is maintained.</td>
<td>Correct link factor KF.</td>
</tr>
<tr>
<td>2069*</td>
<td>Overwriting of position not allowed</td>
<td>When programming a position with GI command.</td>
<td>G command not executed.</td>
<td>Correct input.</td>
</tr>
<tr>
<td>2070*</td>
<td>Reconfiguration/deletion not allowed</td>
<td>At RECONFIGURATION via G function (G401), i.e. addition, cancellation of a leading spindle or changing a coupling structure or on DELETE CONFIGURATION (from NCK).</td>
<td>Interlocking of NC START; NC Stop, stopping of the channel, command is not executed, JOG mode still possible.</td>
<td>Precede by LINK_OFF for the specified GI combination.</td>
</tr>
<tr>
<td>2073*</td>
<td>Change of link factor KF illegal</td>
<td>When entering a new link factor with G function (from NCK).</td>
<td>Command is not executed, the previous link factor is maintained. Interlocking of NC Start; NC Stop, channel stopped: JOG mode still possible.</td>
<td>Correct the link factor KF.</td>
</tr>
<tr>
<td>2074*</td>
<td>Change of link factor KF not allowed</td>
<td>When entering a new link factor with G function (from NCK).</td>
<td>Command is not executed, the previous link factor is maintained. Interlocking of NC START; NC STOP. Channel is stopped: JOG mode still possible.</td>
<td>Change default setting if necessary.</td>
</tr>
</tbody>
</table>
2075* GI configuration not allowed

Scan When programming DEFINE CONFIGURATION with G function (from NCK).

Effect • Command is not executed
• Interlocking of NC START
• NC STOP
• Channel stopped: JOG mode still possible

Explanation Possible causes:
• Do leading and following axes have a position measuring system (encoders)?
• Is the following axis linked to itself as a leading axis?
• Can the axis be a following axis (MD 1844*)?
• Link structure switchover not permissible (MD 1844*)
• Link type for the LA/LS not allowed (MD 1456*/496*)?
• The following axes must always be real available axes, i.e. a measuring circuit (POS encoder) must be defined. A measuring circuit must be defined for leading axes/spindles with link structure K2 (actual position link).
• Leading axes/spindles and following axis are not in the same mode group.
• Not exactly one leading spindle defined for following spindle.
• One of the axes in the GI grouping is a fictitious transformation axis.
• No synchronous positions have been defined for on-the-fly synchronization.

Remedy Check configuration

Note Applies as from SW 3

2076* Following spindle not defined

Scan When programming a spindle as a following spindle which has not been defined as such (from NCK).

Effect • G command is not executed
• Interlocking of NC START
• NC STOP
• Channel stopped: JOG mode still possible

Explanation A GI grouping with the stated axis as a following spindle does not exist.

Remedy Correct input.

Note Applies as from SW 3

2077* Spindle not in spindle mode

Scan The programmed following spindle has a C axis which has been selected for C axis mode.

Effect • Command is not executed
• Interlocking of NC START
• NC STOP
• Channel stopped: JOG mode still possible

Explanation When programming a following spindle which is assigned to a C axis, this C axis must be in spindle mode. This is not necessary with G401, but a GI grouping must not be defined for the C axis at the same time.

Remedy Correct mode/input.

2078* Leading spindle not defined

Scan When programming a spindle as a leading spindle or an axis as a leading axis which have not been defined as such (from NCK).

Effect • G command is not executed
• Interlocking of NC START
• NC STOP
• Stop channel: JOG mode is still possible

Explanation A GI grouping with the stated axis as a leading axis does not exist

Remedy Correct input.

Note Applies as from SW 3
2079* Overwriting of GI position not allowed
Scan When programming a position with GI command.
Effect • G command is not executed
• Interlocking of NC START
• NC STOP
• Channel stopped: JOG mode still possible
Explanation The GI positions must not be overwritten (enabled with MD 525*, bit 3)
Remedy Correct input.
Note Applies as from SW 3

2080* Wrong spindle assignment to channel
Scan When programming a position with GI command.
Effect • G command is not executed
• Interlocking of NC START
• NC STOP
• Channel stopped: JOG mode still possible
Explanation The GI command for the following spindle must only be programmed in the channel to which the spindle is assigned
Remedy Change channel or alter assignment.
Note Applies as from SW 3

2081* Retraction spindle is following spindle
Scan On decoding the retraction command
Effect None
Explanation Alarm occurs when a following spindle has been defined as retraction spindle because the link is violated by the retraction. Also, the overlay must be enabled by the PLC.
Remedy Select another retraction spindle.
Note Applies as from SW 4

2082* Retraction spindle in several channels
Scan On decoding G425/6
Effect Machining interrupt
Explanation A spindle has been programmed as retraction axis that has already been selected in another channel for retraction.
Remedy Remove spindle from the retraction block.
Note Applies as from SW 4

2084* IKA path reconfiguration not allowed
Scan When programming G401/G411
Effect Interlocking of NC Start
Interlocking of NC Stop
Explanation • An IKA path has been defined that is already configured.
• An attempt has been made to delete G411 – an IKA path that is still active.
Remedy Activate an IKA path that is not yet configured. On deselecting: switch IKA inactive.

2085* Error in IKA path input/output
Scan When programming G410/G411/G412
Effect Interlocking of NC Start, NC Stop
Explanation If an input/output value is specified with G410/G411/G412 that does not correspond to the configuration or is not permissible, this alarm is triggered.
Remedy Specify input/output correctly or omit I/O designation with G410.
### 2086* Programmed spindle is slave

**Scan**
- Setpoint specified for a slave spindle
- Initiate oscillation mode for a slave spindle
- M19 for a slave spindle

**Explanation**
- Interlocking of NC Start
- Follow-up mode
- Cancellation of Mode Group Ready
- Processing interrupt

**Explanation**
The designated spindle is coupled to its master spindle through a speed setpoint coupling. Setpoints should therefore not be specified.

**Remedy**
Setpoints should not be specified for the slave spindle.

**Note**
Applies as from SW 4.4

### 2087* No synchronous/switching positions defined

**Scan**
When synchronizing or switching on in relation to a position from PLC.

**Effect**
Interlocking of NC START, MACHINING STOP

**Explanation**
An attempt has been made to synchronize master and slave axes/spindles from PLC, or to switch on with reference to a position, without there being any valid switching or synchronizing positions. Synchronization or switching on with reference to a position is therefore not possible.

**Remedy**
For example, specified positions through the GI input display or G403.

**Note**
Applies as from SW 4.4

### 2088* Test stop running

**Note**
Alarm description see 1344*

### 2089* Stop E triggered

**Note**
Alarm description see 1348*

### 2090* Stop D triggered

**Note**
Alarm description see 1352*

### 2091* Stop C triggered

**Note**
Alarm description see 1356*

### 2092* Stop B triggered

**Note**
Alarm description see 1360*

### 2093* Stop A triggered

**Note**
Alarm description see 1364*

### 2094* Tolerance for safe standstill exceeded

**Note**
Alarm description see 1324*

### 2095* Safe speed exceeded

**Note**
Alarm description see 1328*
<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Alarm Description</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2096*</td>
<td>Safe end position exceeded</td>
<td></td>
<td>Reset key</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note</td>
<td></td>
<td>Alarm description see 1332*</td>
<td></td>
</tr>
<tr>
<td>2097*</td>
<td>Failure in a monitoring channel</td>
<td></td>
<td>Reset key</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note</td>
<td></td>
<td>Alarm description see 1336*</td>
<td></td>
</tr>
<tr>
<td>100001</td>
<td>Connection to keyboard faulty!</td>
<td></td>
<td>When initializing and with every input</td>
<td>Restore connection</td>
</tr>
<tr>
<td>Scan</td>
<td></td>
<td></td>
<td>Entries through operator panel no longer possible</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td></td>
<td></td>
<td>Connection between operator panel and MMC CPU interrupted</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100002</td>
<td>Operator panel: buffer overflow</td>
<td>OK softkey</td>
<td>Permanent</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td></td>
<td></td>
<td>MMC crash</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td></td>
<td></td>
<td>Operator panel signals are lost</td>
<td>None</td>
</tr>
<tr>
<td>Explanation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100003</td>
<td>Operator panel interface not ready</td>
<td></td>
<td>Power on</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td></td>
<td></td>
<td>Permanently</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td></td>
<td></td>
<td>Operator panel cannot be used</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100005</td>
<td>... (Alarm text is variable)</td>
<td>OK softkey</td>
<td>Special error text</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td></td>
<td></td>
<td>Depending on operation</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100006</td>
<td>The area ... is to be terminated</td>
<td>OK softkey</td>
<td>Memory required for another application. The operation can be aborted with softkey ABORT.</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td></td>
<td></td>
<td>Application is terminated</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100007</td>
<td>Area ... could not be terminated</td>
<td>OK softkey</td>
<td>Terminate application</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 100008  ... (Alarm text is variable)

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>–</td>
<td>–</td>
<td>Special error text</td>
<td>–</td>
</tr>
<tr>
<td>–</td>
<td></td>
<td>Explained by context of operation</td>
<td>–</td>
</tr>
</tbody>
</table>

**OK softkey**

### 100009  The area ..... is terminated

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

**OK softkey**

### 101000  NCK system being loaded

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>–</td>
<td>None</td>
<td>Message appears in the red bar when the system is being loaded</td>
<td>–</td>
</tr>
</tbody>
</table>

### 101001  PLC system being loaded

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>–</td>
<td>None</td>
<td>Message appears in the red bar when the system is being loaded</td>
<td>–</td>
</tr>
</tbody>
</table>

### 101002  NCK software not available on hard disk

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>–</td>
<td>NCK is not powering-up: MMC powers up without NCK</td>
<td>Required data for loading not available in defined directory, Install NCK software on MMC</td>
<td>–</td>
</tr>
</tbody>
</table>

### 101003  NCK user data being loaded

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>–</td>
<td>None</td>
<td>Data in user/NC/data directory being loaded</td>
<td>–</td>
</tr>
</tbody>
</table>

**Note**

Alarm in SW 5 and higher

### 101004  Checksum error when booting the NCK

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>–</td>
<td>NCK is not powering-up: MMC powers up without NCK</td>
<td>Faulty loaded file (wrong checksum or wrong format), POWER ON, Re-install NC software, if necessary</td>
<td>Applies for SW 2 only</td>
<td>–</td>
</tr>
</tbody>
</table>

**Note**

Applies for SW 2 only
101003  User file not loaded

**Scan**  At system start

**Effect**  File in the user/NC/data directory is not loaded.

**Explanation**  No file operation (read, position, ...) could be performed on the user file ... or an error occurred during transfer. In the case of file operations, message 105011 is not issued (a reference to the faulty file operation).

**Remedy**  Correct the data in the user/NC/data directory.

**Note**  Alarm in SW 5 and higher

101003  Error in NCK/user/data load

**Scan**  At system start

**Effect**  Data in the directory user/NC/data are not loaded into the NCK

**Explanation**  –

**Remedy**  Correct data in the directory user/NC/data. Only GIA data (file name GIA) and IKA data (file names IKA1, IKA2, IKA3) should be stored there.

**Note**  Applies from SW 3 to SW 4.4

101004  MMC–NC data link not ready (log)

**Scan**  –

**Effect**  NCK is not powering-up: MMC powers up without NCK

**Explanation**  • Software error in transport protocol

**Remedy**  • POWER ON

• Replace hardware, reinstall software

101005  Faulty load list on MM

**Scan**  –

**Effect**  NCK is not powering-up: MMC powers up without NCK

**Explanation**  • Last file when booting is not NCK_SYS

**Remedy**  • Reinstall NCK software on MMC

101006  MMC–NC data link not ready

**Scan**  –

**Effect**  NCK is not powering-up: MMC powers up without NCK

**Explanation**  • Internal software error in the data link at driver level

**Remedy**  • Install new software on MMC

• Replace hardware

101008  Remove EPROM submodule on NC–CPU

**Scan**  –

**Effect**  NCK is not powering-up: MMC powers up without NCK

**Explanation**  EPROM module is plugged on NC CPU 386

**Remedy**  • See error message: replace CPU, if necessary (if no RESTART EPROM is plugged)

102000  Directory does not exist on harddisk

**Scan**  When displaying a data selector in MMC

**Effect**  Reset to configured initial state of data selector

**Explanation**  The data selector tries to display an area no longer available in the data management

**Remedy**  –

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SINUMERIK 840C / SIMODRIVE 611–D (DA)
### 102010 Configuring error

**Scan**
- First display of a data selector in MMC

**Effect**
- Empty display

**Explanation**
- Possibly a consequential error, since data selector cannot work in the services, diagnosis, programming area

**Remedy**
- Check/change configuration of UMS/FUMS.

### 102013 Only ... of ... elements displayed

**Scan**
- When data selector is called

**Effect**
- Data only partially displayed

**Explanation**
- Quantity of displayed data limited internally

**Remedy**
- –

### 103000 DUAL PORT RAM error!

**Scan**
- –

**Effect**
- –

**Explanation**
- Hardware problem or incorrectly installed by OEM

**Remedy**
- Replace hardware if necessary

### 104000 Maximum line length reached

**Scan**
- When inputting/inserting in the ASCII editor on MMC

**Effect**
- Operation is not executed

**Explanation**
- The maximum line length of the ASCII editor is exceeded

**Remedy**
- Shorter lines

### 104001 Search text not found

**Scan**
- When searching

**Effect**
- None

**Explanation**
- The ASCII editor in the MMC outputs a message that the search for a character string has not been successful.

**Remedy**
- –

### 104002 File cannot be opened

**Scan**
- When displaying an ASCII editor in MMC

**Effect**
- Empty display in ASCII editor

**Explanation**
- ASCII editor cannot find the file to be processed in the data management

**Remedy**
- None

### 104004 Buffer is empty

**Scan**
- ASCII editor when pasting from clipboard

**Effect**
- Operation is not executed

**Explanation**
- By operator action the ASCII editor is requested to paste from the clipboard into the file processed. The clipboard, however, is empty, not available or faulty. Possibly an operating error

**Remedy**
- Other operator action
  - Fill clipboard
104005  Caution File has lines which are too long  OK softkey
Scan When reading in file
Effect Line wrapround with LF
Explanation Line length > 128 characters (as from SW 4: > 256 characters)
Remedy –
Note Applies up to SW 4.5

104005  File or harddisk failure  OK softkey
Scan in ASCII editor
Effect Operation aborted.
Explanation An error has occurred in the editor during a write/read operation on the hard disk.
Remedy Perform chkdsk; replace MMC
Note Applies as from SW 5

104006  The hard disk is full  OK softkey
Scan When expanding the current file in ASCII editor
Effect Operation is aborted
Explanation The ASCII editor cannot generate any further internal auxiliary files
Remedy Reduce number of files on the hard disk.
Note Applies up to SW 4.4

104006  File cannot be processed further  OK softkey
Scan ASCII editor
Effect
Explanation Possible causes are
1. File is ≥ 8 MB
2. File ≥ 8 MB was processed further
3. Hard disk is full
4. Hard disk error
Remedy • for 1, 3, 4: exit file without saving
• for 2: changes made up to this message can be saved.
Note Applies as from SW 4.4

104007  Line wrapround due to excessively long lines  OK softkey
Scan When reading in file
Effect –
Explanation Line length > 128 characters (as from SW 4: > 256 characters)
Remedy –

104008  Save not possible at present time  OK softkey
Scan When saving file
Effect File is not saved
Explanation File is still open somewhere else (e.g. execution from harddisk)
Remedy Wait until execution has ended
104009  File cannot be loaded into NCK  OK softkey

Scan   With SK Save and Load in NCK
Effect  Operation is aborted
Explanation An error has occurred while loading the file into the NCK. Possible causes: File type cannot be loaded into NCK; incorrect keyswitch position; no communication with NCK.
Note   Alarm in SW 5 and higher

105000  MMC power up

Scan   Power up
Effect  None
Explanation Time of MMC power is up noted in log
Remedy  No error

105001  Too many alarms/messages  Acknowledgement key

Scan   –
Effect  New alarms are not displayed until alarms are acknowledged again
Explanation An alarm is displayed although 50 unacknowledged alarms already exist
Remedy  POWER ON

105002  No communication to NCK!

Scan   Power up
Effect  MMC power up without NCK
Explanation A more detailed error diagnostic is entered in the log with alarm 105011. Wrong MD, e.g. too short IPO cycles
Remedy  Check NCK driver, POWER ON

105003  NCK failed with error ...

Scan   Power up
Effect  Alarm 105005 is also output —> see alarm 105005
Explanation [EPROM_ERROR]: EPROM error
[DRAM_ERROR]: DRAM error detected during power up
[DRAM_PROG_ERROR]: DRAM system program error
Remedy  POWER ON, replace NCK hardware if necessary

105004  NCK reset – please wait ...

Scan   Power up
Effect  System can temporarily not be operated
Explanation NCK power up in progress
Remedy  Wait until NCK reset is completed and message disappears

105005  Please initiate NCK reset

Scan   Power up
Effect  • NCK cannot be operated
• Interlocking of NC START
Explanation MMC crash and subsequent power up does not cause the operating program to be interrupted. For safety reasons an NCK RESET must be initiated at a suitable time. An NCK system error has occurred. For more detailed diagnosis refer to messages 105003 or 105020.
Remedy  Initiate NCK RESET
<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
<th>Effect</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>105006</td>
<td>System crash – Please switch control off/on</td>
<td>Power up</td>
<td>POWER ON</td>
</tr>
<tr>
<td>105006</td>
<td>!!! System crash – reboot !!!</td>
<td>MMC is rebooted after 5 seconds</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Power up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>MMC is rebooted after 5 seconds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Either applications or the operating system has</td>
<td></td>
<td>POWER ON</td>
</tr>
<tr>
<td>Remedy</td>
<td>crashed or there is an MMC hardware fault</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

105007 | Operator system initialization failed             | Power up                                   | POWER ON          |
| Scan     | Power up                                         |                                             |                   |
| Effect   | No power up of MMC                               |                                             |                   |
| Explanation| Internal system error during power up            |                                             |                   |
| Remedy   | Inform system service                            |                                             |                   |

105008 | Hardware error: ...                              | Power up                                   |                   |
| Scan     | –                                                |                                             |                   |
| Effect   | Alarm 105006 is also output → see alarm 105006   |                                             |                   |
| Explanation| DPR driver recognizes NMI because of a MMC      |                                             |                   |
| Remedy   | Internal system error during power up            |                                             |                   |

105009 | UMS too large → UMS not loaded                   | OK softkey                                 |                   |
| Scan     | Power up                                         |                                             |                   |
| Effect   | UMS does not load                                |                                             |                   |
| Explanation| The UMS (customer or Siemens UMS) cannot be     |                                             |                   |
| Remedy   | loaded with the current memory configuration    |                                             |                   |
|          | because it is set greater than in NC–MD 60000   |                                             |                   |
|          | (as from SW 4; up to SW 3, 512 kB fixed).        |                                             |                   |
|          | Change the memory configuration (as from SW 4);  |                                             |                   |
|          | set MD 60000 accordingly.                        |                                             |                   |

105010 | Master control initialization failed!            | POWER ON                                   |                   |
| Scan     | Power up                                         |                                             |                   |
| Effect   | No power up of MMC                               |                                             |                   |
| Explanation| Internal system error during power up            |                                             |                   |
| Remedy   | Inform system service                            |                                             |                   |

105011 | Internal error: ...                              | OK softkey                                 |                   |
| Scan     | –                                                |                                             |                   |
| Effect   | Alarms 105002, 105012 or 105013 are also output → see these alarms |                   |                   |
| Explanation| Internal system error                            |                                             |                   |
| Remedy   | See alarms 105002, 105012 and 105013             |                                             |                   |

105012 | Error in UMS → UMS not loaded                    | OK softkey                                 |                   |
| Scan     | Power up                                         |                                             |                   |
| Effect   | UMS does not load                                |                                             |                   |
| Explanation| More detailed error diagnostics are entered in  |                                             |                   |
| Remedy   | the log with message 105011                      |                                             |                   |
|          | Check customer UMS, POWER ON                    |                                             |                   |
1  Alarms

1.5.1 Alarm description

105013 Standard UMS cannot be loaded  POWER ON

**Scan** Power up

**Effect** The MMC system boots up without NCK

**Explanation** The Siemens configuration file NCMEMCFG.020 does not exist. When transferring the standard configuration, an error occurred or the NCK signals an error in memory configuration.

**Remedy** New system software

105014 Operator panel initialization failed  POWER ON

**Scan** Power up

**Effect** No power up of MMC

**Explanation** Operator panel cannot be initialized

**Remedy** Check whether serial driver has been loaded, POWER ON

105015 There is no directory for temporary files!  POWER ON

**Scan** Power up

**Effect** No power up of MMC

**Explanation** There is no directory for temporary files in the data management

**Remedy** Reload MMC software

105017 Boot file ... cannot be loaded  OK softkey

**Scan** When loading from NCK, PLC or SIMODRIVE 611–D

**Effect** –

**Explanation** –

**Remedy** –

**Note** Applies up to SW 4

105017 System file not loaded  Acknowledgement key

**Scan** While loading NCK/PLC or SIMODRIVE 611D.

**Effect** MMC powers up without NCK and message 105002 appears.

**Explanation** No file operation (read, position, ...) could be performed on system file ... or an error has occurred during transmission. Message 105011 – reference to incorrect file operation – also missing during file operation.

**Remedy** Notify system service.

**Note** Applies as from SW 5

105018 Error in memory configuration → standard configuration loaded  OK softkey

**Scan** –

**Effect** Boot with standard configuration

**Explanation** Memory configuration could not be loaded and initiated. Error in the customer configuration.

**Remedy** Create new customer configuration

105020 NCK crash ... 10 following lines  POWER ON

**Scan** Permanent

**Effect** The register dump for alarms 105031 – 105039 is written into the log
Alarm 105005 has also been output —> see alarm 105005

**Explanation** NCK has crashed and has saved register dump

**Remedy** Report register dump from alarm log to Siemens Service, POWER ON
### 1.5.1 Alarm description

<table>
<thead>
<tr>
<th>Alarm Number</th>
<th>Description</th>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>105030</td>
<td>Except... 386–Error... Task...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105031</td>
<td>CS: ... EIP: ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105032</td>
<td>SS: ... ESP: ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105033</td>
<td>EFLAGS: ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105034</td>
<td>DS: ... ES: ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105035</td>
<td>FS: ... GS: ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105036</td>
<td>EAX: ... EBX: ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105037</td>
<td>ECX: ... EDX: ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105038</td>
<td>esi: ... edi: ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105039</td>
<td>EBP: ... LDTR: ... CR0: ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Explanation:** Under these alarm numbers the register contents of the NCK crash is entered in the alarm list.

**Remedy:** See alarm 105020

**Note:** These alarms are displayed only for a short period of time. They are entered in the alarm list.

**Acknowledgement key:**

- **Wrong text number for message no. ...**

  **Scan:** Power up

  **Effect:** Text number 0 understood.

  **Explanation:** Error during conversion of ASCII files. A message has a text number greater than or equal to the number of texts.

  **Remedy:** Eliminate error in the alarm configuration.

  **Note:** SW 5 and higher

**Acknowledgement key:**

- **Incorrect reference to message description for no. ...**

  **Scan:** Power up

  **Effect:** Reference to the first message description

  **Explanation:** Error during conversion of ASCII files. A message has a reference to a message line description greater than or equal to the number of message line descriptions.

  **Remedy:** Eliminate error in the alarm configuration

  **Note:** SW 5 and higher
## 105042 Incorrect reference to dialog description for no. ...  
**Scan**  
Power up  
**Effect**  
Reference set to the first dialog description.  
**Explanation**  
Error during conversion of ASCII files. A message has a reference to a dialog description greater than or equal to the number of dialog descriptions.  
**Remedy**  
Eliminate error in the alarm configuration  
**Note**  
SW 5 and higher

## 105043 Message no. ... neither dialog nor message  
**Scan**  
Power up  
**Effect**  
Value 0 understood.  
**Explanation**  
Error during conversion of ASCII files. The third from last parameter of the message description is not 0 or 1 (0 for message line, 1 for dialog box)  
**Remedy**  
Eliminate error in the alarm configuration.  
**Note**  
SW 5 and higher

## 105044 Syntax error in message configuration  
**Scan**  
Power up  
**Effect**  
Binary files have been read from the Siemens branch.  
**Explanation**  
Error during conversion of ASCII files. The converter could not interpret the message attribute/message text files. The binary files from the Siemens branch have been read in.  
**Remedy**  
Eliminate error in the alarm configuration.  
**Note**  
SW 5 and higher

## 105045 No communication to PLC  
**Scan**  
Permanently  
**Effect**  
MMC cannot communicate with PLC  
**Explanation**  
Communication with PLC aborted after an error or time overrun  
**Remedy**  
Check whether module is slotted in, notify Service.

## 105046 PLC failed with error ...  
**Scan**  
Permanently  
**Effect**  
If the PLC signals an error, the error number is entered in the alarm log  
**Explanation**  
Used for logging the PLC error number  
**Remedy**  
Report error no. to Siemens, log module

## 105047 PLC Reset – please wait ...  
**Scan**  
Permanently  
**Effect**  
No communication possible with PLC at the moment  
**Explanation**  
This alarm is displayed while communication is started, e.g. after a link bus reset. It dissappears after a short time  
**Remedy**  
Wait

## 105048 Text in ... not available  
**Scan**  
After Power On  
**Effect**  
A language which is not available has been set in the config file in the master control  
**Explanation**  
Siemens settings apply  
**Remedy**  
Set correct language and Power On
## 105049  Operator panel interface ... faulty

**Scan**  
After Power On  

**Effect**  
An interface which does not exist has been set in the config file of the master control  

**Explanation**  
Siemens settings apply  

**Remedy**  
Set correct interface and Power On  

## 105050  Keyword unknown in line ... (master control)

**Scan**  
After Power On  

**Effect**  
An unknown keyword is in the config file of the master control  

**Explanation**  
Line is ignored  

**Remedy**  
Correct and Power On  

## 105051  Wrong value in ... line (master control)

**Scan**  
After Power On  

**Effect**  
An incorrect value stands behind the keyword in the config file of the master control  

**Explanation**  
Interpreted as value 0  

**Remedy**  
Correct and Power On  

## 105052  Text too long in line ... (master control)

**Scan**  
After Power On  

**Effect**  
A string is too long in the config file of the master control  

**Explanation**  
Line is ignored  

**Remedy**  
Correct and Power On  

## 105053  Missing value in line ... (master control)

**Scan**  
After Power On  

**Effect**  
The value behind the keyword is missing in the config file of the master control  

**Explanation**  
Line is ignored  

**Remedy**  
Correct and Power On  

## 105054  Too many masks in line ... (master control)

**Scan**  
After Power On  

**Effect**  
There are too many masks for registering the alarms to be entered in the log in the config file of the master control  

**Explanation**  
Line is ignored  

**Remedy**  
Reduce number of masks and Power On  

## 105055  Log ... created new

**Scan**  
Power up  

**Effect**  
Old entries have been deleted.  

**Explanation**  
The existing log (alarm log = 1, service log = 2) could no longer be accessed.  

**Remedy**  
–  

**Note**  
Applies as from SW 4
### 105056 Log ... cannot be created

**Scan**  
Power up

**Effect**  
Power up without log

**Explanation**  
It was not possible to create a log file (alarm log = 1, service log = 2) (disk defective or full).

**Remedy**  
Check disk

**Note**  
Applies as from SW 4

---

### 106000 Listing texts ... cannot be read

**Scan**  
MMC power up

**Effect**  
Listing texts cannot be used.

**Explanation**  
An essential system file cannot be read.

**Remedy**  
Notify service.

**Note**  
Applies as from SW 4

---

### 106001 Listing ... being prepared

**Scan**  
Selection of a listing

**Effect**  
The selected listing is prepared just once.

**Explanation**  
This text simply provides information and is intended to explain a delay that might occur. When selecting the same listing again, this does not have to be prepared again.

**Remedy**  
Wait until the message disappears again.

**Note**  
Applies as from SW 4

---

### 106002 ... is being read

**Scan**  
File functions MDD

**Effect**  
A data block is being read in from harddisk.

**Explanation**  
This text simply provides information and is intended to explain a delay that might occur.

**Remedy**  
Wait until the message disappears again.

**Note**  
Applies as from SW 4

---

### 106003 ...: Error in data block ...

**Scan**  
File functions MDD

**Effect**  
A data block has not been completely read in.

**Explanation**  
A data block read in from harddisk (so-called punched tape format) contains an error.

**Remedy**  
Correct the error as far as possible and repeat the process.

**Note**  
Applies as from SW 4

---

### 106004 ...: This data area on-line only

**Scan**  
File functions MDD with user pictures.

**Effect**  
This function is not possible.

**Explanation**  
The selected data area can only be combined with data block selection 0 (i.e. always on-line). Storage on harddisk in punched tape format is not possible.

**Remedy**  
Correct the error as far as possible and repeat the process.

**Note**  
Applies as from SW 4
106005  Memory overflow  OK softkey
Scan   File functions MDD
Effect Function is aborted
Explanation The main memory (RAM) is full
Remedy End another application and repeat the process.
Note   Applies as from SW 4

106006  Harddisk full  OK softkey
Scan   File functions MDD
Effect Function is aborted
Explanation The harddisk is full
Remedy Delete another file and repeat the process.
Note   Applies as from SW 4

106007  MD error: ...  OK softkey
Scan   Individual fields with machine data
Effect Function is aborted
Explanation Input or configuring error
Remedy —
Note   Applies as from SW 4

110000  No data can be created here  OK softkey
Scan   FUNCTION / NEW
Effect —
Explanation No new data can be created by the user in the current directory
Remedy Select another directory

110001  Please enter correct name  OK softkey
Scan   MANAGEMENT / COPY / PASTE / OK
Effect —
Explanation The entered name can only contain letters, numbers or underline. For part program %3 = MPF3<3 = SPF3. The length of the file name must be no more than 8 characters.
Remedy Correct the name

110002  Name ... already exists  OK softkey
Scan   COPY / PASTE
Effect —
Explanation The entered name already exists for the data type
Remedy Enter a different name

110003  Data cannot be created  OK softkey
Scan   COPY / PASTE / OK
Effect Data are not created
Explanation Data type can only be created once
Remedy Select a different data object type
<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
<th>OK Softkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>110004</td>
<td>No data selected</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In the SERVICES area with data selection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The data selector is positioned on the directory .. or -</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select with the cursor</td>
<td></td>
</tr>
<tr>
<td>110005</td>
<td>No read access for this data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DATA MANAGEMENT / COPY / COPY / DATA IN-OUT / PRINT / START</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Data cannot be processed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No authorization for reading the selected data or printing exists for the set user class</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set a password, enable keyswitch</td>
<td></td>
</tr>
<tr>
<td>110006</td>
<td>No write access at this point</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DATA MANAGEMENT / NEW / OK / COPY / PASTE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Data cannot be created/ copied or written</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No authorization to write the selected data exists for the set user class</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set a password, enable keyswitch</td>
<td></td>
</tr>
<tr>
<td>110007</td>
<td>Data must not be deleted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MANAGEMENT / DELETE / OK</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Data are not deleted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No authorization to delete the selected data exists for the set user class, i.e. they cannot be deleted at all</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set a password, enable keyswitch</td>
<td></td>
</tr>
<tr>
<td>110008</td>
<td>Selected data cannot be edited</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MANAGEMENT / EDIT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Editor is not started</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The selected data cannot be edited (e.g. a directory)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select alternative data</td>
<td></td>
</tr>
<tr>
<td>110009</td>
<td>No interface file</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The interface is not parameterized and can therefore not be used.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>See above</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select or create valid interface</td>
<td></td>
</tr>
<tr>
<td>110010</td>
<td>Workpiece archiving in punch tape format only</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DATA IN-OUT / DATA OUTPUT / WORKPIECES</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A workpiece or job list can only be archived in punch tape format</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select punch tape format via toggle field</td>
<td></td>
</tr>
</tbody>
</table>
110011 There is no error log
Scan Error log
Effect None
Explanation No error log was created for the previous data transfer
Remedy –

110012 Selected data cannot be printed
Scan DATA IN-OUT / PRINT
Effect –
Explanation Selected data cannot be printed
Remedy Select data (e.g. MPF ..) which can be printed

110013 There is no job list for printer
Scan DATA IN-OUT / PRINT / JOB LIST
Effect –
Explanation The printer has no job to process at the moment
Remedy –

110015 Floppy was not formatted
Scan DATA IN-OUT / FORMAT / OK
Effect Diskette not formatted
Explanation General error during formatting
Remedy Check disk drive/cable

110016 Floppy is write-protected
Scan DATA IN-OUT / DATA OUTPUT / ... / START
      (INSERT NEXT DISKETTE)OK
      DATA IN-OUT / FORMAT / OK
Effect Data are not stored or diskette is not formatted
Explanation The diskette tab is in the wrong position
Remedy Remove write-protection or insert another diskette

110017 No floppy inserted
Scan DATA IN-OUT / DATA OUTPUT / ... / START
      DATA IN-OUT / DATA INPUT / START
      (INSERT NEXT DISKETTE)OK
      DATA IN-OUT / FORMAT / OK
Effect –
Explanation There is no diskette in the floppy disk drive
Remedy Insert diskette

110018 Interface ... not initialized
Scan DATA IN-OUT / DEVICES / SELECTION
Effect Data transfer not possible
Explanation Interface incorrect or not parameterized
Remedy Select suitable interface file and reparameterize. If floppy selected, floppy drive must be connected to interface.
<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>110019</td>
<td>Observe error log</td>
<td>DATA IN-OUT / INPUT OR OUTPUT</td>
<td>–</td>
<td>Errors occurred during data transfer. The data concerned are listed in the logs and must be checked. Cause: Data already exist, overwriting not desired. No read/write authorization when reading in again, incorrect punch tape format</td>
<td>Rectify the cause (if possible) and read in again</td>
</tr>
<tr>
<td>110020</td>
<td>Floppy is not formatted</td>
<td>DATA IN-OUT / START</td>
<td>Data are not read in/written</td>
<td>The floppy is either not formatted or incorrectly formatted</td>
<td>Insert formatted diskette</td>
</tr>
<tr>
<td>110021</td>
<td>Error on reading the archive</td>
<td>DATA IN-OUT / DATA INPUT / START</td>
<td>Data are not read</td>
<td>Archive file is faulty</td>
<td></td>
</tr>
<tr>
<td>110022</td>
<td>No workpiece selected</td>
<td>LOAD NC / SHOPFLOOR SHEET</td>
<td>No display</td>
<td>Selected data are not workpieces</td>
<td>Select workpiece under LOCAL or GLOBAL</td>
</tr>
<tr>
<td>110023</td>
<td>There are no comments for ...</td>
<td>LOAD NC / SHOPFLOOR SHEET / COMMENT</td>
<td>–</td>
<td>No comment available for current workpiece</td>
<td>Enter comment in program</td>
</tr>
<tr>
<td>110024</td>
<td>Archive list/job list is empty</td>
<td>DATA IN-OUT / DATA OUTPUT / ARCHIVE LIST</td>
<td>No data are being read out</td>
<td>No object in the archive list can be accessed</td>
<td>Check archive list</td>
</tr>
<tr>
<td>110025</td>
<td>Floppy is full</td>
<td>DATA IN-OUT / ... / START</td>
<td>Wait</td>
<td>The diskette is full</td>
<td>Insert another diskette, continue by pressing the OK softkey</td>
</tr>
</tbody>
</table>
### 110026 Archive not created or not found

**Scan**
DATA IN-OUT / DATA INPUT / START
DATA IN-OUT / DATA OUTPUT / ... / START

**Effect**
–

**Explanation**
The archive has not been written or no archive has been found

**Remedy**
Read in: Transfer another archive
Read out: Check data/archive or job list/transfer format

### 110027 ... is not an archive file

**Scan**
DATA IN-OUT / DATA OUTPUT / ARCHIVE LIST

**Effect**
–

**Explanation**
The selected data is not an archive list

**Remedy**
Select archive list with data selector

### 110028 No machining operation for ...

**Scan**
LOAD NC / SHOPFLOOR SHEET / MACHINING OPERATION

**Effect**
None

**Explanation**
The selected workpiece does not have a machining operation

**Remedy**
Create data

### 110029 Not a hexadecimal number

**Scan**
DATA IN-OUT / DEVICES / EDIT / STORE

**Effect**
Data cannot be stored

**Explanation**
Hexadecimal number: a–f, A–F, 0–9

**Remedy**
correct

### 110030 Not a decimal number

**Scan**
DATA IN-OUT / DEVICES / EDIT / STORE

**Effect**
Data cannot be stored/softkey operation cannot be executed

**Explanation**
Decimal number: 0–9 without sign

**Remedy**
correct

### 110031 Interface still transmitting data

**Scan**
DATA IN-OUT / DEVICES / SELECTION

**Effect**
Interface selection still being executed

**Explanation**
Interface selection not possible during output (e.g. printing)

**Remedy**
Delete print jobs or wait

### 110032 Error in archive file

**Scan**
DATA IN-OUT / DATA INPUT / START

**Effect**
Data are either not read in or are read in with errors

**Explanation**
Archive list is faulty

**Remedy**
correct
110033  Error on writing the archive  
Scan  DATA IN-OUT / DATA OUTPUT / ... / START  
Effect  Data read out has been interrupted  
Explanation  Data is not evaluated by output medium (external device) (hardware fault)  
Remedy  Start again  

110034  Timeout >= 0 and <= 60 seconds  
Scan  DATA IN-OUT / DEVICES / EDIT / STORE  
DATA IN-OUT / DEVICES / SELECTION  
Effect  Data cannot be stored/no device selection  
Explanation  Time must be in the specified range  
Remedy  Enter 0 ≤ time ≤ 60 seconds  

110035  Wrong output medium parameterized  
Scan  DATA IN-OUT / FORMAT  
DATA IN-OUT / PRINT  
Effect  None  
Explanation  Parameterized floppy cannot be formatted, print command cannot be sent to parameterized universal interface  
Remedy  Change interface parameterization  

110036  No data for ...  
Scan  LOAD NC / SHOPFLOOR SHEET / WORK SCHEDULE / MACHINING OPERATION  
LOAD NC / SHOPFLOOR SHEET / WORK SCHEDULE  
LOAD NC / SHOPFLOOR SHEET / BLANK  
Effect  None  
Explanation  The corresponding data for the shopfloor sheet is not available  
Remedy  Create data  

110037  The hard disk is full  
Scan  DATA MANAGEMENT / COPY / COPY / DATA IN-OUT / DATA INPUT / START / SAVE NC / SOURCE NC / START  
Effect  Data cannot be stored or created  
Explanation  –  
Remedy  Delete data no longer required  

110038  Syntax error in job list line ...  
Scan  LOAD NC / START  
DATA IN-OUT / DATA OUTPUT / WORKPIECES / START  
Effect  Data are not archived/loaded into the NC  
Explanation  Syntax error in job list  
Remedy  Correct  

110039  Data cannot be copied  
Scan  MANAGEMENT / COPY / PASTE / OK  
Effect  Data are not copied  
Explanation  General error, e.g. data type may exist only once  
Remedy  E.g. delete data beforehand  

1 Alarms  
1.5.1 Alarm description
110041  Error in NCK name  
**Scan**  DATA IN-OUT / DATA INPUT / START  
**Effect**  Data in punch tape format are not read in their entirety  
**Explanation**  With data I/O in punch tape format the name is transmitted first. NCK data must begin with %MPF, %SPF, %TOA, %TEA, %SEA, %UMS, %RPA  
**Remedy**  Alter external data  

110042  Syntax error in UMS file  
**Scan**  DATA IN-OUT / DATA INPUT / START  
**Effect**  UMS file has been read in incorrectly  
**Explanation**  Error in data  
**Remedy**  Change external data  

110043  Please use the proposed name  
**Scan**  MANAGEMENT / NEW / OK  
**Effect**  Data are not created  
**Explanation**  –  
**Remedy**  Use the proposed name  

110044  Too many print jobs in queue  
**Scan**  DATA IN-OUT / PRINT / START  
**Effect**  Data are not sent to printer  
**Explanation**  The number of print jobs allowed is limited  
**Remedy**  Wait for the next print job to be completed or remove a print job from the job list  

110045  ...signals transmission fault  
**Scan**  DATA IN-OUT / (DATA INPUT OR OUTPUT)  
**Effect**  Data have either not been transferred at all or only partially or incorrectly  
**Explanation**  General error  
**Remedy**  Check other station and cable, reselect interface  

110046  System error ...  
**Scan**  None  
**Effect**  The last action has not been executed correctly  
**Explanation**  None  
**Remedy**  Inform system service  

110047  Interface is still active  
**Scan**  –  
**Effect**  A data transmission session to this interface has not yet ended.  
**Explanation**  –  
**Remedy**  Terminate data transmission.  
**Note**  Applies as from SW 4.4
### 110048 Interface signals overrun

**Scan**
DATA IN-OUT / DATA INPUT / START

**Effect**
Data are not read in correctly

**Explanation**
Hardware problem

**Remedy**
–

### 110049 Check interface parameterization

**Scan**
DATA IN-OUT / DATA INPUT / START

**Effect**
Data are not read in correctly

**Explanation**
Baud rate, parity, data length, number of stop bits incorrect

**Remedy**
Alter interface data and reselect

### 110050 Floppy is already full

**Scan**
DATA IN-OUT / DATA OUTPUT / ... / START

**Effect**
Data are not are not archived

**Explanation**
A full diskette has been inserted

**Remedy**
Insert new diskette

### 110051 ... was not printed

**Scan**
DATA IN-OUT / PRINT SERIAL / START

**Effect**
Not all of the specified object has been printed or it has not been printed at all

**Explanation**
None

**Remedy**
Check interface/printer

### 110052 ... signals timeout

**Scan**
(DATA INPUT OR OUTPUT)

**Effect**
Data have not been read in or read out

**Explanation**
No data were read in or collected in the parameterized time (TIMEOUT)

**Remedy**
Check other station

### 110053 End of transmission without end identifier

**Scan**
DATA IN-OUT / ... / ... / START

**Effect**
Data are not read-in/written or only partially

**Explanation**
E.g. end of data without M02 or end identifier

**Remedy**
Check other station and cable

### 110054 No punch tape format or it is faulty

**Scan**
DATA IN-OUT / DATA INPUT / START

**Effect**
No reading-in

**Explanation**
No punch tape format found in archive, archive does not have a PC format or transmission was started at the wrong time

**Remedy**
Check external data
110055  Too much data found
Scan    SERVICES / DATA OUTPUT
Effect  There is still more data that cannot be accessed
Explanation The currently selected workpiece contains more data than can be displayed or processed (max 240 files)
Remedy  Select low no. of files for output

110056  PC format can be transmitted only with 8 data bits
Scan    DATA IN-OUT / ... / ... / START
Effect  No data read-in or out
Explanation For reading in or out data in PC format the device must be parameterized with 8 data bits
Remedy  Suitably parameterize interface

110057  File not available
Scan    DATA IN-OUT / ... / ... / START
Effect  File not read out
Explanation File is not available on MMC at the archiving time
Remedy  Faulty archive list or time problem

110058  Transfer aborted
Scan    DATA ON OFF / ... / ... / START
Effect  Not all the data was transferred.
Explanation Abort occurred while file was being transferred.
Remedy  Check cable and peer.

110059  Cannot be transmitted in punch tape format
Scan    Archiving
Effect  Data is not archived.
Explanation Only MPF, SPF, TOA, RPA, ZOA, UMS, SEA, TEA1, TEA2, TEA4 can be transmitted in LS format.
Remedy  Select other data or archive in PC format

110060  Stored in the clipboard
Scan    DATA IN-OUT / DATA INPUT / START
Effect  The file was entered in the clipboard
Explanation The file could not be entered in the current directory (not possible, no authorization, file opened from PC editor)
Remedy  Paste from clipboard into the desired archive location

110061  No workpiece in job list line ...
Scan    LOAD NC / START
Effect  Job list processing was interrupted
Explanation The workpiece name in the LOAD instruction does not exist
Remedy  Change job list

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### 110062  ... not found in job list

**Scan**  LOAD NC / START  
**Effect**  Job list processing was interrupted  
**Explanation**  The workpiece name in the LOAD instruction does not exist  
**Remedy**  Change job list  

### 110063  No workpiece can be created here

**Scan**  DATA IN-OUT / DATA INPUT / IN NEW WORKPIECE  
**Effect**  None  
**Explanation**  A workpiece cannot be created at the current location  
**Remedy**  Select the directory PC/USER/LOCAL or PC/USER/GLOBAL  

### 110064  Data type exists already

**Scan**  Data management / new  
Data management / insert from archive  
**Effect**  File is not created / copied  
**Explanation**  The data type can only be created once in the current location.  
**Remedy**  First delete the existing file  

### 110065  Not possible at present

**Scan**  When data is output through V24 and saved to hard disk at the same time, e.g. from a MPF in the programming. If file is processed in the PC editor.  
**Effect**  Data is not transmitted.  
**Explanation**  –  
**Remedy**  Wait until the save operation has been concluded in the ASCII editor.  
**Note**  Applies as from SW 4.4  

### 110066  Data in Siemens branch cannot be stored

**Scan**  Data management / new  
Data management / insert from archive  
**Effect**  File is not created / copied  
**Explanation**  File cannot be created in Siemens branch.  
**Remedy**  Move to user branch  

### 110067  Please enter correct archive name

**Scan**  Data input  
Data output  
**Effect**  Function is not processed  
**Explanation**  The archive name must have the syntax of a file name  
**Remedy**  Enter correct name  

### 110068  Interface ... is disabled

**Scan**  Data input  
Data output  
**Effect**  Function is not processed  
**Explanation**  The interface is busy with another application (PG SW, WOP, transfer job by PLC)  
**Remedy**  Wait until interface is free
110069  Tool list not available
Scan  PROGRAMMING: shopfloor sheet / create TO file / OK
Effect  TO file is not created
Explanation  –
Remedy  Create tool list

110070  D number(s) exist more than once
Scan  PROGRAMMING: shopfloor sheet / create TO file / OK
Effect  Data sets in TO file exist more than once
Explanation  –
Remedy  Process tool list

110071  Computer link: error number ...
Scan  Computer link / error listing
Effect  Error during transmission
Explanation  Error number reported during transmission
Remedy  –

110100  There is no data/part program
Scan  LOAD NC/START
Effect  Part program ... is not loaded
Explanation  An item of data specified in the job list/part progam is not available
Remedy  Correct job list

110101  There is no channel No./mode group/PLC No.
Scan  LOAD NC, SAVE NC
Effect  Data is not saved or loaded
Explanation  TOA, SEA4, RPA, ZOA (TOA, SEA4 > 0) RPA, ZOA ≥ 0
Remedy  All data ≤ 4 (or 6 as from SW 4)

110102  No read/write access for ...
Scan  Save NC / NC source / start
Effect  Data object is not created on MMC or cannot be read
Explanation  No read only / write rights for the set user class, e.g. because PLC is in stop or keyswitch not processed in PLC
Remedy  Turn keyswitch to position < 3 or set password

110103  Memory on NCK is full
Scan  LOAD NC or basic display in AUTOMATIC mode, LOAD WORKPIECE
Effect  Part program will not be transferred
Explanation  None
Remedy  Delete part programs no longer needed from the NCK
### 1.5.1 Alarm description

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>110104</td>
<td>Error in data/part-program ...</td>
<td>LOAD NC or AUTOMATIC basic display, LOAD WORKPIECE</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Effect</td>
<td>Data are not transferred or only partly</td>
<td>NC data to be loaded have errors, Read error on hard disk when executing from hard disk</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Check data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110105</td>
<td>Error during job processing</td>
<td>LOAD NC, SAVE NC or AUTOMATIC basic display, LOAD WORKPIECE</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Effect</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110107</td>
<td>NC data/part program cannot be created here</td>
<td>SAVE NC / NC SOURCE / START MANAGEMENT / COPY / PASTE DATA IN-OUT / BUFFER / INSERT</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Effect</td>
<td>Data are not saved, copied or inserted in buffer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>The data cannot be stored in the current directory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Select a different directory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110108</td>
<td>There is no workpiece . . .</td>
<td>(AUTOMATIC MODE)</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Effect</td>
<td>Workpiece will not be loaded</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>The workpiece required by the NCK does not exist in the MMC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Check entered names</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110109</td>
<td>Only workpieces/NCK data can be loaded</td>
<td>LOAD NC / START</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Effect</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Only workpieces or NCK data can be loaded</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Using the data selector, select a workpiece under LOCAL or GLOBAL or an NCK object under a workpiece or from NC data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110110</td>
<td>No access to SPF0</td>
<td>SAVE NC / NC SOURCE / START</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Effect</td>
<td>SPF0 is not saved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>The name SPF0 is not permissible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Deselect from SPF1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110111</td>
<td>... being processed or cycle inhibit</td>
<td>SAVE NC / NC SOURCE / START / LOAD NC / START</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Effect</td>
<td>Data will not be saved to MMC or loaded in NCK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>The part program either has cycle disable or is being processed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Remove disable or discontinue processing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note</td>
<td>Applies up to SW 2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
110112  ... is not a correct NCK name
Scan     LOAD NC / START
Effect   Data are not transferred to NC
Explanation Error in part program name, e.g. MPF_1
Remedy   Correct name in MMC

110113  No communication to NCK
Scan     (Power up) LOAD NC / START SAVE NC / NC SOURCE
Effect   No data transfer
Explanation There is no connection to the NCK. A more detailed error diagnosis is entered in the alarm log with message 105011 and possibly 105030 to 105039. Incorrect MDs e.g. IPO cycles too short.
Remedy   Inform system service

110114  ... transmitted incompletely
Scan     Abort AUTOMATIC basic display
         LOAD NC / START / ABORT
         SAVE NC / NC SOURCE / START / ABORT
Effect   The file has not been transmitted in its entirety to the MMC or the NCK
Explanation It may no longer be possible to send the complete file to the NCK
Remedy   Save the complete file from the NC again and/or transfer it completely to the NCK

110115  ... : Line is too long
Scan     LOAD NC / START
Effect   Incomplete data transfer
Explanation Line may not contain more than 120 characters without blanks or 120 characters with blanks in the comments section.
Remedy   Alter using editor
Note     Applies up to SW 2

110116  No data transmitted for ...
Scan     LOAD NC / ... / START / SAVE NC / ... / START
Effect   –
Explanation No transferable data was selected
Remedy   Select data that can be transmitted / correct job list

110117  Wrong channel number
Scan     SAVE NC / ... / START
Effect   No data transmission
Explanation The channel number must be $\geq 0$ $\geq 4$ ($\geq 6$ as from SW 4)
Remedy   –

110118  Storage of ... not allowed here
Scan     Save NC / NC source / start
Effect   No data transmission
Explanation Parameter ... stands for NC name
          Part programs MFP/SPF can only be stored in a workpiece and GIA data can only be stored under NC data.
Remedy   Position on/in a workpiece or in the case of GIA data to NC data using the data selector.
### 110119  Data not transferred or incompletely

**Scan**  Computer link / save start  
**Effect**  Not all data transfers, the last file may be incomplete  
**Explanation**  Cause perhaps in error log  
**Remedy**  Rectify cause, restart transmission

### 110120  Data cannot be read in

**Scan**  DATA INPUT START  
**Effect**  File has neither been read in the clipboard nor under the target path.  
**Explanation**  Cause (e.g. no write authorization, file opened by ASCII editor) can be seen in the error log  
**Remedy**  Eliminate cause. Restart data input.  
**Note**  Applies as from SW 4.4

### 110121  Option not available

**Scan**  On computer link  
**Effect**  –  
**Explanation**  Computer link module not slotted in or not active  
**Remedy**  Activate computer link module (CP)

### 110122  NCK password not set

**Scan**  When loading NCK data  
**Effect**  The selected data are not loaded  
**Explanation**  Password required for loading GIA data  
**Remedy**  Set password in diagnosis

### 120000  Password set

**Scan**  When operating softkey, “Set password”; the password is correct and has been set.  
**Effect**  Files can be stored with ASCII editor.  
New files can be created or deleted.  
Backup can be executed.  
**Explanation**  –  
**Remedy**  –

### 120001  Password reset

**Scan**  When operating softkey, “Reset password”; the password has been reset.  
**Effect**  Password protected files cannot be altered.  
**Explanation**  –  
**Remedy**  –

### 120002  Wrong time/date given

**Scan**  When pressing the “Set clock” softkey  
**Effect**  –  
**Explanation**  Time or date entered incorrectly.  
**Remedy**  Check input fields  
*Input values for*  
- **hour:** 0 . . . 23  
- **minute:** 0 . . . 59  
- **day:** 1 . . . 31  
- **month:** 1 . . . 12  
- **year:** 1980 . . . 1999
120003  No password set  OK softkey
Scan  You have tried to save a file or perform a backup.
Effect  The files cannot be saved with the ASCII editor.
No data can be created or deleted.
No backup can be performed.
Explanation  The password has not been set.
Remedy  Enter and set the password in the screen form for this.

120004  No logbook found  OK softkey
Scan  When operating the softkey, “Display logbook”.
Effect  –
Explanation  Logbook in MMC area has been deleted illegally
Remedy  Not possible by user

120005  No data selected  OK softkey
Scan  The identifier “..” or “–” has been selected with the data selector and a softkey (e.g. “Edit”) has been pressed.
Effect  The next display cannot be called up.
Explanation  Data has been selected which cannot be edited
Remedy  Select a valid name with the data selector and press the softkey (e.g. “Edit”) again.

120006  Transfer error ...  OK softkey
Scan  The error occurred during data transfer (PLC/NC DATA).
Effect  The data have either not been transmitted or have been transmitted incorrectly.
Explanation  The value indicates a data transfer error if the cause cannot be output as a plaintext message.
Remedy  Check settings on NC and check input fields and restart transmission.

120007  No data presetting possible  OK softkey
Scan  Standard default setting could not be set.
Effect  SIEMENS default setting is used.
Explanation  –
Remedy  Check path setting of data selector in SIIEMENS branch; the path must also exist in the user branch.

120008  No data storage possible here  OK softkey
Scan  No NC/PPLC data can be stored in the SIEMENS area.
Effect  None
Explanation  Only data transfer from the NCK in the user areas of the MMC is possible.
Remedy  Select user area.

120009  Password incorrect  OK softkey
Scan  An incorrect password has been entered.
Effect  See alarm message 120003 “No password set”
Explanation  None
Remedy  Enter correct password, press “Return” key and the “Set” softkey.
<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>120010</td>
<td>Error while generating alarm log</td>
<td>Log could not be created. No log is displayed. The master control creates the logs when demanded by diagnosis</td>
<td>Check the entry for the length of the logs in the configuration file of the master control and alter if necessary.</td>
</tr>
<tr>
<td>120011</td>
<td>Error on creating service log</td>
<td>Log could not be created. No log is displayed. The master control creates the logs when demanded by diagnosis</td>
<td>Check the entry for the length of the logs in the configuration file of the master control and alter if necessary.</td>
</tr>
<tr>
<td>120012</td>
<td>... cannot be created</td>
<td>An error has occurred while creating the specified data object. The object will not be created or only partially.</td>
<td>Delete a file, possibly there are too many files in this directory. Check position of keyswitch and capacity of hard disk.</td>
</tr>
<tr>
<td>120013</td>
<td>No write access at this point</td>
<td>You have tried to store a file in the SIEMENS branch, or to store NC data in the user branch when keyswitch not in position 1 or 2. Data cannot be stored.</td>
<td>Check the position of the keyswitch. Leave editor using RECALL key.</td>
</tr>
<tr>
<td>120014</td>
<td>... not available</td>
<td>The specified file (e.g. PCF17) has not been found in the NCK. None</td>
<td>Existing PLC error messages can only be saved in the NC. Select a different program number for PCF file.</td>
</tr>
<tr>
<td>120015</td>
<td>Operating system – error ...</td>
<td>An error has been caused in an operating system call during data transfer. System failure Operating system error [0x4005] i.e.: no communication to NCK</td>
<td>Inform service</td>
</tr>
<tr>
<td>120016</td>
<td>NCK password not set</td>
<td>An attempt has been made to transfer NC files to the NCK for which a password is required. File is not transferred.</td>
<td>Set the password on the NCK side.</td>
</tr>
<tr>
<td>Scan</td>
<td>Effect</td>
<td>Explanation</td>
<td>Remedy</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>-------------</td>
<td>--------</td>
</tr>
<tr>
<td>120017</td>
<td>Transmission aborted</td>
<td>The user has aborted data transfer with softkey.</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The data have not been transferred or only incompletely.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Applies as from SW 4.4</td>
<td></td>
</tr>
<tr>
<td>120018</td>
<td>Error in channel no. / TO area</td>
<td>The channel no. or TO area entered is not permissible with the NC source specified.</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td></td>
<td>File is not transferred.</td>
<td></td>
</tr>
<tr>
<td>120019</td>
<td>Name ... not allowed</td>
<td>An illegal file name has been entered.</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The file with the name is not created on the MMC side.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Letters A...Z, numbers 0...9 and the underscore character are permissible.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Please enter the correct name, e.g. ABC _123</td>
<td></td>
</tr>
<tr>
<td>120020</td>
<td>There is no data/part program</td>
<td>The error occurred while a file was being transferred.</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td></td>
<td>File has not been transferred or only partially.</td>
<td></td>
</tr>
<tr>
<td>120021</td>
<td>Error in NCK name</td>
<td>The error occurred while a file was being transferred.</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td></td>
<td>File has not been transferred or only partially.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The name for the NC is incorrect. It consists of an NC identifier (RPA for R parameter) and the channel number, e.g.: R parameter for channel 2 → name = RPA2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Correct the name and/or channel number</td>
<td></td>
</tr>
<tr>
<td>120022</td>
<td>No read/write access for ...</td>
<td>The error occurred while transferring a file.</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td></td>
<td>File has not been transferred or only partially.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Set keyswitch for data.</td>
<td></td>
</tr>
<tr>
<td>120023</td>
<td>Memory on NC is full</td>
<td>An error occurred during transfer of a file.</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td></td>
<td>File has not been transferred or only partially.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The NC part program is full.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>If necessary, delete part programs from the memory.</td>
<td></td>
</tr>
</tbody>
</table>
### 120024 Error in data/part program ...

**Scan**
The error occurred while transferring the file.

**Effect**
File has not been transferred or only partially.

**Explanation**
Syntax error in file structure.
E.g.: % MPF in part program on MMC

**Remedy**
Correct the file

---

### 120025 Error during job processing

**Scan**
Error occurred while transferring the above file.

**Effect**
File has not been transferred or only partially.

**Explanation**
Check selected files

**Remedy**
Restart transmission

---

### 120026 Only possible in Reset

**Scan**
The error occurred while transferring the above file.

**Effect**
File was not transferred or only incompletely.

**Explanation**
The selected data can be transferred in RESET mode only.

**Remedy**
Trigger NC Reset and transfer; start again.

**Note**
Applies as from SW 4.4

---

### 120027 Error in file structure

**Scan**
The error occurred while transferring the above file.

**Effect**
File was not transferred or only incompletely.

**Explanation**
Syntax error in the file structure. Data after end of list. An item of data follows M02.

**Remedy**
Make the corrections in the file.

**Note**
Applies as from SW 4.4

---

### 120028 Cycle disable set

**Scan**
The error occurred while a file was being transferred.

**Effect**
File has not been transferred or only partially.

**Explanation**
The cycle disable can be set for several cycles.

**Remedy**
Remove cycle disable for the cycles concerned.

---

### 120029 No communication to NCK

**Scan**
See alarm 110113

---

### 120030 Option not available

**Scan**
When activating the PG function

**Effect**
SS package for programming functions cannot be called up.

**Remedy**
Activate option
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>OK softkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>120031</td>
<td>Wrong option password</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: The password entered for the options is incorrect.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: The displayed options cannot be altered.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: Enter correct password.</td>
<td></td>
</tr>
<tr>
<td>120032</td>
<td>Error in options list ...</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: When activating option &lt;Nxxx&gt;.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: The option in question cannot be activated or deactivated.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: Call service!</td>
<td></td>
</tr>
<tr>
<td>120033</td>
<td>Help text ... not found</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: When operating the I key in the diagnosis alarm basic display.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: No alarm/message help texts displayed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: Copy the file &quot;MELDINFO&quot; from the standard branch (master control/language) to user under installation PC data with the softkey Preset. The file can then be edited in the user branch and also stored if the password is set.</td>
<td></td>
</tr>
<tr>
<td>120034</td>
<td>The hard disk is full</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: PC data preset</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: It is not possible to store or create the data.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: –</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: Delete data not required.</td>
<td></td>
</tr>
<tr>
<td>120035</td>
<td>PLC program ... cannot be created</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: Save PLC program</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: The PLC user program could not be saved on the hard disk in the usual way.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: –</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: –</td>
<td></td>
</tr>
<tr>
<td>130000</td>
<td>Workpiece/file exists already</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: NEW / CREATE / mask for entering an object name</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: No new object can be created</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: Workpiece or file already exists in the data management and cannot be created again.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: Enter a new/different name</td>
<td></td>
</tr>
<tr>
<td>130001</td>
<td>No element selected</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: PROGRAM or EDIT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: A file cannot be processed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: Cursor is positioned on &quot;.&quot; or &quot;--&quot;, the file that can be processed has not been selected</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: Select a file with the cursor</td>
<td></td>
</tr>
</tbody>
</table>
130002 No file type selected
Scan NEW / CREATE
Effect New file cannot be created
Explanation No element selected in the file type list for creating new files (system error)
Remedy New programming / data selector version

130003 No write access for this file
Scan EDIT
Effect File cannot be processed
Explanation A file has been chosen for which you have no authorization for making changes
Remedy Set keyswitch to > 0 setting; enter password in the diagnostics

130004 No read access for this file
Scan EDIT
Effect File cannot be processed
Explanation A file has been selected for which read access does not exist
Remedy Position key switch to position > 3; enter password in diagnosis

130005 There is no standard job list
Scan NEW / JOB LIST / CREATE → Create a new job list
Effect Job list cannot be created
Explanation The standard job list and/or the “EMPIRICAL VALUES” directory is missing from the data management. When a new job list is created, this is copied onto the new job list.
Remedy Inform system service

130006 Job list does not exist
Scan JOB LIST
Effect Job list cannot be processed
Explanation No job list exists under a workpiece
Remedy Create a job list under the workpiece node using the softkey NEW

130007 Workpiece/file cannot be created
Scan NEW / CREATE / mask for entering an object name
Effect No new workpiece or file can be created
Explanation Error in data management configuration memory too small
Incorrect object name (error message from data management create function)
Remedy Create more memory
New programming/data management version

130008 Please select workpiece
Scan PROGRAMMING
Effect Workpiece cannot be processed
Explanation Cursor positioned on “...”, a workpiece has been selected which cannot be processed
Remedy Position the cursor on a workpiece name
<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
<th>OK softkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>130009</td>
<td>Please state name</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Scan</td>
<td>NEW / CREATE / mask for entering object name</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>No new workpiece or file is created</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>No name was entered</td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>The name was not terminated with input</td>
<td>Enter a name or terminate input with input key</td>
</tr>
<tr>
<td>130010</td>
<td>Only NCK-data/part programs can be edited</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Scan</td>
<td>EDIT</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>File cannot be processed</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>A file was not selected (recognizable by the length, length 0 also possible) for processing with the editor</td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Place the cursor on an element with a length entry</td>
<td></td>
</tr>
<tr>
<td>130011</td>
<td>Select a workpiece for job list</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Scan</td>
<td>JOB LIST</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>Job list cannot be processed</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>The job list of the selected workpiece cannot be processed</td>
<td>Place the cursor on a workpiece</td>
</tr>
<tr>
<td>130012</td>
<td>There is no programming system</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Scan</td>
<td>PROGRAMMING</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>Graphic programming not possible</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Graphic programming system does not exist. Install GRAPHIC PROGRAMMING SYSTEM option.</td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>130013</td>
<td>Name not allowed</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Scan</td>
<td>NEW / CREATE / mask for entering file name</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>No new object created</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Syntax of entered name is incorrect, only alphanumeric characters and “_” permitted</td>
<td>Enter correct name</td>
</tr>
<tr>
<td>Remedy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>130014</td>
<td>No workpiece/file may be created</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Scan</td>
<td>Softkey NEW at top level “LOCAL” “GLOBAL”</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>No new object created</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>The data management tree does not allow the creation of a directory on this level</td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>130015</td>
<td>Access denied</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Scan</td>
<td>PROGRAMMING</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>Workpiece cannot be processed</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Incorrect keyswitch setting No authorization for processing workpiece</td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Turn keyswitch to setting 1 or 2; enter password in DIAGNOSIS</td>
<td></td>
</tr>
</tbody>
</table>
### 130016  No more memory space available  
**Scan**  NEW / CREATE  
**Effect**  Directory/file cannot be created  
**Explanation**  No memory left to create the directory/file  
**Remedy**  Workpieces/files which are no longer required can be deleted  

### 130017  Disk full! No graphical programming  
**Scan**  PROGRAMMING  
**Effect**  Workpiece cannot be machined  
**Explanation**  No memory available to load programming system data  
**Remedy**  Workpieces/files which are no longer required can be deleted  

### 130018  File not available  
**Scan**  EMPIRICAL VALUES  
**Effect**  Empirical values file cannot be processed  
**Explanation**  There is no empirical value file in the data management tree that can be copied into the user branch for processing.  
**Remedy**  Notify service  

### 130019  Data transfer in progress! Terminate?  
**Scan**  –  
**Effect**  –  
**Explanation**  If an MMC CPU with 8 MB is available, the graphic programming system (WOP) must not be started while the V24 data transfer is in progress.  
**Remedy**  • By pressing the OK softkey, the V24 data transfer is aborted.  
• By pressing the ABORT softkey, WOP is not started.  
**Note**  Applies as from SW 4.4  

### 130020  File has been altered! Lose change?  
**Scan**  –  
**Effect**  –  
**Explanation**  File was exited after an alteration with RECALL and without softkey SAVE.  
**Remedy**  • Press ABORT softkey if further changes are to be made in the edit mode.  
• Press OK softkey if the changes are to be lost.  
**Note**  Applies as from SW 4.4
You will find below a list of all possible alarms and messages that can occur in the SIMULATION area.

The messages and alarms are self-explanatory or their explanation is obvious from the last operator action. The majority of alarms and messages point to a programming error in the blocks of the simulation program. An explanation of the programming functions is beyond the scope of this documentation. Please refer to the Programming Guide.

Some alarms and messages include an identifier %... in their formatting. These are replaced in the display by the cause, e.g.:

141497 “Workpiece %1 is being loaded”
Display: 141497 “Workpiece PART 3 is being loaded”

141102 “Error on workpiece selection !”
141104 “No program selected !”
141105 “Select. allowed only after end of prog./RESET”
141106 “Workpiece empty, please make new selection”
141107 “Program selection error! Reselect tool!”
141122 “Scale modification not allowed !”
141123 “Illegal scale value !”
141124 “Coordinate rotation not allowed !”
141130 “Turning allowed in perspective view only !”
141132 “Function not allowed with only one view”
141134 “Cut allowed with 3D and side view !”
141135 “Please select numerical input.”
141136 “Representation no longer possible”
141137 “A cut is not possible in TURNING mode.”
141140 “Please exit the vertical menu first”
141141 “No end–of–program (M02/M30/M17) programmed”
141142 “Program stop due to M0/M1.”
141490 “Memory limitation, please terminate simulation!”
141495 “Parameter save in progress”
141496 “Initialize simulation”
141497 “Workpiece %1 is being loaded.”
141498 “Internal error ! Result might be faulty !”
141499 “Internal error ! Please end simulation!”
142001 “No blank available !”
142002 “No tools set up !”
142003 “No workholder available !”
142004 “Error on loading machine data !”
142005 “Error on loading R parameters”
142006 “Error on loading the ZOA data !”
1 Alarms
1.5.1 Alarm description

142007 "Error on loading the TOA data !"
142008 "Error on loading the SEA data !"
142009 "No operational data, default setting !"
142010 "No machined parts available !"
142011 "Too many points in contour %1 !"
142015 "Error on storing operational data !"
142020 "Error on loading the TOA data !"
142021 "Error on loading the TOA data !"
142022 "No D number in tool list !"
142025 "Programm %1 does not exist !"
142026 "Syntax error in job list !"
142027 "Job list could not be evaluated"
142030 "Axis in transmit data set not defined"
142031 "Axis in transmit data expected to be fictit."
142032 "Axis in transmit data set expected to be real"
142033 "Axis in transmit data set exists several times"
142034 "Non–assigned transmit MD incorrectly initialized"
142035 "No data set exists for TRANSMIT !"
143000 "Access via P address does not exist !"
143001 "Pointer in P cell invalid !"
143002 "R parameter address invalid on READING !"
143003 "R parameter address invalid on WRITING !"
143004 "TO area not available !"
143005 "There is no D compensation memory !"
143006 "No access to settable zero offset"
143007 "No access to progr. zero offset"
143008 "Specified angle No. not equal to 1 !"
143009 "No access to settable coordinate rotation"
143010 "No access to progr. coordinate rotation"
144051 "Circle end point error in circle programming"
144052 "Full circle with circle rad.prog. not allowed"
144053 "Radius too small for programmed circle"
144100 "Wrong input for contour definition !"
144101 "No intersection possible !"
144102 "Angle value not allowed !"
144103 "Radius value not allowed !"
144104 "Wrong selection G02/03 !"
144105 "Block sequence wrong !"
144106 "Values for contour definition faulty !"
144108 "Wrong axis programmed for cont. definition!"
144109 "Target position cannot be reached !"
144150 "Scale modification not allowed !"
144151 "Illegal scale value !"
144152 "Coordinate rotation not allowed !"
144200 "Smooth appr. + retraction cannot be selected!"
144201 "Not poss. to deselect smooth appr. + retr. !"
144202 "Wrong smooth approach and retraction plane !"
144203 "No TRC chosen on selecting smooth appr.+retr.!"
144204 "No added axis with smooth appr. + retr. !"
144205 "Select/deselect TRC not possible !"
144206 "Contour violation TRC !"
144207 "Too many blocks programmed without path !"
144208 "No equidistant intersection available!"
144209 "Transform. not allowed with active TRC !"
144210 "No axis added with TRC !"
144211 "No added axis with TLC !"
144300 "Transmit grouping %1 in channel %2 illegal !"
144301 "Current transformation not deselected !"
144302 "Transformation type %1 not defined"
144304 "Axis %1 cannot be traversed with TRANSMIT !"
144305 "Feed is zero !"
144309 "Circle end point error in interpolation !"
144311 "G4 S progr., spindle not rotating !"
144312 "G96 S progr., leading spindle missing!"
144313 "Velocity limitation"
144316 "Rotary axis feed G98: G1 or G36 required !"
144318 "Path thru transformation centre not allowed"
144319 "Veloc. of transmit rotary axis too high"
144320 "Veloc. of transmit linear axis too high"
144350 "Axis %1 not possible. Only 3 axes at present"
144351 "Axis %2 not permitted in channel %1!"
144352 "Axis %2 disabled in channel %3!"
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<td>&quot;Spindle %2 not in rotary axis mode!&quot;</td>
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<tr>
<td>144354</td>
<td>&quot;Setting setpoint for axis %1 not allowed!&quot;</td>
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<tr>
<td>144355</td>
<td>&quot;Setting setpoint for axis %1 not allowed!&quot;</td>
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<tr>
<td>144356</td>
<td>&quot;Limit on software limit switch&quot;</td>
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<td>144357</td>
<td>&quot;Spindle in other channel active!&quot;</td>
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<td>144358</td>
<td>&quot;Rotary axis mode not possible for spindle!&quot;</td>
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<tr>
<td>144359</td>
<td>&quot;Spindle %1 currently being moved as an axis!&quot;</td>
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<tr>
<td>144450</td>
<td>&quot;@71x: Unable to read R parameters&quot;</td>
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<tr>
<td>144451</td>
<td>&quot;@71x: Unable to write R parameters&quot;</td>
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<tr>
<td>144452</td>
<td>&quot;@71x: Unable to copy R parameters&quot;</td>
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<tr>
<td>144453</td>
<td>&quot;@711: No direction straight line defined&quot;</td>
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<tr>
<td>144454</td>
<td>&quot;@711: No contour element stored in R para.&quot;</td>
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<tr>
<td>144455</td>
<td>&quot;@711: No circle element stored in R para.&quot;</td>
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<tr>
<td>144456</td>
<td>&quot;@711: Circle element exceeds 2 quadrants&quot;</td>
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<tr>
<td>144457</td>
<td>&quot;@711: No point of intersection available&quot;</td>
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<tr>
<td>144458</td>
<td>&quot;@710: %1 could not be opened&quot;</td>
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<td>144459</td>
<td>&quot;@710: Wrong control parameter in R%1&quot;</td>
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<tr>
<td>144460</td>
<td>&quot;@710: NC block from contour %1 cannot be read&quot;</td>
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<tr>
<td>144461</td>
<td>&quot;@710: Invalid NC block in contour %1&quot;</td>
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<tr>
<td>144462</td>
<td>&quot;@710: Invalid ident. for direct. of rotation&quot;</td>
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<tr>
<td>144463</td>
<td>&quot;@710: NC block in contour %1 has error&quot;</td>
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<td>144464</td>
<td>&quot;Circle not programmed in selected plane&quot;</td>
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<tr>
<td>144465</td>
<td>&quot;DIN: %1&quot;</td>
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<tr>
<td>144501</td>
<td>&quot;No more memory space available!&quot;</td>
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<tr>
<td>144502</td>
<td>&quot;No more memory space available!&quot;</td>
</tr>
<tr>
<td>144504</td>
<td>&quot;Error in '%1' geometry!&quot;</td>
</tr>
<tr>
<td>146000</td>
<td>&quot;DIN: ... %1 ...&quot;</td>
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<tr>
<td>146001</td>
<td>&quot;Ovelong line cut off&quot;</td>
</tr>
<tr>
<td>146002</td>
<td>&quot;Block not concluded with Line Feed&quot;</td>
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<td>146003</td>
<td>&quot;Jump destination %1 not found&quot;</td>
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<tr>
<td>146004</td>
<td>&quot;Program SPF%1 not available&quot;</td>
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<tr>
<td>146005</td>
<td>&quot;Too many SPFs: SPF%1 not opened&quot;</td>
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<tr>
<td>146006</td>
<td>&quot;M17 not allowed in MPF&quot;</td>
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<tr>
<td>146007</td>
<td>&quot;M02/M30 not allowed in SPF&quot;</td>
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<tr>
<td>146010</td>
<td>&quot;Comments/program coordination nested&quot;</td>
</tr>
<tr>
<td>146011</td>
<td>&quot;End of line in comments/program coordination&quot;</td>
</tr>
</tbody>
</table>
146012 "Invalid character in block"
146013 "Too many characters in the block"
146014 "One point alone is not a permissible number"
146015 "Block too long: closing brackets inserted"
146020 "Only R parameters allowed here"
146021 "Only constant allowed here"
146022 "Only constant or R parameters allowed here"
146023 "Only the first sign is considered"
146024 "Illegal address extension"
146025 "Illegal value"
146026 "Illegal R parameter number"
146027 "Illegal R parameter number"
146028 "Illegal constant in @ function"
146029 "Sign in address extension not allowed"
146030 "Illegal constant"
146040 "'=' is missing after target parameter"
146041 "'R' must be followed by number or '='"
146042 "Only 'R', 'P', or constant allowed here"
146043 "Division by ZERO"
146044 "Error in calculation"
146050 "Illegal beginning of word"
146051 "Too much information in the block"
146052 "Value must be an integer"
146053 "R parameter number not an integer"
146054 "Illegal word value"
146055 "Faulty word"
146060 "%1 word already programmed in block"
146061 "Too many M functions in the block"
146062 "Rap.aux.fct. not allowed because %1 value neg"
146063 "Address extension not allowed for %1 word"
146064 "Selected D number not available"
146065 "S word must follow M19"
146066 "Spindle number not allowed"
146067 "M function of Group %1 already programmed"
146068 "Meaning of P word not defined"
146069 "The block no. is not at the beginning of line"
146070  "Illegal axis address extension"
146071  "Address with extension not allowed"
146072  "Illegal address"
146073  "Address extension not allowed for dwell"
146074  "Value overflow (negative)"
146075  "Value overflow (positive)"
146076  "Main block allowed in program level 0 only"
146077  "P word must be directly behind G92"
146078  "P word must immediately follow L–word"
146079  "Word is not allowed after G%1"
146080  "G%1: I, J, K, IKA or IKP cannot be allocated"
146081  "G%1: Same spindle programmed more than once"
146082  "G%1: I before J is missing"
146083  "Multiple transform’n select/deselect in block"
146084  "Selection can only be made in deselected pos."
146085  "Valid transformation data set missing"
146100  "Further alarms in the block are suppressed"
146110  "Repeated selection of a G group not allowed"
146111  "Illegal G function"
146112  "Conflict: @706 <-> G53"
146113  "G%1: Block cannot be simulated"
146114  "G%1 interpreted as LF"
146115  "Smooth retraction requires G40"
146116  "G40 has already been set by WAB"
146117  "Function no longer effective"
146118  "Transmit cannot be simulated"
146120  "G%1 is not simulated"
146130  "@ function is not simulated"
146131  "@ function cannot be simulated exactly"
146132  "@ function for PLC is not simulated"
146133  "@ number not allowed"
146134  "Illegal @ function"
146135  "Value must be an integer here"
146136  "Value overflow"
146137  "Value must be a bit pattern here"
146138  "Not enough parameters for @ function"
Alarms
1.5.1 Alarm description

146139 "End of line in @ parameter list"
146140 "Type of parameter illegal"
146141 "Illegal sign"
146142 "Only value 0 or 1 allowed here"
146143 "Only values 0 to 7 allowed here"
146144 "No. of machine/setting data not allowed"
146145 "Type of machine data/setting data illegal"
146146 "1st parameter: quantity must be positive"
146147 "Stack limit exceeded/not reached"
146148 "Source/target is in stack area"
146149 "Illegal MIB address"
146150 "MIB cell not initialized"
146151 "G group function non-modal"
146152 "R number for result of @713 not allowed"
146153 "Axis not defined"
146154 "No IPO parameter exists for axis"
146155 "@ expression contains errors"
146156 "Identifier in @3FF cannot be simulated"
146157 "Type in 3FF data group cannot be simulated"
146158 "No D number active – cycle alarm 4100"
146159 "Tool radius = 0 – cycle alarm 4101"
146160 "Cutter radius too large – cyc. alarm 4102"
146161 "Tool too wide – cycle alarm 4103"
146162 "No M03/M04 programmed – cycle alarm 4120"
146163 "Spindle not in tolerance – cycle alarm 4121"
146164 "Diam. of fin.part too small – cyc. alarm 4140"
146165 "Option not available – cycle alarm 4180"
146166 "Check definition R (Nxxx) – cycle alarm 4200"
146167 "Thread length too short – cycle alarm 4153"
146168 "Cycle alarm number not defined"
146169 "Only angle No.1 allowed"
146170 "Only axis 1 to 9 possible"
146171 "@ position in block invalid"
146200 "The axis is disabled according to axis MD"
146201 "G16 block allows only signs in axis word"
146202 "Axis already programmed in block"
1 Alarms
1.5.1 Alarm description

146203 "After axis etc: do not change system of units"
146204 "Too many axes programmed in the block"
146205 "Too many radii and/or chamfers in the block"
146206 "Too many angles programmed in the block"
146207 "Too many interpolation parameters in block"
146208 "Only K parameters allowed here"
146209 "R parameter not allowed as spline coefficient"
146210 "Spline coefficient must be an integer"
146211 "X word not allowed"
146212 "Dwell already programmed in block"
146213 "Stop angle has been corrected 'modulo 360'"
146214 "Negative S value for speed not allowed"
146215 "Too many components for contour def. in block"
146216 "G92 S/ G96 S allowed for leading spindle only"
146217 "Illegal axis setpoint"
146218 "Illegal rotary axis setpoint"
146219 "Illegal modulo rotary axis setpoint"
146220 "G%1 not allowed in this block"
146221 "Axis with act. transformation illegal"
146231 "MD%1: MD could not be read"
146232 "MD%1: name of radius/chamfer not allowed"
146233 "MD%1: name of angle not allowed"
146234 "MD%1: name conflict: radius/chamfer <-> angle"
146235 "MD%1: addr.ext. not allowed for radius/chamfr"
146236 "MD%1: address extension not allowed for angle"
146237 "MD%1: input resolution not allowed"
146238 "MD%1: axis name not allowed"
146239 "MD%1: axis not allowed in mode group"
146240 "MD%1: axis name assigned several times"
146241 "MD%1: IPO parameters not allowed"
146242 "MD%1: axis name not allowed for plane"
146243 "MD%1: G number not allowed as initial setting"
146253 "Rapid traverse block was generated"
146254 "G15 is not simulated"

* Simulation must be cancelled and a corrected set of machine data activated with the load list by reselecting.
1.5.1 Alarm description

Alarms

146255 "Spline interpolation G06 cannot be simulated"
146256 "Spline interpolation G06 cannot be simulated"
146261 "In–process measurement @720 is not simulated"
146262 "Program coord. [...] not being simulated"
146263 "Coupled motion is not simulated"
146264 "G200 will not be simulated"
146265 "G103 is not simulated"
146266 "G104 is not simulated"
146267 "G105 is not simulated"
146268 "G119 is not simulated"
146269 "G24 is not simulated"
146271 "Ramp–up time G92 T is not simulated"
146272 "Starting angle offset G92 A is not simulated"
146273 "Working area limitation G25 is not simulated"
146274 "Working area limitation G26 is not simulated"
146275 "M36/M37 is not simulated"
146276 "Exact stop G60 is not simulated"
146277 "Velocity reduction G62 is not simulated"
146278 "Velocity reduction G64 is not simulated"
146290 "Context: measurement function @720"
146291 "Context: G function of 7th group"
146292 "Context: scale modification G51"
146293 "Context: synchronized spindle stop M19S"
146294 "Context: program jump"
146295 "Context: block to be skipped"
146296 "Context: dwell"
146297 "Context: refpt preprocess f. stock rem. cycle"
146298 "Context: intersection calc.f.stock rem. cycle"
146299 "Context: plane selection with free axis sel."
146300 "Context: cylindrical interpolation G92P"
146301 "Context: transformation"
146302 "Context: approach reference point"
146303 "Context: pole specification"
146304 "Context: spline interpolation is selected"
146305 "Context: block preprocessing stop by @714"
146307 "Context: G200 block"
146310 "Context: G15 block expected"
146311 "Context: G220–G222 block expected"
146312 "Context: G420–G426 block expected"
146320 "Conflict: measuring function @720 not allowed"
146321 "Conflict: G function of 7th group not allowed"
146322 "Conflict: scale modification not allowed"
146323 "Conflict: synchr. spindle stop not allowed"
146324 "Conflict: jump not allowed but still performed"
146326 "Conflict: dwell not allowed"
146327 "Conflict: ref.pt preprocessing not allowed"
146328 "Conflict: intersection calc. not allowed"
146329 "Conflict: plane selection not allowed"
146330 "Conflict: cylindr. interpolation not allowed"
146331 "Conflict: transformation not allowed"
146332 "Conflict: ref. point approach not allowed"
146333 "Conflict: pole selection not allowed"
146335 "Conflict: @714 not allowed"
146337 "Conflict: G200 block not allowed"
146340 "Conflict: G15 block invalid"
146341 "Conflict: G200–G222 block invalid"
146342 "Conflict: G420–G426 block invalid"
146400 "G%1: more than 1 radius in block"
146401 "G%1: radius is missing → value 0 added"
146402 "G%1 ignored because of soft approach/retract."
146403 "G%1: plane axis is missing in block"
146404 "G48 prog. w/o previous approach / distance 0"
146405 "G%1: radius 0 programmed"
146406 "G%1: amount formed for negative radius"
146407 "G%1: allowed with G0/G1/G2/G3 only"
146410 "G%1: interpolation parameter is missing"
146411 "G%1: several thread leads prog. →1st is valid"
146412 "G%1: thread lead param. does not match axes"
146415 "G%1: 1 axis or 2 axes are expected"
146416 "G%1: thread lead must be positive"
146417 "G%1: no axis programmed"
146418 "G%1: thread lead change F is missing"
146420  "G%1: only one rotary axis allowed"
146421  "G%1: 2 or 3 axes are expected"
146422  "G%1: Thread pitch parameter = 0"
146423  "G36: C is plane axis but G%1 is selected"
146430  "G%1: no pole defined yet"
146431  "G%1: negative radius illegal"
146432  "G%1: programmed axis is not a pole axis"
146433  "G%1: more than 2 axes programmed"
146434  "G%1: program either axis or radius"
146435  "G%1: program either axis or angle"
146436  "G%1: pole definition with G90 is missing"
146437  "G%1: pole definition only with exactly 2 axes"
146438  "G%1: G91 only allowed for existing pole axes"
146439  "G%1: no radius in block"
146440  "G%1: negative radius illegal"
146441  "G%1: no angle in block"
146442  "G%1: G91 for angle only allowed after G90"
146443  "G%1: more than one radius programmed"
146444  "G%1: more than one angle programmed"
146450  "G%1: no axes programmed"
146451  "Rapid trav. for contour definit'n not allowed"
146452  "G%1: sequence/number of elements illegal"
146453  "Only positive radius allowed here"
146454  "Progr. elements do not form a trav. block"
146455  "Contour definition: no further axis possible"
146456  "Contour definition: more than 2 axes progr."
146457  "G%1: G935 must be programmed with G1"
146458  "Contour definition: faulty circle parameters"
146459  "Contour def.: circle param. progr. sev. times"
146460  "No further circular axis possible"
146461  "Faulty circle parameters"
146470  "G16: at least 2 axes expected"
146471  "G%1: plane axes are identical"
146472  "G16: max. 4 axes can be simulated"
146480  "Axis prog. -> C axis on/off ignored"
146481  "M19 S: other M functions ignored"
146482 "Only 1 spindle can be programmed in a block"
146483 "M19 not allowed here"
146484 "M groups not allowed in this block"
146490 "G06: inch/metric conversion not allowed"
146491 "G06: axes to IPO parameters are missing"
146492 "G06: here only IPO parameter I allowed"
146493 "G06: positive path length I expected"
146494 "G06: exactly 3 coefficients K expected"
146500 "L%1 ignored, because M2, M30 or M17 in block"
146501 "G%1 deselected, because M2, M30 or M17 in block"
146502 "G%1 deselected, because L call in block"
146510 "@720 is only possible in traversing block"
146511 "@714 must be on its own in the block"
146512 "@%1 is not permitted in contour program"
146513 "Traversing block must be in its own block"
146520 "G96: cutting velocity S is missing"
146521 "Feed is missing"
146522 "G98 allowed with G0/G1/G36 only"
146523 "G96 not allowed together with M19"
146524 "G36: G98 is generated and G%1 is deselected"
146530 "Option for G%1 is missing"
146531 "Cylindrical interpolation option is missing"
146532 "Circle radius programming option is missing"
146533 "Contour definition SPRINT option missing"
146534 "Option 5D helical is missing"
146535 "Program coordination option is missing"
146536 "Reference point preprocessing option missing"
146537 "Option extended thread package is missing"
146550 "G%1 not allowed here -> ignored"
146551 "G04 block: dwell F, X or S is missing"
146552 "S/T/angle is missing -> G92 ignored"
146553 "G92 T: T value > 5 not allowed"
146554 "G92 P: exactly one axis expected"
146555 "G92 P: axis is not a rotary axis"
146556 "G%1: axes for working area limit. are missing"
146557 "G%1: axis or angle is missing"
146558  "G%1: exactly one axis expected"
146559  "G63 allowed with G01 only, not with G%1"
146560  "P factor is missing with G51"
146561  "G175 inserted internally because of G%1"
146562  "G175 inserted internally because of @706"
146563  "G175 inserted internally because of D word"
146564  "G%1: only absolute ZO possible with G51"
146565  "@711: Both plane axes are expected"
146566  "@711: G0, G1, G10 or G11 must be active"
146567  "G15: 3 linear and 2 rotary axes expected"
146568  "G%1 is not simulated"
146569  "G%1: No drives programmed"
146570  "G%1: Master drive missing"
146571  "G%1: Max. 1 spindle allowed on master drives"
146572  "G%1: Slave drive per MD invalid"
146573  "G%1: I, J, K, IKA, IKP for slave drive illegal"
146574  "G%1: Axes, IKA or IKP cannot be simulated"
146575  "G%1: No position for drives allowed"
146576  "G%1: No position for slave drives allowed"
146577  "G%1: Position for slave drive is missing"
146578  "G%1: Position for a master drive is missing"
146579  "G%1: I, J or IKP for master drives illegal"
146580  "G%1: Link. struct. K does not permit IKA word"
146581  "G%1: Linking structure K requires IKA word"
146582  "G%1: IKA word expected due to IKP word"
146583  "G%1: K word not allowed"
146584  "DIN: ... %1 ...
146585  "G%1 block: too much information in block"
146586  "Block information before jump ignored"
146587  "Block with G92 P: too much info in block"
146588  "Too much information in spline coeff. block"
146589  "Block with G92 T: too much info in block"
146590  "Too much information in block with G92 angle"
146591  "Block with G92 S: too much info in block"
146592  "Block with M19 S: too much info in block"
146593  "Block with @710: too much info. in block"
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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>146709</td>
<td>&quot;Block with @711: too much info. in block&quot;</td>
</tr>
<tr>
<td>146730</td>
<td>&quot;Axis not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146731</td>
<td>&quot;IPO parameters not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146732</td>
<td>&quot;Radii not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146733</td>
<td>&quot;Angle not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146734</td>
<td>&quot;F word not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146735</td>
<td>&quot;M words not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146736</td>
<td>&quot;S word not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146737</td>
<td>&quot;T word not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146738</td>
<td>&quot;H word not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146739</td>
<td>&quot;D word is not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146740</td>
<td>&quot;Comments not allowed here&quot;</td>
</tr>
<tr>
<td>146741</td>
<td>&quot;::word not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146742</td>
<td>&quot;Only @714 allowed here. Other @ ignored&quot;</td>
</tr>
<tr>
<td>146743</td>
<td>&quot;@706/@715/@720 not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146744</td>
<td>&quot;Progr. coord. [...] illegal here → ignored&quot;</td>
</tr>
<tr>
<td>146745</td>
<td>&quot;L word not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146746</td>
<td>&quot;N word not allowed here → ignored&quot;</td>
</tr>
<tr>
<td>146747</td>
<td>&quot;P word not allowed here → ignored&quot;</td>
</tr>
</tbody>
</table>

**160001 Axis already assigned**

<table>
<thead>
<tr>
<th>Scan</th>
<th>On “START”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>The selected function is not started</td>
</tr>
<tr>
<td>Explanation</td>
<td>No further startup functions can be started with the defined axis number</td>
</tr>
<tr>
<td>Remedy</td>
<td>Terminate the startup function already active for this axis</td>
</tr>
</tbody>
</table>

**160002 Axis not configured or configured wrongly**

<table>
<thead>
<tr>
<th>Scan</th>
<th>Startup application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Startup function is not executed</td>
</tr>
<tr>
<td>Explanation</td>
<td>Selected axis is not available</td>
</tr>
<tr>
<td>Remedy</td>
<td>Select available axis</td>
</tr>
</tbody>
</table>

**160003 Drive module is not configured or incorrectly**

<table>
<thead>
<tr>
<th>Scan</th>
<th>Startup application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Startup function is not executed</td>
</tr>
<tr>
<td>Explanation</td>
<td>Selected drive number is not available</td>
</tr>
<tr>
<td>Remedy</td>
<td>Select available drive module</td>
</tr>
</tbody>
</table>
160004  **Data code ... , error ... , 0x ...**  OK softkey

*Scan*  Startup application
*Effect*  Undefined
*Explanation*  Internal system error with stated error parameters
*Remedy*  Terminate application and repeat procedure, notify service if necessary.

160005  **Function code ... , error ... , 0x ...**  OK softkey

*Scan*  Startup application
*Effect*  Undefined
*Explanation*  Internal system error
*Remedy*  Terminate application and repeat procedure, notify service if necessary.

160006  **File transfer ID ... , error ... , 0x ...**  OK softkey

*Scan*  Startup application
*Effect*  Undefined; measuring data lost
*Explanation*  - Internal system error
- File transfer error when reading out a measurement buffer with specified error parameters.
*Remedy*  Check MMC system configuration and hardware

160007  **Measurement/drive type combination not allowed**  OK softkey

*Scan*  When starting measuring functions
*Effect*  The selected function is not started
*Explanation*  The selected function is not possible with the addressed drive type
*Remedy*  None

160008  **Mode/drive type combination not allowed**  OK softkey

*Scan*  When starting measuring functions
*Effect*  The selected function is not started
*Explanation*  The selected function is not possible with the addressed drive type.
*Remedy*  None

160009  **Mode/signal type combination not allowed**  OK softkey

*Scan*  When starting measuring functions
*Effect*  The selected function is not started
*Explanation*  The selected signal type is not available
*Remedy*  Correct signal selection

160010  **Too many function generators operating**  OK softkey

*Scan*  When function generator is started
*Effect*  Function generator is not started
*Explanation*  Only function generator at a time can be active
*Remedy*  Stop active function generator and repeat procedure
<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>160011</td>
<td>File name ... invalid</td>
<td>When selecting file functions</td>
<td>OK softkey</td>
</tr>
<tr>
<td>160012</td>
<td>Invalid input resolution (...)</td>
<td>Parameterization/starting startup functions</td>
<td>OK softkey</td>
</tr>
<tr>
<td>160013</td>
<td>Invalid position control resolution (...)</td>
<td>Parameterization/starting startup functions</td>
<td>OK softkey</td>
</tr>
<tr>
<td>160014</td>
<td>Invalid maximum current of power section</td>
<td>Parameterization/starting startup functions</td>
<td>OK softkey</td>
</tr>
<tr>
<td>160015</td>
<td>Invalid maximum axis velocity/spindle speed</td>
<td>Parameterization/starting startup functions</td>
<td>OK softkey</td>
</tr>
<tr>
<td>160016</td>
<td>Invalid scan time of current controller</td>
<td>Parameterization/starting startup functions</td>
<td>OK softkey</td>
</tr>
<tr>
<td>160017</td>
<td>Invalid scan time of position controller</td>
<td>Parameterization/starting startup functions</td>
<td>OK softkey</td>
</tr>
<tr>
<td>160018</td>
<td>Invalid scan time of speed controller</td>
<td>Parameterization/starting startup functions</td>
<td>OK softkey</td>
</tr>
<tr>
<td>Alarm Code</td>
<td>Description</td>
<td>OK softkey</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>160019</td>
<td>Invalid tacho adaptation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Parameterization/starting startup functions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>The startup function cannot be started</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>See machine data description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Check/correct machine data for tacho adaptation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>160020</td>
<td>A measuring function is already active</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Starting startup functions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>The startup function cannot be started</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Only one measuring function at a time can be active</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Stop previous measuring function and repeat procedure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>160022</td>
<td>Illegal bus selection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>When starting DAC output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Startup application internal error; it is not possible to access 611D hardware</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>End application and repeat procedure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>160023</td>
<td>Illegal component</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>When starting DAC output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Signal selection does not correspond to drive components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Correct parameterization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>160024</td>
<td>There is no signal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Starting DAC output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>The selected signal is not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Correct signal selection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>160025</td>
<td>Protected data area selected (segment)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Starting DAC output from memory location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Selected address area is not allowed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Correct segment parameterization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>160026</td>
<td>Protected data area selected (offset)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Starting DAC output from memory location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Selected address area is not allowed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Correct offset parameterization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>160027</td>
<td>Illegal offset parameterized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>When starting DAC output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Offset value is outside the permissible range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Correct offset value</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 160028 Illegal shift factor parameterized

<table>
<thead>
<tr>
<th>Scan</th>
<th>When starting DAC output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
</tr>
<tr>
<td>Explanation</td>
<td>Shift factor is outside permissible range</td>
</tr>
<tr>
<td>Remedy</td>
<td>Correct shift factor</td>
</tr>
</tbody>
</table>

### 160029 Missing target hardware

<table>
<thead>
<tr>
<th>Scan</th>
<th>When starting DAC output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
</tr>
<tr>
<td>Explanation</td>
<td>–</td>
</tr>
<tr>
<td>Remedy</td>
<td>–</td>
</tr>
</tbody>
</table>

### 160030 Non-available DAC started

<table>
<thead>
<tr>
<th>Scan</th>
<th>When starting DAC output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
</tr>
<tr>
<td>Explanation</td>
<td>A drive module which is not configured has been selected</td>
</tr>
<tr>
<td>Remedy</td>
<td>Select available drive module</td>
</tr>
</tbody>
</table>

### 160031 Max. number of servo signals exceeded

<table>
<thead>
<tr>
<th>Scan</th>
<th>When starting DAC output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
</tr>
<tr>
<td>Explanation</td>
<td>A maximum of 4 SERVO signals can be output through DAC channels</td>
</tr>
<tr>
<td>Remedy</td>
<td>Reduce number of output SERVO signals</td>
</tr>
</tbody>
</table>

### 160032 Max. number of active DACs exceeded

<table>
<thead>
<tr>
<th>Scan</th>
<th>Parameterization/starting DAC output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
</tr>
<tr>
<td>Explanation</td>
<td>Internal startup application error</td>
</tr>
<tr>
<td>Remedy</td>
<td>End application and repeat procedure</td>
</tr>
</tbody>
</table>

### 160033 DAC busy from other half of two-axis module

<table>
<thead>
<tr>
<th>Scan</th>
<th>Parameterization/starting DAC output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
</tr>
<tr>
<td>Explanation</td>
<td>Three DAC channels exist on two-axis modules for both axes</td>
</tr>
<tr>
<td>Remedy</td>
<td>Select other output channel and repeat procedure or stop busy DAC</td>
</tr>
</tbody>
</table>

### 160034 No axis configured

<table>
<thead>
<tr>
<th>Scan</th>
<th>When selecting startup menus for axes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Startup menu for axes disabled</td>
</tr>
<tr>
<td>Explanation</td>
<td>Startup menu for axes needs at least one NC axis</td>
</tr>
<tr>
<td>Remedy</td>
<td>Enter NC axis configuration</td>
</tr>
</tbody>
</table>

### 160035 No drive module configured

<table>
<thead>
<tr>
<th>Scan</th>
<th>Selecting menu for DAC output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Startup menu for DAC is disabled</td>
</tr>
<tr>
<td>Explanation</td>
<td>Menu for DAC output needs at least one 611D module</td>
</tr>
<tr>
<td>Remedy</td>
<td>–</td>
</tr>
</tbody>
</table>
### 160036  No mixed I/O module configured

<table>
<thead>
<tr>
<th>Scan</th>
<th>When selecting menus for mixed I/O output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Startup menu for mixed I/O output is disabled</td>
</tr>
<tr>
<td>Explanation</td>
<td>Menu for mixed I/O output requires mixed I/O hardware</td>
</tr>
<tr>
<td>Remedy</td>
<td>–</td>
</tr>
</tbody>
</table>

**Remedy:** Enter mixed I/O hardware configuration.

### 160037  No spindle configured

<table>
<thead>
<tr>
<th>Scan</th>
<th>When selecting startup menu for spindles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Startup menu for spindles is disabled</td>
</tr>
<tr>
<td>Explanation</td>
<td>Startup menu for spindles requires at least one NC spindle</td>
</tr>
<tr>
<td>Remedy</td>
<td>Enter NC spindle configuration</td>
</tr>
</tbody>
</table>

**Remedy:** Enter NC spindle configuration.

### 160038  Error on DAC initialization

<table>
<thead>
<tr>
<th>Scan</th>
<th>When starting startup application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
</tr>
<tr>
<td>Explanation</td>
<td>Internal startup application error</td>
</tr>
<tr>
<td>Remedy</td>
<td>Restart system and repeat procedure</td>
</tr>
</tbody>
</table>

**Remedy:** Restart system and repeat procedure.

### 160039  Error in DAC selection for digital drives

<table>
<thead>
<tr>
<th>Scan</th>
<th>When parameterizing DAC output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>DAC output cannot be started</td>
</tr>
<tr>
<td>Explanation</td>
<td>Internal startup application error</td>
</tr>
<tr>
<td>Remedy</td>
<td>Restart application and repeat procedure</td>
</tr>
</tbody>
</table>

**Remedy:** Restart application and repeat procedure.

### 160040  Error in DAC selection for mixed I/Os

<table>
<thead>
<tr>
<th>Scan</th>
<th>When parameterizing mixed I/O output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Mixed I/O output cannot be started</td>
</tr>
<tr>
<td>Explanation</td>
<td>Internal startup application error</td>
</tr>
<tr>
<td>Remedy</td>
<td>Restart application and repeat procedure</td>
</tr>
</tbody>
</table>

**Remedy:** Restart application and repeat procedure.

### 160041  No more memory space available

<table>
<thead>
<tr>
<th>Scan</th>
<th>When starting startup application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Startup functions cannot be executed</td>
</tr>
<tr>
<td>Explanation</td>
<td>No more system memory available</td>
</tr>
<tr>
<td>Remedy</td>
<td>End other area application and repeat procedure</td>
</tr>
</tbody>
</table>

**Remedy:** End other area application and repeat procedure.

### 160042  Measured values invalid

<table>
<thead>
<tr>
<th>Scan</th>
<th>Measuring functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Measuring function is aborted</td>
</tr>
<tr>
<td>Explanation</td>
<td>Recorded measured values cannot be used</td>
</tr>
<tr>
<td>Remedy</td>
<td>Check measuring parameters and repeat procedure. A higher amplitude must be selected most especially for path frequency response measurement</td>
</tr>
</tbody>
</table>

**Remedy:** Check measuring parameters and repeat procedure. A higher amplitude must be selected most especially for path frequency response measurement.
<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
<th>Action</th>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>160043</td>
<td>Illegal measurement/meas. value combination</td>
<td>OK softkey</td>
<td>Parameterization/starting measuring functions</td>
<td>The measuring function cannot be started</td>
<td>The selected measurement is not accessible with the selected signal</td>
<td>Correct signal selection or measurement selection</td>
</tr>
<tr>
<td>160044</td>
<td>Travel function cannot be started</td>
<td>OK softkey</td>
<td>When starting startup traversing movements</td>
<td>Function cannot be started</td>
<td>Traversing function not possible because of an alarm, missing controller or feedrate enable</td>
<td>Check enables, acknowledge alarms and repeat procedure</td>
</tr>
<tr>
<td>160045</td>
<td>Wrong axis/drive/channel number</td>
<td>OK softkey</td>
<td>Startup application</td>
<td>Startup application cannot be started</td>
<td>Selected axis/drive number does not exist</td>
<td>Select available axis/drive number</td>
</tr>
<tr>
<td>160046</td>
<td>Axis/spindle has an analog drive</td>
<td>OK softkey</td>
<td>When starting startup function</td>
<td>Startup function is not started</td>
<td>A startup function which is not available for analog drives has been selected</td>
<td>Select a different startup function</td>
</tr>
<tr>
<td>160047</td>
<td>Axis/spindle has an FDD drive</td>
<td>OK softkey</td>
<td>Softkey parameter FDD</td>
<td>FDD parameters are not displayed</td>
<td>No FDD parameters exist for MSD drive</td>
<td>None</td>
</tr>
<tr>
<td>160048</td>
<td>Axis/spindle has an FDD drive</td>
<td>OK softkey</td>
<td>Softkey parameter MSD</td>
<td>MSD parameters are not displayed</td>
<td>No MSD parameters exist for FDD drive</td>
<td>None</td>
</tr>
<tr>
<td>160049</td>
<td>Compare error</td>
<td>OK softkey</td>
<td>Startup application</td>
<td>Function aborted</td>
<td>Error on internal consistency check</td>
<td>End application and restart</td>
</tr>
<tr>
<td>160050</td>
<td>Data not available</td>
<td>OK softkey</td>
<td>Startup application</td>
<td>Function aborted</td>
<td>Error on internal data access</td>
<td>End application and restart</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>OK softkey</td>
<td>Scan</td>
<td>Effect</td>
<td>Explanation</td>
<td>Remedy</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------</td>
<td>------------</td>
<td>------------</td>
<td>---------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td>160051</td>
<td>Division by 0</td>
<td></td>
<td>Startup application</td>
<td>Function aborted</td>
<td>Error on internal consistency check</td>
<td>End application and restart; check measuring parameters</td>
</tr>
<tr>
<td>160052</td>
<td>Drive does not acknowledge messages</td>
<td></td>
<td>611D communication</td>
<td>611D drives cannot be addressed</td>
<td>Communications partner on drive side is not available</td>
<td>Start up control/drive; deselect faulty module</td>
</tr>
<tr>
<td>160053</td>
<td>Function generator already active</td>
<td></td>
<td>When starting function generator</td>
<td>Start command is ignored if the function generator is already running</td>
<td></td>
<td></td>
</tr>
<tr>
<td>160054</td>
<td>Wrong block number/file name</td>
<td></td>
<td>611D communication</td>
<td>Function aborted</td>
<td>Error on internal consistency check</td>
<td>End application and restart</td>
</tr>
<tr>
<td>160055</td>
<td>Absolutely no access rights</td>
<td></td>
<td>Startup application</td>
<td>Startup function cannot be executed</td>
<td>Access to required data not possible</td>
<td>End application and restart</td>
</tr>
<tr>
<td>160056</td>
<td>Error during job processing</td>
<td></td>
<td>611D communication</td>
<td>Function aborted</td>
<td>Error on internal consistency check</td>
<td>End application and restart</td>
</tr>
<tr>
<td>160057</td>
<td>Status does not permit job</td>
<td></td>
<td>611D communication</td>
<td>Function aborted</td>
<td>Error on internal consistency check</td>
<td>End application and restart</td>
</tr>
<tr>
<td>160058</td>
<td>Job could not be processed</td>
<td></td>
<td>Startup application</td>
<td>Function aborted</td>
<td>Error on internal consistency check</td>
<td>End application and restart</td>
</tr>
</tbody>
</table>
160059  Measurement function already active
Scan  When starting measuring function
Effect  Start command is ignored if measuring function is already running.
Explanation  –
Remedy  –

160060  Measurement in progress
Scan  Startup applications measuring functions
Effect  –
Explanation  Operational message during measuring function
Remedy  –

160061  PI function code ... , error 0x ...
Scan  Startup application
Effect  Function aborted
Explanation  Error on internal consistency check
Remedy  End application and restart

160062  Package sequence error
Scan  Startup application
Effect  Function aborted
Explanation  Error on internal consistency check
Remedy  End application and restart

160063  Press “Accept configuration” softkey
Scan  Startup application
Effect  Application operating with inconsistent data
Explanation  Drive configuration must be updated after NCK reset or 611D ramp-up
Remedy  Press “OK” and “Accept configuration” softkeys

160064  Log error
Scan  611D communication
Effect  Function aborted
Explanation  Error on internal consistency check
Remedy  Start up control/drive; deselect faulty module

160065  System error start-up application
Scan  Startup application
Effect  Undefined
Explanation  Startup application is no longer stable
Remedy  MMC reset

160066  Temporarily no access rights
Scan  Startup application
Effect  Startup function is not executed
Explanation  Application has no access rights for required data
Remedy  Enter password/alter keyswitch position
### 160067 Timeout

**Scan**  
Startup application

**Effect**  
Startup function is not executed

**Explanation**  
Timeout error on internal communication

**Remedy**  
End application and restart

---

### 160068 Illegal amplitude

**Scan**  
Function generator or measuring function parameterization

**Effect**  
Function cannot be started

**Explanation**  
The defined amplitude is illegal

**Remedy**  
Enter sensible amplitude value

---

### 160069 Illegal amplitude 1

**Scan**  
Function generator parameterization (square wave)

**Effect**  
The function cannot be started

**Explanation**  
The stated amplitude is illegal

**Remedy**  
Enter sensible amplitude value

---

### 160070 Illegal amplitude 2

**Scan**  
Function generator parameterization (staircase)

**Effect**  
The function cannot be started

**Explanation**  
The stated amplitude is illegal

**Remedy**  
Enter sensible amplitude value

---

### 160071 Illegal bandwidth

**Scan**  
Function generator/measuring function parameterization

**Effect**  
The function cannot be started

**Explanation**  
The bandwidth must be <= of half the sampling rate

**Remedy**  
Set permissible bandwidth

---

### 160072 Illegal scaling

**Scan**  
Function generator/measuring function parameterization

**Effect**  
The function cannot be started

**Explanation**  
–

**Remedy**  
Set permissible scaling

---

### 160073 Illegal period duration

**Scan**  
Function generator/measuring function parameterization

**Effect**  
The function cannot be started

**Explanation**  
–

**Remedy**  
Enter a sensible value not equal to zero

---

### 160074 Illegal limitation

**Scan**  
Function generator/measuring function parameterization

**Effect**  
The function cannot be started

**Explanation**  
–

**Remedy**  
Enter a lower value not equal to zero
160075  Illegal measuring time
Scan  Measuring function parameterization
Effect  The function cannot be started
Explanation  The defined measuring time is too great
Remedy  Enter a smaller value not equal to zero

160076  Illegal operating mode
Scan  Function generator/measuring function parameterization
Effect  The function cannot be started
Explanation  Stated mode cannot be executed (check by servo/611D)
Possible causes:
- Start-up function of an axis in spindle operation
- Start-up function of a spindle in C axis operation
- Travel against fixed stop is active
- The axis/spindle is a GI following axis/spindle
- The axis/spindle is a slave axis/spindle
- Start-up function of a spindle without encoder (MD 520*, bit 2)
Remedy  Enter a different operating mode

160077  Illegal offset
Scan  Function generator/measuring function parameterization
Effect  The function cannot be started
Explanation  Stated value too high
Remedy  Enter a smaller value

160078  Illegal settling time
Scan  Measuring function parameterization
Effect  The function cannot be started
Explanation  Stated value too high
Remedy  Enter smaller value

160079  Illegal pulse width
Scan  Function generator parameterization
Effect  Function cannot be started
Explanation  –
Remedy  Enter sensible value

160080  Illegal ramp duration
Scan  Measuring function parameterization
Effect  Function cannot be started
Explanation  –
Remedy  Enter smaller value

160081  Illegal traversing range limits
Scan  Function generator/measuring function parameterization
Effect  The function cannot be started
Explanation  –
Remedy  Enter lower value; "0" means no monitoring
### 160082 Illegal signal type

**Scan**
Function generator parameterization

**Effect**
The function cannot be started

**Explanation**
The selected function is not possible with this signal

**Remedy**
Change signal type

### 160083 Value not allowed

**Scan**
Startup application

**Effect**
The function is not executed

**Explanation**
The value concerned is not within the permissible value range (negative acknowledgement with variables service)

**Remedy**
correct input

### 160084 Value > maximum value

**Scan**
Function generator/measuring function parameterization

**Effect**
The function cannot be started

**Explanation**
The value in question exceeds the permissible maximum value

**Remedy**
Enter lower value

### 160085 Value < minimum value

**Scan**
Function generator/measuring function parameterization

**Effect**
The function cannot be started

**Explanation**
The value in question is below the permissible minimum value

**Remedy**
Enter larger value

### 160086 Max. acceleration too large

**Scan**
Function generator/measuring function parameterization

**Effect**
The function cannot be started

**Explanation**
The maximum acceleration is too large or the initialization value is too large or the fine quantization is too large or the number of learning runs is too large.

**Remedy**
- Reparameterization of the maximum acceleration (function parameters of the neural quadrant error compensation)
- Reparameterization of the initialization value (function parameters of the neural quadrant error compensation)
- Reparameterization of the fine quantization (function parameters of the neural quadrant error compensation)
- Reparameterization of the number of learning runs (function parameters of the neural quadrant error compensation)

Start-up function aborts

- a) The maximum working area has been entered as a value that is greater than allowed in MD 276 and the function generator has been started with this.
- b) The maximum working area exceeds internal format limits (even without function generator start).
- The initialization value of the neural quadrant error compensation is limited to 1% of the maximum speed in order to prevent uncontrolled injections during the learning phase if the network has not yet established the characteristic. In the 1st learning run, this value is used as injection amplitude.
- The fine quantization must be greater than/equal to 4 and less than/equal to 32.
- The number of learning runs must not be less than 5 or greater than 40.
- Enter a smaller value in the function parameter max. acceleration.
- Enter a value between 0 and 1% (resolution 0.001%).
- Enter a valid value in the fine quantization.
- Enter a valid value.
160087  Max. acceleration too small
Fine quantization too small
Coarse quantization too small
Number of learning runs too small
Scan:
  • Reparameterization of the maximum acceleration (function parameter of the neural quadrant error compensation)
  • Reparameterization of the fine quantization (function parameter of the neural quadrant error compensation)
  • Reparameterization of the coarse quantization (function parameter of the neural quadrant error compensation)
  • Reparameterization of the number of learning runs (function parameter of the neural quadrant error compensation)
Effect:
  • Start-up function aborts
Explanation:
  • Input of maximum acceleration zero is not allowed.
  • Fine quantization must be greater than or equal to 4 and less than or equal to 32.
  • Coarse quantization must be greater than 1.
  • A number of learning runs less than 5 or greater than 40 is not allowed.
Remedy:
  • Enter a larger value in the function parameter max. acceleration.
  • Enter a valid value in the fine quantization.
  • Enter a valid value in the coarse quantization.
  • Enter a valid value.

160088  Axis/spindle name ... invalid
Scan:
  • DAC function parameterization
Effect:
  • The function cannot be started
Explanation:
  • The stated axis/spindle does not exist
Remedy:
  • Correct input

160089  Axis/spindle number ... invalid
Scan:
  • DAC function parameterization
Effect:
  • The function cannot be started
Explanation:
  • The stated axis/spindle does not exist
Remedy:
  • Correct input

160090  Hard disk full, create file ...
Scan:
  • Startup application file services
Effect:
  • The data set in question is not stored
Explanation:
  • Note enough memory on hard disk
Remedy:
  • Remove file not required

160091  Data block of ... file invalid
Scan:
  • Startup application file services (read only)
Effect:
  • No data is read
Explanation:
  • The contents of the selected file are not consistent
Remedy:
  • None

160092  File ... not loaded completely
Scan:
  • Startup application file services (read only)
Effect:
  • The read data set is not complete
Explanation:
  • Contents of file were not transferred completely
Remedy:
  • Repeat procedure
<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
<th>OK softkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>160093</td>
<td>File ... not saved completely</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Startup application file services (write)</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>Incomplete data set created</td>
<td>Repeat procedure</td>
</tr>
<tr>
<td>Explanation</td>
<td>File contents not completely transferred</td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Repeat procedure</td>
<td></td>
</tr>
<tr>
<td>160094</td>
<td>File ... does not exist</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Startup application file services (read only)</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>No data is read</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>The stated file does not exist</td>
<td>Correct file selection</td>
</tr>
<tr>
<td>Remedy</td>
<td>Correct file selection</td>
<td></td>
</tr>
<tr>
<td>160095</td>
<td>Error on reading from file ...</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Startup application file services (read only)</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>No data or only inconsistent data are read</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Bulk storage device access problems</td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Contact service</td>
<td></td>
</tr>
<tr>
<td>160096</td>
<td>Error in file structure ...</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Startup application file services (read only)</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>No data read in</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>File does not have correct format</td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>160097</td>
<td>Hard disk full, write file ...</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Startup application file services (write)</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>No data or only inconsistent data are written</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>Bulk storage device access problems</td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Remove files not required</td>
<td></td>
</tr>
<tr>
<td>160098</td>
<td>Data block of file ... not available</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Startup application file services (read only)</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>No data read in</td>
<td></td>
</tr>
<tr>
<td>Explanation</td>
<td>The file does not contain any data for the selected axis/drive</td>
<td>None</td>
</tr>
<tr>
<td>Remedy</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>160099</td>
<td>File ... not loaded</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Startup application file services (read only)</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>No data is read in</td>
<td>Repeat procedure</td>
</tr>
<tr>
<td>Explanation</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Repeat procedure</td>
<td></td>
</tr>
<tr>
<td>160100</td>
<td>File ... not saved</td>
<td></td>
</tr>
<tr>
<td>Scan</td>
<td>Startup application file services (write)</td>
<td></td>
</tr>
<tr>
<td>Effect</td>
<td>Data set is not stored</td>
<td>Repeat procedure</td>
</tr>
<tr>
<td>Explanation</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Remedy</td>
<td>Repeat procedure</td>
<td></td>
</tr>
</tbody>
</table>
1 Alarms

1.5.1 Alarm description

<table>
<thead>
<tr>
<th>Alarm Number</th>
<th>Description</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>160101</td>
<td>Internal error, end startup</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: Startup application</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: –</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: Startup application cannot be executed because of internal error</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: No startup application or end startup application</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note: Applies as from SW 4</td>
<td></td>
</tr>
<tr>
<td>160102</td>
<td>Memory area exceeded</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: Start-up application at start of neural quadrant error compensation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: The function cannot be started</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: Fine quantization ≤ (coarse quantization +1) must be less than or equal to 1000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: Reduce the size of fine and coarse quantization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note: Applies as from SW 4</td>
<td></td>
</tr>
<tr>
<td>160103</td>
<td>Invalid address assignment</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: Start-up application at start of neural quadrant error compensation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: The function cannot be started</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: Error in the parameterization of limit lower or upper area</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: Correct inputs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note: Applies as from SW 4</td>
<td></td>
</tr>
<tr>
<td>160104</td>
<td>Learning phase active file functions not possible</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: Start-up application at file functions in the neural quadrant error compensation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: Access to the file functions not possible</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: No file functions are allowed while measurement is taking place</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: Stop measurement or wait for end of measurement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note: Applies as from SW 4</td>
<td></td>
</tr>
<tr>
<td>160105</td>
<td>QEC bits not set</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: Start-up application at start of neural quadrant error compensation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: The function cannot be started</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: The activation bit of the neural QEC (NC MD) is not set</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: Set QEC bits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note: Applies as from SW 4</td>
<td></td>
</tr>
<tr>
<td>160106</td>
<td>Feedforward control not activated</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: Start-up application at start of neural quadrant error compensation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: The function cannot be started</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: The speed feedforward control must be activated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: Activate speed feedforward control (option, NC MD, PLC bit)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note: Applies as from SW 4</td>
<td></td>
</tr>
<tr>
<td>160107</td>
<td>Axes not configured</td>
<td>OK softkey</td>
</tr>
<tr>
<td></td>
<td>Scan: Start-up application at start of circle form test</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effect: The function cannot be started</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation: Two real axes must be configured</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remedy: Configure axes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note: Applies as from SW 4</td>
<td></td>
</tr>
</tbody>
</table>
### 160108 No trace activated

**Scan**
Start-up application at start of SERVO TRACE function

**Effect**
SERVO trace is not started

**Explanation**
All traces are switched passive or no signal selected

**Remedy**
Switch at least one trace to active

**Note**
Applies as from SW 4

### 160109 Trace buffer already assigned ...

**Scan**
Start-up application at start of SERVO TRACE function

**Effect**
SERVO trace is not started

**Explanation**
Trace buffer assigned by measuring function

**Remedy**
Stop measuring function and restart Trace

**Note**
Applies as from SW 4

### 160110 Illegal NC No. ...

**Scan**
Start-up application at start of SERVO TRACE function

**Effect**
SERVO trace is not started

**Explanation**
NC No. is illegal

**Remedy**
Specify axis name for a valid NC axis/spindle

**Note**
Applies as from SW 4

### 160111 Illegal component ...

**Scan**
Start-up application at start of SERVO TRACE function

**Effect**
SERVO trace is not started

**Explanation**
Component is illegal

**Remedy**
Specify valid component (SERVO)

**Note**
Applies as from SW 4

### 160112 Illegal signal selection ...

**Scan**
Start-up application at start of SERVO TRACE function

**Effect**
SERVO trace is not started

**Explanation**
Signal number is illegal

**Remedy**
Specify valid signal number

**Note**
Applies as from SW 4

### 160113 Illegal segment address ...

**Scan**
Start-up application at start of SERVO TRACE function

**Effect**
SERVO trace is not started

**Explanation**
Segment address is illegal

**Remedy**
Specify legal segment address

**Note**
Applies as from SW 4
1.5.1 Alarm description

**160114  Illegal offset address ...**

**Scan**
Start-up application at start of SERVO TRACE function

**Effect**
SERVO trace is not started

**Explanation**
Offset address is illegal

**Remedy**
Specify legal offset address

**Note**
Applies as from SW 4

**160115  Illegal measurement duration ...**

**Scan**
Start-up application at start of SERVO TRACE function

**Effect**
SERVO trace is not started

**Explanation**
Measuring duration is illegal

**Remedy**
Specify legal measuring duration

**Note**
Applies as from SW 4

**160116  Illegal trigger time ...**

**Scan**
Start-up application at start of SERVO TRACE function

**Effect**
SERVO trace is not started

**Explanation**
Trigger time is illegal

**Remedy**
Specify legal trigger time

**Note**
Applies as from SW 4

**160117  Illegal mode ...**

**Scan**
Start-up application at start of SERVO TRACE function

**Effect**
SERVO trace is not started

**Explanation**
Mode is illegal

**Remedy**
Specify legal mode (0)

**Note**
Applies as from SW 4

**160118  Illegal trigger condition ...**

**Scan**
Start-up application at start of SERVO TRACE function

**Effect**
SERVO trace is not started

**Explanation**
Trigger condition is illegal

**Remedy**
Specify legal trigger condition

**Note**
Applies as from SW 4

**160119  Conversion error ...**

**Scan**
Start-up application when converting the TRACE buffer

**Effect**
Signal values in the Trace buffer could not be converted

**Explanation**
–

**Remedy**
–

**Note**
Applies as from SW 4
<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wrong Trace number (domain) ...</td>
<td>OK softkey</td>
<td>Start-up application when reading out the TRACE buffer</td>
<td>Trace buffer could not be displayed</td>
<td>Applies as from SW 4</td>
</tr>
<tr>
<td>Trace header not initialized (domain) ...</td>
<td>OK softkey</td>
<td>Start-up application when reading out the TRACE buffer</td>
<td>Trace buffer could not be displayed</td>
<td>Applies as from SW 4</td>
</tr>
<tr>
<td>Trace active, no data (domain) ...</td>
<td>OK softkey</td>
<td>Start-up application when reading out the TRACE buffer while Trace function is running</td>
<td>Trace buffer could not be displayed</td>
<td>Applies as from SW 4</td>
</tr>
<tr>
<td>Illegal trigger threshold ...</td>
<td>OK softkey</td>
<td>Start-up application at start of SERVO TRACE function</td>
<td>SERVO trace is not started</td>
<td>Applies as from SW 4</td>
</tr>
<tr>
<td>Option is not available</td>
<td>OK softkey</td>
<td>Start-up application on selecting the circle form test function</td>
<td>Circle form test cannot be selected</td>
<td>Applies as from SW 4</td>
</tr>
<tr>
<td>Trace buffer already assigned</td>
<td>OK softkey</td>
<td>Start-up application on starting a measurement function</td>
<td>Measurement function is not started.</td>
<td>Applies as from SW 4</td>
</tr>
</tbody>
</table>
### 160126 Data not available on Servo

**Scan**
Start-up application at SK display and SK file function. Save with neural QEC or SK stop at Servo Trace.

**Effect**
The characteristic of the neural QEC for the selected axis is not loaded from the Servo side to the MMC side. With Servo Trace, the data are not loaded to the MMC side.

**Explanation**
The data characteristic is not yet available on the Servo side.

**Remedy**
Enter the function parameters of the neural QEC for the axis and start the learning process or press the parameter transfer softkey. The characteristic is then available. With Servo Trace, parameterize correctly (observe the trigger conditions) and restart.

**Note**
Applies as from SW 4

### 160127 Illegal channel / IKA No.

**Scan**
Start-up applications when starting the servo-trace function for NCK signals.

**Effect**
Servo-trace is not started.

**Explanation**
Enter permissible channel/IKA No. and restart.

**Note**
Alarm in SW 5 and higher

### 161001 Function abort by the operator

**Scan**
Startup function

**Effect**
Operational message after operator action

**Explanation**
Stop Servo Trace and restart measurement function

### 161002 Function abort by SERVO error ...

**Scan**
Startup application

**Effect**
Current startup function aborted

**Explanation**
A system error has caused the active function to terminate

The following errors (No. and meaning) are possible:

<table>
<thead>
<tr>
<th>No.</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>“Axial alarm active”</td>
</tr>
<tr>
<td>82</td>
<td>“Above traversing range upper limit”</td>
</tr>
<tr>
<td>83</td>
<td>“Below traversing range lower limit”</td>
</tr>
<tr>
<td>84</td>
<td>“No axial SERVO enable”</td>
</tr>
<tr>
<td>85</td>
<td>“No PLC enable”</td>
</tr>
<tr>
<td>86</td>
<td>“SERVO mode change”</td>
</tr>
<tr>
<td>87</td>
<td>“MF on SERVO aborted”</td>
</tr>
<tr>
<td>88</td>
<td>“Reset”</td>
</tr>
<tr>
<td>89</td>
<td>“Axis/spindle not in stop state”</td>
</tr>
<tr>
<td>90</td>
<td>Spindle ramp-up encoder stop from PLC”</td>
</tr>
</tbody>
</table>

**Remedy**
End application and restart
161003  Function abort due to 611D error ...

Scan   Startup application
Effect  Current startup function aborted
Explanation A system error has caused the active function to terminate.

Function abort function generator:
- Function generator already active
- Wrong mode
- Selected servo cycle is 0
- Length of period is 0 or > 1000 s
- Scaling is negative
- Amplitude 1 is negative or greater than allowed
- Offset is beyond the allowed limits
- Limitation is greater than allowed
- Wrong curve form
- Pulse width is negative or greater than the length of period
- Bandwidth is < 1 or > 100000
- Calculation of a register length for the noise signal from length of period and bandwidth for which no provision has been made
- Scaling change with inactive function generator

Furthermore the following errors (No. and meaning) are possible:
- 97  "Measuring function 611D aborted with error"
- 98  "611D ends FG mode, was already active"
- 99  "No pulse enable"
- 100 "Timer expired, 611D does not respond"

Function abort measuring functions:
- Measuring function is already active
- Measuring type not in permitted range
- Measured value not input
- There is a gap in the measured values input

Remedy  Start up control/drive again and repeat procedure

161004  Measurement aborted  OK softkey

Scan   Startup application
Effect  Current measurement aborted
Explanation Current measurement aborted because of system error
Remedy  Start up control/drive again and repeat procedure
161005 Function abort by NC error ...

**Scan**
Startup application traversing function

**Effect**
The traversing function in question aborted

**Explanation**
Traversing function aborted because of system error or operator action.

**General error**
1 "Emergency stop"
2 "Warm restart"

**Mode Group error**
17 "Mode change"

**Channel error**
33 "Not all channels in reset state"
34 "Reset"
35 "Feed hold" or "feed override = 0"
36 "NC–STOP"
37 "No channel defined"

**Axis error**
49 "Servo enable"
50 "Parking axis"
51 "Feed hold"
52 "Follow-up"
53 "Axis disable"
54 "Hardware limit switch"
55 "Working area limitation +"
56 "Working area limitation –"
57 "Traversing range +"
58 "Traversing range –"
59 "Error conversion actual value system"

**Spindle error**
65 "PLC control for spindle"
66 "Spindle reset"
67 "Spindle servo enable"
68 "Setpoint = 0"
69 "Park"
70 "Spindle stop"

**Remedy**
If system error occurs, start up control again and repeat procedure

161006 Function generator is running

**Scan**
Startup application function generator

**Effect**
–

**Explanation**
Function generator operational message

**Remedy**
–

161007 Measurement current control loop in progress

**Scan**
Startup application measuring function current

**Effect**
–

**Explanation**
Current controller measuring function operational message

**Remedy**
–

161008 Measurement position control loop in progress

**Scan**
Startup application position controller measuring function

**Effect**
–

**Explanation**
Position controller measuring function operational message

**Remedy**
–
### 161009 Measurement speed control loop in progress

**Scan**
Startup application speed controller measuring function

**Effect**
–

**Explanation**
Speed controller measuring function operational message

**Remedy**
–

### 161010 Please press NC start

**Scan**
Selecting traversing movement during startup application

**Effect**
–

**Explanation**
Control waits for traversing function enable with “NC START”

**Remedy**
Press NC START

### 161011 Wait for PLC enable

**Scan**
Selecting traversing movement during startup application

**Effect**
–

**Explanation**
Control waits for PLC safety signal

**Remedy**
PLC safety signal scan can be deselected with “Enable: internal”

### 161012 Measuring for circularity test in progress

**Scan**
Start-up application after start of circularity test

**Effect**
–

**Explanation**
The control performs circularity test

**Remedy**
–

**Note**
Applies as from SW 4

### 161013 Measuring for neural QEC in progress

**Scan**
Start-up application after start of neural QEC

**Effect**
–

**Explanation**
The control performs neural QEC

**Remedy**
–

**Note**
Applies as from SW 4

### 161014 Trace function is started

**Scan**
Start-up application after start of SERVO Trace function

**Effect**
–

**Explanation**
The control performs SERVO Trace

**Remedy**
–

**Note**
Applies as from SW 4

### 161015 Trace started ...

**Scan**
Start-up application after recording has started within the control for all active Trace buffers

**Effect**
–

**Explanation**
The selected Trace signals are recorded

**Remedy**
–

**Note**
Applies as from SW 4
### 161016  Trace triggered ...

- **Scan**: Start-up application after trigger has occurred within the control for all active trace buffers.
- **Effect**: –
- **Explanation**: The selected triggers have been reached for all active Trace buffers.
- **Remedy**: –
- **Note**: Applies as from SW 4

### 161017  Trace concluded ...

- **Scan**: Start-up application after end of recording within control for all active Trace buffers.
- **Effect**: –
- **Explanation**: The selected traces have all been concluded, i.e. the selected measuring time has expired.
- **Remedy**: –
- **Note**: Applies as from SW 4

### 161018  Trace function aborted ...

- **Scan**: Start-up application while Trace function in progress
- **Effect**: All active trace functions are aborted
- **Explanation**: The selected traces are aborted before expiry of the measuring time
- **Remedy**: –
- **Note**: Applies as from SW 4

### 165001  No drive is assigned to this slot

- **Scan**: Storing, loading MD from an individual drive
- **Effect**: Function is not executed
- **Explanation**: Defined drive number is not assigned to any slot
- **Remedy**: Match drive configuration and accept

### 165002  No data has been transmitted

- **Scan**: Loading MD files
- **Effect**: Function not executed
- **Explanation**: The selected file does not contain the required MD
- **Remedy**: Select another file

### 165003  There is no free memory left

- **Scan**: –
- **Effect**: –
- **Explanation**: This message appears as a result of the previous operation and is self-explanatory
- **Remedy**: –

### 165004  The DPRAM is assigned – data was not transferred

- **Scan**: Saving, loading MD files
- **Effect**: Function is not executed
- **Explanation**: The link PC to NC is busy.
- **Remedy**: Wait, startup end, NCK reset or Power On
### 165005 Error in data transfer

**Scan**
Loading drive standard data

**Effect**
Some data in the drive are invalid

**Explanation**
Data not completely transferred

**Remedy**
Repeat operation

### 165007 Data is stored with errors

**Scan**
Saving machine data

**Effect**
An invalid file was stored

**Explanation**
Data was not completely transferred

**Remedy**
Delete file, repeat operation

### 165008 Selected drive has no FDD module

**Scan**
Drive MD: select motor

**Effect**
Function is not executed

**Explanation**
No active FDD drive available

**Remedy**
Enter FDD in drive configuration and accept

### 165009 No valid slot selected

**Scan**
Drive configuration: select module or delete slot

**Effect**
Function is not executed

**Explanation**
No valid slot number was entered

**Remedy**
Enter valid number (1–15), repeat operation

### 165010 Drive not active

**Scan**
Saving or loading MD of an individual drive

**Effect**
Function is not executed

**Explanation**
There is no connection to the passive drives

**Remedy**
Switch drive to active, accept configuration

### 165011 Transmission error – data not transferred

**Scan**
Saving, loading machine data

**Effect**
Function is not executed

**Explanation**
Transmission not possible or transmission interference

**Remedy**
Repeat operation

### 165012 There is no file with FDD motors

**Scan**
Drive MD/FDD/motor selection

**Effect**
No default possible for motor

**Explanation**
There is no system file

**Remedy**
Please notify Siemens Service

**Note**
Applies as from SW 4
### 165013 There is no file with spindle drive motors

**Scan** Drive MD/MSD/motor selection  
**Effect** No default possible for motor  
**Explanation** There is no system file  
**Remedy** Please notify Siemens Service  
**Note** Applies as from SW 4

### 165014 Selected drive has no spindle drive module

**Scan** Drive MD: select motor  
**Effect** Function is not executed  
**Explanation** No active MSD drive available  
**Remedy** Enter MSD in drive configuration and transfer.

### 165015 Data transmission has been aborted

**Scan** –  
**Effect** –  
**Explanation** This message always appears when the “Abort” softkey has been pressed during a file function and has also been effective. The file function has therefore been performed incompletely. Because an incomplete file function can lead to inconsistent data, an aborted loading operation, for example, should be repeated or the result of an incomplete save operation, for example, should not be used. If the operation could no longer be interrupted at the time of operating the Abort key, e.g. because it has already been completed to the maximum possible extent, then this message does not appear.  
**Remedy** Repeat operation if necessary.

### 165016 No file name entered

**Scan** Save, load, delete, copy MD file functions  
**Effect** Function is not executed  
**Explanation** Call up function again, enter correct name  
**Remedy** –

### 165017 No valid file name entered

**Scan** Save, load, delete, copy MD file functions  
**Effect** Function is not executed  
**Explanation** Name entered using illegal characters  
**Remedy** Call function again, enter correct name

### 165018 File must not be deleted

**Scan** Deleting MD files  
**Effect** Function is not executed  
**Explanation** <online> and STANDARD data cannot be deleted  
**Remedy** –

### 165019 File cannot be edited

**Scan** Selecting Edit or Edit new  
**Effect** Function is not executed  
**Explanation** BOOT files cannot be edited.  
**Remedy** –
### Scan

#### Effect

- Selection of Edit or Edit new
- Function is not performed

#### Explanation

- Internal error on file selection

#### Remedy

- Please notify Siemens Service
- Applies as from SW 4

### 165021 Drive configuration has not been saved

#### Scan

- Saving, loading drive MD

#### Effect

- Function is not executed

#### Explanation

- The configuration must first be saved

#### Remedy

- Press softkey “Accept conf.+NCKPO”, repeat operation

### 165022 Data has not been written on hard disk

#### Scan

- Saving machine data

#### Effect

- Files incomplete

#### Explanation

- Hard disk is probably full

#### Remedy

- Check free memory on hard disk

### 165023 Drive is not in configuration

#### Scan

- Saving, loading drive MD

#### Effect

- Function is not executed

#### Explanation

- The configuration must first be accepted (saved)

#### Remedy

- Change configuration and accept, with repeat operation

### 165024 Selected file cannot be copied

#### Scan

- Copying MD files

#### Effect

- Function is not executed

#### Explanation

- BOOT or <online> data was selected

#### Remedy

- Select standard or user file

### 165025 Error: file has not been copied

#### Scan

- Copying MD files

#### Effect

- Function is not executed

#### Explanation

- The named file does not exist

#### Remedy

- –

### 165026 Name is reserved for standard data

#### Scan

- Edit new, saving, inserting MD files

#### Effect

- Function is not executed

#### Explanation

- This name cannot be used for user files

#### Remedy

- Enter a different name
### 165027 Loading from on-line to on-line not possible

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading MD files</td>
<td>Function is not executed</td>
<td>Only user or STANDARD data can be loaded</td>
<td>–</td>
</tr>
</tbody>
</table>

### 165028 BOOT is no valid file name

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit new, editing, saving, inserting MD files</td>
<td>Function is not executed</td>
<td>The name cannot be used for user files</td>
<td>Enter a different name.</td>
</tr>
</tbody>
</table>

### 165029 Boot files cannot be loaded

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading MD files</td>
<td>–</td>
<td>Boot files are automatically loaded on NCK reset</td>
<td>–</td>
</tr>
</tbody>
</table>

### 165030 There is no file with power section selection

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive MD/module selection</td>
<td>Power section cannot be selected</td>
<td>There is no system file</td>
<td>Please notify Siemens Service</td>
</tr>
</tbody>
</table>

**Note**: Applies as from SW 4

### 165031 No communication to the MSD

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saving, loading machine data</td>
<td>Function is not executed</td>
<td>Transmission either not possible or transmission interference</td>
<td>Repeat operation</td>
</tr>
</tbody>
</table>

**Note**: Applies for SW 3 only

### 165032 MSD has not taken any standard values

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive MD, spindle (MSD): select motor</td>
<td>Drive is not parameterized</td>
<td>There are no standard data for this motor/PS combination</td>
<td>Select a different motor or motor from another manufacturer</td>
</tr>
</tbody>
</table>

### 165033 Conversion has not been switched off

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading drive machine data</td>
<td>Illegal data in drive</td>
<td>–</td>
<td>Repeat operation</td>
</tr>
</tbody>
</table>

**Note**: Applies as from SW 5.4.
165034 Conversion has not been switched on
Scan Loading drive machine data
Effect Illegal data in drive
Explanation –
Remedy Repeat operation
Note Applies as from SW 5.4.

165035 MD for motor/p section comb. not preset
Scan Drive MD, axis (FDD): select motor
Effect Drive is not parameterized
Explanation There are no standard data for this motor/PS combination
Remedy Select a different motor or motor from another manufacturer

165036 Not a valid drive number
Scan Saving and loading MD of one individual drive
Effect Selected function is not executed
Explanation An illegal drive number has been entered
Remedy Enter a legal drive number

165037 Boot file drive n. not saved
Scan Saving BOOT for one or all drives
Effect Current drive status lost after next reset
Explanation No communication with drive
Remedy Save BOOT configuration, NCK reset, repeat operation

165038 Drive configuration has not been loaded
Scan Loading user drive machine data
Effect No connection to drives
Explanation The loaded MD file does not contain a configuration
Remedy Load file with configuration data

165039 No communication to the digital drives
Scan Saving, loading drive MD
Effect Function is not executed
Explanation The stated configuration is accepted
Remedy Save BOOT configuration, NCK reset, repeat operation

165040 Only user configuration can be changed
Scan Softkey “Configure memory”
Effect Function is not performed
Explanation Standard or on-line configuration selected accidentally.
Remedy Select user setting under “File functions”
Note Applies as from SW 4
<table>
<thead>
<tr>
<th>Alarm</th>
<th>Description</th>
<th>OK Softkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>165041</td>
<td><strong>Only possible in general reset mode</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Scan</strong></td>
<td>Softkey “Configure memory”</td>
<td></td>
</tr>
<tr>
<td><strong>Effect</strong></td>
<td>Function is not performed</td>
<td></td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>To configure memory, the control must be in the general reset mode.</td>
<td></td>
</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Activate the general reset mode under “Diagnosis/start-up”</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Applies as from SW 4</td>
<td></td>
</tr>
<tr>
<td>165042</td>
<td><strong>Configuration not complete</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Scan</strong></td>
<td>Softkey “Configure memory”, check DRAM and SRAM configuration</td>
<td></td>
</tr>
<tr>
<td><strong>Effect</strong></td>
<td>Function is not performed</td>
<td></td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>Not all data belonging to the configuration are available</td>
<td></td>
</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>First enter all data</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Applies as from SW 4</td>
<td></td>
</tr>
<tr>
<td>165043</td>
<td><strong>Insufficient memory space</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Scan</strong></td>
<td>Softkey “Configure memory”, check DRAM and SRAM configuration</td>
<td></td>
</tr>
<tr>
<td><strong>Effect</strong></td>
<td>Function is not performed</td>
<td></td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>The calculated free memory space available is negative</td>
<td></td>
</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Change the configuration such that the remaining memory is positive</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Applies as from SW 4</td>
<td></td>
</tr>
<tr>
<td>165044</td>
<td><strong>Controller data have not been calculated</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Scan</strong></td>
<td>Loading of standard drive machine data and also softkey “Calculate controller data”</td>
<td></td>
</tr>
<tr>
<td><strong>Effect</strong></td>
<td>Invalid data in the drive</td>
<td></td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>–</td>
<td></td>
</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Repeat action</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Applies as from SW 4</td>
<td></td>
</tr>
<tr>
<td>165045</td>
<td><strong>No power section selected</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Scan</strong></td>
<td>Softkey “OK” in the drive machine data/selection module screen</td>
<td></td>
</tr>
<tr>
<td><strong>Effect</strong></td>
<td>Key is ignored</td>
<td></td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>Line with intermediate heading has been selected accidently. These lines serve only for the headings in the selection list.</td>
<td></td>
</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Select the correct module and press the key again.</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Applies as from SW 4</td>
<td></td>
</tr>
<tr>
<td>165046</td>
<td><strong>No input authorization</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Scan</strong></td>
<td>Insert from clipboard, drive selection</td>
<td></td>
</tr>
<tr>
<td><strong>Effect</strong></td>
<td>Function is not performed</td>
<td></td>
</tr>
<tr>
<td><strong>Explanation</strong></td>
<td>The data block just edited cannot be modified even if password is set (e.g. standard data block)</td>
<td></td>
</tr>
<tr>
<td><strong>Remedy</strong></td>
<td>Select another data block</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Applies as from SW 4</td>
<td></td>
</tr>
</tbody>
</table>
## Alarm Description

### 165047  No curve parameterized
- **Scan:** Copy to clipboard and paste from clipboard in the IKA relationships display selected "with" curve.
- **Effect:** Function is not performed
- **Explanation:**
  - The curve number is not parameterized
  - Start or end pointer of the curve is not parameterized
  - The start pointer is greater than the end pointer
  - This information cannot be read (e.g. <on-line>, NCK power-up)
- **Remedy:** Select "without" curve using the toggle key or press the Abort key and parameterize the curve.
- **Note:** Applies as from SW 4

### 165048  No drift compensation performed for axis ...
- **Scan:** "Drift compensation" softkey in Service display
- **Effect:** Function not carried out.
- **Explanation:** Internal error
- **Remedy:** None
- **Note:** Alarm in SW 5 and higher

### 165049  Axis ... not available
- **Scan:** "Drift compensation" softkey in Service display
- **Effect:** Function not carried out.
- **Explanation:** The selected axis is not active, e.g. because it has just been set up.
- **Remedy:** Perform Power on, repeat action.
- **Note:** Alarm in SW 5 and higher

### 165050  Axis ... to be stopped first
- **Scan:** "Drift compensation" softkey in service display
- **Effect:** Function not carried out.
- **Explanation:** Drift compensation only possible in Reset.
- **Remedy:** Stop program, press Reset, repeat action.
- **Note:** Alarm in SW 5 and higher

### 165051  NQFK data not backed up
- **Scan:** "Save on hard disk" softkey in the File functions menu in the Diagnosis/Start-up/Machine data display
- **Effect:** The NQFK data have not been saved
- **Explanation:** System error
- **Remedy:** Please notify Siemens Service
- **Note:** Alarm in SW 5 and higher

### 165052  NQFK data for axis ... not saved
- **Scan:** "Save on hard disk" softkey in the File functions menu in the Diagnosis/Start-up/Machine data display
- **Effect:** The NQFK data for the stated axis have not been saved.
- **Explanation:** The stated axis may have been incorrectly parameterized.
- **Remedy:** Check parameterization and repeat procedure.
- **Note:** Alarm in SW 5 and higher
### 1 Alarms

#### 1.5.1 Alarm description

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>165053</strong> NQFK data... not loaded</td>
<td>“Load from hard disk” softkey in the File functions menu in the Diagnosis/Start-up/Machine data display</td>
<td>The NQFK data have not been loaded.</td>
<td>Please notify Siemens service.</td>
<td>Alarm in SW 5 and higher</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>165054</strong> NQFK data for axis ... not loaded</td>
<td>“Load from hard disk” softkey in the File functions menu in the Diagnosis/Start-up/Machine data display</td>
<td>The NQFK data of the stated axis have not been loaded. The NQFK ASCII file of the stated axis is defective or not compatible.</td>
<td>Delete or correct file, repeat procedure.</td>
<td>Alarm in SW 5 and higher</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>165055</strong> Equivalent circuit data have not been calculated</td>
<td>Softkey “Calculate equivalent circuit diagram”</td>
<td>Invalid data in drive.</td>
<td>Repeat action</td>
<td>Alarm in SW 5 and higher</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>165056</strong> Carry out safety acceptance test</td>
<td>Softkey “Accept safe functions”</td>
<td>Without acceptance test, the operator’s life and limb are at risk. The acceptance test must be performed in accordance with the valid safety regulations.</td>
<td>Applies as from SW 5.4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
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<tr>
<td><strong>165057</strong> Sisitec data TEA1 axis read error</td>
<td>Softkey “Accept safe functions”</td>
<td>The function has not been performed.</td>
<td>If necessary, first start up the axis.</td>
<td>Applies as from SW 5.4</td>
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<tr>
<td><strong>165058</strong> Sisitec data TEA3 drive write error</td>
<td>Softkey “Accept safe functions”</td>
<td>The function has possibly been performed incompletely, data may be inconsistent.</td>
<td>If necessary, first start up the drive.</td>
<td>Applies as from SW 5.4</td>
</tr>
</tbody>
</table>
165059  Check input new SI password different
Scan  Softkey “Change password”
Effect  The password has not been changed
Explanation  The new password must be entered again in the third field to ensure that it has been entered correctly.
Remedy  Repeat input.
Note  Applies as from SW 5.4

165060  Rated power too small (MD x130 ≤ 0)
Scan  Softkey “Calculate equivalent circuit diagram data (MSD only)”
Effect  The equivalent circuit diagram data have not been changed.
Explanation  The rated power (in MD 1130 and MD 2130) must not be ≤ 0.
Remedy  Correct value, repeat function.
Note  Applies as from SW 5.4

165061  Rated voltage too small (MD x132 ≤ 0)
Scan  Softkey “Calculate equivalent circuit diagram data (MSD only)”
Effect  The equivalent circuit diagram data have not been changed.
Explanation  The rated voltage (in MD 1132 and MD 2123) must not be ≤ 0.
Remedy  Correct value, repeat function.
Note  Applies as from SW 5.4

165062  Rated current too small (MD x103 ≤ 0)
Scan  Softkey “Calculate equivalent circuit diagram data (MSD only)”
Effect  The equivalent circuit diagram data have not been changed.
Explanation  The rated current (in MD 1103 and MD 2103) must not be ≤ 0.
Remedy  Correct value, repeat function.
Note  Applies as from SW 5.4

165063  Cos Phi power factor wrong
Scan  Softkey “Calculate equivalent circuit diagram data (MSD only)”
Effect  The equivalent circuit diagram data have not been changed.
Explanation  The Cos Phi power factor (in MD 1129 and MD 2129) must not be ≤ 0 and must not exceed 0.996.
Remedy  Correct value, repeat function.
Note  Applies as from SW 5.4

165064  Pole pair no. (ratio MD x134/MD x400) illegal
Scan  Softkey “Calculate equivalent circuit diagram data (MSD only)”
Effect  The equivalent circuit diagram data have not been changed.
Explanation  The pole pair no. (ratio rated frequency (MD 1134 and MD 2134)/rated speed (MD 1400 and MD 2400)) is illegal.
Remedy  Correct value, repeat function.
Note  Applies as from SW 5.4
165065  **Result field weakening speed < rated speed**  
**Effect**  The equivalent circuit diagram data have not been calculated, the field weakening speed (MD 1142 and 2142) can now be modified manually.  
**Explanation**  The calculated field weakening speed is smaller than the rated speed (MD 1400 and 2400). This WarnNote is displayed if rated voltage plus the voltage drop at the series reactor exceed 400V.  
**Remedy**  Correct value of “field weakening speed” manually.  
**Note**  Applies as from SW 5.4

165066  **Current controller gain (MD 1120) not calculable**  
**Effect**  The controller data have been calculated, the machine data concerned has been given a suitable default value.  
**Explanation**  The calculated current controller gain is < 0.  
**Remedy**  If necessary, correct value and repeat function.  
**Note**  Applies as from SW 5.4

165067  **Default value (MD x15) cannot be calculated**  
**Effect**  The controller data have been calculated, the machine data concerned has been given a suitable default value.  
**Explanation**  The result calculated was a default value ≤ 0.  
**Remedy**  If necessary, correct value and repeat function.  
**Note**  Applies as from SW 5.4

165068  **Magnetizing reactance (MD x14) not allowed**  
**Effect**  The controller data have been calculated, the machine data concerned has been given a suitable default value.  
**Explanation**  The value 0 has been entered for the magnetizing reactance (MD1141 and MD 2141).  
**Remedy**  If necessary, correct value and repeat function.  
**Note**  Applies as from SW 5.4

165069  **Leakage reactance (MD x139/MD x140) not allowed**  
**Effect**  The controller data have been calculated, the machine data concerned has been given a suitable default value.  
**Explanation**  The value 0 has been entered for one of the leakage reactances (MD 1139, 1140, 2139, 2140).  
**Remedy**  If necessary, correct value and repeat function.  
**Note**  Applies as from SW 5.4

165070  **Rated frequency (MD x134) not allowed**  
**Effect**  The controller data have been calculated, the machine data concerned has been given a suitable default value.  
**Explanation**  The value 0 has been entered for the rated frequency (MD 1134 and MD 2134).  
**Remedy**  If necessary, correct value and repeat function.  
**Note**  Applies as from SW 5.4
165071  **Rotor resistance (MD x138) illegal**  
**Scan**  Softkey “Calculate controller data (MSD only)”  
**Effect**  The controller data have been calculated, the machine data concerned has been given a suitable default value.  
**Explanation**  The value 0 has been entered for the rotor resistance (MD 1138 and MD 2138).  
**Remedy**  If necessary, correct value and repeat function.  
**Note**  Applies as from SW 5.4

165072  **Moment of inertia (MD x117) illegal**  
**Scan**  Softkey “Calculate controller data”  
**Effect**  The controller data have been calculated, the machine data concerned has been given a suitable default value.  
**Explanation**  The value 0 has been entered for the moment of inertia (MD 1117 and MD 2117).  
**Remedy**  If necessary, correct value and repeat function.  
**Note**  Applies as from SW 5.4

165073  **Maximum speed smaller than field weakening speed**  
**Scan**  Softkey “Calculate controller data (MSD only)”  
**Effect**  The controller data have been calculated, the machine data concerned has been given a suitable default value.  
**Explanation**  The maximum speed (MD 1146 and MD 2146) is smaller than the field weakening speed (MD 1142 and MD 2142).  
**Remedy**  If necessary, correct value and repeat function.  
**Note**  Applies as from SW 5.4

165074  **Field weakening speed (MD x142) not allowed**  
**Scan**  Softkey “Calculate controller data (FDD only)”  
**Effect**  The controller data have been calculated, the machine data concerned has been given a suitable default value.  
**Explanation**  The value 0 has been entered for the field weakening speed (MD 1142 and MD 2142).  
**Remedy**  If necessary, correct value and repeat function.  
**Note**  Applies as from SW 5.4

165075  **No-load current (MD 1118) not allowed**  
**Scan**  Softkey “Calculate controller data (FDD only)”  
**Effect**  The controller data have been calculated, the machine data concerned has been given a suitable default value.  
**Explanation**  The value 0 has been entered for the no-load current.  
**Remedy**  If necessary, correct value and repeat function.  
**Note**  Applies as from SW 5.4

165076  **Ratio maximum current / no-load current illegal**  
**Scan**  Softkey “Calculate controller data (FDD only)”  
**Effect**  The controller data have been calculated, the machine data concerned has been given a suitable default value.  
**Explanation**  The ratio maximum current (MD 1104) no-load current (MD 1118) exceeds 900.  
**Remedy**  If necessary, correct value and repeat function.  
**Note**  Applies as from SW 5.4
### 165077 Pole pair no. (ratio MD x130/MD x400) illegal

**Scan** Softkey “Calculate controller data (MSD only)”

**Effect** The pole pair data have been calculated, the machine data concerned has been given a suitable default value.

**Explanation** The pole pair no. (ratio rated frequency (MD 1134 and MD 2134) / rated speed (MD 1400 and MD 2400) is illegal.

**Remedy** If necessary, correct value and repeat function.

**Note** Applies as from SW 5.4

### 300000 System error

**Scan** Cyclic after control startup

**Effect** Machining stops, interlocking of NC Start and Mode Group Ready

**Explanation**

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<th>Explanation</th>
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<td>Contact service</td>
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<tr>
<td>UX0002</td>
<td>Task ID</td>
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<td>UX0003</td>
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<tr>
<td>UX0004</td>
<td>Task ID</td>
<td>No queues available</td>
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<tr>
<td>UX0011</td>
<td>Protocol ID</td>
<td>Unknown protocol ID</td>
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<tr>
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<td>Message frame type</td>
<td>Unknown protocol message type</td>
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<tr>
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<td>Service ID</td>
<td>Unknown protocol service ID</td>
<td>Contact service</td>
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<tr>
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<td>Variable length</td>
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<tr>
<td>UX0022</td>
<td>Task ID</td>
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<td>UX0023</td>
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<td>Put_message pointer error</td>
<td>Contact service</td>
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<tr>
<td>UX0102</td>
<td>Version (set/actual)</td>
<td>Version error of boot files</td>
<td>Create boot files again</td>
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<tr>
<td>UX0103</td>
<td>Length (set/actual)</td>
<td>Incorrect length of boot files</td>
<td>Create boot files again</td>
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<td>Status</td>
<td>PI service initialization error</td>
<td>Contact service</td>
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<tr>
<td>UX0302</td>
<td>Status</td>
<td>PI service execution error</td>
<td>Contact service</td>
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<tr>
<td>UX0303</td>
<td>Status</td>
<td>PI service message error</td>
<td>Contact service</td>
</tr>
<tr>
<td>UX0304</td>
<td>Status</td>
<td>PI service abort error</td>
<td>Contact service</td>
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<tr>
<td>UX0401</td>
<td>Drive no.</td>
<td>Command with illegal drive no.</td>
<td>Contact service</td>
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<tr>
<td>UX0402</td>
<td>Message frame type</td>
<td>Command with illegal header (transmission)</td>
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<td>Message frame type</td>
<td>Command with illegal header (reception)</td>
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<td>Management overflow on transmitting orders</td>
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<td>UX0405</td>
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<td>Management overflow on transmitting of acknowledgements</td>
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<td>Management overflow on receiving orders</td>
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<td>UX0408</td>
<td>Status</td>
<td>Queue transmission error</td>
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<td>UX0411</td>
<td>–</td>
<td>Checksum error on receiving</td>
<td>Replace hardware</td>
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<tr>
<td>UX0412</td>
<td>Message length</td>
<td>Message length exceeded on receiving</td>
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<td>UX0413</td>
<td>Task ID</td>
<td>Timeout on transmitting</td>
<td>Replace hardware, Increase cycle times</td>
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<td>UX0414</td>
<td>–</td>
<td>Timeout + message unknown on transmitting</td>
<td>Replace hardware, Increase cycle times</td>
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<td>UX0415</td>
<td>Task ID</td>
<td>Timeout on receiving</td>
<td>Replace hardware, Increase cycle times</td>
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<td>UX0416</td>
<td>–</td>
<td>Timeout + message unknown on receiving</td>
<td>Replace hardware, Increase cycle times</td>
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<td>Error Code</td>
<td>Task ID</td>
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<td>Description</td>
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<td>0x0418</td>
<td>Task ID</td>
<td>Error in data transmission (unknown protocol ID)</td>
<td>Replace hardware</td>
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<td>0x0421</td>
<td>Protocol ID</td>
<td>Error in data transmission (unknown message type)</td>
<td>Contact service</td>
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<tr>
<td>0x0422</td>
<td>Service ID</td>
<td>Error in data transmission (unknown service ID)</td>
<td>Contact service</td>
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<tr>
<td>0x0423</td>
<td>Variable length</td>
<td>Error in data transmission (unknown variable length)</td>
<td>Contact service</td>
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<tr>
<td>0x0431</td>
<td>Drive type</td>
<td>Timeout on firmware booting</td>
<td>Replace hardware (control module 611D, drive bus or DCM), increase cycle times</td>
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<tr>
<td>0x0432</td>
<td>Filling level (time of 611D error)</td>
<td>Abort of firmware booting due to 611D system error</td>
<td>Replace hardware (control module 611D, drive bus or DCM)</td>
</tr>
<tr>
<td>0x0433</td>
<td>File ID</td>
<td>An error occurred while reloading the drive software from the MMC. This can happen if NCK Power On or PLC restart has been given during drive booting.</td>
<td>Switch control off/on. If the error then still occurs, the 611D firmware must be re-installed.</td>
</tr>
<tr>
<td>0x0434</td>
<td>File ID</td>
<td>Error in boot sequence</td>
<td>Re–install 611D firmware, contact Service</td>
</tr>
<tr>
<td>0x0435</td>
<td>File ID</td>
<td>Error in boot file</td>
<td>Re–install 611D firmware, contact Service</td>
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<tr>
<td>0x0501</td>
<td>Status</td>
<td>No AUS block available</td>
<td>Contact service</td>
</tr>
<tr>
<td>0x0502</td>
<td>Status</td>
<td>No AUS send possible</td>
<td>Contact service</td>
</tr>
<tr>
<td>0x0520</td>
<td>Task ID</td>
<td>Message to illegal software component</td>
<td>Contact service</td>
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<td>0x0801</td>
<td>Task ID</td>
<td>Error on drive bus formation or data transmission (write FIFO not empty)</td>
<td>Replace hardware: NC module, control module 611D, drive bus cable</td>
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<td>0x0802</td>
<td>Reserved</td>
<td></td>
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<td>0x0803</td>
<td>Task ID</td>
<td>Error on bus formation: timeout or CRC error during PCU initialization</td>
<td>Replace hardware: control module 611D, NC module</td>
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<td>0x0804</td>
<td>Task ID</td>
<td>Error on bus formation: timeout or CRC error on timer initialization in PCU</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>0x0806</td>
<td>Task ID</td>
<td>Sign–of–life error 611D</td>
<td>Hang programming with G1 or eliminate gantry axes, replace 611D control module, wrong default for speed controller clock pulse in standard control system with SW versions below SW 5</td>
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<td>0x0807</td>
<td>Task ID</td>
<td>Invalid DCM interrupt (no timeout, no CRC)</td>
<td>Replace NC hardware</td>
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<td>0x0808</td>
<td>Reserved</td>
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<tr>
<td>0x0810</td>
<td>Reserved</td>
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<tr>
<td>0x0811</td>
<td>Task ID</td>
<td>Digital drives configured although there is no DCM (drive bus interface) on the NC hardware</td>
<td>Replace NC hardware</td>
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<tr>
<td>0x0812</td>
<td>Task ID</td>
<td>Illegal internal ramp-up status</td>
<td>Replace NC hardware Reinstall NC system software Contact service</td>
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<tr>
<td>0x0813</td>
<td>Task ID</td>
<td>Invalid smtk_task opcode</td>
<td>Replace NC hardware Reinstall NC system software Contact service</td>
</tr>
<tr>
<td>0x0814</td>
<td>Task ID</td>
<td>Invalid smtk_status</td>
<td>Replace NC hardware Reinstall NC system software Contact service</td>
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### 1.5.1 Alarm description

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<td>Invalid status var_meldung()</td>
<td>Replace NC hardware, Reinstall NC system software, Contact service</td>
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<tr>
<td>UX0b16</td>
<td>Invalid status send_msg() – no message buffer free – error with smtk_send()</td>
<td>Replace NC hardware, Reinstall NC system software, Contact service</td>
</tr>
<tr>
<td>UX0b17</td>
<td>Invalid status mk_teadu_check() (error during interpretation of drive configuration)</td>
<td>Delete drive configuration, Reinstall NC system software, Contact service</td>
</tr>
<tr>
<td>UX0b18</td>
<td>Invalid status mk_bus_init()</td>
<td>Replace hardware: control module 611D, NC module, Contact service</td>
</tr>
<tr>
<td>UX0b19</td>
<td>Invalid status zustand_antrieb() Default status—0</td>
<td>Replace hardware: control module 611D, NC module</td>
</tr>
<tr>
<td>UX0b20</td>
<td>Invalid status zustand_antrieb() Acknowledgement status—0</td>
<td>Replace hardware: control module 611D, NC module</td>
</tr>
<tr>
<td>UX0b21</td>
<td>Invalid status zustand_antrieb() Default status—1</td>
<td>Replace hardware: control module 611D, NC module</td>
</tr>
<tr>
<td>UX0b22</td>
<td>Invalid status zustand_antrieb() Acknowledgement status—1</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>UX0b23</td>
<td>Invalid status zustand_antrieb() Default status—2</td>
<td>Replace hardware: control module 611D, NC module</td>
</tr>
<tr>
<td>UX0b24</td>
<td>Invalid status zustand_antrieb() Acknowledgement status—2</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>UX0b25</td>
<td>Invalid status zustand_antrieb() Default status—3</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>UX0b26</td>
<td>Invalid status zustand_antrieb() Acknowledgement status—3</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>UX0b27</td>
<td>Invalid status zustand_antrieb() Default status—4</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>UX0b28</td>
<td>Invalid status zustand_antrieb() Acknowledgement status—4</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>UX0b29</td>
<td>Invalid status zustand_antrieb() Acknowledgement status—5</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>UX0b30</td>
<td>Invalid status anstoss_hintergrund()</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>UX0b31</td>
<td>Invalid status lese_alarm_status()</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>UX0b32</td>
<td>Invalid status with drive alarm processing (al_status)</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>UX0b33</td>
<td>Invalid init-task event</td>
<td>Replace NC module, Reinstall NC system software</td>
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<tr>
<td>UX0b34</td>
<td>Error in drive configuration</td>
<td>Delete drive configuration, Reinstall NC system software</td>
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<tr>
<td>UX0b35</td>
<td>Invalid drive type (gsi_anlaufart)</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>UX0b36</td>
<td>Invalid smtk_event</td>
<td>Replace hardware: control module 611D, NC module</td>
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### 1.5.1 Alarm description

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<td>UX0837</td>
<td>Illegal transmission parameter in taster_übernahme()</td>
<td>Replace hardware: control module 611D, NC module</td>
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<tr>
<td>UX0838</td>
<td>Timeout during drive ramp-up – status u is not acknowledged by the drive</td>
<td>Reinstall drive firmware</td>
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<tr>
<td>UX0839</td>
<td>Illegal transmission parameter in meldung_servo_6xx()</td>
<td>Replace hardware: control module 611D, NC module</td>
</tr>
<tr>
<td>UX0840</td>
<td>Illegal status test formation of drive bus (gsi_zust_businit)</td>
<td>Reinstall drive firmware</td>
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<tr>
<td>UX0841</td>
<td>Faulty length of boot block 1</td>
<td>Reinstall drive firmware</td>
</tr>
<tr>
<td>UX0842</td>
<td>Faulty length of boot block 2</td>
<td>Reinstall drive firmware</td>
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<tr>
<td>UX0843</td>
<td>Timeout during transmission of initial program loader</td>
<td>Reinstall hardware: control module 611D, NC module</td>
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<td>UX0844</td>
<td>Faulty transmission parameter for fw_611D_urladen()</td>
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<td>UX0845</td>
<td>Faulty status fw_611D_urladen()</td>
<td>Reinstall hardware: control module 611D, NC module</td>
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<tr>
<td>UX0701</td>
<td>Function no. Overflow with orders (internal communication servo, drive)</td>
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<tr>
<td>UX0702</td>
<td>Function no. Overflow with acknowledgements (internal communication servo, drive)</td>
<td>Contact service</td>
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<tr>
<td>UX0703</td>
<td>Function no. Timeout (internal communication servo, drive)</td>
<td>Only SW 4: Set identical axis-specific position control cycle multiplication for all axes or resort the axes so that they are sorted according to descending position control cycle (e.g. 1st axis 4 ms, 2nd axis 2 ms, 3rd axis 1 ms) Otherwise: Increase cycle times for drive to obtain more calculation time for the communication.</td>
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<tr>
<td>UX0704</td>
<td>Function no. Handshake error (internal communication servo, drive)</td>
<td>Only SW 4: Set identical axis-specific position control cycle multiplication for all axes or resort the axes so that they are sorted according to descending position control cycle (e.g. 1st axis 4 ms, 2nd axis 2 ms, 3rd axis 1 ms) Otherwise: Contact service</td>
</tr>
<tr>
<td>UX0705</td>
<td>Function no. Unknown order (internal communication servo, drive)</td>
<td>Contact service</td>
</tr>
<tr>
<td>UX0706</td>
<td>Function no. Unknown acknowledgement (internal communication servo, drive)</td>
<td>Contact service</td>
</tr>
</tbody>
</table>

**Note**
Applies as from SW 3.

#### 300001 Configuration error drive number

**Scan**
When 611D drive link is being established

**Effect**
611D link is not established

**Explanation**
Illegal drive number entered

**Remedy**
Enter a drive number between 1 and 15

**Note**
Applies as from SW 3
### 1 Alarms

1.5.1 Alarm description

<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Scan</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>300002</td>
<td></td>
<td></td>
<td>Configuration error module type</td>
<td>Establishing the 611D drive link</td>
<td>611D link not established</td>
</tr>
<tr>
<td>300003</td>
<td></td>
<td></td>
<td>Configuration error bus configuration</td>
<td>Establishing the 611D drive link</td>
<td>611D link not established</td>
</tr>
<tr>
<td>300004</td>
<td></td>
<td></td>
<td>Configuration error meas. cct. components</td>
<td>Establishing the 611D drive link</td>
<td>611D link not established</td>
</tr>
<tr>
<td>300005</td>
<td></td>
<td></td>
<td>Configuration error drive type</td>
<td>Establishing the 611D drive link</td>
<td>611D link not established</td>
</tr>
<tr>
<td>300006</td>
<td></td>
<td></td>
<td>CRC error drive link</td>
<td>Cyclic</td>
<td>Machining stops, interlocking of NC START and Mode Group Ready</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300007</td>
<td></td>
<td></td>
<td>Number of defective axes, spindles, drives</td>
<td>Control startup</td>
<td>Interlocking of NC START and Mode Group Ready</td>
</tr>
</tbody>
</table>
### 300008 FDD software not loaded

**Scan**
Control power-up – establishment of drive link

**Effect**
Power-up aborts

**Explanation**
Drive configuration and NCK memory configuration are inconsistent.

**Remedy**
In the NCK memory configuration, select the “FDD yes” setting or remove FDD from drive configuration. Check the system software.

**Note**
Applies as from SW 4

### 300009 MSD software not loaded

**Scan**
Control power-up – establishment of drive link

**Effect**
Power-up aborts

**Explanation**
Drive configuration and NCK memory configuration are inconsistent.

**Remedy**
In the NCK memory configuration, select the “MSD yes” setting or remove MSD from drive configuration. Check the system software.

**Note**
Applies as from SW 4

### 300100 Drive link off

**Scan**
Cyclic

**Effect**
Interlocking of NC START and Mode Group Ready

**Explanation**
Alarm appears when power supply to electronics of 611D in operation is switched off

**Remedy**
Return power supply to drive electronics and press reset key

**Note**
Applies as from SW 3

As from SW 6, the alarm 300100 "Drive link off" is displayed only by the drive on which read access could not be executed. In addition, both error registers from the DCM are displayed for further information on the alarm. If the information from the error registers is not sufficient to determine a drive number, the alarm is output for the first drive available.

### 300300 Drive link off

**Scan**
Startup

**Effect**
Interlocking of NC start and Mode Group Ready

**Explanation**
Alarm appears if there is no supply to the electronics for the 611D currently ramping up

**Remedy**
Return power supply to drive electronics

**Note**
Applies as from SW 3; as from SW 6, the two error registers are displayed for further information on the alarm.

### 300301 "Drive software" being loaded

**Scan**
When starting up the control or after switching on the drives.

**Effect**
None

**Explanation**
The message "Drive software being loaded" is displayed as long as the software of the drives is being loaded.

**Remedy**
The message is automatically cleared after loading of the drive software.

**Note**
Applies as from SW 6
### 300500 System error drive

**Scan**
Cyclic after control power-up

**Effect**
a) Error occurs during the ramp-up phase
- Ramp-up phase is stopped
- Pulse or servo disable
- SIMODRIVE_READY and DRIVE_READY are cancelled

### Explanation

<table>
<thead>
<tr>
<th>Error No. F...</th>
<th>Additional information (xx = for diagnostic purposes)</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Relevant for</th>
</tr>
</thead>
<tbody>
<tr>
<td>F001 (only for drive SW 1.x). For drive software &gt; SW 2.x, see F034 or F035.</td>
<td>Incorrect address / xx</td>
<td>In the program memory test, it was found during power-up that the written bit pattern could not be read back. Cause: Hardware error on the servo control module.</td>
<td>Replace servo control module.</td>
<td>FDD</td>
</tr>
<tr>
<td>F002</td>
<td>Incorrect address / xx</td>
<td>In the data memory test, it was found during power-up that the written bit pattern could not be read back. Cause: Hardware error on the servo control module.</td>
<td>Replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F007</td>
<td>xx / xx</td>
<td>In the clock pulse synchronization between NC and drive, an illegal state has been read from the hardware. Synchronization could not be performed.</td>
<td>Replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F01B</td>
<td>xx / Axis No. xx = 0: Error</td>
<td>• A current of 0 is expected during power-up of the current actual value measurement and during cyclic operation on a pulse disable, since the system assures that no current can flow. It is possible that the hardware for the current actual value measurement is defective.</td>
<td>• Replace the control module. Check the connections. Connect the power section</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F020</td>
<td>xx / xx</td>
<td>On a single-axis module, an attempt is made by the NC to activate the second axis. Possibly faults in communication via the drive bus or servo control module defective.</td>
<td>Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F021</td>
<td>xx / xx</td>
<td>On a single-axis module, an attempt is made by the NC to activate two axes. Possibly faults in communication via the drive bus or servo control module defective.</td>
<td>Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F022</td>
<td>xx / xx</td>
<td>In at least one axis of the drive module, the motor measuring system is not implemented or it is defective. Since the components used in the measuring systems are detected by the NC and this information is passed on to the drive, faults in communication by the drive bus could be the cause.</td>
<td>Replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
</tbody>
</table>

### Note
In the event of a fault, record additional information and inform hotline.
<table>
<thead>
<tr>
<th>Error No.</th>
<th>Additional information (xx = for diagnostic purposes)</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Relevant for</th>
</tr>
</thead>
<tbody>
<tr>
<td>F023</td>
<td>xx / Axis No. Read K1C register of the relevant PCU ASIC NC drive number</td>
<td>The motor measuring system has a motor encoder with voltage output. This calls for an IPU submodule with voltage input. A submodule other than that expected has been detected.</td>
<td>Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F024</td>
<td>xx / xx</td>
<td>In executing the software, an illegal internal axis number has been found. Possible causes: Defective servo control module, electromagnetic compatibility faults.</td>
<td>Replace servo control module. Take measures to eliminate noise (screening, check ground connections).</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F025</td>
<td>xx / xx</td>
<td>In executing the software, an illegal internal physical axis number has been found. Possible causes: Defective servo control module, electromagnetic compatibility faults.</td>
<td>Replace servo control module. Take measures to eliminate noise (screening, check ground connections).</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F026</td>
<td>xx / Axis No.</td>
<td>The NC attempts to log on an FDU module as MSD. There are possibly faults in the communication via the drive bus or servo control module is defective.</td>
<td>Replace servo control module. Take measures to eliminate noise (screening, check ground connections).</td>
<td>FDD</td>
</tr>
<tr>
<td>F027</td>
<td>xx / Axis No.</td>
<td>The NC attempts to log on an MSD module as FDD. There are possibly faults in the communication via the drive bus or servo control module is defective.</td>
<td>Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).</td>
<td>MSD</td>
</tr>
<tr>
<td>F028</td>
<td>xx / Axis No. Read K1C register of the relevant PCU ASIC NC drive number</td>
<td>For the direct measuring system, only certain submodules are allowed. A submodule has been detected that is not allowed.</td>
<td>Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F031</td>
<td>Error code / Axis No. 0x40; illegal PDU length 0x41; axes do not have the same PDU length 0x42; PDU length not a word multiple 0x43; axes do not have the same NC type</td>
<td>The NC has not transferred permissible corner data to the drive for communication via the drive bus. This is presumably caused by faults on the drive bus or a defective servo control module.</td>
<td>Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F033</td>
<td>Error code / xx 0x51; wrong data format in element list 0x52; wrong conversion group specified in Refresh</td>
<td>The drive software is no longer consistent. This is presumably caused by a hardware fault on the servo control module.</td>
<td>Reload drive software Replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F034</td>
<td>Error code / incorrect address 0 or incorrect response of SERVO on STF handshake 0x60; incorrect transport checksum does not correspond to that of SERVO</td>
<td>Errors have been found on loading the drive software. This is caused either by errors in transmission on the drive bus or a defective servo control module.</td>
<td>Check drive bus cable and connectors, take measures to eliminate noise (screening, check ground connections), replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
</tbody>
</table>
**Effect**

b) In cyclic mode

For MSD:
- Pulse suppression, motor runs down
- SIMODRIVE_READY and DRIVE_READY are cancelled
- Power On fault
- Pulse and controller disable corresponds to STOP A with SINUMERIK Safety Integrated.

For FDD:
- Controllers are disabled, Motor is braked,
- SIMODRIVE_READY and DRIVE_READY are cancelled
- Power On fault
- Regenerative stop (corresponds to STOP B) with SINUMERIK Safety Integrated.

Response via MD 1612.0, can be configured as from SW 4

**Explanation**

<table>
<thead>
<tr>
<th>Error No.</th>
<th>Additional information</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Relevant for</th>
</tr>
</thead>
</table>
| F003      | xx / xx                | The computation time of the drive processor is no longer sufficient for the selected functions in the given clock pulse times. This error normally occurs only in conjunction with start-up functions (FFT measurement, step response). | During start-up with FFT or measurement of the step response  
- Switch off emergency retraction  
- Switch off feedforward control (MD 1004.0)  
- Switch off min-max memory (MD 1650.0)  
- Reduce number of DAC output channels (max. 1 channel)  
- Switch off variable signaling function (MD1620.0)  
- Switch off encoder phase error compensation (MD1011.1)  
- Select larger position controller cycle for the NC.  
- Increase the corresponding cycle or the subordinate cycle (e.g. current, speed or position control cycle) or deselect functions which are not required. | FDD / MSD |
<p>| F004      | xx / xx                | With controller enable, the NC must update the sign-of-life in each position controller cycle. If an error occurs, there has been no sign-of-life for at least two consecutive position controller cycles. Causes: NC failure, communication failure via the drive bus. Hardware fault on the drive module or HW error on NC CPU if error occurs sporadically at intervals of several hours. A further reason: ring programming with GI or gantry axes. | Check plug-on connections, take measures to eliminate noise (screening, check ground connections). Replace NC hardware, replace servo control module. | FDD / MSD |
| F005      | xx / xx                | Ramping up of the drive modules is broken down into 5 states (steps). The states are provided in sequence by the NC and acknowledged by the drive. If an error occurs, an invalid setpoint state has been detected in the drive. Causes: Faults in communication via the drive bus. Hardware fault on the drive module, hardware fault on the NC. | Check plug-on connections, take measures to eliminate noise (screening, check ground connections). Replace NC hardware, replace servo control module. | FDD / MSD |
| F006      | xx / xx                | The endless loop for processing communication has been exited. Presumably caused by a hardware fault on the servo control module. | Replace servo control module. | FDD / MSD |</p>
<table>
<thead>
<tr>
<th>Error No.</th>
<th>Additional information (xx = for diagnostic purposes)</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Relevant for</th>
</tr>
</thead>
<tbody>
<tr>
<td>F010</td>
<td>x / xx&lt;br&gt;x =&lt;br&gt;1: HW undeflow&lt;br&gt;2: HW overflow&lt;br&gt;3: SW undeflow&lt;br&gt;4: SW overflow</td>
<td>The boundaries of the processor-internal hardware stack or of the software-stack in the data memory have been violated.</td>
<td>Reload drive software. Replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F011</td>
<td>xx / xx</td>
<td>The watchdog timer on the servo control module has expired. Caused by a hardware fault in the time base on the servo control module.</td>
<td>Replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F012</td>
<td>xx / xx</td>
<td>The NC basic clock pulse generated on the NC and transmitted via the drive bus cable to the drive has failed. Possible causes: NCK Reset, EMC faults, hardware fault NC, cable break drive bus, hardware fault servo control module.</td>
<td>Check drive bus cable and plug-on connectors, take measures to eliminate noise (screening, check ground connections), replace NC hardware, replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F013</td>
<td>xx / xx</td>
<td>The NC basic clock pulse generated on the NC and transmitted via the drive bus cable to the drive did not supply a pulse that fits in the clock pulse grid. Possible causes: EMC faults drive bus, hardware fault NC, hardware fault servo control module.</td>
<td>Check drive bus cable and plug-on connectors, take measures to eliminate noise (screening, check ground connections), replace NC hardware, replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F014</td>
<td>Incorrect address / xx</td>
<td>The processor has detected an illegal command in the program memory.</td>
<td>Replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F015</td>
<td>xx / xx&lt;br&gt;As from version 4.0: start address of the incorrect code data area As from version 4.0: segment of the incorrect code data area, with:&lt;br&gt;0: P memory&lt;br&gt;1: X memory&lt;br&gt;2: Y memory</td>
<td>In the continuous checking of the checksum in the program memory, a difference has been found between the set and actual checksums. Presumably caused by a hardware fault on the servo control module.</td>
<td>Replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F016</td>
<td>xx / xx</td>
<td>An illegal interrupt of the processor has occurred.</td>
<td>Check drive bus cable and connector. Replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F017</td>
<td>xx / xx</td>
<td>An illegal interrupt of the processor has occurred.</td>
<td>Check drive bus cable and connector. Replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F018</td>
<td>xx / xx</td>
<td>An illegal interrupt of the processor has occurred.</td>
<td>Check drive bus cable and connector. Replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F019</td>
<td>xx / xx</td>
<td>An illegal interrupt of the processor has occurred.</td>
<td>Check drive bus cable and connector. Replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>Error No.</td>
<td>Additional information (xx = for diagnostic purposes)</td>
<td>Explanation</td>
<td>Remedy</td>
<td>Relevant for</td>
</tr>
<tr>
<td>----------</td>
<td>-------------------------------------------------------</td>
<td>-------------</td>
<td>--------</td>
<td>--------------</td>
</tr>
<tr>
<td>F030</td>
<td>Error code / Axis No. 0x01; non-supported ROSCTR 0x02; illegal ROSCTR 0x03; job management 'defective' 0x04; wrong PDUREF for acknowledgement 0x05; acknowledgement illegal at that time 0x06; acknowledgement is not supported 0x07; illegal PROTID 0x08; illegal PERLG (odd) 0x09; buffer management 'defective' 0x0A; illegal PI code (internal) 0x0B; internal status of PI restart illegal 0x0C; status processor in WRITE DATA &quot;defective&quot; 0x0D; illegal transmission parameter for REFRSH.PI.ZUST NC drive number</td>
<td>Either irrecoverable errors have been found in the communication via the drive bus, or the drive software is no longer consistent. Cause is either a defective drive bus interface or a hardware fault on the servo control group.</td>
<td>Check drive bus cable and plug-on connectors, take measures to eliminate noise (screening, check ground connections), replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F032</td>
<td>Error code / Axis No. 0x20; job management 'defective' 0x21; illegal status in SET_TRANSPO 0x22; checksum test incorrect more than 3 times 0x23; receive PDU too long 0x24; status 6XX abort illegal NC drive number</td>
<td>Either irrecoverable errors have been found in the communication via the drive bus, or the drive software is no longer consistent. Cause is either a defective drive bus interface or a hardware fault on the servo control group.</td>
<td>Check drive bus cable and plug-on connectors, take measures to eliminate noise (screening, check ground connections), replace servo control module.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F040</td>
<td>xx / xx</td>
<td>An illegal number of current setpoint filters (&gt;4) has been entered.</td>
<td>Correct number of current setpoint filters MD1200.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F041</td>
<td>xx / xx</td>
<td>An illegal number of speed setpoint filters (&gt;2) has been entered.</td>
<td>Correct number of speed setpoint filters MD1500.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>Error No.</td>
<td>Additional information (xx = for diagnostic purposes)</td>
<td>Explanation</td>
<td>Remedy</td>
<td>Relevant for</td>
</tr>
<tr>
<td>----------</td>
<td>-----------------------------------------------------</td>
<td>-------------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>F044 (drive SW 2.5 and higher) xx-axis no.</td>
<td>- The rotor position synchronization is faulty. The difference between the first part of rotor position synchronization (coarse synchronization) and the second part (fine synchronization to the active encoder zero mark) exceeds 45 electrical. A too large difference may be caused by the following: incorrect encoder adjustment, EMC problem on zero mark signal, too high voltage level of CD track.</td>
<td>- Uncheck encoder adjustment and EMC measures new sequence check mode replacee motor</td>
<td>FDD</td>
<td></td>
</tr>
<tr>
<td>F045</td>
<td>Error code / Axis No.</td>
<td>- Either an encoder with distance-coded reference marks has been entered by the NC or a BERO switch in the register $1D$ of the motor measuring system of the PCU ASIC. This is not allowed during fine synchronization which is activated by powering up, by zero monitoring error or by deselecting the parking axis.</td>
<td>After powering up, in the event of zero monitoring errors or after deselection of the parking axis, the NC/PLC must not enter encoders with distance-coded reference marks or a BERO switch into the register $1D$ of the motor measuring system of the PCU ASIC.</td>
<td>FDD / MSD</td>
</tr>
<tr>
<td>F046</td>
<td>xx / xx</td>
<td>- As from drive software SW 4.02, startup of the drive is only possible with the drive software loaded</td>
<td>Re-load drive software</td>
<td>FDD/MSD</td>
</tr>
</tbody>
</table>

**Note**
Applies as from SW 3

### 300501 Current monitoring

**Scan**
Cyclically after the control is switched on

**Effect**
Pulse reset, motor coasts down SIMODRIVE READY and DRIVE READY are reset. Power On error.

**Explanation**
1. The smoothed current amount (smoothing time: MD 1254) is greater than or equal to a current threshold. A serious error has occurred in the current actual value acquisition.
2. With active rotor position identification (FDD only), the permissible current threshold has been exceeded.
   - Up to SW 2.6 (611–D): only MSD; additionally to alarms 300502 / 300503
     - Current threshold = 1.2 * max. permissible power section current (MD1107)
   - With SW 2.6 and higher: FDD and MSD; replacing alarms 300502 / 300503
     - Current threshold = 1.2 * 1.05 * max. permissible power section current (MD1107)

**Remedy**
Check maximum power section current MD1107; replace 611D hardware if necessary

**Note**
Applies with SW 3 and higher

### 300502 Meas. circuit error phase current R

**Scan**
Cyclically after control power up

**Effect**
- Pulse suppression, motor runs down
- SIMODRIVE READY and DRIVE READY are cancelled.
- Power On error

**Explanation**
Phase current R is greater than or equal to 1.05 times the value of the maximum permissible power section current MD 1107. Serious error has occurred in the actual current value circuit.
- Check maximum power section current MD1107
- Defective actual current value circuit

**Remedy**
Check maximum power section current MD1107; replace 611D hardware if necessary

**Note**
Applies up to SW 4 (611–D: up to SW 2.6)
300503  **Meas. circuit error phase current S**  
*POWER ON*

**Scan**  
Cyclic after control power up

**Effect**  
- Pulse suppression, motor runs down
- SIMODRIVE-ready and DRIVE-ready are cancelled.
- Power On error

**Explanation**  
Phase current S is greater than or equal to 1.05 times the value of the maximum permissible power section current MD 1107. Serious error has occurred in the actual current value circuit.
- Check maximum power section current MD1107
- Defective actual current value circuit

**Remedy**  
Check maximum power section current MD1107; replace 611D hardware if necessary

**Note**  
Applies up to SW 4 (611–D: up to SW 2.6)

300504  **Meas. circuit error motor (inc.)**  
*POWER ON*

**Scan**  
Cyclic after control power up

**Effect**  
- Pulse suppression, motor runs down
- SIMODRIVE-ready and DRIVE-ready are cancelled.
- Power On error

**Explanation**  
- Encoder faulty
- Motor encoder not connected
- Motor encoder cable faulty
- Module faulty

**Remedy**  
Eliminate cause; replace motor/611D hardware if necessary

**Note**  
Applies as from SW 3

300505  **Measuring circuit error abs. track**  
*POWER ON*

**Scan**  
Control power up or cancellation of the Parking Axis function

**Effect**  
- Pulse suppression, motor runs down
- SIMODRIVE-ready and DRIVE-ready are cancelled.
- Power On error

**Explanation**  
Error on the absolute track or measured value acquisition of optical encoder
- Absolute value encoder defective
- Motor encoder not connected
- Motor encoder cable faulty
- Module faulty
- Consider MD1023 (IMS) and MD1033 (DMS)

**Remedy**  
Eliminate cause; replace motor/611D hardware if necessary

**Note**  
Applies as from SW 3
300506  Sign of life: NC failed

**Scan**  Cyclic after servo enable

**Effect**  for MSD:
- Pulse suppression, motor coasts down
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Power On – error

  for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- As from drive SW 2, response can be configured via MD 1612.6

**Explanation**  With servos enabled, the NC must update the sign of life in every position control cycle. If an error occurs, the sign of life has not been updated.

**Cause:**
- a) NC does not update the sign of life as response to an alarm (e.g. 611D alarm)
- b) Failure of communication via drive bus
- c) Hardware fault of drive module
- d) NC failure

**Remedy**  Re a)
Check to see whether the sign of life failure is a secondary error. It is a secondary error if, for example:
- Axis x is faulty / outputs an alarm in an n–axes structure. If this error situation is present, the above error message is given for all n axes, although there is a fault/alarm present only on axis x.
  ⇒ Correct fault of axis x
  ⇒ Sign of life of other axes is irrelevant

Re b)
Check connector, take radio interference suppression measures (check shielding and ground)
Re c) Exchange servo module
Re d) See NC error diagnosis, replace NC hardware, if necessary.

**Note**  Applies as from SW 6

---

300507  Synchronization error rotor position

**Scan**  Control power up or cancellation of the Parking Axis function

**Effect**  for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE\_READY and DRIVE\_READY are cancelled
- As from drive SW 2, response can be configured via MD 1612.7

**Explanation**  Difference angle between the actual rotor position and the recalculated rotor position is too great. Faults might have occurred on the encoder or zero marker signals.

**Remedy**  Reference with BERO deselect. Check encoder cable, encoder cable connection or grounding, because EMC problems might have occurred.
Replace motor/611D if necessary.

**Note**  Applies as from SW 4
As from SW 5, alarm cannot be configured
### 300508 Zero mark error motor

**Scan**  
Cyclic after control power up

**Effect**  
for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE_READY and DRIVE_READY are cancelled.
- Power On error

for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE_READY and DRIVE READY are cancelled

**Explanation**  
The counted number of encoder marks is incorrect on passing through the zero marker.
- Defective encoder
- EMC problems
- Defective IPU submodule

**Remedy**  
Eliminate cause; replace motor/611D hardware if necessary.

**Note**  
Applies as from SW 3

### 300509 Converter limit frequency exceeded

**Scan**  
Cyclic after control power up

**Effect**  
for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE_READY and DRIVE READY are cancelled.
- Power On error

for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE_READY and DRIVE READY are cancelled
- Power On error

**Explanation**  
As from drive SW 2, response can be configured via MD 1612.9
Motor frequency has exceeded the limit frequency \( f_g \).
Possible causes:
- Number of encoder marks in MD 1005 does not correspond to actual number of encoder marks.
- Speed limitation MD 1147 or number of motor pole pairs MD 1112 in FDD or motor nominal frequency MD 1134 and motor nominal speed MD 1400 for MSD are equal to zero or not correct.

Limit frequency \( f_g \):
- \( FDD \): \( f_g = 1.12 \times \min(1.2 \times \text{MD 1400, MD 1147}) \times \text{MD1112}/60 \)
- \( MSD \): \( f_g = 1.12 \times \min(\text{MD 1146, MD 1147}) \times \frac{\text{number of pole pairs}}{60} \times \frac{\text{nominal motor frequency (MD 1134)}}{\text{60}} \times \frac{\text{nominal motor speed (MD 1400)}}{\text{MD 1400}} \)

**Remedy**  
Check MD 1005 against actual number of encoder marks.
If necessary, check MD 1147 (speed limitation), MD 1400 (nominal motor speed) and additionally for MSD: MD 1134 (nominal motor frequency).

**Note**  
Applies as from SW 4

### 300510 Fault in center frequency measurement

**Scan**  
Cyclic after control power up

**Effect**  
- Pulse suppression, motor runs down
- SIMODRIVE_READY and DRIVE READY are cancelled.
- Power On error

**Explanation**  
Speed too high at center frequency measurement

**Remedy**  
Reduce speed

**Note**  
Applies as from SW 4
300511  **Meas. value memory active**  
**Scan**  Cyclic after control power up  
**Effect**  - Pulse suppression, motor runs down  
- SIMODRIVE READY and DRIVE READY are cancelled.  
- Power On error  
**Explanation**  Measured value memory is active during power up  
**Remedy**  Start up again!  
**Note**  Applies as from SW 4

300515  **Heat sink temperature alarm**  
**Scan**  Cyclic after control power up  
**Effect**  for MSD:  
- Pulse suppression, motor runs down  
- SIMODRIVE READY and DRIVE READY are cancelled.  
- Power On error  
for FDD:  
- Controllers are disabled, motor is braked  
- SIMODRIVE READY and DRIVE READY are cancelled  
- Power On error  
**Explanation**  Heat sink temperature in “hot” state and time of 20 s expired.  
- Converter overload  
- Ambient temperature too high  
- Fan not working  
- Temperature encoder faulty  
**Remedy**  Eliminate cause  
**Note**  Applies as from SW 4

300606  **Flux controller at end stop**  
**Scan**  Cyclically after the control is switched on  
**Effect**  - Pulse reset, motor coasts down  
- SIMODRIVE READY and DRIVE READY are reset.  
- Reset error  
**Explanation**  The specified flux setpoint cannot be achieved although the maximum current is specified.  
**Causes:**  
- Motor data (equivalent circuit diagram data) are incorrect  
- Motor data and type of connection of motor (start/delta) do not match  
- Motor is unstable because motor data are completely wrong  
- Current limit is too low for motor (0.9 * MD 1238 * MD 1103 < MD 1136)  
**Remedy**  Eliminate cause  
**Note**  Alarm in SW 5 and higher

300607  **Current controller at end stop**  
**Scan**  Cyclically after the control is switched on  
**Effect**  - Pulse reset, motor coasts down  
- SIMODRIVE READY and DRIVE READY are reset.  
- Reset error  
**Explanation**  The specified current setpoint cannot be injected in the motor although the maximum voltage is defined.  
**Possible causes:**  
- Motor either not connected or phase missing  
**Remedy**  Check motor – converter connecting cable.  
**Note**  Alarm in SW 5 and higher (611–D: SW 3.1 and higher)
300608  **Speed controller against stop**  
*Scan*  
Cyclic after control power up  
*Effect*  
- Pulse suppression, motor runs down  
- SIMODRIVE_READY and DRIVE_READY are cancelled.  
- Reset error  
*Explanation*  
Set torque value exceeds limit torque value, set speed value is less than speed threshold MD 1606 and the time of MD 1603 (FDD) has expired.  
*Causes:*  
- Motor encoder not connected  
- Motor encoder cable faulty  
- Module faulty  
- Encoder faulty  
- Motor earth not connected  
- Motor encoder cable shield not connected  
- Motor not connected or phase not connected  
- Motor blocked  
*Remedy*  
Eliminate cause  
*Note*  
Applies as from SW 3

300609  **Temperature probe break**  
*Scan*  
Cyclic after control power up  
*Effect*  
- Pulse suppression, motor runs down  
- SIMODRIVE_READY and DRIVE_READY are cancelled.  
- Reset error  
*Explanation*  
Temperature encoder faulty (motor)  
- Connection to encoder faulty  
- Module faulty  
*Remedy*  
Eliminate cause or operate at fixed temperature  
*Note:* Temperature monitoring not active with fixed temperature  
*Note*  
Applies as from SW 3

300609  **Encoder limit frequency exceeded**  
*Scan*  
Cyclic after control power up  
*Effect*  
- Pulse suppression, motor runs down  
- SIMODRIVE_READY and DRIVE_READY are cancelled.  
- Power On error  
*Explanation*  
Actual speed value exceeds the encoder limit frequency:  
- Wrong encoder  
- MD 1005 does not correspond to number of encoder marks  
- Encoder defective  
- Motor encoder cable defective or not fastened properly  
- Motor encoder cable screen not connected  
- Drive module defective  
*Remedy*  
Eliminate cause  
*Note*  
Applies as from SW 4
300610  Rotor position identification failed  Reset key

Scan  During the function “Rotor position identification”

Effect  FDD only:
– Controllers are disabled, motor is braked
– SIMODRIVE_READY and DRIVE_READY are cancelled.
– Reset error

Response via MD 1613.13 configurable as from SW 4

Explanation  Rotor position could not be determined from the measuring signals, because no significant saturation effects occurred.

Remedy  Increase current via MD 1019 or check whether motor is connected.

Note  Applies as from SW 6

300611  Illegal motion during rotor position identification  Reset key

Scan  During the function “Rotor position identification”

Effect  for MSD only:
• Controllers are disabled, motor is braked
• SIMODRIVE_READY and DRIVE READY are cancelled.
• Reset error

Explanation  During the measurement, the motor has rotated by a value greater than that entered in MD 1020. The torsion may have been caused by switching the motor onto a rotating motor or through the identification.

Remedy  If the torsion has been caused by the identification and if the error occurs repeatedly, reduce MD 1019 or increase MD 1020.

Note  Applies as from SW 6

300613  Motor temperature alarm  Reset key

Scan  Cyclic after control power up

Effect  for MSD:
• Pulse suppression, motor runs down
• SIMODRIVE READY and DRIVE READY are cancelled.
• Reset error

for FDD:
• Pulse suppression, motor runs down
• SIMODRIVE READY and DRIVE READY are cancelled
• Reset error

Response via MD 1613.13 configurable as from SW 4

Explanation  Beyond the motor temperature threshold MD 1607
• Motor overloaded
• Machine current too great, e.g. because of incorrect motor data
• Temperature sensor defective (motor)
• Motor fan defective
• Module defective
• Fault between turns motor

Remedy  Eliminate cause or operate at MSD fixed temperature

Note  Temperature monitoring not active with fixed temperature

Note  Applies as from SW 4
### 300614 Motor temperature cut-off limit

**Scan**
Cyclic after control power up

**Effect**
- for MSD:
  - Pulse suppression, motor runs down
  - SIMODRIVE_READY and DRIVE_READY are cancelled.
  - Reset error
- for FDD:
  - Controllers are disabled, motor is braked
  - SIMODRIVE_READY and DRIVE_READY are cancelled
  - Reset error

**Explanation**
Beyond motor temperature threshold MD 1602 and timer MD 1603 has expired
- Motor overloaded
- Machine current too great, e.g. because of incorrect motor data (P–96/P–238)
- Temperature sensor defective (motor)
- Motor fan defective
- Module defective
- Fault between turns motor

**Remedy**
Eliminate cause or operate at MSD fixed temperature
- Note: Temperature monitoring not active with fixed temperature

**Note**
Applies as from SW 3

### 300701 Start-up required

**Scan**
POWER ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
Drive does not have correct parameter set

**Remedy**
- Boot strap via motor selection or load TEA3 file
- Save BOOT drive
- Power up again

**Note**
Applies as from SW 3

### 300702 Drive basic clock pulse invalid

**Scan**
POWER ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
A drive basic clock pulse has been set at the NC that is too high for the drive

**Remedy**
Change the basic clock pulse at the NC

**Note**
Applies as from SW 3

### 300703 Current controller clock pulse invalid

**Scan**
POWER ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
A current controller clock pulse MD 1000 has been set that is not allowable for the drive.

**Remedy**
Change current controller clock pulse

**Note**
Applies as from SW 3

### 300704 Speed controller clock pulse invalid

**Scan**
POWER ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
Speed controller clock pulse MD 1001 is invalid.

**Remedy**
Change speed controller clock pulse

**Note**
Applies as from SW 3
### 300705 Position controller clock pulse invalid

**Scan**: POWER ON  
**Effect**: Drive only ramps up to ramp-up state 2  
**Explanation**: A position controller clock cycle has been set at the NC that is not allowed for the drive  
**Remedy**: Change position controller clock cycle at the NC  
**Note**: Applies as from SW 3

### 300706 Monitoring clock pulse invalid

**Scan**: POWER ON  
**Effect**: Drive only ramps up to ramp-up state 2  
**Explanation**: Monitoring clock pulse MD 1002 is invalid  
**Remedy**: Change monitoring clock cycle  
**Note**: Applies as from SW 3

### 300707 Drive basic clock pulse axially not equal

**Scan**: POWER ON  
**Effect**: Drive only ramps up to ramp-up state 2  
**Explanation**: On 2-axis modules, the drive basic clock cycle must be identical for both axes.  
**Remedy**: On 2-axis modules, the drive basic clock pulse must be set to be identical for both axes.  
**Note**: Applies as from SW 3

### 300708 Current controller clock cycle axially not equal

**Scan**: POWER ON  
**Effect**: Drive only ramps up to ramp-up state 2  
**Explanation**: On 2-axis modules, the current controller clock pulse MD 1000 must be identical for both axes.  
**Remedy**: Set the current controller clock cycle to be identical for both axes.  
**Note**: Applies as from SW 3

### 300709 Speed controller clock pulse axially not equal

**Scan**: POWER ON  
**Effect**: Drive only ramps up to ramp-up state 2  
**Explanation**: On 2-axis modules, the speed controller clock pulse MD 1001 must be identical for both axes.  
**Remedy**: Set speed controller clock pulse to be identical for both axes.  
**Note**: Applies as from SW 3

### 300710 Position controller clock pulse axially not equal

**Scan**: POWER ON  
**Effect**: Drive only ramps up to ramp-up state 2  
**Explanation**: On 2-axis modules, the position controller clock pulse must be identical for both axes.  
**Remedy**: Set the position controller clock pulse to be identical for both axes.  
**Note**: Applies as from SW 3
### 300711 Monitoring clock pulse axially not equal

<table>
<thead>
<tr>
<th>Scan</th>
<th>POWER ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Drive only ramps up to ramp-up state 2</td>
</tr>
<tr>
<td>Explanation</td>
<td>On 2-axis modules, the monitoring clock pulse MD 1002 must be identical for both axes.</td>
</tr>
<tr>
<td>Remedy</td>
<td>Set the monitoring clock pulse to be identical for both axes.</td>
</tr>
<tr>
<td>Note</td>
<td>Applies as from SW 3</td>
</tr>
</tbody>
</table>

### 300712 Dynamic response setting not possible (2 axes)

<table>
<thead>
<tr>
<th>Scan</th>
<th>POWER ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Drive only ramps up to ramp-up state 2</td>
</tr>
<tr>
<td>Explanation</td>
<td>For two active axes on a module, it is not possible to change the controller structure via MD 1004.</td>
</tr>
<tr>
<td>Remedy</td>
<td>With two active axes on a module, configuration structure MD 1004 must be set to i before n.</td>
</tr>
<tr>
<td>Note</td>
<td>Applies as from SW 3</td>
</tr>
</tbody>
</table>

### 300713 Shift of position controller clock pulse invalid

<table>
<thead>
<tr>
<th>Scan</th>
<th>POWER ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Drive only ramps up to ramp-up state 2</td>
</tr>
<tr>
<td>Explanation</td>
<td>The position controller clock pulse shift specified by the NC is greater than or equal to the position controller clock pulse.</td>
</tr>
<tr>
<td>Remedy</td>
<td>NC Hotline</td>
</tr>
<tr>
<td>Note</td>
<td>Applies as from SW 4</td>
</tr>
</tbody>
</table>

### 300714 Power section code wrong

<table>
<thead>
<tr>
<th>Scan</th>
<th>POWER ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Drive only ramps up to ramp-up state 2</td>
</tr>
</tbody>
</table>
| Explanation   | • The module order number entered in the NC for the drive is not permissible  
                             Additional information for MSD (drive SW 1 only):  
                             Illegal power section code  
                             The drive has already been booted with a module order number which does not correspond with the module order number currently set in the NC.  
                             Additional information for MSD (drive SW 1 only):  
                             Actual power section code in MSD and actual power section code in NC |
| Remedy        | Reselect module in the NC or cancel reboot procedure |
| Note          | Applies as from SW 3 |

### 300715 Maximum power section current <= 0

<table>
<thead>
<tr>
<th>Scan</th>
<th>POWER ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>Drive only ramps up to ramp-up state 2</td>
</tr>
<tr>
<td>Explanation</td>
<td>The maximum current of the power section MD 1107 has a value that is less than or equal to 0.</td>
</tr>
<tr>
<td>Remedy</td>
<td>Enter a valid value in machine data MD 1107 “Maximum current of power section”.</td>
</tr>
<tr>
<td>Note</td>
<td>Applies as from SW 3</td>
</tr>
</tbody>
</table>
300716  Torque constant invalid

Scan  POWER ON
Effect  Drive only ramps up to ramp-up state 2
Explanation  1. Torque constant MD 1113 has a value that is less than or equal to 0.
           2. The ratio of torque constant MD 1113/number of pole pairs MD 1112 is greater than 70.
Remedy  Enter a valid value in machine data MD 1113 "Torque constant".
Note  Applies as from SW 3

300717  Motor moment of inertia <= 0

Scan  POWER ON
Effect  Drive only ramps up to ramp-up state 2
Explanation  Motor moment of inertia MD 1117 has a value that is less than or equal to 0.
Remedy  Enter a valid value in machine data MD 1117 "Motor moment of inertia".
Note  Applies as from SW 3

300718  Calculation delay error, I controller

Scan  POWER ON
Effect  Drive only ramps up to ramp-up state 2
Explanation  Input error in calculation delay timer MD 1101
Remedy  Correct input error in calculation delay timer MD 1101.
Note  Applies for SW 3 only

300719  Error motor code number

Scan  POWER ON
Effect  Drive only ramps up to ramp-up state 2
Explanation  One of the motor code numbers is illegal (P–96 or P–238)
           Additional information
           Motor fault (1 or 2)
Remedy  • Change motor code number
           • Save BOOT drive
           • Repeat ramp-up
Note  Applies for SW 3 only

300719  Motor delta not parameterized

Scan  POWER ON
Effect  Drive only ramps up to ramp-up state 2
Explanation  During activation of the star-delta changeover by drive MD1013, the motor delta (motor2) is not parameterized.
Remedy  Check or enter machine data for motor delta (motor 2).
Note  Applies as from SW 4

300720  Maximum motor speed too high

Scan  POWER ON
Effect  Drive only ramps up to ramp-up state 2
Explanation  Maximum motor speed MD 1401 of speed controller clock pulse MD 1001 have too great a value.
Remedy  Reduce maximum motor speed MD 1401 or set a smaller speed controller clock pulse MD 1001.
Note  Applies for SW 3 only
### 300721 I0 motor > i-rated motor

**Scan**
Power ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
Motor no-load current (MD 1136) is greater than the rated current (MD 1103) of the motor.

**Remedy**
- Change motor data
- Save BOOT drive
- Repeat ramp-up

**Note**
Applies for SW 3 only

### 300722 I0 motor > I-rated power section

**Scan**
Power ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
Connected motor too large for power section being used (continuous current MD 1108) because of its no-load current (MD 1136).

**Remedy**
Change power section or motor

**Note**
Applies for SW 3 only

### 300723 STS configuration axially unequal

**Scan**
Power ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
On 2-axis modules, the configuration of the control set MD 1003 must be identical for both axes.

**Remedy**
Make the configuration of the control set identical for both axes.

**Note**
Applies as from SW 3

### 300724 Invalid pole pair number

**Scan**
Power ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
FDD: MD 1112 is not correct.
MSD: MD 1134 or MD 1400 is not correct.

**Remedy**
Eliminate error on inputting the above machine data.

**Note**
Applies as from SW 4

### 300725 Number of encoder marks = 0

**Scan**
Power ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
The number of encoder marks MD 1005 has the value 0.

**Remedy**
Eliminate error when entering the number of encoder marks MD 1005.

**Note**
Applies as from SW 3

### 300726 Voltage constant = 0

**Scan**
Power ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
The voltage constant MD 1114 has a value less than or equal to zero.

**Remedy**
Eliminate error on inputting the voltage constant MD 1114.

**Note**
Applies as from SW 4
<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
<th>Effect</th>
<th>Explanation</th>
<th>Remedy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>300727</td>
<td>Reactance &lt;= 0</td>
<td>POWER ON</td>
<td>The stator reactance MD 1139 or rotor reactance MD 1140 or magnetizing reactance MD 1141 is less than or equal to zero.</td>
<td>Eliminate error on inputting MD 1139, MD 1140 or MD 1141.</td>
<td></td>
</tr>
<tr>
<td>300728</td>
<td>Torque/current matching factor too large</td>
<td>POWER ON</td>
<td>The matching factor (set torque → cross current) in the speed controller is too large.</td>
<td>Eliminate error when inputting&lt;br&gt;- Rated motor current MD 1103, or&lt;br&gt;- Limit current transistor MD 1107, or&lt;br&gt;- Torque constant MD 1113.</td>
<td></td>
</tr>
<tr>
<td>300729</td>
<td>Motor zero-speed current &lt;= 0</td>
<td>POWER ON</td>
<td>Motor zero-speed current MD 1118 is less than or equal to zero.</td>
<td>Eliminate error on inputting the motor zero-speed current MD 1118</td>
<td></td>
</tr>
<tr>
<td>300730</td>
<td>Rotor resistance invalid</td>
<td>POWER ON</td>
<td>Rotor resistance is less than or equal to zero or format overflow has occurred.</td>
<td>The following machine data can have an incorrect value:&lt;br&gt;- Torque controller clock pulse MD 1001&lt;br&gt;- Rated motor frequency MD 1134&lt;br&gt;- Rotor resistance cold MD 1138&lt;br&gt;- Stator stray reactance MD 1139&lt;br&gt;- Rotor stray reactance MD 1140</td>
<td></td>
</tr>
<tr>
<td>300731</td>
<td>Rated power &lt;= 0</td>
<td>POWER ON</td>
<td>Rated power MD 1130 is less than or equal to zero.</td>
<td>Eliminate error on inputting the rated power MD 1130.</td>
<td></td>
</tr>
<tr>
<td>300732</td>
<td>Rated motor speed &lt;= 0</td>
<td>POWER ON</td>
<td>Rated motor speed MD 1140 is less than or equal to zero.</td>
<td>Eliminate error on inputting the rated motor speed MD 1140.</td>
<td></td>
</tr>
</tbody>
</table>
### 300733 Motor no-load voltage invalid

**Scan**
POWER ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
The motor no-load voltage $MD_{1135}$ is less than or equal to zero or greater than rated motor voltage $MD_{1132}$ or greater than $450 \times MD_{1400}/MD_{1142}$.

With $MD_{1400}$: Rated motor speed
$MD_{1142}$: Speed at start of field weakening

**Remedy**
Eliminate error on inputting
- Rated motor voltage $MD_{1132}$
- Rotor zero-speed voltage $MD_{1135}$
- Rated motor speed $MD_{1400}$
- Threshold speed field weakening $MD_{1142}$
- Motor no-load current $MD_{1136}$

**Note**
Applies as from SW 4

### 300734 Motor no-load current <= 0

**Scan**
POWER ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
Motor no-load current $MD_{1136}$ is less than or equal to zero.

**Remedy**
Eliminate error on inputting the motor no-load current $MD_{1136}$.

**Note**
Applies as from SW 4

### 300735 Field weakening speed <= 0

**Scan**
POWER ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
Field weakening speed $MD_{1142}$ is less than or equal to zero.

**Remedy**
Eliminate error on inputting the field weakening speed $MD_{1142}$.

**Note**
Applies as from SW 4

### 300736 Lh characteristic invalid

**Scan**
POWER ON

**Effect**
Drive only ramps up to ramp-up state 2

**Explanation**
Upper speed on the Lh characteristic $MD_{1143}$ is less than or equal to field weakening speed $MD_{1142}$ or gain of Lh characteristic $MD_{1144}$ is less than 100.

**Remedy**
Eliminate error on inputting
- Upper speed of the Lh characteristic $MD_{1143}$
- Gain of the Lh characteristic $MD_{1144}$
- Field weakening speed $MD_{1142}$

**Note**
Applies as from SW 4

### 300740 Parameterization error

**Scan**
POWER ON and cyclic

**Effect**
Drive only ramps up to ramp-up state 2 or pulse suppression and motor runs down

**Explanation**
Division error has occurred because of illegal parameter combination
Additional information: none

**Remedy**
- Check parameters and correct
- Save BOOT
- Repeat ramp-up

**Note**
Applies as from SW 3
300741  Upper limit violated MD
Scan  POWER ON
Effect  Drive only ramps up to ramp-up state 2
Explanation  During ramp-up control detects that machine data has violated input limits. This occurs with parameters with motor-dependent limits if the motor maximum speed is reduced and maintained after booting. Another cause might be the switching off of the input limits (P–90, bit 0). Alter parameter and switch on input limits again.
Addition information:
Number of incorrect machine data
Remedy  • Correct parameter
• Check all parameters with motor-dependent limits
• Save BOOT drive
• Repeat ramp-up
Note  Applies as from SW 3

300742  Lower limit violated MD
Scan  POWER ON
Effect  Drive only ramps up to ramp-up state 2
Explanation  During ramp-up control detects that machine data has violated input limits. This occurs with parameters with motor-dependent limits if the motor maximum speed is reduced and maintained after booting. Another cause might be the switching off of the input limits (P–90, bit 0). Alter parameter and switch on input limits again.
Additional information:
Number of incorrect machine data
Remedy  • Correct parameter
• Check all parameters with motor-dependent limits
• Save BOOT drive
• Repeat ramp-up
Note  Applies for SW 3 only

300742  Converter frequency U/f
Scan  Power On
Effect  Drive only ramps up to ramp-up state 2
Explanation  In V/f mode (selection via MD 1014), only converter frequencies (MD 1100) of 4 kHz and 8 kHz are permissible.
Remedy  Eliminate error during input of converter frequency MD 1100 or by deselecting V/f mode MD 1014.
Note  Applies as from SW 5.1

300743  Error on saving FEPROM
Scan  POWER ON
Effect  Drive only ramps up to ramp-up state 2
Explanation  Error occurred when last saved; data from last save operation are used.
Remedy  • Check parameters and save BOOT again
Note  Applies for SW 3 only
1 Alarms

1.5.1 Alarm description

300743  Function not with this 611D control module
  Effect  The power–up procedure is interrupted, the pulses remain disabled.
  Explanation The 611D performance control module is required for SINUMERIK Safety Integrated (see SINUMERIK Safety Integrated documentation). This alarm is output if the hardware is not installed. This alarm also occurs if 1PH2/4/6 motors are connected and no 611D performance control module is installed.
  Remedy  Replace the 611D control module.
  Note  Applies as from SW 5.4.

300744  Checksum error safe monitorings
  Effect  The power–up procedure is interrupted, the pulses remain disabled.
  Explanation The actual checksum calculated by the drive and stored in MD 1398 via the safety–related MDs has a different value to the reference checksum stored in MD 1399 on the last machine acceptance. The safety–related data have been modified or an error has occurred.
  Remedy  Check all safety–related MDs and make any necessary corrections. Then execute a POWER ON. Carry out an acceptance test.
  Note  Applies as from SW 5.4.

300745  Limit values for safe end position interchanged
  Effect  The power–up procedure is interrupted, the pulses remain disabled.
  Explanation The data for the upper limit for SE monitoring contains a value less than that stored in the data for the lower limit.
  Remedy  Check machine data
MD 1334 upper limit value for safe end position and
MD 1335 lower limit value for safe end position,
and change them such that the upper limit is greater than the lower limit. Then execute a POWER ON.
  Note  Applies as from SW 5.4.

300746  No SBH/SG enable
  Effect  The power–up procedure is interrupted, the pulses remain disabled.
  Explanation The SBH/SG function is not enabled in MD 1301, although the SE/SN function is selected in this MD.
  Remedy  Enable the SBH/SG function in MD 1301.
  Note  Applies as from SW 5.4.

300747  Monitoring cycle MD 1300 invalid
  Effect  The power–up procedure is interrupted, the pulses remain disabled.
  Explanation MD 1300 was not set to a multiple of the NC position control cycle.
  Remedy  Set the monitoring cycle in MD 1300 to n * NC position control cycle, where n must be 1.
  Note  Applies as from SW 5.4.
### 300748 Monitoring cycle of both axes not identical

**Scan**
When powering up the control.

**Effect**
The power–up procedure is interrupted, the pulses remain disabled.

**Explanation**
The monitoring cycle in MD 1300 was not set to an identical value for both axes of a two–axis module.

**Remedy**
Set MD 1300 to the same value on all drives of the module.

**Note**
Applies as from SW 5.4.

### 300749 Conversion factor between motor and load too

**Scan**
When powering up the control.

**Effect**
The power–up procedure is interrupted, the pulses remain disabled.

**Explanation**
The conversion factor from the motor system [increments] to the load system [µm/m degrees] is greater than 1, or the factor that converts the load system to the motor system is greater than 65535.

**Conditions**
The condition for the load to motor system factor is: \( \mu m\_to\_incr \leq 65535 \)
The condition for the motor to load system factor is: \( incr\_to\_\mu m \leq 1 \)

\[
\frac{\mu m\_to\_incr}{inr\_to\_\mu m} = 1
\]

**Equation for rotary axis**
With a rotary motor encoder and a rotary axis:

\[
inr\_to\_\mu m(n) = \frac{MD1321}{MD1322} \times incr\_to\_\mu m\_rot\_rot
\]
where \( n = 0 \ldots 7 \) (gear stage) and

\[
inr\_to\_\mu m\_rot\_rot = \frac{360000}{8192} \times 1
\]

**Equation for linear axis**
With a rotary motor encoder and a linear axis:

\[
inr\_to\_\mu m(n) = \frac{MD1321}{MD1322} \times incr\_to\_\mu m\_rot\_lin
\]
where \( n = 0 \ldots 7 \) (gear stage) and

\[
inr\_to\_\mu m\_rot\_lin = \frac{1000}{8192} \times 1 \times MD1318
\]

**Remedy**
Check the following safety–related MDs, depending on the motor encoder type and axis type, and correct if necessary.
- MD 1317 Grid spacing linear scale (for a linear encoder)
- MD 1318 Encoder marks per revolution (for a rotary encoder)
- MD 1318 MD 1320 (for a rotary encoder and linear axis)
- MD 1321 MD 1322 (for the use of a gearbox)

The motor type and axis type are defined in MD 1302.

**Note**
Applies as from SW 5.4
300750  **Speed controller adapt.: n–max < n–min**  Reset key

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Note</th>
</tr>
</thead>
</table>
| Cyclic after control power up | for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |
| for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |
| Cyclic after control power up for MSD: |
- Pulse suppression, motor runs down
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |
| for FDD: |
- Controllers are disabled, motor is braked
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |

**Explanation**
The upper adaptation speed MD 1412 is less than the lower adaptation speed MD 1411.

**Remedy**
Enter a larger value for upper adaptation speed MD 1412 than for lower adaptation speed MD 1411.

**Note**
Applies as from SW 3

300850  **Cyclic after control power up**  Reset key

<table>
<thead>
<tr>
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<th>Note</th>
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</thead>
</table>
| Cyclic after control power up | for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |
| for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |
| Cyclic after control power up for MSD: |
- Pulse suppression, motor runs down
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |
| for FDD: |
- Controllers are disabled, motor is braked
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |

**Explanation**
The upper adaptation speed MD 1412 is less than the lower adaptation speed MD 1411.

**Remedy**
Enter a larger value for upper adaptation speed MD 1412 than for lower adaptation speed MD 1411.

**Note**
Applies as from SW 3

300751  **Speed controller amplification too high**  Reset key

<table>
<thead>
<tr>
<th>Scan</th>
<th>Effect</th>
<th>Note</th>
</tr>
</thead>
</table>
| Cyclic after control power up | for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |
| for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |
| Cyclic after control power up for MSD: |
- Pulse suppression, motor runs down
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |
| for FDD: |
- Controllers are disabled, motor is braked
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |

**Explanation**
The P gain of the speed controller MD 1407 or MD 1408 is too large.

**Remedy**
Enter lower value for P gain MD 1407 or MD 1408 for speed controller; or the motor zero-speed current MD 1118 must be greater than zero.

**Note**
Applies as from SW 3

300752  **Blocking freq. l-set filter wrong**  Reset key

<table>
<thead>
<tr>
<th>Scan</th>
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<th>Note</th>
</tr>
</thead>
</table>
| Cyclic after control power up | for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |
| for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |
| Cyclic after control power up for MSD: |
- Pulse suppression, motor runs down
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |
| for FDD: |
- Controllers are disabled, motor is braked
- SIMODRIVE\_READY and DRIVE\_READY are cancelled.
- Reset error |

**Explanation**
Sampling theorem violated.

**Remedy**
The blocking frequency MD 1210, MD 1213, MD 1216, MD 1219 for each current filter must be greater than the reciprocal value of two current controller clock pulses MD 1000.

**Note**
Applies as from SW 3
300753  Timer n-controller at stop wrong  
Scan  Cyclic after control power up  
Effect  
- Controllers disabled, motor braked  
- SIMODRIVE_READY and DRIVE_READY are cancelled.  
- Reset error  
Explanation  –  
Remedy  Speed controller timer at stop MD 1605 must always be larger or the same as the pulse suppression cutoff speed MD 1403.  
Note  Applies as from SW 3

300754  Signal number invalid  
300854  
Scan  Cyclic after control power up  
Effect  
for MSD:  
- Pulse suppression, motor runs down  
- SIMODRIVE_READY and DRIVE_READY are cancelled.  
- Reset error  
for FDD:  
- Controllers are disabled, motor is braked  
- SIMODRIVE_READY and DRIVE READY are cancelled.  
- Reset error  
Explanation  Signal number invalid in the variables signalling function and min-max memory.  
Remedy  Enter correct signal number.  
Note  Applies as from SW 4

300755  V/f operation: motor running  
300855  
Scan  Cyclic after control power up  
Effect  
for MSD:  
- Pulse suppression, motor runs down  
- SIMODRIVE_READY and DRIVE READY are cancelled.  
- Reset error  
for FDD:  
- Controllers are disabled, motor is braked  
- SIMODRIVE READY and DRIVE READY are cancelled.  
- Reset error  
Explanation  V/f operation: at initialization, the motor turns.  
Remedy  Stop the motor.  
Note  Applies as from SW 4
### 300756 Hysteresis of torque setpoint smoothing too large

**Scan**  
Cyclic after control power up

**Effect**  
for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE READY and DRIVE READY are cancelled.
- Reset error
for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE READY and DRIVE READY are cancelled.
- Reset error

**Explanation**  
Hysteresis of the torque setpoint smoothing MD 1246 is greater than or equal to the threshold of the torque setpoint smoothing MD 1245.

**Remedy**  
Eliminate error on inputting MD 1246 and MD 1245.

**Note**  
Applies as from SW 4

---

### 300757 Torque matching factor too great

**Scan**  
Cyclic after control power up

**Effect**  
for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE READY and DRIVE READY are cancelled.
- Reset error
for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE READY and DRIVE READY are cancelled.
- Reset error

**Explanation**  
The torque matching factor MD 1191 is beyond the format limit.

**Remedy**  
Eliminate error on inputting MD 1191.

**Note**  
Applies as from SW 4

---

### 300758 Upper generator threshold too high

**Scan**  
Cyclic after control power up

**Effect**  
for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE READY and DRIVE READY are cancelled.
- Reset error
for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE READY and DRIVE READY are cancelled.
- Reset error

**Explanation**  
Upper threshold of the two-point controller is too high in the generator mode i.e. the sum of the values in MD1631 + MD1632 exceeds that in MD1633.

**Remedy**  
Eliminate error on inputting MD 1631, MD 1632 and MD 1633.

**Note**  
Applies as from SW 4
300759 Generator cut-off threshold too high
300859
Scan Cyclic after control power up
Effect for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE_READY and DRIVE_READY are cancelled.
- Reset error
for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE_READY and DRIVE_READY are cancelled.
- Reset error
Response via MD 1613.0 can be configured as from drive SW 2.
Alarm output can be activated via MD 1012.4 as from V. 5.2 (611D: SW 3).
- MD 1012.4 = 0: 300759
- MD 1012.4 = 1: 300859

Explanation Generator cut-off voltage MD 1633 is greater than or equal to the response threshold for the d.c. link monitoring MD 1630.
Remedy Eliminate error on inputting MD 1633 or MD 1630.
Note Applies as from SW 4

300760 Excessive emergency retraction speed
300860
Scan Cyclic after control power up
Effect for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE_READY and DRIVE_READY are cancelled.
- Reset error
for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE_READY and DRIVE_READY are cancelled.
- Reset error
Response via MD 1613.0 can be configured as from drive SW 2.
Alarm output can be activated via MD 1012.4 as from V. 5.2 (611D: SW 3).
- MD 1012.4 = 0: 300760
- MD 1012.4 = 1: 300860

Explanation Emergency retraction speed MD 1639 is greater than or equal to the maximum speed MD 1146.
Remedy Eliminate error on inputting MD 1639 or MD 1146.
Note Applies as from SW 4

300761 Min. generator speed too high
300861
Scan Cyclic after control power up
Effect for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE_READY and DRIVE_READY are cancelled.
- Reset error
for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE_READY and DRIVE_READY are cancelled.
- Reset error
Response via MD 1613.0 can be configured as from drive SW 2.
Alarm output can be activated via MD 1012.4 as from V. 5.2 (611D: SW 3).
- MD 1012.4 = 0: 300761
- MD 1012.4 = 1: 300861

Explanation Minimum speed generator axis MD 1635 is greater than or equal to the maximum speed MD 1146.
Remedy Eliminate error on inputting MD 1635 or MD 1146.
Note Applies as from SW 4
### 300762 Emergency retract/generator active

**Scan**
- Cyclic after control power up

**Effect**
- **for MSD:**
  - Pulse suppression, motor runs down
  - SIMODRIVE READY and DRIVE READY are cancelled.
  - Reset error
- **for FDD:**
  - Controllers are disabled, motor is braked
  - SIMODRIVE READY and DRIVE READY are cancelled.
  - Reset error

**Explanation**
- Alarm output can be activated via MD 1012.4 as from V. 5.2 (611D: SW 3).
  - MD 1012.4 = 0: 300762
  - MD 1012.4 = 1: 300862

**Remedy**
- Emergency retraction or generator is already active.

**Note**
- Check parameterization/machine data.

**Response via MD 1613.0 can be configured as from drive SW 2.
Alarm output can be activated via MD 1012.4 as from V. 5.2 (611D: SW 3).**
- MD 1012.4 = 0: 300762
- MD 1012.4 = 1: 300862

**MD 1012.4 = 0: 300762**
**MD 1012.4 = 1: 300862**

### 300763 Generator/emergency retraction mode invalid

**Scan**
- Cyclic

**Effect**
- **for MSD:**
  - Pulse suppression, motor runs down
  - SIMODRIVE READY and DRIVE READY are cancelled.
  - Reset error
- **for FDD:**
  - Controllers are disabled, motor is braked
  - SIMODRIVE READY and DRIVE READY are cancelled.
  - Reset error

**Explanation**
- Value given by the NC via a G command must be in the range 0 ... 7.

**Remedy**
- Check parameterization (G command in the NC).

**Note**
- Applies as from SW 4

### 300764 No emergency retraction/generator mode possible

**Scan**
- Cyclic

**Effect**
- **for MSD:**
  - Pulse suppression, motor runs down
  - SIMODRIVE READY and DRIVE READY are cancelled.
  - Reset error
- **for FDD:**
  - Controllers are disabled, motor is braked
  - SIMODRIVE READY and DRIVE READY are cancelled.
  - Reset error

**Explanation**
- Emergency retraction/generator mode is possible only with active d.c. link measurement (MD 1161 = 0) in an old hardware version, no d.c. link measurement is possible and therefore the error message 300765 might also be issued if in an old hardware version MD 1161 is set to zero.

**Remedy**
- Enter the value zero into machine data MD 1161 or order new hardware version (hardware components: drive control with Order No. 6SN1 118–0Dx1x–0AA0).

**Note**
- Applies as from SW 4
300765  No link measurement possible

**Scan**  Cyclic

**Effect**  for MSD:
- Pulse suppression, motor runs down
- SIMODRIVE READY and DRIVE READY are cancelled.
- Reset error

for FDD:
- Controllers are disabled, motor is braked
- SIMODRIVE READY and DRIVE READY are cancelled.
- Reset error

**Explanation**  If the fixed voltage MD 1161 is equal to zero, no d.c. link measurement is possible because of the incorrect hardware version.

**Remedy**  In the machine data fixed voltage MD 1161, enter a value greater than zero or order new hardware version (hardware components: drive control with the Order No. 6SN1 118–0Dx1x–0AA0).

**Note**  Applies as from SW 4

300865

300766  Blocking frequency greater than Shannon frequency

**Scan**  Cyclic after control power up

**Effect**  With MSD:
- Pulse reset, motor coasts down
- SIMODRIVE READY and DRIVE READY are reset.
- Reset error

With FDD:
- Controllers disabled, motor braked
- SIMODRIVE READY and DRIVE READY are reset.
- Reset error

**Explanation**  The band-stop frequency of a speed setpoint filter is greater than the Shannon sampling frequency from the sampling theorem.

**Remedy**  The band-stop frequency of a speed setpoint filter must be smaller than the reciprocal value of two speed controller pulserates.

- Speed setpoint filter 1: MD 1210 < 1 / (2 × MD 1000 × 31.25 microsec)
- Speed setpoint filter 2: MD 1213 < 1 / (2 × MD 1000 × 31.25 microsec)
- Speed setpoint filter 3: MD 1216 < 1 / (2 × MD 1000 × 31.25 microsec)
- Speed setpoint filter 4: MD 1219 < 1 / (2 × MD 1000 × 31.25 microsec)

The band-stop frequency of a current setpoint filter must be smaller than the reciprocal value of two current controller pulserates.

- Current setpoint filter 1: MD 1214 < 1 / (2 × MD 1000 × 31.25 microsec)
- Current setpoint filter 2: MD 1217 < 1 / (2 × MD 1000 × 31.25 microsec)

**Note**  Alarm in SW 5 and higher
### 300767 Natural frequency greater than Shannon frequency

**Scan**  
Cyclic after control power up

**Effect**  
With MSD:
- Pulse reset, motor coasts down
- SIMODRIVE READY and DRIVE READY are reset.
- Reset error

With FDD:
- Controllers disabled, motor braked
- SIMODRIVE READY and DRIVE READY are reset.
- Reset error

Response via MD 1613.0 can be configured as from drive SW 2.

**Explanation**  
The natural frequency of a speed setpoint filter is greater than the Shannon sampling frequency from the sampling theorem.

**Remedy**  
The natural frequency of a speed setpoint filter must be lower than the reciprocal value of two speed controller pulserates.

- Speed setpoint filter 1:
  - MD 1520 < 1 / (2•MD 1001•31.25 microsec)
- Speed setpoint filter 2:
  - MD 1514 < 1 / (2•MD 1001•31.25 microsec)

**Note**  
Alarm in SW 5 and higher

### 300768 Counter bandwidth greater than double blocking frequency

**Scan**  
Cyclic after control power up

**Effect**  
With MSD:
- Pulse reset, motor coasts down
- SIMODRIVE READY and DRIVE READY are reset.
- Reset error

With FDD:
- Controllers disabled, motor braked
- SIMODRIVE READY and DRIVE READY are reset.
- Reset error

Response via MD 1613.0 can be configured as from drive SW 2.

**Explanation**  
The counter bandwidth of a current or speed setpoint filter is greater than twice the blocking frequency.

This error message is generated for the general band blocking only if:

- Speed setpoint filter 1:
  - MD 1516 > 0.0 or
  - MD 1520 = 100.0

- Speed setpoint filter 2:
  - MD 1519 > 0.0 or
  - MD 1521 = 100.0

- Current setpoint filter 1:
  - MD 1212 > 0.0

- Current setpoint filter 2:
  - MD 1215 > 0.0

- Current setpoint filter 3:
  - MD 1218 > 0.0

- Current setpoint filter 4:
  - MD 1221 > 0.0

**Remedy**  
The counter bandwidth must be smaller than double the blocking frequency.

- Current setpoint filter 1:
  - MD 1212 ≤ 2•MD 1210

- Current setpoint filter 2:
  - MD 1215 ≤ 2•MD 1213

- Current setpoint filter 3:
  - MD 1218 ≤ 2•MD 1216

- Current setpoint filter 4:
  - MD 1221 ≤ 2•MD 1219

- Speed setpoint filter 1:
  - MD 1516 ≤ 2•MD 1514

- Speed setpoint filter 2:
  - MD 1519 ≤ 2•MD 1517

**Note**  
Alarm in SW 5 and higher
### 300769  Denominator bandwidth greater than double natural frequency

**Scan**  Cyclic after control power up  

**Effect**  
- With MSD:
  - Pulse reset, motor coasts down  
  - SIMODRIVEREADY and DRIVEREADY are reset.  
  - Reset error  
- With FDD:
  - Controllers disabled, motor braked  
  - SIMODRIVEREADY and DRIVEREADY are reset.  
  - Reset error  

Response via MD 1613.0 can be configured as from drive SW 2.  

**Explanation**  The denominator bandwidth of a current or speed setpoint filter is greater than twice the natural frequency.  

This error message is generated for the general band blocking only if:  
- Speed setpoint filter 1:  
  - MD 1516 > 0.0 or  
  - MD 1520 \(\neq\) 100.0  
- Speed setpoint filter 2:  
  - MD 1519 > 0.0 or  
  - MD 1521 \(\neq\) 100.0  
- Current setpoint filter 1:  
  - MD 1212 > 0.0  
- Current setpoint filter 2:  
  - MD 1215 > 0.0  
- Current setpoint filter 3:  
  - MD 1218 > 0.0  
- Current setpoint filter 4:  
  - MD 1221 > 0.0

**Remedy**  The denominator bandwidth of a current or speed setpoint filter must be greater than double the natural frequency.  

- Speed setpoint filter 1:  
  - MD 1515 \(\leq\) 2\(\times\)MD 1514\(\times\)0.01\(\times\)MD 1520  
- Speed setpoint filter 2:  
  - MD 1518 \(\leq\) 2\(\times\)MD 1517\(\times\)0.01\(\times\)MD 1521  
- Current setpoint filter 1:  
  - MD 1211 \(\leq\) 2\(\times\)MD 1210  
- Current setpoint filter 2:  
  - MD 1214 \(\leq\) 2\(\times\)MD 1213  
- Current setpoint filter 3:  
  - MD 1217 \(\leq\) 2\(\times\)MD 1216  
- Current setpoint filter 4:  
  - MD 1220 \(\leq\) 2\(\times\)MD 1219

**Note**  Alarm in SW 5 and higher

### 300770  Filter factor cannot be represented

**Scan**  Cyclic after control power up  

**Effect**  
- With MSD:
  - Pulse reset, motor coasts down  
  - SIMODRIVEREADY and DRIVEREADY are reset.  
  - Reset error  
- With FDD:
  - Controllers disabled, motor braked  
  - SIMODRIVEREADY and DRIVEREADY are reset.  
  - Reset error  

Response via MD 1613.0 can be configured as from drive SW 2.  

**Explanation**  The calculated filter coefficients for a band-stop filter cannot be represented in the internal format.  

**Remedy**  Alter filter setting  

**Note**  Alarm in SW 5 and higher
**300775**  
**Fixed voltage axially unequal**  
**Reset key**

**Scan**  
Cyclic

**Effect**  
- Error 300775:
  - for MSD: Pulse deletion, motor idles to a stop SIMODRIVE READY and DRIVE READY are canceled.
  - for FDD: Controllers are disabled, motor brakes SIMODRIVE READY and DRIVE READY are canceled.
    - Response configurable via MD 1613.0 as from drive SW 2.
- Error 300875: No impact on current operation. The old state is retained as long as the fixed axial voltages on the module axes are different.
  - Alarm output can be activated via MD 1012.4 as from SW 5.2 (611D: SW 3).
  - MD 1012.4 = 0: 300775
  - MD 1012.4 = 1: 300875

**Explanation**  
The fixed voltage for the intermediate circuit entered in each MD 1161 is different for the axes of a two-axis module. When a fixed voltage not equal to 0 is entered in MD 1161, it replaces the measured voltage of the intermediate circuit. The fixed voltages in MD 1161 for the axes on a module must be equal before they can be used.

- MD 1161 for both axes = 0
- Measured voltage of the intermediate circuit is used in internal calculations.
- MD 1161 for both axes = 580 V
  - The entered fixed voltage is used in internal calculations.

**Remedy**  
Set the same fixed voltage or enter “0” on all module axes in order to use the measured intermediate circuit voltage for internal calculations.

**Note**  
Applies as from SW 5

**300776**  
**Meas. circ. monitor. motor (inc.) inact.**  
**Reset key**

**Scan**  
Power-up and cyclic

**Effect**  
for MSD:
- Pulse deletion, motor idles to a stop SIMODRIVE READY and DRIVE READY are canceled.
- Reset error

for FDD:
- Controllers are disabled, motor brakes SIMODRIVE READY And DRIVE READY are canceled
- Reset error
  - Response configurable via MD 1613.0 as from drive SW 2.

**Explanation**  
When SINUMERIK Safety Integrated function MD 1301 is active, the measuring circuit monitoring motor (inc.) MD 1600.4 must be active.

**Remedy**  
Activate the measuring circuit monitoring motor (inc.) by setting MD 1600.4 = 0.

**Note**  
Applies as from SW 5.4

**300777**  
**Current for rotor position identification**  
**Reset key**

**Scan**  
Power-up and cyclic

**Effect**  
FDD only:
- Controllers are disabled, motor brakes SIMODRIVE READY and DRIVE READY are canceled.
  - Response configurable via MD 1613.0 as from drive SW 4.

**Explanation**  
A current higher than that permissible for the motor and for the power section used has been parameterized in MD 1019.

**Remedy**  
Reduce current via MD 1019.

**Note**  
Applies as from SW 6
300778 Illegal converter frequency rotor position identification

Scan Power-up and cyclic

Effect FDD only:
– Controllers are disabled, motor brakes
– SIMODRIVE\_READY and DRIVE\_READY are canceled.

Explanation When selecting the rotor position identification (MD 1018), only converter frequencies (MD 1100) of 4 kHz or 8 kHz are permissible.

Remedy Change converter frequency or deselect rotor position identification.

Note Applies as from SW 6

300779 Motor moment of inertia $\leq 0$

Scan Power-up and cyclic

Effect for MSD:
– Pulse suppression, motor coasts down
– SIMODRIVE\_READY and DRIVE\_READY are canceled
for FDD:
– Controllers are disabled, motor brakes
– SIMODRIVE\_READY and DRIVE\_READY are canceled.

Explanation Motor moment of inertia MD 1117 has a value that is smaller or equal to zero.

Remedy Enter a correct value in machine data MD 1117 "Motor moment of inertia".

Note Applies as from SW 6

300780 IO motor > I-rated motor

Scan Power-up and cyclic

Effect MSD only:
– Pulse suppression, motor coasts down
– SIMODRIVE\_READY and DRIVE\_READY are canceled.

Explanation The no-load current of the motor (MD 1136) is greater than the rated current (MD 1103) of the motor.

Remedy
– Change motor data
– Save Boot drive
– Power up again

Note Applies as from SW 6

300781 IO motor > I-rated power section

Scan Power-up and cyclic

Effect MSD only:
– Pulse suppression, motor coasts down
– SIMODRIVE\_READY and DRIVE\_READY are canceled.

Explanation Because of its no-load current (MD 1136), the motor connected is too large for the power section used (continuous current MD 1108).

Remedy Replace power section or motor

Note Applies as from SW 6

300782 Reactance $\leq 0$

Scan Power-up and cyclic

Effect FDD only:
– Controllers are disabled, motor brakes
– SIMODRIVE\_READY and DRIVE\_READY are canceled.

Explanation The stator reactance MD 1139 or rotor reactance MD 1140 or main field reactance MD 1141 is smaller than or equal to zero.

Remedy Correct error when entering MD 1139, MD 1140 or MD 1141.

Note Applies as from SW 6
300783  **Rotor resistance invalid**  
Reset key

**Scan**  
Power–up and cyclic

**Effect**  
MSD only:
- Pulse suppression, motor coasts down
- SIMODRIVE READY and DRIVE READY are canceled.

**Explanation**  
The rotor resistance is less than or equal to zero or a format overflow has occurred.

**Remedy**  
The following machine data may have an incorrect value:
- Speed controller cycle MD 1001
- Motor rated frequency MD 1134
- Rotor resistance cold MD 1138
- Stator leakage reactance MD 1139
- Rotor leakage reactance MD 1140.

**Note**  
Applies as from SW 6

300784  **Motor no-load voltage invalid**  
Reset key

**Scan**  
Power–up and cyclic

**Effect**  
MSD only:
- Pulse suppression, motor coasts down
- SIMODRIVE READY and DRIVE READY are canceled.

**Explanation**  
Error in no–load voltage (MD 1135):
- MD 1135 ≤ 0 or
- MD 1135 > MD 1132 or
- MD 1135 x MD 1142 / MD 1400 + Vpre>450 V

With Vpre=0.181 x MD 1136 x MD 1142 x MD 1119

MD 1132: Rated motor voltage
MD 1400: Rated motor speed
MD 1142: Threshold speed field weakening
MD 1136: No–load motor current
MD 1119: Inductance series reactor

**Remedy**  
Correct error when entering
- Rated motor voltage MD 1132 or
- No–load motor voltage MD 1135 or
- Rated motor speed MD 1400 or
- Rotor resistance cold MD 1138
- Threshold speed field weakening MD 1142 or
- No–load motor current MD 1136.

**Note**  
Applies as from SW 6

300785  **Motor no-load current ≤ 0**  
Reset key

**Scan**  
Power–up and cyclic

**Effect**  
MSD only:
- Pulse suppression, motor coasts down
- SIMODRIVE READY and DRIVE READY are canceled.

**Explanation**  
Motor no–load current MD 1136 is smaller than or equal to zero.

**Remedy**  
Correct the error when entering the motor no–load current MD 1136.

**Note**  
Applies as from SW 6

300786  **Field weakening speed ≤ 0**  
Reset key

**Scan**  
Power–up and cyclic

**Effect**  
MSD only:
- Pulse suppression, motor coasts down
- SIMODRIVE READY and DRIVE READY are canceled.

**Explanation**  
Field weakening speed MD 1142 is smaller than or equal to zero.

**Remedy**  
Correct the error when entering the field weakening speed MD 1142.

**Note**  
Applies as from SW 6
<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300799</td>
<td><strong>Save and boot required</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Power On</strong></td>
</tr>
<tr>
<td></td>
<td>Cyclic after control power up</td>
</tr>
<tr>
<td></td>
<td><strong>Effect</strong></td>
</tr>
<tr>
<td></td>
<td>for MSD:</td>
</tr>
<tr>
<td></td>
<td>• Pulse suppression, motor runs down</td>
</tr>
<tr>
<td></td>
<td>• SIMODRIVE READY and DRIVE READY are cancelled.</td>
</tr>
<tr>
<td></td>
<td>• Reset error</td>
</tr>
<tr>
<td></td>
<td>for FDD:</td>
</tr>
<tr>
<td></td>
<td>• Controllers are disabled, motor is braked</td>
</tr>
<tr>
<td></td>
<td>• SIMODRIVE READY and DRIVE READY are cancelled.</td>
</tr>
<tr>
<td></td>
<td>• Reset error</td>
</tr>
<tr>
<td>Effect</td>
<td>Response via MD 1613.0 can be configured as from drive SW 2.</td>
</tr>
<tr>
<td>Explanation</td>
<td>After automatic calculation of the controller parameters, it is necessary to save the machine data and to perform a power up.</td>
</tr>
<tr>
<td>Remedy</td>
<td>Perform above measures.</td>
</tr>
<tr>
<td>Note</td>
<td>Applies as from SW 4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300850</td>
<td><strong>Speed controller adaptation: n–max &lt; n–min</strong></td>
</tr>
<tr>
<td>Note</td>
<td>Alarm description see 300750</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300854</td>
<td><strong>Signal number invalid</strong></td>
</tr>
<tr>
<td>Note</td>
<td>Alarm description see 300754</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300855</td>
<td><strong>u/f operation: motor running</strong></td>
</tr>
<tr>
<td>Note</td>
<td>Alarm description see 300755</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300858</td>
<td><strong>Upper generator threshold too high</strong></td>
</tr>
<tr>
<td>Note</td>
<td>Alarm description see 300758</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300859</td>
<td><strong>Generator cut–off threshold too high</strong></td>
</tr>
<tr>
<td>Note</td>
<td>Alarm description see 300759</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300860</td>
<td><strong>Excessive emergency retraction speed</strong></td>
</tr>
<tr>
<td>Note</td>
<td>Alarm description see 300760</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300861</td>
<td><strong>Minimum generator speed too high</strong></td>
</tr>
<tr>
<td>Note</td>
<td>Alarm description see 300761</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300862</td>
<td><strong>Emergency retraction/generator active</strong></td>
</tr>
<tr>
<td>Note</td>
<td>Alarm description see 300762</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300863</td>
<td><strong>Generator/emergency retraction mode invalid</strong></td>
</tr>
<tr>
<td>Note</td>
<td>Alarm description see 300763</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alarm Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300864</td>
<td><strong>No emergency retraction/generator mode possible</strong></td>
</tr>
<tr>
<td>Note</td>
<td>Alarm description see 300764</td>
</tr>
</tbody>
</table>
1  Alarms
1.5.1  Alarm description

**300865  No link measurement possible**  
*Note*  
Alarm description see 300765

**300875  Fixed voltage axially unequal**  
*Note*  
Alarm description see 300775

**300899  Save and boot necessary**  
*Note*  
Alarm description see 300799

**300900  Stop A triggered**  
*Scan*  
In monitoring cycle.  
*Effect*  
The drive is stopped with STOP A.  
– Pulses are disabled via relay "Drive_IMP".  
– Motor runs down  
– Power on error  
*Explanation*  
There can be several reasons for triggering STOP A:  
– The time frame in MD 1356 of STOP B has expired.  
– The speed has fallen below the threshold in MD 1360 of STOP B.  
– The shut-down path test has been requested by the user by SGE "test stop selection", but the pulses were not deleted after expiry of the time frame in MD 1357.  
*Remedy*  
The user must find the cause and initiate appropriate measures.  
*Note*  
Applies as from SW 5.4

**300901  Stop B triggered**  
*Scan*  
Cyclic in SI monitoring cycle.  
*Effect*  
The drive is stopped with STOP B. The pulses are then disabled via relay "Drive_IMP".  
*Explanation*  
There can be several reasons for triggering STOP B:  
– The safe standstill monitoring has responded.  
– STOP B was requested after STOP F, i.e. an error has occurred during cross-comparison.  
*Remedy*  
The user must find the cause and initiate appropriate measures.  
*Note*  
Applies as from SW 5.4

**300906  Safe braking ramp exceeded**  
*Scan*  
Cyclic in SI monitoring cycle.  
*Effect*  
The drive is stopped with STOP A. The pulses are then disabled via relay "Drive_IMP".  
*Explanation*  
Die Istgeschwindigkeit der Achse ist beim Bremsen mit "nsoll=0" (Stop B oder Stop C) nicht verringert worden, sondern ist über die beim Bremsen nachgeführte Geschwindigkeitsgrenze und die in MMMMD_SB_STOP_N_TOL (Toleranz Istgeschwindigkeit für SBR) eingetragene Toleranz angestiegen.  
*Remedy*  
Eingabewert des Maschinendatums MD_SB_STOP_N_TOL überprüfen.  
*Note*  
Applies as from SW 6

**300907  Tolerance for safe operational stop exceeded**  
*Scan*  
Cyclic in SI monitoring cycle.  
*Effect*  
The drive is stopped with STOP A or STOP B. The pulses are disabled via relay "Drive_IMP".  
*Explanation*  
The actual position has migrated too far from the set/standstill position (outside the standstill window). The standstill window is configured in MD 1330.  
*Remedy*  
The user must find the cause and initiate appropriate measures.  
*Note*  
Applies as from SW 5.4
### 300908 Stop C triggered

**Scan**
Cyclic in SI monitoring cycle.

**Effect**
The drive is stopped with STOP C. After completion of the stop reaction, the drive remains under control, and the axis is monitored for SBH.

**Explanation**
There can be several reasons for triggering STOP C (depending on the configuration):
- The safe speed monitoring has responded (MD 1361).
- The safe end position monitoring has responded (MD 1362).

**Remedy**
The user must find the cause and initiate appropriate measures.

**Note**
Applies as from SW 5.4

### 300909 Stop D triggered

**Scan**
Cyclic in SI monitoring cycle.

**Effect**
The NC has stopped the drive with STOP D. After completion of the stop reaction, the drive remains under control, and the axis is monitored for SBH.

**Explanation**
There can be several reasons for triggering STOP D (depending on the configuration):
- The safe speed monitoring has responded (MD 1361).
- The safe end position monitoring has responded (MD 1362).

**Remedy**
The user must find the cause and initiate appropriate measures.

**Note**
Applies as from SW 5.4

### 300910 Stop E triggered

**Scan**
Cyclic in SI monitoring cycle.

**Effect**
The NC has stopped the drive with STOP E. After completion of the stop reaction, the drive remains under control, and the axis is monitored for SBH.

**Explanation**
There can be several reasons for triggering STOP E (depending on the configuration):
- The safe speed monitoring has responded (MD 1361).
- The safe end position monitoring has responded (MD 1362).

**Remedy**
The user must find the cause and initiate appropriate measures.

**Note**
Applies as from SW 5.4

### 300911 Failure in a monitoring channel

**Scan**
Cyclic in SI monitoring cycle.

**Effect**
If no Safety Integrated monitoring system is active, STOP F does not initiate a stop response, but displays the message "Failure in a monitoring channel". If SBH/SG, SE or SN are active, the drive is stopped with the stop response STOP A/B.

**Explanation**
Cross-comparison between NC and drive has revealed a difference, and STOP F has been initiated.

**Remedy**
Find the difference between the monitoring channels. The error code which indicates the cause appears as follows:
- on 840C
  - MD 301: Diagnostics for STOP F
- on 611D
  - MD 1395

The meaning of the error code can be found in the SINUMERIK Safety Integrated documentation.

It is possible that the safety–related machine data are no longer identical or that the SGEs do not have the same signal level (measure again or check in the SI service display). If no such error is found, an error may have occurred in the CPU, such as a corrupt memory cell. This error can be transient (remedied by POWER ON) or permanent (reoccurs after POWER ON, in this case replace the hardware).

**Note**
Applies as from SW 5.4
### 300914 Safe speed exceeded

**Scan**  
Cyclic in SI monitoring cycle.

**Effect**  
The drive is stopped by the response configured in MD 1361. After completion of the stop reaction, the drive remains under control, and the axis is monitored for SBH.

**Explanation**  
The axis has moved faster than defined in MD 1331, i.e. the axis has exceeded the permissible speed limit.

**Remedy**  
The user must find the cause and initiate appropriate measures.

**Note**  
Applies as from SW 5.4

---

### 300915 Safe end position exceeded

**Scan**  
In monitoring cycle.

**Effect**  
The drive is stopped by the response configured in MD 1361. After completion of the stop reaction, the drive remains under control, and the axis is monitored for SBH.

**Explanation**  
The axis has traveled beyond the end position entered in data MD 1334 and MD 1335.

**Remedy**  
If no apparent operating error has occurred:
Check the input value of the machine data, check the SGEs: of the 2 end positions, was the correct one selected?  
If MDs and SGEs are correct, inspect the machine for damage and repair the damage.

**Note**  
Applies as from SW 5.4

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### 300950 Axis is not safely referenced

**Scan**  
In monitoring cycle.

**Effect**  
No stop response was initiated. The alarm remains active, when the SN/SE functions are enabled, until the axis state "axis safely referenced" is attained.

**Explanation**  
The standstill position stored before the machine was switched off does not match the actual position (reference position) detected on power–up.  
This alarm requests the user to confirm the present actual position. The position should be established as follows:
- Measure the position  
- Travel to a known position

**Remedy**  
If safe automatic referencing is not possible, the user must issue a user authorization for the new position with the softkey. This user authorization identifies the above position as safe, i.e. the axis state "axis safely referenced" is attained.

**Warning**  
If the axis has not been referenced safely, and the user authorization is not active:
- The safe cams are active but not yet safe  
- The safe end positions are not yet active

**Note**  
Applies as from SW 5.4

---

### 300951 Teststop running

**Scan**  
In monitoring cycle.

**Effect**  
The pulses are deleted.
- If, following the time configured in MD 1357 (time for checking pulse deletion), the positive acknowledgement of pulse deletion has not been detected, STOP A is triggered.  
- If the pulse deletion is acknowledged internally in the drive within the configured time, a stop response is not initiated. The alarm remains active, on selection via SGE "test stop selection", until the selection is canceled.

**Explanation**  
The test stop has been activated by the user by setting SGE "test stop selection". When the user cancels the "test stop selection" SGE, the alarm is deactivated.

**Remedy**  
If STOP A was triggered, it is only possible to restart by POWER ON.

**Note**  
Applies as from SW 5.4
### 301701 Limit value SG too large

**Scan**
Power On

**Effect**
The startup process is interrupted. The pulses remain disabled.

**Explanation**
The limit value of the safe speed is higher than the speed that corresponds to a limit frequency of 300 kHz. The maximum permissible speed to be monitored is calculated as follows:

\[
\text{n}_{\text{max}} = \frac{300000 \text{[Hz]} \times 60 \text{ no. of encoder marks}}{\text{rev} \text{[min]}}
\]

Monitoring condition: \( \text{MD1331} \leq \frac{1}{\bar{u}} \times \text{n}_{\text{max}} \) with \( \bar{u} \) = speed ratio

**Remedy**
Check the input in MD 1331, correct if necessary and execute a POWER ON.

**Note**
Applies as from SW 6

### 301706 Parameterization of cam position invalid

**Scan**
Power On

**Effect**
The startup process is interrupted. The pulses remain disabled.

**Explanation**
At least one of the cam positions parameterized and enabled via MD_SB_ENABLE contravenes the rule that cam positions must not lie within the tolerance range around the modulo position. The tolerance range is defined as follows:

a) With inactive cam synchronization (MD 1301 bit 7=0):
   - Upper modulo value – MD 1342 < cam position
   - Lower modulo value + MD 1342 > cam position

b) With active cam synchronization (MD 1301 bit 7=1):
   - Upper modulo value – MD 1340 – MD 1342 > cam position
   - Lower modulo value + MD 1342 ≤ cam position

Upper/lower modulo value = \( 737 \times 280 \text{000} \)

**Remedy**
Check the parameterization of the cam positions MD 1336[0–3] and MD 1337[0–3] and the entry in MD 1305, correct if necessary and execute a POWER ON.

Check the input in MD 1305, correct if necessary and execute a POWER ON.

**Note**
Applies as from SW 6

### 301707 Parameterization module value for invalid

**Scan**
Power On

**Effect**
The startup process is interrupted. The pulses remain disabled.

**Explanation**
The parameterized modulo value for the function "Cams for endlessly rotating rotary axes" in MD 1305 is not a multiple of 360 000 mdegrees.

**Remedy**
Check the modulo value for SN in MD 1305, correct if necessary and execute a POWER ON.

**Note**
Applies as from SW 6
1.6 Dialog text

1.6.1 Notes for the operator

With many operator inputs, texts are displayed in the left two thirds of the input line for support and for error diagnostics.

<table>
<thead>
<tr>
<th>Dialog text</th>
<th>Appears with the following event</th>
<th>What must be done or What is wrong</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLOCK NOT AVAILABLE</td>
<td>When searching for blocks in the part program</td>
<td>—</td>
</tr>
<tr>
<td>BLOCK NUMBER TOO LARGE</td>
<td>Generating block number</td>
<td>Block number cannot be greater than N9999</td>
</tr>
<tr>
<td>BLOCK STRUCTURE WRONG</td>
<td>With “Correction block” function</td>
<td>Cursor is at the start of the wrong block</td>
</tr>
<tr>
<td>BLOCK TOO LONG</td>
<td>When editing part programs, a block must not be longer than 120 characters</td>
<td>Conclude block with “LF”</td>
</tr>
<tr>
<td>CHARACTER NOT ALLOWED</td>
<td>Taking over an input value (e.g. with the input key)</td>
<td>Input value has the wrong format</td>
</tr>
<tr>
<td>CHARACTER NOT AVAILABLE</td>
<td>When searching for characters in part programs</td>
<td>—</td>
</tr>
<tr>
<td>COMMENTS ERROR</td>
<td>Occurs when editing if the brackets do not match up</td>
<td>Check the number of brackets set</td>
</tr>
<tr>
<td>CYCLE DISABLE</td>
<td>When handling cycles (editing, copying, etc.)</td>
<td>Remove “Cycle disable” interface signal</td>
</tr>
<tr>
<td>CYCLE IN THE EPROM</td>
<td>Information while handling cycles</td>
<td>—</td>
</tr>
<tr>
<td>DATA TRANSMISSION RUNNING</td>
<td>Editing part programs</td>
<td>Stop interface</td>
</tr>
<tr>
<td>Dialog text</td>
<td>Appears with the following event</td>
<td>What must be done or What is wrong</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>DECIMAL POINT NOT ALLOWED</td>
<td>Taking over an input value (e.g. with the input key)</td>
<td>—</td>
</tr>
<tr>
<td>DELETE DATA?</td>
<td>“Delete” key has been pressed</td>
<td>If pressed again the data area specified will be deleted</td>
</tr>
<tr>
<td>DIFFERENT PROGRAM TYPES</td>
<td>When copying or renaming part programs</td>
<td>Only identical program types (L to L, % to %, etc.) can be handled</td>
</tr>
<tr>
<td>DRIFT COMPENSATION DATA ERROR</td>
<td>With semi-automatic drift compensation</td>
<td>Repeat compensation</td>
</tr>
<tr>
<td>EDITING NOT ALLOWED</td>
<td>When editing part programs</td>
<td>Repeat input</td>
</tr>
<tr>
<td>ENTER PASSWORD</td>
<td>When trying to enter protected data</td>
<td>Enter password</td>
</tr>
<tr>
<td>FORMAT ERROR</td>
<td>Taking over an input value (e.g. with the input key)</td>
<td>The control can do nothing with the value in this position. See Operator’s Guide.</td>
</tr>
<tr>
<td>FORMAT ERROR IN DISPLAY DESCRIPTION</td>
<td>Cannot occur with the user. (Only possible with the machine manufacturer during UMS testing.)</td>
<td>A format has been specified in the display description which does not agree with that to be displayed</td>
</tr>
<tr>
<td>GENERAL DATA ERROR</td>
<td>Taking over an input value (e.g. with the input key)</td>
<td>The value cannot be taken over. Taking over the value would cause an error: change value</td>
</tr>
<tr>
<td>GENERAL INPUT ERROR</td>
<td>Taking over an input value (e.g. with the input key)</td>
<td>The value was wrong. Change value</td>
</tr>
<tr>
<td>HELP NOT AVAILABLE</td>
<td>Operating the “Help” key</td>
<td>No help is available for the display selected</td>
</tr>
<tr>
<td>INPUT DISABLED</td>
<td>Taking over an input value (e.g. with the input key)</td>
<td>Operate keyswitch</td>
</tr>
<tr>
<td>INPUT ERROR (PROGRAM)</td>
<td>When editing part programs</td>
<td>The character selected cannot be entered in the part program</td>
</tr>
<tr>
<td>INPUT LINE OVERFLOW</td>
<td>Character input</td>
<td>Max. 25 characters</td>
</tr>
<tr>
<td>INTERFACE ASSIGNED</td>
<td>When starting data input/output</td>
<td>Selected interface is already operating</td>
</tr>
<tr>
<td>KEY NOT ALLOWED</td>
<td>Taking over an input value (e.g. with the input key)</td>
<td>Refers to input key and delete keys</td>
</tr>
<tr>
<td>KEYSWITCH MISSING</td>
<td>Selecting machine data tree or with general reset</td>
<td>Operate keyswitch</td>
</tr>
<tr>
<td>“MB” NOT CONFIGURED</td>
<td>When paging the menu tree</td>
<td>The menu block/tree is incorrectly configured</td>
</tr>
<tr>
<td>MD TRANSFER ERROR</td>
<td>Data error when fetching machine data</td>
<td>—</td>
</tr>
<tr>
<td>MDA CHANNEL ASSIGNED</td>
<td>MDA has already been started in another channel</td>
<td>Change channel or press “Reset”</td>
</tr>
<tr>
<td>MDA MEMORY OVERFLOW</td>
<td>In “MDA” mode</td>
<td>Max. 500 characters may be entered</td>
</tr>
<tr>
<td>NO CORRECTION BLOCK</td>
<td>With “Correction block” function</td>
<td>Correction block cannot be selected</td>
</tr>
<tr>
<td>Dialog text</td>
<td>Appears with the following event</td>
<td>What must be done or What is wrong</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>NO RENAME FOR CYCLES</td>
<td>Renaming cycles is not possible</td>
<td>—</td>
</tr>
<tr>
<td>NO VALUE ENTERED</td>
<td>Taking over an input value (e.g. with the input key)</td>
<td>Input value has the wrong format</td>
</tr>
<tr>
<td>ONLY 1 PROG. NO. ALLOWED</td>
<td>With MOVE or RENAME or EXECUTE YES/NO, of a part program</td>
<td>—</td>
</tr>
<tr>
<td>ONLY POSSIBLE AFTER “RESET”</td>
<td>When entering program numbers into the automatic basic display</td>
<td>The NC must be in the RESET state for safety reasons. Press RESET or wait until the current program is completed</td>
</tr>
<tr>
<td>“OPERATOR PROMPT MACRO BLOCK” SEVERAL VALUES</td>
<td>When editing via screen forms using operator prompt macros</td>
<td>If several fields are bracketed together in the display, then only one of the values can be entered</td>
</tr>
<tr>
<td>“OPERATOR PROMPT MACRO BLOCK” TOO LONG</td>
<td>When editing using the screen form with the aid of the operator prompt macros</td>
<td>Operator prompt macro has been incorrectly configured</td>
</tr>
<tr>
<td>“OPERATOR PROMPT MACRO BLOCK” VALUE MISSING</td>
<td>When editing via screen forms using operator prompt macros</td>
<td>No value has been entered</td>
</tr>
<tr>
<td>OVERSTORAGE ACTIVE</td>
<td>When overstoring</td>
<td>Wait until previous overstore operation has been completed</td>
</tr>
<tr>
<td>PROGRAM ALREADY AVAILABLE</td>
<td>When opening part programs, copying, renaming</td>
<td>Select different number</td>
</tr>
<tr>
<td>PROGRAM ERASE PROTECTED</td>
<td>Renaming part program number Opening Reading in via RS232C (V.24) if already present and being executed</td>
<td>Complete execution or reading in</td>
</tr>
<tr>
<td>PROGRAM MEMORY FULL</td>
<td>Inputting part programs manually or via RS232C (V.24)</td>
<td>On appearance of the message programs must be deleted</td>
</tr>
<tr>
<td>PROGRAM NOT AVAILABLE</td>
<td>Taking over a part program number during part program handling</td>
<td>Correct number</td>
</tr>
<tr>
<td>PROGRAM NUMBER NOT ALLOWED</td>
<td>Part program handling</td>
<td>Change part program number</td>
</tr>
<tr>
<td>PROGRAM PRESELECTION FORBIDDEN (MODE)</td>
<td>Selecting program for editing in MDA mode</td>
<td>Change mode</td>
</tr>
<tr>
<td>PROGRAM PRESELECTION NOT ALLOWED</td>
<td>Part program selection during TEACH IN</td>
<td>Abort TEACH IN (RESET)</td>
</tr>
<tr>
<td>SELECT PROGRAM</td>
<td>Something is to be entered in a part program</td>
<td>Select part program</td>
</tr>
<tr>
<td>SOURCE PROGRAM DEFECTIVE</td>
<td>Appears when reading out a part program</td>
<td>A bit has flipped in the part program just read (parity error).</td>
</tr>
<tr>
<td>Dialog text</td>
<td>Appears with the following event</td>
<td>What must be done or What is wrong</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SPECIFY 2 PROGRAM NUMBERS</td>
<td>When copying or renaming part programs</td>
<td>—</td>
</tr>
<tr>
<td>STOP AXES</td>
<td>The actual axis value is to be read</td>
<td>Axis values must not change.</td>
</tr>
<tr>
<td>STOP PROGRAM</td>
<td>Editing the program being processed</td>
<td>Interrupt program (NC STOP)</td>
</tr>
<tr>
<td>TOO MANY CHARACTERS ENTERED</td>
<td>Taking over an input value (e.g. with the input key)</td>
<td>Input value has the wrong format</td>
</tr>
<tr>
<td>TOOL NUMBER NOT ALLOWED</td>
<td>With functions operating with tool offsets</td>
<td>E.g. PRESET with a rotary axis: In the PRESET display “0” must be entered for the tool offset number</td>
</tr>
<tr>
<td>RS232C (V.24) CHANNEL ALREADY IN RESET</td>
<td>On stop or stop all in display Data input/output</td>
<td>A RESET request has already been sent. When the softkey is pressed again it is ignored.</td>
</tr>
<tr>
<td>RS232C (V.24) CHANNEL NUMBER NOT CORRECT</td>
<td>When starting data input/output</td>
<td>The RS232C (V.24) interface number is too large or too small</td>
</tr>
<tr>
<td>WRONG AXIS SPECIFIED</td>
<td>With axis-specific functions (e.g. Preset)</td>
<td>Axis does not exist</td>
</tr>
<tr>
<td>WRONG DATA NUMBER</td>
<td>When deleting data</td>
<td>Data item (e.g. R parameter) with the number entered does not exist</td>
</tr>
<tr>
<td>WRONG G FUNCTION</td>
<td>With technology-dependent functions</td>
<td>Correct G function</td>
</tr>
<tr>
<td>WRONG MODE GROUP</td>
<td>For functions which are assigned to a mode group (e.g. channel selection)</td>
<td>Select an alternative mode group</td>
</tr>
<tr>
<td>WRONG PASSWORD</td>
<td>Password input</td>
<td>—</td>
</tr>
<tr>
<td>WRONG RS232C (V.24) CHANNEL NUMBER</td>
<td>Starting data output</td>
<td>The RS232C (V.24) interface number is too large or too small</td>
</tr>
<tr>
<td>WRONG VALUE ENTERED</td>
<td>When inputting into display screen forms (e.g. contour definition)</td>
<td>Change value</td>
</tr>
<tr>
<td>“=” NOT ALLOWED</td>
<td>Taking over an input value (e.g. with the input key)</td>
<td>Input value has wrong format</td>
</tr>
<tr>
<td>“=”, “CR” IN WRONG PLACE</td>
<td>Taking over an input value (e.g. with the input key)</td>
<td>Input value has the wrong format</td>
</tr>
<tr>
<td>1ST NUMBER &gt; 2ND NUMBER</td>
<td>Deleting data areas</td>
<td>The 1st number must be smaller than the 2nd</td>
</tr>
<tr>
<td>2ND DECIMAL POINT</td>
<td>Taking over an input value (e.g. with the input key)</td>
<td>Input value has the wrong format</td>
</tr>
</tbody>
</table>

END OF SECTION
2 Diagnostics on the PLC

2.1 Error numbers (ACCU 3 high byte, DB 1 DW 160)

**General**

The error number FEHLCODE gives a detailed coding of the cause of error.

The error numbers are hexadecimal and therefore correspond to the representation in the function:

\[ \text{AUSGABE ADR:AG,F0000} \]

with which FEHLCODE and the additional error information can be read.

The error numbers and the additional information are also stored in the diagnostics DB (DB 1) DW 160–164.

If the PLC goes into the stop state with an error number identified by a W, a warm restart will be effected after the next RESET (unless cold restart or installation has been selected.

All other error numbers cause a cold restart.

If no error has occurred the error number is 00.

---

<table>
<thead>
<tr>
<th>Error messages of the interpreter</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Non-interpretable command *)</td>
</tr>
<tr>
<td>02 Illegal parameter *)</td>
</tr>
<tr>
<td>03 Data transfer into non-existent data (DB) *)</td>
</tr>
<tr>
<td>04 Substitution error *)</td>
</tr>
<tr>
<td>05 Call for a block that has not been loaded *)</td>
</tr>
<tr>
<td>06 Call for a non-existent data block *)</td>
</tr>
<tr>
<td>07 Segment not permitted with LI/R/TIR *)</td>
</tr>
<tr>
<td>08 Segment error in a block transfer command *)</td>
</tr>
<tr>
<td>09 Overflow in block stack *)</td>
</tr>
<tr>
<td>0A Overflow in interrupt stack *)</td>
</tr>
<tr>
<td>0B Immediate system stop due to “STS” command *)</td>
</tr>
<tr>
<td>0C Stop request by user (“STP” command) *)</td>
</tr>
<tr>
<td>0D Processing delay *)</td>
</tr>
<tr>
<td>0E Call for an illegal OB (OB No. 0...39 *)</td>
</tr>
<tr>
<td>0F Call for a non-existent page (command “ACR”*)</td>
</tr>
</tbody>
</table>

*) Additional information is given on this error in additional fields (see Section 2.2)
## Error messages on system startup

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>MD 137: Illegal address for OEM info bits 1)</td>
</tr>
<tr>
<td>28</td>
<td>Compress function (&quot;Push block&quot;) interrupt 1) *)</td>
</tr>
<tr>
<td></td>
<td>Note: PLC General Reset required after this error; blocks can first be saved via the programmer</td>
</tr>
<tr>
<td>29</td>
<td>MD8/9/10: Impermissible number of channels/spindles/axes *)</td>
</tr>
<tr>
<td>2A</td>
<td>Data loss</td>
</tr>
<tr>
<td>2B</td>
<td>Installation of NCK/MMC/COM requested</td>
</tr>
<tr>
<td>2C</td>
<td>MD17: Impermissible quantity of wait cycles for enabling the computer link user interface</td>
</tr>
<tr>
<td>2D</td>
<td>MD18: Impermissible user interface number for outputting a message to the host computer on synchronization</td>
</tr>
<tr>
<td>2E</td>
<td>MD19: Impermissible quantity of function nos. for core sequence initiation</td>
</tr>
<tr>
<td>2F</td>
<td>MD20–29: Impermissible function number for core sequences</td>
</tr>
<tr>
<td>30</td>
<td>MD128: Address 1st machine control panel too high (max. 120)</td>
</tr>
<tr>
<td>31</td>
<td>MD129: Address 2nd machine control panel too high (max. 120)</td>
</tr>
<tr>
<td>32</td>
<td>Reserved</td>
</tr>
<tr>
<td>33</td>
<td>MD error with DMP assignment lists (overlapping) *)</td>
</tr>
<tr>
<td>34</td>
<td>Interface-DMP incorrectly started (system start) *)</td>
</tr>
<tr>
<td>35</td>
<td>Reserved</td>
</tr>
<tr>
<td>36</td>
<td>Reserved</td>
</tr>
<tr>
<td>37</td>
<td>Distributed interrupt byte does not exist *)</td>
</tr>
<tr>
<td>38</td>
<td>Number of interrupt byte already exists (double addressing)</td>
</tr>
<tr>
<td>39</td>
<td>Number for interrupt byte has been assigned more than once</td>
</tr>
<tr>
<td>3A</td>
<td>Impermissible input value for number of the interrupt byte</td>
</tr>
<tr>
<td>3B</td>
<td>Reserved</td>
</tr>
<tr>
<td>3C</td>
<td>Reserved</td>
</tr>
<tr>
<td>3D</td>
<td>Reserved</td>
</tr>
<tr>
<td>3E</td>
<td>Reserved</td>
</tr>
<tr>
<td>3F</td>
<td>Interrupt byte declared more than once (with the same address) *)</td>
</tr>
<tr>
<td>40</td>
<td>RAM user memory: Memory capacity too small for inserted EPROM submodules</td>
</tr>
<tr>
<td>41</td>
<td>RAM user memory: Memory capacity set in MD too small for user program memory</td>
</tr>
<tr>
<td>42</td>
<td>RAM user memory: Physical capacity of user program memory too small for machine data setting</td>
</tr>
<tr>
<td>43</td>
<td>RAM user memory: Memory capacity set in MD too small for user data memory</td>
</tr>
<tr>
<td>44</td>
<td>RAM user memory: Physical capacity of user data memory too small for machine data setting</td>
</tr>
<tr>
<td>45</td>
<td>Invalid version of interface DMP firmware *)</td>
</tr>
<tr>
<td>46</td>
<td>I/O configuration: Impermissible number of interfaces plugged in</td>
</tr>
<tr>
<td>47</td>
<td>I/O configuration: Multiple addressing for inputs *)</td>
</tr>
<tr>
<td>48</td>
<td>I/O configuration: Multiple addressing for outputs *)</td>
</tr>
<tr>
<td>W49</td>
<td>I/O modules changed</td>
</tr>
<tr>
<td>4A</td>
<td>Unassigned</td>
</tr>
</tbody>
</table>

*) Additional information is given on this error in additional fields (see Section 2.2)
## Cold restart

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4B</td>
<td>System parameters: Incorrect ms time frame</td>
</tr>
<tr>
<td>4C</td>
<td>System parameters: Incorrect 10 ms time frame</td>
</tr>
<tr>
<td>4D</td>
<td>System parameters: Incorrect 100 ms time frame</td>
</tr>
<tr>
<td>4E</td>
<td>System parameters: Incorrect MC5 time (programmer cannot be used for diagnosis in PLC)</td>
</tr>
<tr>
<td>4F</td>
<td>Unassigned</td>
</tr>
<tr>
<td>51</td>
<td>Impermissible input value for byte number of the alarm byte</td>
</tr>
<tr>
<td>52</td>
<td>Byte number for alarm byte assigned more than once</td>
</tr>
<tr>
<td>53</td>
<td>Alarm byte number specified but byte does not exist or impermissible machine control panel</td>
</tr>
<tr>
<td>54</td>
<td>Irregular block type: PLM block not allowed in user program memory</td>
</tr>
<tr>
<td>55</td>
<td>Irregular block type: C block not allowed in user program memory</td>
</tr>
<tr>
<td>56</td>
<td>Synchronization error in EPROM basic program memory *)</td>
</tr>
<tr>
<td>57</td>
<td>Synchronization error in EPROM user program memory *)</td>
</tr>
<tr>
<td>58</td>
<td>Synchronization error in RAM user program memory *)</td>
</tr>
<tr>
<td>59</td>
<td>Synchronization error in RAM user data memory *)</td>
</tr>
<tr>
<td>5A</td>
<td>Irregular block type in EPROM basic program memory *)</td>
</tr>
<tr>
<td>5B</td>
<td>Irregular block type in EPROM user program memory *)</td>
</tr>
<tr>
<td>5C</td>
<td>Irregular block type in RAM user program memory *)</td>
</tr>
<tr>
<td>5D</td>
<td>Irregular block type in RAM user data memory *)</td>
</tr>
<tr>
<td>5E</td>
<td>Summation error with RAM for OB, FB, DB, FX, SB, PB *)</td>
</tr>
<tr>
<td>5F</td>
<td>Summation error with EPROM for OB, FB, DB, FX, SB, PB *)</td>
</tr>
</tbody>
</table>

## Restart

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5F</td>
<td>Impermissible warm restart *)</td>
</tr>
<tr>
<td>60</td>
<td>Check sum error in RAM for OB, FB, DB, FX, SB, PB *)</td>
</tr>
<tr>
<td>61</td>
<td>Check sum error in EPROM for OB, FB, DB, FX, SB, PB *)</td>
</tr>
</tbody>
</table>

## Cold restart and/or warm restart

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td>No RAM user program memory available</td>
</tr>
<tr>
<td>63</td>
<td>No user data memory available</td>
</tr>
<tr>
<td>64</td>
<td>Operator panel input byte in impermissible area</td>
</tr>
<tr>
<td>65</td>
<td>Operator panel output byte in impermissible area</td>
</tr>
<tr>
<td>66</td>
<td>No synchronization pattern from master in cold restart *)</td>
</tr>
<tr>
<td>67</td>
<td>No synchronization pattern from master in warm restart *)</td>
</tr>
<tr>
<td>68</td>
<td>Process image of the inputs: impermissible value for delete limit</td>
</tr>
<tr>
<td>69</td>
<td>Input is in retentive area of the process image</td>
</tr>
<tr>
<td>6A</td>
<td>Process image of the outputs: impermissible value for delete limit</td>
</tr>
<tr>
<td>6B</td>
<td>Output is in retentive area of the process image</td>
</tr>
<tr>
<td>6C</td>
<td>Function URLADE not executed, submodule not inserted or empty 1)</td>
</tr>
<tr>
<td>6D</td>
<td>Error during function: Save user program on MMC hard disk1)</td>
</tr>
<tr>
<td>6E</td>
<td>Machine data error equivalent to FB25 on the 850 *) (see special section)</td>
</tr>
<tr>
<td>W 6F</td>
<td>EU's or DMP modules not switched on or incorrectly jumpered (rotary switch) *)</td>
</tr>
</tbody>
</table>

*) Additional information is given on this error in additional fields (see Section 2.2)
1) SW 3 and higher
### Operational and user errors

#### Dynamic system monitoring

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>Check sum error in RAM for OB, FB, DB, FX, SB, PB *)</td>
</tr>
<tr>
<td>71</td>
<td>Check sum error in EPROM for OB, FB, DB, FX, SB, PB *)</td>
</tr>
<tr>
<td>72</td>
<td>RAM error in user data memory</td>
</tr>
<tr>
<td>73</td>
<td>RAM error in system data memory</td>
</tr>
</tbody>
</table>

#### Cyclic system monitoring

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>74</td>
<td>NC (master) CPU in the system failed</td>
</tr>
<tr>
<td>75</td>
<td>PLC CPU in the system failed</td>
</tr>
<tr>
<td>76</td>
<td>Reserved for 840</td>
</tr>
<tr>
<td>77</td>
<td>Reserved</td>
</tr>
<tr>
<td>W 78</td>
<td>PLC STOP by request from programmer</td>
</tr>
<tr>
<td>W 79</td>
<td>PLC STOP by operating mode switch</td>
</tr>
<tr>
<td>W 7A</td>
<td>Reserved for 840</td>
</tr>
</tbody>
</table>
| W 7C| No ready signal from interface DMP or interface PLC or 135 WD | • Interface may be blocked
     |                                                  | • Connector missing

#### Error messages from interrupt routines

#### System errors

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>Division error</td>
</tr>
<tr>
<td>81</td>
<td>Overflow error</td>
</tr>
<tr>
<td>82</td>
<td>&quot;Array Bounds&quot; error</td>
</tr>
<tr>
<td>83</td>
<td>Incorrect OP Code</td>
</tr>
<tr>
<td>84</td>
<td>Error in ESC-OP code</td>
</tr>
<tr>
<td>85</td>
<td>Non-interpretable interrupt (NII)</td>
</tr>
<tr>
<td>86</td>
<td>Error in the save routine (SAVE-UP)</td>
</tr>
<tr>
<td>87</td>
<td>Stack overflow</td>
</tr>
<tr>
<td>88</td>
<td>Semaphore buffer overflow</td>
</tr>
<tr>
<td>89</td>
<td>Semaphore buffer not reached</td>
</tr>
<tr>
<td>8A</td>
<td>Addressing error by access to an input/output not existing in the process image</td>
</tr>
</tbody>
</table>

#### Timeouts

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>Unassigned</td>
</tr>
<tr>
<td>91</td>
<td>Unassigned</td>
</tr>
<tr>
<td>92</td>
<td>Timeout with buffered access to link/local bus *)</td>
</tr>
<tr>
<td>93</td>
<td>Timeout with system program processing *)</td>
</tr>
<tr>
<td>94</td>
<td>Timeout with LIR/TIR commands *)</td>
</tr>
<tr>
<td>95</td>
<td>Timeout with TNB/TNW commands *)</td>
</tr>
<tr>
<td>96</td>
<td>Timeout with LPB/LPW/TPB/TPW commands *)</td>
</tr>
<tr>
<td>97</td>
<td>Timeout with a substitution command *)</td>
</tr>
</tbody>
</table>

*) Additional information is given on this error in additional fields (see Section 2.2)
### Timeouts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>98</td>
<td>Timeout with transfer in/out (see errors B0 and B1)</td>
</tr>
<tr>
<td>99</td>
<td>Timeout cannot be interpreted with active interpreter *)</td>
</tr>
<tr>
<td>9A</td>
<td>Timeout with processing a function macro *)</td>
</tr>
<tr>
<td>9B</td>
<td>Timeout with processing high-level language blocks *)</td>
</tr>
<tr>
<td>9C</td>
<td>Timeout with access to pabe commands LB CB, LB CW, LB CD, TB CB, TB CW, TB CD</td>
</tr>
</tbody>
</table>

### Error messages of distributed I/Os

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W A0</td>
<td>Transfer error to an expansion unit</td>
</tr>
<tr>
<td>W A1</td>
<td>Overtemperature in an expansion unit or bouncing enable input with SIMATIC I/O devices</td>
</tr>
<tr>
<td>W A2</td>
<td>Interface DMP outputs a command output disable during operation</td>
</tr>
<tr>
<td>W A3</td>
<td>Transmission link to EU 185U (SIMATIC EU) has failed</td>
</tr>
<tr>
<td>W AF</td>
<td>Message “OUTDS” from power supply unit</td>
</tr>
<tr>
<td>W B0</td>
<td>Input module failed or changed and STOP set for PLC for this module via MD *)</td>
</tr>
<tr>
<td>W B1</td>
<td>Output module failed or changed and STOP set for PLC for this module via MD *)</td>
</tr>
</tbody>
</table>

### Cycle time monitoring

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C0</td>
<td>Cycle time exceeded</td>
</tr>
<tr>
<td>C1</td>
<td>Cycle time exceeded; FB12 called more than twice per cycle</td>
</tr>
</tbody>
</table>

### Error messages when using the PLM and C high-level languages

#### HLL call in the interpreter

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D0</td>
<td>Unknown type identifier in parameter declaration of the FB called</td>
</tr>
<tr>
<td>D1</td>
<td>Illegal type identifier block</td>
</tr>
<tr>
<td>D2</td>
<td>Unknown code in the parameter block of the FB called: input parameter</td>
</tr>
<tr>
<td>D3</td>
<td>Unknown code in the parameter block of the FB called: output parameter</td>
</tr>
</tbody>
</table>

#### HLL_HLL function

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D4</td>
<td>Unknown pseudo parameter in STACK</td>
</tr>
<tr>
<td>D5</td>
<td>Block not available</td>
</tr>
<tr>
<td>D6</td>
<td>HLL block not in line with paragraph</td>
</tr>
<tr>
<td>D7</td>
<td>Block called is not a HLL block</td>
</tr>
</tbody>
</table>

#### HLL_ADB function

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D8</td>
<td>DB to be opened in HLL: wrong pseudo parameter</td>
</tr>
<tr>
<td>D9</td>
<td>DB to be opened not available</td>
</tr>
<tr>
<td>DA</td>
<td>DB to be opened not in line with paragraph</td>
</tr>
</tbody>
</table>

*) Additional information is given on this error in additional fields (see Section 2.2)
### HLL_MACRO function

| DC  | Core to be called not available or cannot be called by HLL |

### HLL_STOP function

| DD  | System STOP by HLL user *) |

### HLL_S5 function

| DE  | Unknown pseudo parameter in STACK |
| DF  | S5 block called not available |
| E0  | S5 block not in line with paragraph |
| E1  | Block called is not a S5 block |

### Other operational and user errors

| F7  | M decoding: byte number for DB30>63 |
| F8  | PROTES system error: error with P link *) |
| F9  | Interrupts from interrupt-generating I/O devices not acknowledged by OB2 |

### Errors in addressing decoding data blocks

| FA  | Decoding data block not available |
| FB  | Data block word length without header not divisible by 3 |
| FC  | Wrong number of decoding units |
| FD  | Decoding data block too short |
| FE  | Assignment list DB99 not available or too short |

### Error message with function macros

| FF  | Group error with function macros *) |
|     | Display of individual errors with function macros is via ACCU1 and ACCU2. The ACCUs can be read out at the programmer via OUTPUT ISTACK. |
|     | For more details on errors see FB descriptions. |

*) Additional information is given on this error in additional fields (see Section 2.2)
### Additional error information

#### (ACCU 3 low byte, DB 1 DW 161–163)

For all errors marked with an *) in the above list, further information is given in the additional fields. This information can be read out using the programmer from addresses F0001 to F0004 or from DW161 to 164 in the diagnostics DB (DB1).

In the additional error information marked by ++) the representation of F0001 - F0004 on the operator panel and in DB1 high/low is swapped.

This information is summarized below:

<table>
<thead>
<tr>
<th>Error No.</th>
<th>Address</th>
<th>Contents/Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>F0000</td>
<td>01: Error number incorrect MCS operation code</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>OB number where incorrect operation code occurred</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>—</td>
</tr>
<tr>
<td>02, 03, 04, 05, 06, 07, 08, 09, 0E, 0F</td>
<td>F0000</td>
<td>Error number of interpreter</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>High byte: Identifier for preceding command</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>Low byte: OB number where the error occurred</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>Operation code of the MCS command which led to error</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>Parameter of MCS command in BCD code — ++ )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identifier for preceding command:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0: No command modification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1: Preceding command was B MW, B DW, B BS or substitution command</td>
</tr>
<tr>
<td>0A</td>
<td>F0000</td>
<td>0A: Overflow in interruption stack</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>OB number where overflow occurred</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>—</td>
</tr>
<tr>
<td>0B</td>
<td>F0000</td>
<td>0B: Stop caused by STS command</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>OB number where STS occurred</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>—</td>
</tr>
<tr>
<td>0D</td>
<td>F0000</td>
<td>0D: Error number processing time delay</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>OB number where processing time delay occurred</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>—</td>
</tr>
<tr>
<td>Error No.</td>
<td>Address</td>
<td>Contents/Designation</td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
<td>----------------------</td>
</tr>
</tbody>
</table>
| 28       | F0000   | 28: Compress function interrupted  
The interrupted block is pushed completely (if possible) during runup |
|          | F0001   | 0000: Block completely pushed |
|          |         | 0100: Interrupted block could not be completely pushed (s. F0002) |
|          | F0002   | where F0001 = 0100: |
|          |         | nntt: Block number and block type  
nn: Block number (hexadecimal)  
tt: Block type (hexadecimal)  
01 = DB, 02 = SB, 04 = PB, 05 = FX, 08 = FB, 0C = DX,  
10 = OB |
| 29       | F0000   | 29: MD8/9/10: Impermissible number of channels/spindles/axes |
|          | F0001   | 01: MD8: Too many channels |
|          |         | 02: MD9: Too many spindles |
|          |         | 03: MD10: Too many axes |
| 33       | F0000   | 33: MD error in DMP assignment lists or error in the DMP configuration DB/DX |
|          | F0001   | 00: Error in DMP assignment lists (overlapping) |
|          |         | 04: I/O type identifier: DMP I/O device configuration does not correspond to configuration DB/DX |
|          | F0002   | Otherwise: Error in the configuration lists DB/DX  
Number of the DB/DX from MD 136 (BCD format) |
<p>|          | F0003   | When F0001=4: 0I or 0Q identifier input/output |
|          |         | Otherwise: Number of the incorrect/missing data word within the configuration DB/DX (BCD format) |
|          | F0004   | Otherwise: Unassigned |
| 34       | F0000   | 34: Interface DMP/interface PLC not started correctly or EU incorrectly jumpered |
|          | F0001   | 00: Interface DMP/interface PLC not started correctly (system startup) |
|          |         | 01: Identifier for incorrect EU jumpering |
|          | F0002   | Number of the interface module (at F0001=01) |
|          | F0003   | Submodule number (when F0001=01) |
|          | F0004   | Line number (when F0001=01) |
| 37       | F0000   | 37: Distributed interrupt byte not available |
|          | F0001   | Byte number (BCD format) |
|          | F0002   | — |
|          | F0003   | — |</p>
<table>
<thead>
<tr>
<th>Error No.</th>
<th>Address</th>
<th>Contents/Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3C</td>
<td>F0000</td>
<td>3C: Error number MD double addressing inputs</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>Group number (BCD format)</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>—</td>
</tr>
<tr>
<td>3D</td>
<td>F0000</td>
<td>3D: Error number MD double addressing outputs</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>Group number (BCD format)</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>—</td>
</tr>
<tr>
<td>3E</td>
<td>F0000</td>
<td>3E: Error number output group per MD for several PLCs</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>Group number (BCD format)</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>—</td>
</tr>
<tr>
<td>45</td>
<td>F0000</td>
<td>45: Error number illegal version of interface DMP firmware</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>Number of interface module</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>Illegal (fitted) firmware interface-DMP</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>Required firmware interface-DMP ++</td>
</tr>
<tr>
<td>47</td>
<td>F0000</td>
<td>47: Error number double addressing inputs</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>Byte number (BCD format)</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>—</td>
</tr>
<tr>
<td>48</td>
<td>F0000</td>
<td>48: Error number double addressing outputs</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>Byte number (BCD format)</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>—</td>
</tr>
<tr>
<td>49</td>
<td>F0000</td>
<td>49: Error number modification of I/O modules</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>3C: Changed address location of I/O byte</td>
</tr>
<tr>
<td></td>
<td></td>
<td>00: I/O failure</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>0I or 0Q identifier input/output</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>Byte number (BCD format)</td>
</tr>
<tr>
<td>55, 56, 57, 58, 59, 5A, 5B, 5C, 5D, 5E, 60, 61, 70, 71</td>
<td>F0000</td>
<td>Respective error number</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>Segment address of fault block</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>Offset address (byte-oriented) of fault block (segment and offset point to the synchronization pattern) ++</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>—</td>
</tr>
</tbody>
</table>
## Contents/Designation

<table>
<thead>
<tr>
<th>Error No.</th>
<th>Address</th>
<th>Contents/Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>5F</td>
<td>F0000</td>
<td>I/O failure during the cycle or a set cold restart because of IP/WF modules (MD 6049, bit 1 = 1) causes PLC to stay in the stop state after the first RESET. A warm restart gives the described error; the cold restart set in the machine data prevents a warm restart from being executed and message 5FH appears (warm restart not allowed). After repeating RESET, the cold restart set in the MD is executed together with a redefinition of the I/Os. If one of the modules fails on Power off, the PLC executes a cold restart and goes into cyclic operation; the failed module is ignored.</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>No entry in ISTACK or power supply failure not only reason for interruption or PLC machine data 6049 bit 1 (cold restart bit) set and warm restart initiated by programmer or PLC mode selector switch.</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>Changed address location of I/O byte, otherwise I/O type identifier:</td>
</tr>
<tr>
<td></td>
<td>F0003</td>
<td>Byte number (BCD format) ++</td>
</tr>
<tr>
<td>6C 1)</td>
<td>F0000</td>
<td>Error when booting the user program</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>Memory dump (file on MMC hard disk) does not exist or is empty</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Illegal user program file</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICODE error</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ADS error (e.g. no communication with MMC) ++</td>
</tr>
<tr>
<td>6D 1)</td>
<td>F0000</td>
<td>Error while saving the user program</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>Scare not possible (reason see F0002)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>System error</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICODE error</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>ADS error (e.g. no communication with MMC)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When F0001 = 0001:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>User program memory empty</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Boot not completely finished or data loss ++</td>
</tr>
</tbody>
</table>

1) SW 3 and higher
### Error No. | Address | Contents/Designation
--- | --- | ---
6F | F0000 | 6F: Error number I/O fault on start-up
 | F0001 | Type of link:
 | 03: 16-bit
 | 04: DMP
 | F0002 | Number of the interface module
 | F0003 | EU number or DMP module number
 | F0004 | Line (MPC) number for DMP
92 | F0000 | 92: Error number timeout for buffered access to link (local bus
 | F0001 | Bus address (segment), where timeout occurs
 | F0002 | Bus address (offset), where timeout occurs
 | F0003 | Type identifier of the timeout **)  
93 | F0000 | 93: Error number timeout with system progr. processing
 | F0001 | CS when timeout occurs
 | F0002 | IP when timeout occurs
 | F0003 | Type identifier of the timeout **)  
94 | F0000 | 94: Error number timeout with LIR/TIR
 | F0001 | OPCODE command
 | F0002 | Offset address
 | F0003 | Segment number
95 | F0000 | 95: Error number timeout with TNB/TNW
 | F0001 | OPCODE command
 | F0002 | Offset address
 | F0003 | Segment number
96 | F0000 | 96: Error number timeout with LPB/LPW/TPB/TPW
 | F0001 | OPCODE command
 | F0002 | Specification of input or output
 | F0003 | Byte number (BCD format)
99 | F0000 | 99: Error number timeout not interpretable when interpreter active
 | F0001 | CX when timeout occurs
 | F0002 | IP when timeout occurs
 | F0003 | Type identifier of the timeout **)
9A | F0000 | 9A: Error number timeout when processing a function macro
 | F0001 | OPCODE of the command that called the function macro
 | F0002 | Command parameter (with FX only, otherwise 0000)
 | F0003 | Type identifier of the timeout **)

** Type identifier of timeout:
0001 = Internal timeout
0002 = Link bus timeout
0003 = Local bus timeout
### Error No. | Address | Contents/Designation
--- | --- | ---

<table>
<thead>
<tr>
<th>Error No.</th>
<th>Address</th>
<th>Contents/Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>9B</td>
<td>F0000</td>
<td><strong>9B:</strong> Error number timeout when processing high-level language</td>
</tr>
<tr>
<td></td>
<td>F0001</td>
<td>CS when timeout occurs</td>
</tr>
<tr>
<td></td>
<td>F0002</td>
<td>IP when timeout occurs</td>
</tr>
</tbody>
</table>
|  | F0003 | Type identifier of the timeout **)
|  | F0004 | Identifier indicating whether DB has been opened
|  | 0000: | DB opened |
|  | 0001: | No DB opened (in this case timeout is initiated on access to timeout DB) |
| A0 | F0000 | Error number A0 |
|  | F0001 | I/O type identifier
|  | 01: | Centralized I/O devices, TPx, LPx |
|  | 03: | 16-bit link |
|  | 04: | DMP |
|  | F0002 | 0I or 0Q identifier inputs/outputs |
|  | F0003 | Byte number (BCD format) ++
| B0, B1 | F0000 | Error number B0/B1 |
|  | F0001 | I/O type identifier
|  | 01: | Centralized I/O devices, TPx, LPx |
|  | 03: | 16-bit link |
|  | 04: | DMP |
|  | F0002 | 0I or 0Q identifier inputs/outputs |
|  | F0003 | Byte number (BCD format) ++
|  | | In compact terminal blocks, it is not possible to enter the individually defective module in the error fine coding (the terminal block always fails as a complete unit); i.e. the first defective byte (the byte with the lowest address) found in the image is always the one given in the error fine coding. If the terminals are mixed (inputs and outputs), this is always an input byte. |
| DD | F0000 | DD: Error number system STOP by HLL user |
|  | F0001 | User STOP number |
|  | F0002 | HLL call address (offset) |
|  | F0003 | HLL call address (segment) |
| FF | F0000 | FF: Group error with function macro |
|  | F0001 | Current OB No. (No. of processing level) |
|  | F0002 | — |
|  | F0003 | — |

**): Type identifier of timeout:
0001 = Internal timeout
0002 = Link bus timeout
0003 = Local bus timeout
PLC machine data test

1. The machine data test is performed in the code restart branch.

2. If the machine data are invalid, the group error number 110D (6EH) is transferred in the error field (address F0000 with programmer, cell FEHLCOD for system program). The detailed error identifiers for each test are entered in the additional error field (address F0001 with programmer, cell EADOPAD + 1 for system program).

3. Detailed error identifiers

<table>
<thead>
<tr>
<th>Address</th>
<th>Error</th>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0000</td>
<td>0</td>
<td>Reserved</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Reserved</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Reserved</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Reserved</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Reserved</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>PLC MD for error and operational messages (channel-specific) set</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>PLC MD for error and operational messages (spindle-specific) set</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>PLC MD for error and operational messages (axis-specific) set</td>
</tr>
<tr>
<td>10</td>
<td>PLC MD for M decoding with extended addresses set. At least one decoding list is missing.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>PLC MD “1st machine control panel” set – input missing</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>PLC MD “2nd machine control panel” set – input missing</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Reserved</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Reserved</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>PLC MD “1st machine control panel” set – output missing</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>PLC MD “2nd machine control panel” set – output missing</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Reserved</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Reserved</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>PLC MD for error and operational messages (DB58) set</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Reserved</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Reserved</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Reserved</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Reserved</td>
<td></td>
</tr>
</tbody>
</table>
### Synchronization error on power-up

<table>
<thead>
<tr>
<th>Address</th>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0000</td>
<td>F0001</td>
</tr>
<tr>
<td>66</td>
<td>1 Cold restart: synchronization error master CPU</td>
</tr>
<tr>
<td>67</td>
<td>1 Restart: synchronization error master CPU</td>
</tr>
</tbody>
</table>

### Error in programmer link

This error is an internal software error.

<table>
<thead>
<tr>
<th>Address</th>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0000</td>
<td>F0001</td>
</tr>
<tr>
<td>F8</td>
<td></td>
</tr>
<tr>
<td>0100</td>
<td>Error on fetching a receive buffer</td>
</tr>
<tr>
<td>0200</td>
<td>Error on returning a receive buffer</td>
</tr>
<tr>
<td>0300</td>
<td>Error on reserving a transmit buffer</td>
</tr>
<tr>
<td>0400</td>
<td>Error on transmitting a receive buffer</td>
</tr>
<tr>
<td>0500</td>
<td>Reserved</td>
</tr>
<tr>
<td>0600</td>
<td>ADS interface between PLC and IF PLC faulty</td>
</tr>
</tbody>
</table>

END OF SECTION
3 Error Display on CPU

Errors that prevent normal operation of the PLC or the IF PLC, are displayed by a flashing LED on the front panel of the module in question.

Error list of the PLC

<table>
<thead>
<tr>
<th>LEDs for PLC</th>
<th>Meaning (SINUMERIK 840C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steady light (green only)</td>
<td>PLC cyclic mode</td>
</tr>
<tr>
<td>Steady light (red only)</td>
<td>PLC in STOP state</td>
</tr>
<tr>
<td>Steady light (red and green)</td>
<td>OVERALL RESET necessary (initial power-up or data loss)</td>
</tr>
<tr>
<td>Light flashing (red)</td>
<td></td>
</tr>
<tr>
<td>once</td>
<td>Error on cross-check sum over system program submodule</td>
</tr>
<tr>
<td>3 times</td>
<td>Timer 0 error (process-internal timer) or watchdog error</td>
</tr>
<tr>
<td>4 times</td>
<td>SW3: Module is a PLC 135 WB (can no longer be used)</td>
</tr>
<tr>
<td>5 times</td>
<td>Access to link RAM not possible</td>
</tr>
<tr>
<td>6 times</td>
<td>Error with test access to link RAM</td>
</tr>
<tr>
<td>7 times</td>
<td>SW1 and SW2: Error in system initialization program (synchronization pattern)</td>
</tr>
<tr>
<td>9 times</td>
<td>SW3: No communication with MMC</td>
</tr>
<tr>
<td>10 times</td>
<td>SW3: Error when booting</td>
</tr>
<tr>
<td>11 times</td>
<td>1 ACOP error (group error)</td>
</tr>
<tr>
<td>12 times</td>
<td>IF PLC cannot be addressed from PLC</td>
</tr>
<tr>
<td>13 times</td>
<td>RAM of the IF PLC defective (program memory or CPU RAM)</td>
</tr>
<tr>
<td>14 times</td>
<td>Dual port RAM of the IF PLC defective</td>
</tr>
<tr>
<td>15 times</td>
<td>ADS link to the NC defective</td>
</tr>
<tr>
<td>16 times</td>
<td>ADS link to the IF PLC defective</td>
</tr>
<tr>
<td>17 times</td>
<td>ADS link (reserved); SW3 and higher: ADS link to MMC defective</td>
</tr>
</tbody>
</table>

LED for IF PLC

<table>
<thead>
<tr>
<th>LED for IF PLC</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steady light (green only)</td>
<td>IF PLC in cyclic operation (no error), MPC transmission running</td>
</tr>
<tr>
<td>Steady light (red only)</td>
<td>IF PLC in the STOP state</td>
</tr>
<tr>
<td>Light flashing (red)</td>
<td>RAM of the IF PLC defective (CPU-RAM)</td>
</tr>
<tr>
<td>12 times</td>
<td>Dual port RAM of the IF PLC defective</td>
</tr>
<tr>
<td>13 times</td>
<td>No MPC transmission, processor running</td>
</tr>
<tr>
<td>LED off</td>
<td></td>
</tr>
</tbody>
</table>

Note

If the PLC 135 WB2 is used, the LEDs for the PLC and IF PLC are situated on the PLC 135 WB2 or interface PLC module. If the PLC 135 WD is used, all the LEDs are situated on the front panel of this module.

Error display on the MMC CPU

<table>
<thead>
<tr>
<th>Figure</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Driver not loaded</td>
</tr>
<tr>
<td>1</td>
<td>Driver loaded but ADS power-up not yet performed</td>
</tr>
<tr>
<td>2</td>
<td>Jump ADS interface power-up</td>
</tr>
<tr>
<td>3</td>
<td>ADS interface power-up, MMC waits for ‘0’ from NC</td>
</tr>
</tbody>
</table>
### Error detection

#### NCK CPU

The cause of errors in the NCK area are displayed on the 386 NCK CPU as far as possible by the flashing rhythm of the red LED at the front of the NCK CPU. On the 486 CPU, these error detections are now displayed on the 7-segment display at the front of the CPU module (2 digits, both numbers alternating). If the NC continues to run and simply intends to indicate failure of the link to the MMC, this is still signalled by the red LED flashing 11 times. In the case of errors designated by R! it is essential to read out from the alarm log of the MMC which register contents of the NCK CPU were logged at the time of failure (this makes it much easier to identify the cause of error).

<table>
<thead>
<tr>
<th>Error code</th>
<th>Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The selected boot bank (switch position on the 486 CPU) is either not programmed or incorrectly programmed. Switch position 0 must always function otherwise the module is defective.</td>
</tr>
<tr>
<td>2</td>
<td>DRAM error on NCK CPU, defective during memory test after Power On</td>
</tr>
<tr>
<td>4</td>
<td>!R Parity error in the DRAM</td>
</tr>
<tr>
<td>7</td>
<td>!R Undefined NMI</td>
</tr>
<tr>
<td>8</td>
<td>!R NMI caused by push button on CSB or CPU (486) or V24 (486)</td>
</tr>
<tr>
<td>9</td>
<td>!R NMI caused by timeout (CPU local)</td>
</tr>
<tr>
<td>10</td>
<td>!R NMI caused by timeout on link or local bus</td>
</tr>
<tr>
<td>11</td>
<td>Failure of link to the MMC (this is indicated simply by flashing, also on 486 CPU)</td>
</tr>
<tr>
<td>14</td>
<td>!R NC processor exception (commonly known as software crash)</td>
</tr>
<tr>
<td>15</td>
<td>!R Internal hardware fault</td>
</tr>
<tr>
<td>16</td>
<td>!R Boot transfer error (ADS transport)</td>
</tr>
<tr>
<td>17</td>
<td>!R Boot transfer error (I code protocol)</td>
</tr>
<tr>
<td>18</td>
<td>!R Faulty file booted (OMF format)</td>
</tr>
<tr>
<td>19</td>
<td>!R Faulty file booted (illegal address area)</td>
</tr>
<tr>
<td>20</td>
<td>!R Wrong file started as last in the loading list (no starting information)</td>
</tr>
<tr>
<td>21</td>
<td>!R Link area between boot EPROM and loaded system was illegally overwritten (presumably software error in the loaded system program). Remedy: Reboot</td>
</tr>
</tbody>
</table>

END OF SECTION
# 4 Errors with Function Macros

<table>
<thead>
<tr>
<th>ACCU 1 (FB No.)</th>
<th>ACCU 2 (Error No.)</th>
<th>Error occurred at</th>
<th>Error description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>1</td>
<td>Setting up data blocks</td>
<td>DB No. impermissible</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>DB No. &gt; 255</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td>Specified DW No. &lt; 0</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td>Length of DB to be set up is not the same as the length of the DB already in the PLC</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
<td>Memory space in the PLC no longer sufficient</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td></td>
<td>Existing DW No. &gt; 255</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td></td>
<td>DB No. = 0</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td></td>
<td>DB type different from DB or DX</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>Retriggering of cycle time monitoring</td>
<td>PLC Stop with error detection 0C1H on 3rd call of FB12 within one PLC cycle</td>
</tr>
<tr>
<td>52</td>
<td>1</td>
<td>Block transfer</td>
<td>Illegal mode</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>Number of DWs to be transferred &gt; 127</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td>Number of DWs to be transferred &lt; 0</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td>Segment No. of 8-bit memory &lt; 1 or &gt; 13</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
<td>Segment No. of 16-bit memory &lt; 1 or &gt; 13</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td></td>
<td>Offset of 1st DW in 8-bit memory &gt; 7FFFFH</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td></td>
<td>Offset of 1st DW in 16-bit memory &gt; 7FFFFH</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td></td>
<td>Selected 8-bit memory area exceeds lower segment limit (not with segment Nos. 6, 10, 11,12)</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td></td>
<td>Selected 16-bit memory area exceeds lower segment limit (not with segment Nos. 6, 10, 11,12)</td>
</tr>
<tr>
<td>60</td>
<td>1</td>
<td>Block transfer</td>
<td>Number of DWs to be transferred &gt; 2043</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>Number of DWs to be transferred = 0</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td>Target DB No. = 0</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td>Target or source DB not available</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
<td>Target DB too short</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td></td>
<td>Target DB in EPROM</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td></td>
<td>Source DB too short</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td></td>
<td>Incorrect TYQU parameter</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td></td>
<td>Incorrect TYZI parameter</td>
</tr>
<tr>
<td>ACCU 1 (FB No.)</td>
<td>ACCU 2 (Error No.)</td>
<td>Error occurred at</td>
<td>Error description</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------</td>
<td>------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>61</td>
<td>v0</td>
<td>Read NC data</td>
<td>ANZ &gt; 1 not permitted</td>
</tr>
<tr>
<td></td>
<td>v1</td>
<td></td>
<td>NSBY not permitted</td>
</tr>
<tr>
<td></td>
<td>v2</td>
<td></td>
<td>DB missing or DB No. not permitted or</td>
</tr>
<tr>
<td></td>
<td>v3</td>
<td></td>
<td>MW not permitted</td>
</tr>
<tr>
<td></td>
<td>v4</td>
<td></td>
<td>Data type not permitted</td>
</tr>
<tr>
<td></td>
<td>v5</td>
<td></td>
<td>°ANZ = 0 or &gt; 128</td>
</tr>
<tr>
<td></td>
<td>v6</td>
<td></td>
<td>Reading / writing not permitted</td>
</tr>
<tr>
<td></td>
<td>v7</td>
<td></td>
<td>Number format not permitted</td>
</tr>
<tr>
<td></td>
<td>v8</td>
<td></td>
<td>Value 3 for ZOA or ZOFA not equal or 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Type data target/data source in PLC not permitted</td>
</tr>
<tr>
<td>62</td>
<td></td>
<td>Write NC data</td>
<td>See FB 61 (reading NC data)</td>
</tr>
<tr>
<td>65</td>
<td>1</td>
<td>Transfer flags → flag stacks</td>
<td>Stackpoint overflow</td>
</tr>
<tr>
<td>66</td>
<td>1</td>
<td>Transfer flag stack → flags</td>
<td>Stackpoint not reached</td>
</tr>
<tr>
<td>67</td>
<td>2</td>
<td>Transfer machine control panel signals → DB axes</td>
<td>Parameter axis No. &gt; 30</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>PLC machine data not set for signals from/to axis</td>
</tr>
<tr>
<td>68</td>
<td>1</td>
<td>Aperiodic user program call</td>
<td>Parameter tool &lt; 0</td>
</tr>
<tr>
<td>69</td>
<td>1</td>
<td>G decoding</td>
<td>Channel number not permitted</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>G group incorrect</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td>PLC MD: signals from/to NC channel or signals from NC channel not set</td>
</tr>
<tr>
<td>70</td>
<td>1</td>
<td>Transfer interfaces DB to I/Q/F</td>
<td>Source or target type incorrect (illegal ASCII character)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>Source DB does not exist in PLC</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td>Parameter limits of source or target parameter not reached or exceeded</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td>Source or target DB too short</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
<td>Parameter limit of flag area exceeded</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td></td>
<td>PII or PIQ limits exceeded</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td></td>
<td>Illegal source or target parameter type (not I, Q, F)</td>
</tr>
<tr>
<td>ACCU 1 (FB No.)</td>
<td>ACCU 2 (Error No.)</td>
<td>Error occurred during</td>
<td>Error description</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------</td>
<td>----------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>71</td>
<td></td>
<td>Transfer interface DB to I/Q/F (see FB 70)</td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>1</td>
<td>Transfer NC channel to DB channel-specific signals</td>
<td>Channel address not permitted</td>
</tr>
<tr>
<td>73</td>
<td>1</td>
<td>Transfer DB channel-specific signals to NC channel</td>
<td>Channel address not permitted</td>
</tr>
<tr>
<td>74</td>
<td>1</td>
<td>Transfer spindle to DB spindle-specific signals</td>
<td>Spindle address not permitted</td>
</tr>
<tr>
<td>75</td>
<td>1</td>
<td>Transfer DB spindle-specific signals to spindle</td>
<td>Spindle address not permitted</td>
</tr>
<tr>
<td>76</td>
<td>1</td>
<td>Transfer axis to DB axis-specific signals</td>
<td>Axis address not permitted</td>
</tr>
<tr>
<td>77</td>
<td>1</td>
<td>Transfer DB axis-specific signals to axis</td>
<td>Axis address not permitted</td>
</tr>
<tr>
<td>78</td>
<td>1</td>
<td>Transfer machine control panel signals → channels/spindles</td>
<td>PLC machine data not set for signals from/to channel PLC machine data not set for signals from/to spindle Parameterized channel No. or spindle No. too large</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>79</td>
<td>1</td>
<td>Transfer machine control panel signals → DB axes</td>
<td>PLC machine data not set for signals from/to axis Number of parameterized axes &gt; 30</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>88</td>
<td>1</td>
<td>Mode lamp</td>
<td>PLC MD signals from/to channel not set Parameterized channel No. &gt;4</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>89</td>
<td>1</td>
<td>Reading of block start address</td>
<td>Block type not permitted Address list does not exist Address list insufficient</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>113</td>
<td></td>
<td>Symmetrical tool search</td>
<td>No messages</td>
</tr>
</tbody>
</table>

END OF SECTION
# 5 Parameterization Errors Spindle/Axis

The Safety Integrated service data are described in the SINUMERIK Safety Integrated documentation (Description of Functions).

The Service numbers can be found under DIAGNOSIS in the Service display Axes/Spindles menu.

<table>
<thead>
<tr>
<th>Service number</th>
<th>Significance</th>
<th>Remedy General</th>
<th>Remedy Axis</th>
<th>Remedy Spindle</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>Sampling ratio incorrect</td>
<td>MD 155</td>
<td>MD 1396*</td>
<td>MD 466*</td>
</tr>
<tr>
<td></td>
<td>and/or with SW 5.4 and higher: The monitoring cycle set for Safety Integrated via MD 40010 is not a multiple of the position control cycle for this axis.</td>
<td></td>
<td>MD 40010</td>
<td>MD 40010</td>
</tr>
<tr>
<td>301 to 307</td>
<td>(reserved)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>308</td>
<td>Incorrect increment weighting</td>
<td>MD 364*</td>
<td>466*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>368*</td>
<td>456*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1208*</td>
<td>524*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1212*</td>
<td>468*</td>
<td></td>
</tr>
<tr>
<td>309</td>
<td>Incorrect actual-value resolution</td>
<td>MD 1116*</td>
<td>1204*</td>
<td>458*</td>
</tr>
<tr>
<td>310 to 311</td>
<td>(reserved)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>312</td>
<td>a) Error in encoder speed ratios (MD value = 0)</td>
<td>MD 3032*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) Speed ratios not 1:1 for axis with distance-coded measuring system</td>
<td>MD 3060*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MD 3064*</td>
<td>2407*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>to 3092*</td>
<td>2408*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>to 2415*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>313</td>
<td>(reserved)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>314</td>
<td>Illegal servo gain $K_v$ factor</td>
<td>MD 252*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>260*</td>
<td>435*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>256*</td>
<td>to 442*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>468*</td>
<td></td>
</tr>
<tr>
<td>315</td>
<td>(reserved)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>316</td>
<td>Illegal modulo value/axis is not a rotary axis</td>
<td>MD 344*</td>
<td>564*</td>
<td></td>
</tr>
<tr>
<td>317 1)</td>
<td>Position control cycle LA/LS is not the same</td>
<td>MD 1396*</td>
<td>466*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Position control cycle FA/FS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>318 1)</td>
<td>Incorrect LA/LS/FA/FS number parameterized</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) SW 3 and higher
<table>
<thead>
<tr>
<th>Service number</th>
<th>Significance</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>General</td>
</tr>
<tr>
<td>319</td>
<td>Illegal maximum speed (scaling overrun)</td>
<td>MD 264* to 403*</td>
</tr>
<tr>
<td>320</td>
<td>(reserved)</td>
<td>MD 312* to 465*</td>
</tr>
<tr>
<td>321</td>
<td>Feedforward control parameterization incorrect</td>
<td>MD 168*</td>
</tr>
<tr>
<td>322</td>
<td>Incorrect clock cycle setting</td>
<td>MD 1800*</td>
</tr>
<tr>
<td>323</td>
<td>Illegal position control resolution 1)</td>
<td>MD 200*</td>
</tr>
<tr>
<td>324</td>
<td>Incorrect C axis assignment: (axis does not exist) no spindle encoder available 2)</td>
<td>MD 364* to 368*</td>
</tr>
<tr>
<td>325</td>
<td>Position control sampling time for C axis ≠ position control sampling time for spindle</td>
<td>MD 1396*</td>
</tr>
<tr>
<td>326</td>
<td>Incorrect measuring gear</td>
<td>MD 364* to 455*</td>
</tr>
<tr>
<td>327</td>
<td>Measuring systems 1 and 2 of an axis are assigned to one distance-coded linear scale or an absolute encoder has also been defined. SW5 and higher: An EnDat absolute encoder without zero marker has been defined.</td>
<td>MD 1808*</td>
</tr>
<tr>
<td>328</td>
<td>On reparameterization of the machine data of the QEC, invalid values have been found. Possible causes are: • The characteristic of the conventional QEC has been incorrectly parameterized. – The MD 1244* must be less than MD 1248*. – The MD 1248* must be less than 100 x MD 1252*. – Internal formats have been exceeded with the characteristic parameterization. • In the neural QEC, the following errors have been found. – The learning rate MD 1368* must not be 0. – The measuring time MD 1376* must not be 0. – The neural QEC has been activated (MD 1812*, bit 0 = 1) although there is no valid parameterization of the function parameters. This can also occur at POWER ON if the person responsible for installation and start-up has forgotten to save to a boot file.</td>
<td>MD 1244* to 1368*</td>
</tr>
</tbody>
</table>

1) or position control resolution (spindle) = position control resolution (axis)

2) or mode group (spindle) = mode group (axis)
<table>
<thead>
<tr>
<th>Service number</th>
<th>Significance</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>329 (SW 3 and higher)</td>
<td>Errors in setpoint/actual value assignment. Double assignment of measuring circuit input/output. and/or With SW 5.4 and higher: The measuring circuit connection (MD 4100*) allocated to SI has already been assigned to another axis/spindle. Note: If SI is operated with an encoder, the second measuring circuit can no longer be allocated freely.</td>
<td>General: MD 200* MD 384* MD 1388* MD 1824* Bit 2 Axis: MD 400* MD 460* MD 522* Spindle: MD 4100*</td>
</tr>
</tbody>
</table>
| 330 (SW 4 and higher) | Invalid values have been entered in the machine data for Master/Slave mode (MD 1336*/2700* oder 1340*/2701*):  
  • The axis/spindle entered there does not exist.  
  • A rotary axis has been assigned to a linear axis or vice versa. Only the following are allowed: 2 rotary axes or 2 spindles or 2 linear axes or 1 rotary axis to a spindle.  
  • In a specific/C-axis combination, different axes/spindles have been assigned.  
  • An axis has been entered in the MD 1340*/2701*.  
  • The entered axis/spindle has a different position controller cycle.  
  • Parameterized axis/spindle is contained in a different mode group | General: MD 1336* MD 1340* Axis: MD 2700* Spindle: MD 2701* | |
| 331 (SW 5.4 and higher) | Errors have occurred during conversion of SI-MD. | General: MD 4184* to 4196* to 4200* to 4244* to 4248* to 4260* to 4180*  
  Spindle: MD 4184* to 4196* to 4200* to 4244* to 4248* to 4260* to 4180* | Evaluate detailed information in the SI SERVICE SCREEN (service data 1000). |