SIEMENS

SINUMERIK 840C
SIMODRIVE 611–D

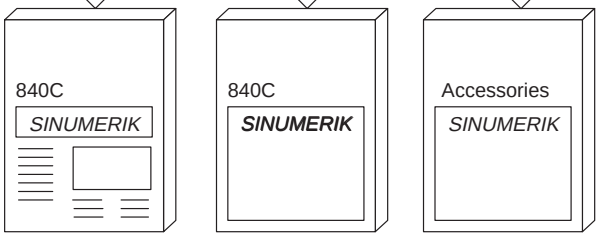
Diagnostics Guide

07.97 Edition

User Documentation

SINUMERIK 840C/OEM Version for Windows

General Documentation

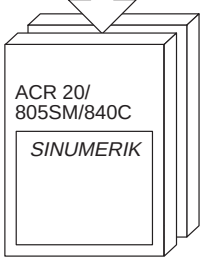


Brochure

Catalog NC 36

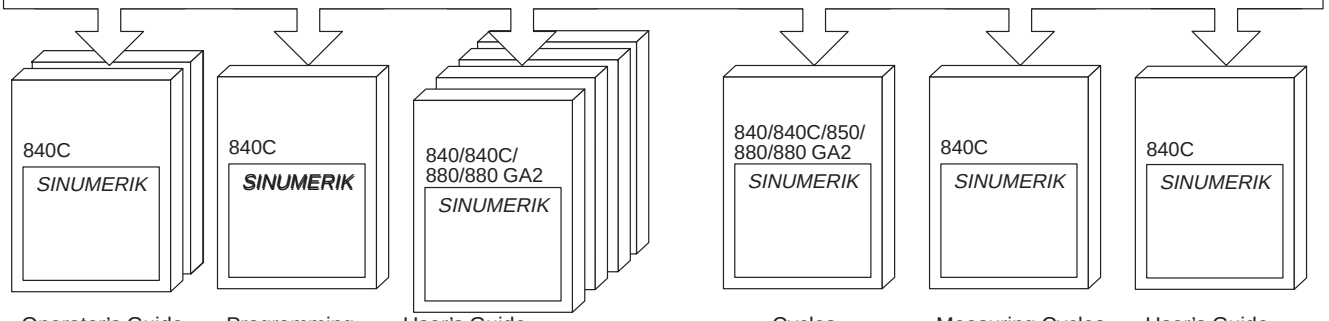
Catalog NC Z

User/Manufacturer/ Service Documentation



Link to SINEC L2–DP with Module
- IM 328-N, Slave
- IM 329-N, Master and Slave

User Documentation



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- Drilling/Boring and Milling Parts 1+2
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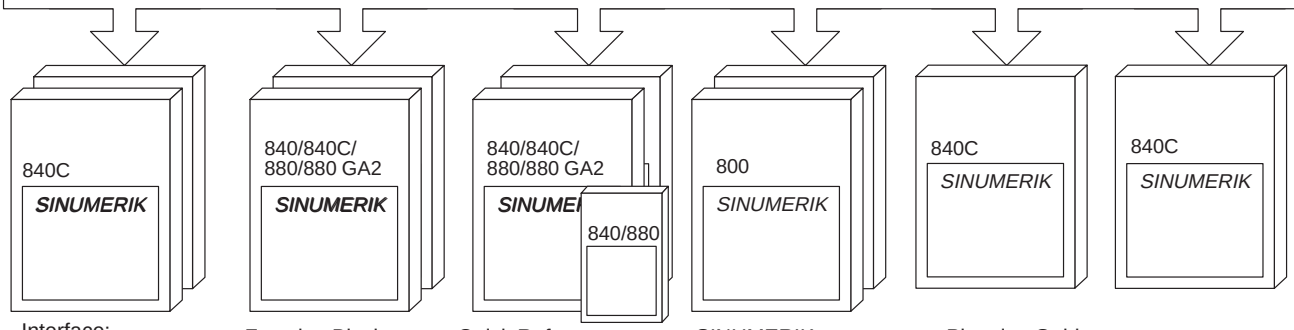
- On PC
- Environment Description 840C

Cycles, Programming Guide

Measuring Cycles Version 20 User's Guide

User's Guide Simulation – Milling and Turning

Manufacturer Documentation



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- CL800 Cycle Language
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Planning Guide Graphic Programming System

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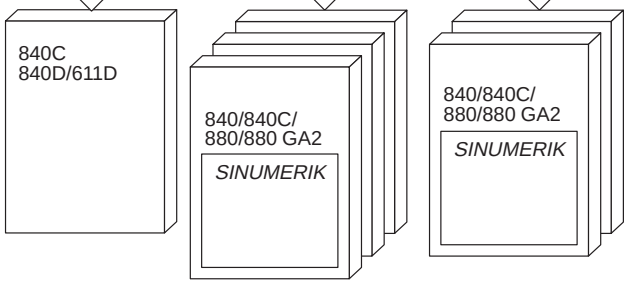

Description of Functions Safety Integrated

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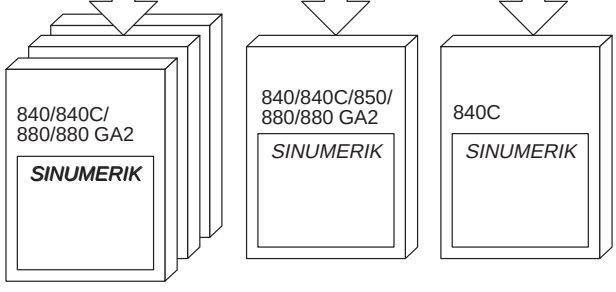

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SIEMENS

SINUMERIK 840C
SIMODRIVE 611–D

Diagnostics Guide

User Documentation

Valid for

Control	Drive
SINUMERIK 840C/CE (Standard/Export version)	SIMODRIVE 611–D
Software Version	Software Version
1.x	
2.x	
3.x	1.x
4.x	2.x
5.x	3.x
6.x	4.x

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.

Edition	Order No.	Remarks
09.95	6FC5198–5AB40–0BP0	**A**
04.96	6FC5198–5AB40–0BP1	**C**
08.96	6FC5198–5AB40–0BP2	**C**
07.97	6FC5198–6AB40–0BP0	**C**

This manual is included in the documentation on CD–ROM (**DOCONCD**)

Edition	Order No.	Remarks
09.97	6FC5 198–6CA00–0BG0 (Read)	C
09.97	6FC5 198–6CB00–0BG0 (Print)	C
09.97	6FC5 198–6CC00–8BG0 (Net)	C

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Other functions not decribed 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.

Order No. 6FC 5198–6AB40–0BP0
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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.

Contents

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

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

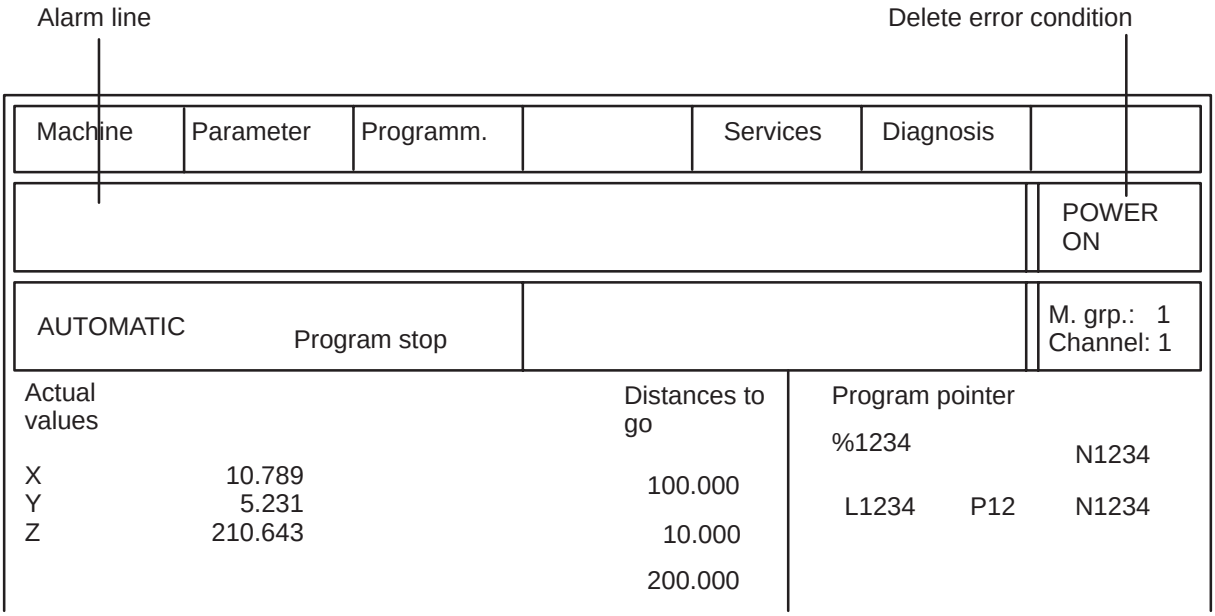
Key	Effect of cancelling alarms
 Acknowledgement	An active NC program is not aborted but only stopped. After eliminating the error, it is possible to continue execution of the NC program from the point at which it was stopped.
 Reset	Execution of an active NC program is aborted. After eliminating the error, the NC program must be restarted.
POWER ON	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. **Caution!** On switching off the control, the contents of the NCK part program memory are lost.

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

Please note the information provided by the machine tool manufacturer.

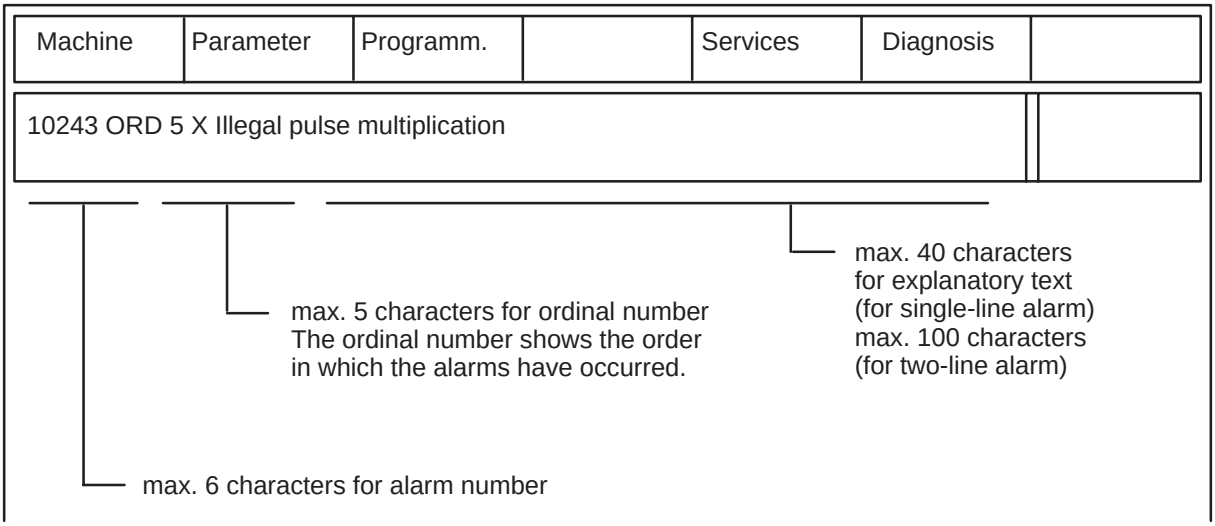
1.3 Display of the alarms in the alarm line

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.

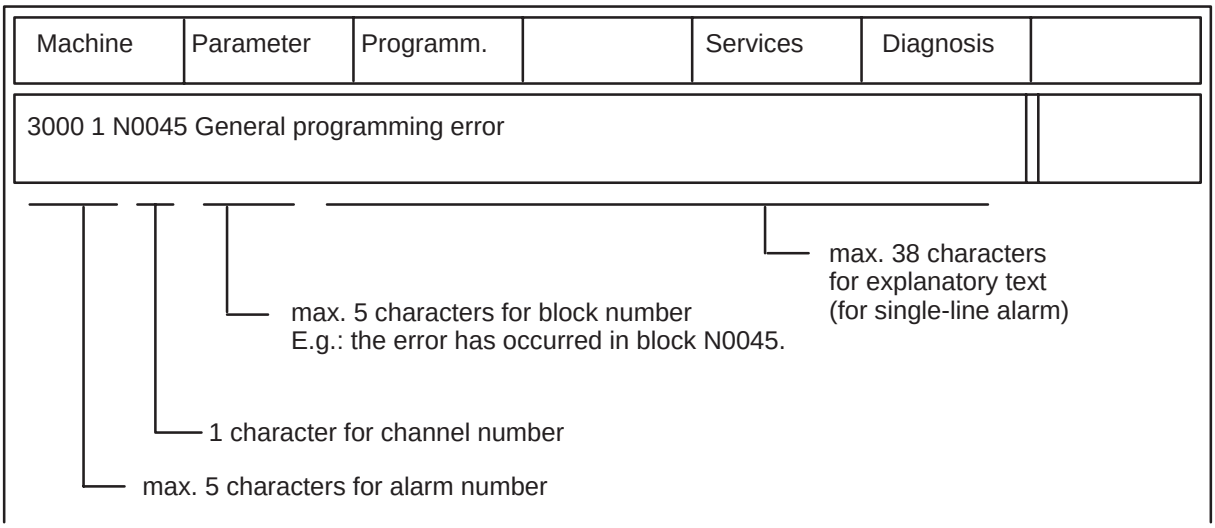


There are three types of display representation for alarm messages: Types A, B and C.

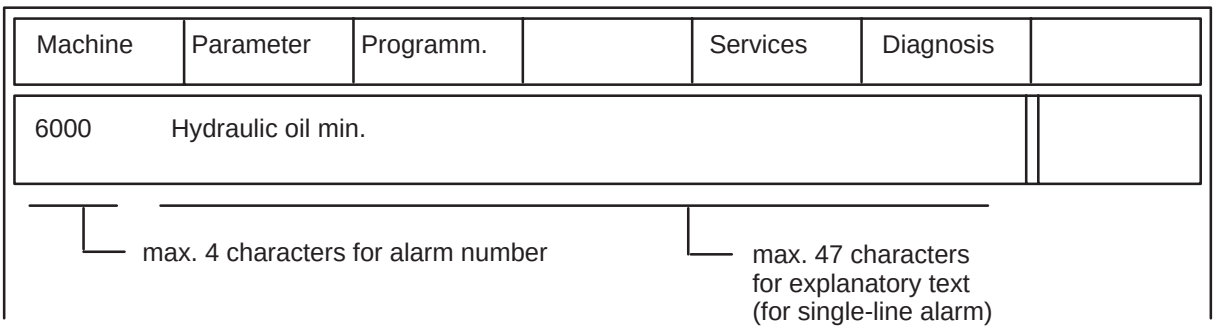
Example of display representation Type A: Alarm display in sequence order



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



Example of display representation Type C:



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.

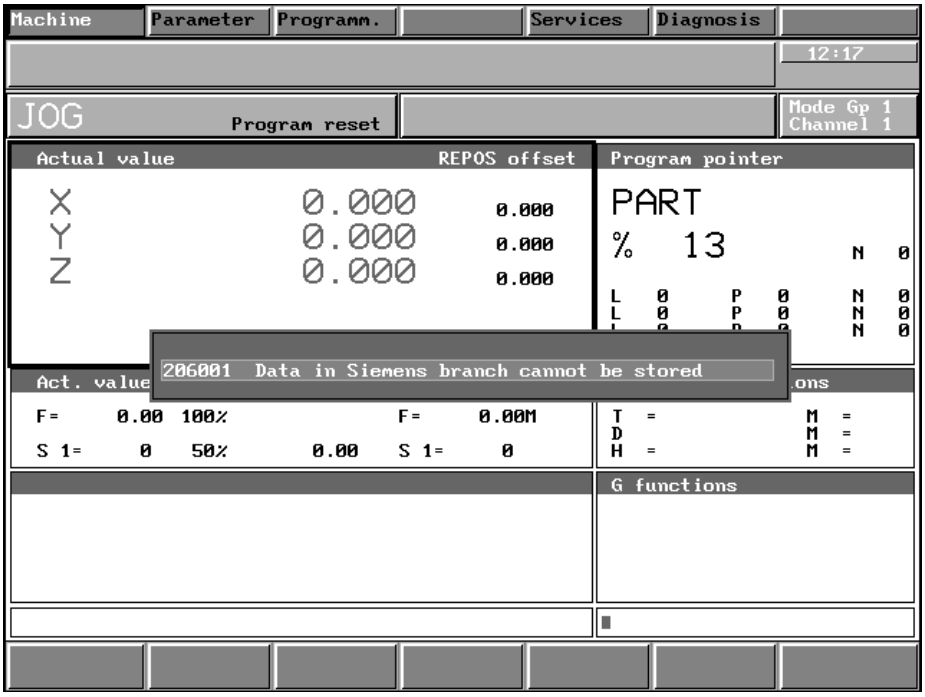


Fig. 1.1 Example 1 dialog box

Dialog box with OK softkey

The dialog box can be acknowledged with the OK key.

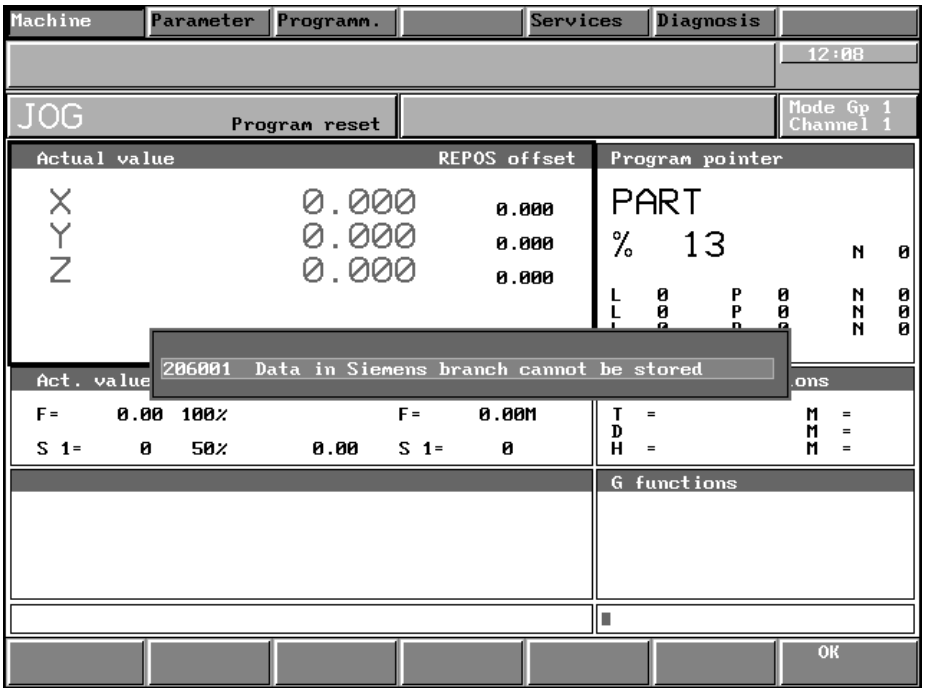


Fig. 1.2 Example 2 dialog box

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.

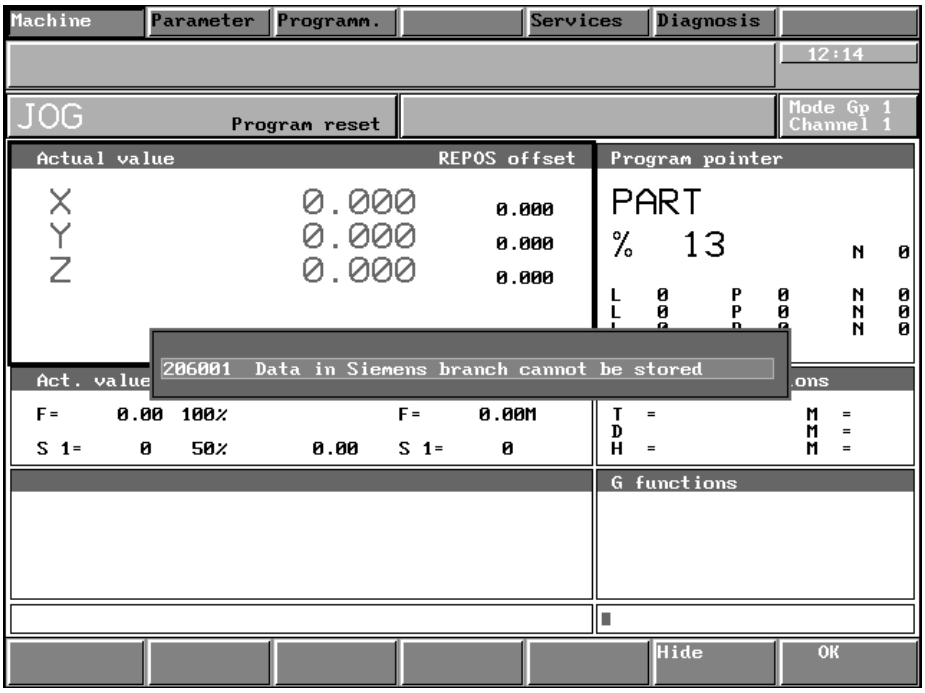


Fig. 1.3 Example 3 dialog box

1.5 Priority of alarms

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

Priority range	Alarm type
0 – 100	Power on
101 – 200	Reset
201 – 300	Cancel
301 – 500	Message
301 – 500	PLC alarm
1000	Diagnosis

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.

Alarm number	Alarm text	Means of cancel.
Scan:	Specifies in which state the alarm occurs.	
Effect:	Specifies the sphere of influence of processing.	
Explanation:	States the reasons for the alarm.	
Remedy:	Instructions for eliminating the alarm state.	

1 Battery: Data loss at power off! **Acknowledgement key**

Scan POWER ON
Cyclic

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
Cyclic

Effect The second temperature monitoring threshold has been triggered because the ambient temperature is too high. NC program is not interrupted.

Explanation 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.

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

3 Fan failure **Acknowledgement key**

Scan POWER ON
Cyclic

Effect Fan monitoring is triggered because of incorrect fan functioning.

Explanation 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.

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

4 System of units not allowed **POWER ON**

Scan
- POWER ON
- After modification of NC machine data

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

Exlanation 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 = $0.5 \bullet 10^{-4}$ degrees, the function bit “High-resolution rotary axis” must be set.

Remedy 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.

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

Remedy The whole NCK unit must be re-installed.
Eliminate hardware fault.

6 Start-up due to system error **Acknowledgement key**

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 **Acknowledgement key**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **Cancel**

Scan POWER ON
Cyclic

Effect 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 **POWER ON**

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 **POWER ON**

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

27 Data input disabled V.24 **POWER ON**

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

Effect
No data has been read in

Explanation
- The “Cycle lock” interface signal (DB 48 D0.11) is present
- An attempt has been made to read in NC machine data in normal mode
- An attempt has been made to transfer UMS data to the NC although the UMS was not enabled or not plugged in.

Remedy
- Reset DB 48 DW 0 bit 11 via PLC STATUS
- Enter new NC machine data

Note
Applies up to SW 2 only

29 Block >254 characters V.24 **POWER ON**

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

Effect
- Computer link transmission interrupted
- Last block declared invalid

Explanation
The block read in has more than 254 characters (counting all characters read in, including blanks, CR, LF, 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

30 Part program memory overflow V.24 **POWER ON**

Scan
- While reading programs in via the computer link of the NC

Effect
- Computer link transmission interrupted
- Last block declared invalid

Explanation
The maximum memory space for part programs is already assigned

Remedy
- Delete old programs to release memory for the reading in of new programs. The number of the faulty block is displayed.

Note
Applies up to SW 2 only

31 No more part program input V.24 **POWER ON**

Scan
- On reading in via computer link

Effect
No data has been read in

Explanation
The part program memory available has been used up.

Remedy
- Read and delete old part programs no longer required in order to provide more memory.

Note
Applies up to SW 2 only

32 Data format error V.24 **POWER ON**

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

Effect
- Computer link transmission interrupted
- Last block declared invalid

Explanation
- The number of decades used after an address is not permissible
- The decimal point occurs in the wrong place
- Part programs or subroutines are not defined or concluded correctly (check header)

Remedy
Check the program to be read in. The number of the faulty block is displayed.

Note
Applies up to SW 2 only

33 Programs different V.24 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

Scan POWER ON

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 **POWER ON**
50 Insufficient memory for block buffer **POWER ON**

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 **POWER ON**

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

60 Internal software error **POWER ON**

Scan Cyclic

Effect Computer stops, machining stops, interlocking of NC Start

Explanation The software has recognized an internal error but cannot rectify it.

Remedy Notify service.

67 1st computer link not ready for operation **POWER ON**

Scan Cyclic or after POWER ON

Effect Message frame transfer between host computer and NC is not possible

Explanation 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.

Remedy
- Check programming of interface module
- Check machine data settings for computer link
- Check whether host computer is ready or connected

68 2nd computer link not ready for operation **POWER ON**

Scan Cyclic or after POWER ON

Effect Message frame transfer between host computer and NC is not possible

Explanation 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.

Remedy
- Check programming of interface module
- Check machine data settings for computer link
- Check whether host computer is ready or connected

70 Define at least one channel **POWER ON**

Scan
- At POWER ON

Effect
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready relay
- Machining not possible

Explanation At start-up, an incorrect assignment of machine data was made.
The NC will not work without channel assignment.

Remedy Check and correct machine data for channel assignment
- POWER ON

71 Too many real axes **POWER ON**

Scan
- At POWER ON

Effect
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready relay
- Machining stops
- Surplus axes are not shown on the service display

Explanation 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.

Remedy Correct axis-specific machine data bits 564*.
Correct MD 60013.

72 Too many fictitious axes **POWER ON**

Scan
- At POWER ON or warm restart

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

Explanation More fictitious axes than are permitted were defined in axis-specific machine data bits 564* during installation.

Remedy Correct axis-specific machine data bits 564*.

73 Axis preset in wrong mode group **POWER ON**

Scan
- At POWER ON or warm restart

Effect
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready relay
- Machining not possible

Explanation 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.

Remedy Check and correct NC machine data “Axis valid in mode group”.
- Correct program
- POWER ON

74 Too many drives **POWER ON**

Scan
- At POWER ON or warm restart

Effect
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready relay
- Machining stops
- Surplus axes do not appear in the service display

Explanation The total number of spindles and real axes defined during installation is greater than permitted.

Remedy Correct axis-specific machine data bits 564* and spindle-specific machine data bits 521*.

75 Max. number of meas. circuits exceeded **POWER ON**

Scan
- At POWER ON or warm restart

Effect
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Interlocking of NC Ready relay
- Machining stops
- Surplus axes do not appear in the service display

Explanation Output of alarm if too many axes and spindles are defined.

Remedy Reduce the number of axes (MD 564*) and spindles (MD 512*).

Note Axes/spindles that are not assigned to a measuring circuit are included in the number of measuring circuits.

77 Mode group no. of axis invalid **POWER ON**

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 “Axis valid in mode group”
- Perform POWER ON

78 Mode group no. of spindle invalid **POWER ON**

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

79 Mode group no. of channel invalid **POWER ON**

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

80 Error in C axis definition **POWER ON**

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*.

84 Coupled motion grouping defined wrong **POWER ON**

Scan
- At POWER ON
- At warm restart

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).

85 Coupled-motion combination wrong **POWER ON**

Scan
- POWER ON
- Warm restart

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

Explanation An undefined combination has been input in NC machine data for the coupled axis combination.

Remedy Correct machine data and perform a warm restart (see Start-up Guide).

87 Illegal software limit switch **POWER ON**

Scan
- After altering machine data

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

Explanation 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.

Remedy Check machine data for software limit switch and where appropriate correct.

Note Applies up to SW 2 only

88 Interpolation greater than 3D **POWER ON**

Scan
- When executing part programs in AUTOMATIC or MDA

Effect
- Interlocking of NC START
- Interlocking of machining

Explanation 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.

Remedy
- Modify part program
- Do not execute more than 2 programs at once

89 More than two 3D interpolations **POWER ON**

Scan
- When executing part program blocks in AUTOMATIC or MDA

Effect
- Interlocking of NC START
- Machining stops

Explanation More than 3 axes have been programmed in more than 2 channels in the NC in one program block in each case.

Remedy
- Modify program
- Do not execute more than 2 programs at once

90 Customer UMS invalid **POWER ON**

Scan
- At POWER ON when UMS bit is set

Effect Interlocking of NC START until alarm is acknowledged.
Standard UMS is loaded.

Explanation Customer UMS faulty or >512 KB.

Remedy Check customer UMS.

Note Applies up to SW 2 only

91 ID no. in UMS header faulty **POWER ON**

Scan
- At POWER ON and with activated UMS data

Effect Interlocking of NC START until alarm is acknowledged.

Explanation 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.

Remedy Check WS 800A software version.

Note Applies up to SW 3 only

91 UMS invalid **POWER ON**

Scan At POWER ON and activated UMS data

Effect Interlocking of NC START until alarm is acknowledged.

Explanation 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.

Remedy Check MD 60000 or install the correct UMS.

Note Applies as from SW 4

93 Wrong UMS selector **POWER ON**

Scan
- At POWER ON and with activated UMS data

Effect
- Interlocking of NC START until alarm is acknowledged.

Explanation The address lists preset by the NC workstation do not contain the set selectors required for error-free processing of a UMS.

Remedy Check the system software of the NC workstation, or have it checked.

94 Wrong UMS identifier **POWER ON**

Scan
- At POWER ON and with activated UMS data

Effect
- Interlocking of NC START until alarm is acknowledged.

Explanation An incorrect identifier is programmed in the UMS.

Remedy Check UMS and NC workstation software.

95 Wrong number in GSB **POWER ON**

Scan
- At POWER ON and with activated UMS data

Effect
- Interlocking of NC START until alarm is acknowledged.

Explanation Numbers have been used in the modified system area (GSB) which are outside the reserved areas.

Remedy Check the numbers used in the modified system area.

96 Language in UMS not available **Acknowledgement key**

Scan At UMS analysis (POWER ON of control not during start-up)

Effect UMS is connected in its basic language

Explanation Two-language UMS does not contain the language activated in the control

Remedy Put correct UMS in control

Note Applies up to SW 1 only

101 Prewarning replace battery **Acknowledgement key**

Scan POWER ON
Cyclic

Effect Battery monitoring is activated if battery voltage falls below the advance warning voltage threshold.

Explanation The working process is not interrupted
User is advised to replace the backup battery to avoid the risk of data loss – see alarm 1.

Remedy Replace battery when control is switched on

102 Prewarning overtemperature **Acknowledgement key**

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 **POWER ON**

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 occured 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 **POWER ON**

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 **POWER ON**

Scan At POWER ON

Parameters: Block number (4–digit) Nxxss:
3rd and 4th digit: Number of protection zone 00–09 = Protection zone 1–20
1st and 2nd digit: Error identifier (see explanation)

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
A non–existing axis has been specified in the machine data 3800*, 3802*, 3804*.

02=Motion axes not in same mode group
Axes that are not in same mode group have been specified In the machine data 3800*, 3802*, 3804*.

03=Error in monitoring reference
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 1 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.

04=Protection zone dimensions not available
The protection zone dimensions specified in the machine data 3812*, 3814*, 3816* are all=0.

05=Negative protection zone dimension
At least one of the protection zone dimensions specified in the machine data 3812*, 3814*, 3816* is negative. But only positive dimensions are allowed.

06=Protection zones not defined in same plane
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.

1st possibility:
The plane of 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.

2nd possibility:
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** **Reset key**

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” has elapsed
- 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** **Reset key**

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 6FX1132–5BAxx 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** **POWER ON**

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** **POWER ON**

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** **POWER ON**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

Scan
- On each axis movement

Effect
- 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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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

172* **Working area limitation plus** **Reset key**

Scan When executing a part program

Effect
- Interlocking of NC START
- Machining stops

Explanation The working area limitation specified in the setting data has been reached.

Remedy
- Check the working area limitation in the setting data
- Check the program
- Program G26 with different values

176* **Working area limitation minus** **Reset key**

Scan When executing a part program

Effect
- Machining stops
- Interlocking of NC START

Explanation The working area limitation minus preset in the setting data of the NC has been reached.

Remedy
- Check the working area limitation in the setting data
- Check the machining program
- Program G25 with different values

180* **Axis active in several channels** **Reset key**

Scan When executing a part program

Effect
- Interlocking of NC START
- Machining stops

Explanation When executing two or more programs in different channels at the same time, one axis has been programmed in both programs (channels).

Remedy
- Check both programs
- Insert L999 or @714
- Stop a channel by pressing NC STOP

Note Channel-specific

188* **HW limit switch plus** **Reset key**

Scan Cyclic

Effect
- Interlocking of NC START
- Direction key in the direction of approach disabled
- Machining stops

Explanation The limit switch is approached in the plus direction or triggered by other errors.

Remedy
- Travel away in the opposite direction
- Check PLC user program
- Check limit switches

192* **HW limit switch minus** **Reset key**

Scan Cyclic

Effect
- Machining stops
- Interlocking of NC START
- Direction key disabled in approach direction

Explanation The machine limit switch in the minus direction has been approached or has been activated by other errors.

Remedy
- Travel away in the opposite direction in JOG mode
- Check limit switches
- Check PLC user program

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

2023 Invalid type of tool **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Acknowledgement key**

Scan When executing a part program

Effect
- Interlocking of “NC START”

Explanation 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 ”Referenzpunkt erreicht” war.

Remedy
- Approach reference point
- The alarm does not occur if the NC machine data “NC START without reference point” is set

2040 Program disabled **Reset key**

Scan When executing a part program

Effect
- Machining stop

Explanation The program (MPF, SPF) called has not been enabled for processing.

Remedy Enable

Note Alarm is displayed with reference to channel

2041 Program does not exist in memory **Reset key**

Scan When specifying a program number and then pressing NC START

Effect
- Interlocking of NC START
- Machining stops

Explanation
- The preselected program is not in the memory
- A non-existent subroutine is called in the main program
- The contour for the stock removal cycle does not exist
- Select “Overview”

Remedy
- Check prgram

Note Channel-specific

2042 Parity error in memory **Reset key**

Scan When executing a part program

Effect
- Interlocking of NC START
- Machining stops

Explanation One or more characters in the memory have been corrupted so that they can no longer be recognized
- These characters are displayed in the “Correction block” or in the part program under “Programming” as “?”

Remedy
- Clear part program block and re-enter

Note Channel-specific

2043 Program error in transformation **Reset key**

Scan When executing a part program

Effect
- Interlocking of NC START
- Machining is interrupted

Explanation
- Programming actual axes with transformation selected
- Programming fictitious axes with transformation deselected
- Selecting transformation although transformation has already been selected
- Programming traversing movements in the selection block of transformation

Remedy
- Correct program

Note Channel-specific

2044 Error execution external **Reset key**

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 **Reset key**

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

Note Channel-specific

2047 Option not available **Reset key**

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

Note Channel-specific

2048 Circle end point error **Reset key**

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

Note Alarm is displayed with reference to block and channel

2049 Axis/spindle converter not available **Reset key**

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 channel

2050 Rotary axis path is too small with G98 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

Scan When executing a part program

Effect
- Machining stops
- Interlocking of NC START

Explanation
- Revolutional feedrate G95 greater than 50 mm/min. has been programmed
- No revolutional 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 **Reset key**

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 **Reset key**

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 **Reset key**

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 limt switch active”

Note Alarm is displayed with reference to block and channel

2066 Thread increase/decrease too high **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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. **Reset key**

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 L_F (Z axis missing
N20... X90 B10 L_F

Remedy
- Check program
- Cancel alarm using Reset

Note Alarm is displayed with reference to block and channel

2081 Block not allowed with TRC **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 > 99.99999

Remedy Note the valid range of values for scale factor:
(P = 0.00001 to 99.99999)

Note Alarm is displayed with reference to block and channel

2161 Illegal scale modification **Reset key**

Scan When working in AUTOMATIC or MDA

Effect
- Interlocking of NC START
- Machining is interrupted

Explanation With a scale factor of $\gg 1$, 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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **CANCEL**

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 **Reset key**

Scan On transformation selection

Effect
- Interlocking of NC START
- Machining stops

Explanation
- The type of transformation is not defined
- The transformation axes are in different mode groups
- The option of selecting transformation is not available
- Transformation has been selected in an illegal channel
- Transformation is defined several times or wrongly
- Transformation data block has been declared invalid by alarm 3087 (error in transformation data)

Remedy
- Check transformation data block
- Check program
- Order option
- Check channel number

Note Alarm is displayed with reference to block and channel

2190 Transformation axes assigned **Reset key**

Scan On transformation selection

Effect
- Interlocking of NC START
- Machining stops

Explanation A transformation has been selected whose actual axes are also used in another channel in a parallel transformation.

Remedy
- Wait until transformation is deselected in the parallel channel
- Check program

Note Alarm is displayed with reference to block and channel

2191 Transformation in zero **Reset key**

Scan On selecting transformation in AUTOMATIC or MDA

Effect
- Interlocking of NC START
- Machining is interrupted

Explanation Transformation was selected at a time when one or more axes involved in transformation have the actual position ZERO.
When selecting TRANSMIT, the X axis (transverse axis) must not have the actual position ZERO.

Remedy Before selecting transformation, set the actual axes of the transformation to be selected to permissible actual positions. (With TRANSMIT set the X axis to $X \neq 0$)

Note Alarm is displayed with reference to block and channel

2192 Following error comp. not possible **Reset key**

Scan At the beginning of a threading block, if the option has been selected.

Effect Machining is stopped and NC START is interlocked

Explanation The servo gain (K_V) factors of the axes involved in thread cutting are too small.

Remedy Check the servo gain factors of the axes involved in thread cutting and correct if necessary–

2193 Wrong axis/spindle operation **Reset key**

Scan When switching over from C axis to spindle

Effect
- Machining stops
- Interlocking of NC START

Explanation A spindle has been programmed in C axis mode or a C axis has been programmed in spindle mode

Remedy Change C axis/spindle mode

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 **Reset key**

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 **Reset key**

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.
Prerequisite: Enable by means of PLC IS “Emergency retraction enabled”.

Remedy 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 ocurred 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 **Acknowledgement key**

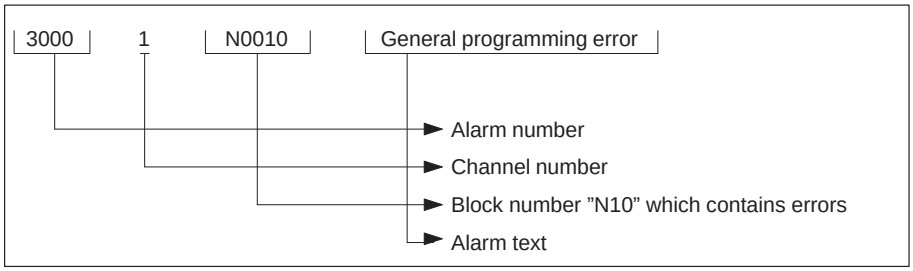
Explanation

- 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:



Note Alarm is displayed with reference to channel

3001 Number of geometry parameters > 5 **Acknowledgement key**

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 **Acknowledgement key**

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 — Acknowledgement key

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 G0 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 G0 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 — Acknowledgement key

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 permitted)
- Incorrect angle selected for sine (–360 (0) + 360 permitted)
- Two constants used for:
  Angle from two vector components, OR, EXOR, AND, NAND
- Incorrect characters input for logical functions (0, 1 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, G11, 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, G110, G111, G112
- 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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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)
- 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

3011 Axis twice or too many axes **Acknowledgement key**

Scan
- When executing a part program

Effect
- Machining stops

Explanation
- An axis has been programmed twice in the same block
- More than five axes 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

3012 Block does not exist in memory **Reset key**

Scan
- On block search or jumps in the part program

Effect
- Machining stops
- Interlocking of “NC START”

Explanation
- On block search, the block number is not available in the program.
- On jumping in the program, the programmed block number cannot be found.
- Program which does not conclude with M30, M17
- The alarm is displayed
  – 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)
  – when backward jumps or jumps to the present block location have been programmed

Remedy
- Check the part program as regards the correct block number target or the correct program conclusion with M30/M02 or M17.
  – Increase maximum memory for “Execution from external” (MD 30)
  – Reduce jump distance
  – Delete backward jumps or jumps to the present block location.

Note
Alarm is displayed with reference to block and channel

3014 Axis disabled in channel **Acknowledgement key**

Scan
- When executing a part program

Effect
- Machining stops

Explanation
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”.

Remedy
- Observe the programming notes of the machine manufacturer.
- Correct machine data if necessary.

Note
Alarm is displayed with reference to block and channel

3015 Main block not in memory **Acknowledgement key**

Scan
- On automatic block search

Effect
- Processing is not started

Explanation
No main block was found in front of the target block during an automatic block search.

Remedy
- Check target block
- Use another block search

Note
Channel-specific
Applies up to SW 2 only

3016 Error in external data input **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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. **Acknowledgement key**

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.

3022 Too many spindles programmed **Reset key**

Scan
- When executing part program blocks in AUTOMATIC or MDA

Effect
- Function is not executed

Explanation Only one spindle may be programmed in any one part program block.

Remedy Divide spindle programming into two or more blocks.

3023 Wrong spindle position in setting data **Reset key**

Scan 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).

Effect
- Interlocking of NC START
- Machining stops

Explanation An illegal value has been entered in the spindle setting data for oriented spindle stop (M19).

Remedy Enter legal value in setting data
permissible range 0 – 359.99

3024 Display description missing **Acknowledgement key**

Scan
- On display selection

Effect
- Selected display does not appear

Explanation Using a programmed softkey, an attempt has been made to select a display not available in the UMS or system memory.

Remedy With the aid of the NC workstation, the programmed display number and softkey function must be checked.

3025 Display description has errors **Acknowledgement key**

Scan
- On display selection

Effect
- Selected display does not appear

Explanation On checking the display information an error has been discovered, e.g.:
- The programmed display type is unknown
- Block increment for the extended table display is incorrect (must always be 1 for absolute display)

Remedy Check the display description with the NC workstation, in particular the information for data group, data type and format.

3026 Fixed-text component too large **Acknowledgement key**

Scan
- On display selection via softkey

Effect
- Not all fixed texts are displayed

Explanation The programmed fixed text part in the display description is too large.

Remedy Using the NC workstation, reduce the fixed text part of the display or split up the contents over several displays.

3027 Graphics section too large **Acknowledgement key**

Scan
- On display selection

Effect
- No graphics display

Explanation The programmed graphics part in the display description is too large
(max. 4 Kbytes).

Remedy Using the NC workstation, reduce the fixed text part of the display or split up the contents over several displays.

3029 Window beyond configuring area **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 subdisplay linking which can lead to recursion.

3039 No multichannel display option **Acknowledgement key**

Scan
- Cyclic

Effect
- Fixed display parts only are displayed

Explanation 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.

Remedy Set multi-channel display option.

3040 Field/variable cannot be displayed **Acknowledgement key**

Scan
- Cyclic

Effect
- Not all variable values/texts are displayed

Explanation
- Field/variable incorrectly configured (data group not available)
- Field/variable programmed with too few places
- Field/variable overflow (value range exceeded)
- Format error; format cannot be changed
- Illegal pointer

Remedy
- Check field/variable with NC workstation and if appropriate delete and re-enter.

If the alarm occurs with standard displays then the value range has been exceeded.

3041 Too many fields/variables **Acknowledgement key**

Scan
- Cyclic

Effect
- Not all values/texts are displayed

Explanation
- The display description is too long so that the internal buffer is no longer adequate for processing the display.
- More than one display (main displays/secondary displays) have been configured with data selector.

Remedy
- Using the NC workstation, the desired information must be reduced or divided amongst more than one display. A maximum number of fields/variables cannot be specified since the fields/variables have different formats and positions.
- Configure only one display with data selector in conjunction with other displays.

3042 Error in dynamic graphics section **Acknowledgement key**

Scan
- Cyclic

Effect
- Dynamic graphics (columns) not entirely displayed

Explanation 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.

Remedy Reconfigure the display at the NC workstation, reduce the variable display parts and dynamic graphics.

3043 Error: NCK fixed display to MMC **Acknowledgement key**

Scan
- On display selection

Effect
- Not all fixed texts are displayed

Explanation An error has occurred during transmission of fixed texts e.g.: delete window, fixed texts, etc. from NCK to MMC.

Remedy Activate notebook for I code and send message to
- System Support (system program change required)

3044 Error: NCK display update to MMC **Acknowledgement key**

Scan
- Cyclic

Effect
- No dynamic display parts are displayed

Explanation An error has occurred during transmission of dynamic display parts such as variable values/texts from the NCK to MMC.

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

3045 Error: NCK fixed graphics to MMC **Acknowledgement key**

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 **Acknowledgement key**
as from SW 5.4: **POWER ON**

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 **Acknowledgement key**
as from SW 5.4: **POWER ON**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

Scan
G27 programmed with active DRF
Setting data 564* not provided with values

Effect
- Interlocking of NC START

Remedy
Deselect DRF

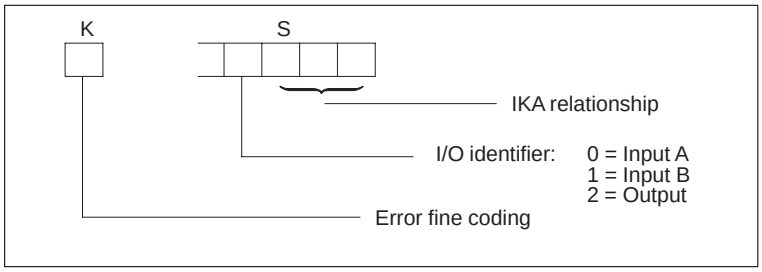
Note
Alarm is displayed with reference to channel

3098 Error in IKA input/output data **CANCEL**

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:



Error fine coding:
1; Error = “Wrong group”
2; Error = “Illegal type of axis”
3; Error = “Wrong axis number”
4; Error = “Axis not available”
5; Error = “Not a real axis”
6; Error = “Wrong R parameter number”
7; Error = “Illegal type of axis”

Remedy
Enter the correct values

3100 Transfer buffer already assigned **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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) **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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

3167 T/H word not acknowledged **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Reset key**

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 **Acknowledgement key**

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 **Acknowledgement key**

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 **Acknowledgement key**

Scan When executing a part program

Effect
- Machining stop
- Interlocking of NC START

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 **Acknowledgement key**

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 **Acknowledgement key**

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.

3239 EPROM cycle overwritten by SPF **POWER ON**

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

3240 Subroutine not read-in **Acknowledgement key**

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

3260 Incorrect parameters “Ext. overstore” **Reset key**

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 lokked by the machine data parameterization.

Remedy Perform no programming or check MD parameterization.

Note Applies as from SW 4

Note Alarm is displayed with reference to channel

3261 Workpiece not available **Reset key**

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

Note Alarm is displayed with reference to channel

3262 Error in NCK FB **Acknowledgement key**

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 CANCEL 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 **Acknowledgement key**

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 **Cancel key**

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 **Acknowledgement key**

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 **POWER ON**

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 **Acknowledgement key**

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 **POWER ON as from SW 2: Reset key**

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 **POWER ON**

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 **Reset key**

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 **Reset key**

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

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 K_V (servo gain) factor by specification of
  – K_V factor (252*)
  – Multgain (260*)
  – Pulse weighting
- Ratio of cycle rate (MD165) to setting for fine interpolation (MD160) or check of MD584* “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** **Reset key**

Scan When the PLC requests a measuring system switchover

Effect
- Interlocking of NC START
- Interlocking of Mode Group Ready
- Setpoint 0
- Servo enable is withdrawn after the time in NC–MD “Cutout delay controller enable” has elapsed
- Follow-up mode

Explanation
- The difference between measuring system 1 and measuring system 2 is greater than the tolerance specified in MD 1216*.

Remedy Check the mechanical parts and find out the reason for the differences in the measuring value acquisition via the 1st and the 2nd measuring system.
Check sign change actual value 2nd measuring system MD 1824* bit 4, if necessary.

1028* **Unable to set reference dimension** **Reset key**

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

Effect
- Interlock of NC Start
- Setpoint 0
- No servo enable
- Follow-up mode

Explanation 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.

Remedy Make sure that the axes are stationary.

1040* **Absolute encoder defective** **POWER ON**

Scan POWER ON

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

Explanation 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.

Remedy 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.

1044* **Battery absolute module** **Acknowledgement key**

Scan Cyclic, every 10 minutes

Effect None

Explanation 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.

Remedy Replace the battery on the absolute module
(see SIPOS absolute encoder description)

1052* **Drive fault** **Reset key**

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

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

Explanation
- Further detailed information on the cause are given in the MMC diagnosis display

Note Applies as from SW 3

1056* **Programmed axis is slave** **Reset key**

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. Setpoings 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** **POWER ON**

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** **POWER ON**

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** **Reset key**

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** **Reset key**

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** **Acknowledgement key**

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** **Acknowledgement key**

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** **Acknowledgement key**

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.** **Reset key**

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** **Acknowledgement key**

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** **Reset key**

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** **Acknowledgement key**

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** **POWER ON**

Scan
- Cyclic

Effect
- Interlocking of NC START
- Machining is interrupted

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** **Reset key**

Scan
- Cyclic (only with linear axes)

Effect
- Interlocking of NC START
- Machining is interrupted
- Set value 0 (abrupt, no deceleration ramp)

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.

1208* **Link factor KF not allowed** **Acknowledgement key**

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

Effect Command is not executed, the previous link factor is maintained. Interlocking of NC start.

Explanation Denominator J=0 is programmed, link factor incorrectly programmed, following axis not programmed.

Remedy Correct link factor

Note Applies as from SW 3

1212* **Overwriting of pos. not allowed** **Acknowledgement key**

Scan When programming a position with GI command.

Effect G command is not executed: interlocking of NC START

Explanation GI positions must not be overwritten (enabled with MD 1844 *, bit 3)

Remedy Correct input

Note Applies as from SW 3

1216* **Reconfiguration/deletion not allowed** **Reset key**

Scan 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)

Effect Interlocking of NC START, NC STOP, i.e. channel is stopped: command is not executed: JOG mode still possible.

Explanation RECONFIGURATION or DELETE CONFIGURATION is not possible until LINK OFF has been set. RECONFIGURATION is only possible after DELETE CONFIGURATION. Program a new configuration block (G401); following axis already exists.

Remedy First set LINK OFF for the GI grouping in question.

Note Applies as from SW 3

1220* **GI configuration not allowed** **Acknowledgement key**

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

Effect Command is not executed. Interlocking of NC START

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

1224* **Change of KF not allowed** **Acknowledgement key**

Scan When a new link factor is entered via G function (from NCK).

Effect The command is not executed, the previous link factor is kept.
Interlocking of NC START

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

Remedy Change default setting if necessary.

Note Applies as from SW 3

1228* Link factor KF not allowed **Reset key**

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 <= /KF/ <= 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 **Reset key**

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 **Reset key**

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 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

1240* Following axis not defined **Reset key**

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 **Reset key**

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

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

Explanation For all GI commands except G401, C axis mode must also be set for the C axis which is to be programmed as a following axis. When G401 is programmed, a GI grouping must not also be defined for the assigned spindle.

Remedy Correct input.

Note Applies as from SW 3

1248* **Leading axis not defined** **Reset key**

Scan When programming an axis as a following axis or a spindle as a leading spindle which are not defined as such. (from NCK)

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

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

Remedy Correct input.

Note Applies as from SW 3

1252* **Overwriting of GI position not allowed** **Reset key**

Scan When programming a position with GI command.

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

Explanation The GI positions cannot be overwritten (enable with MD 1844*, bit 3)

Remedy Correct input

Note Applies as from SW 3

1256* **Retraction axis is following axis** **Reset key**

Scan On decoding the retraction command

Effect None

Explanation 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.

Remedy Select another retraction axis.

Note Applies as from SW 4

1260* **Retraction axis in several channels** **Reset key**

Scan With configuration G425/6

Effect Machining interrupt

Explanation An axis has been programmed as retraction axis that has already been selected in another channel for retraction.

Remedy Remove axis from the retraction block.

Note Applies as from SW 4

1264* **Sel./desel. endl. rot. axis illegal** **Reset key**

Scan On decoding

Effect Machining interrupt

Explanation An endlessly rotating rotary axis programmed for a retraction operation should be switched over to normal axis operation.

Remedy Before deselecting the endless rotary axis, write a G block without this rotary axis.

Note Applies as from SW 4

1268* **IKA path reconfiguration illegal** **Reset key**

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 with G411 an IKA path that is still active.

Remedy Activate an IKA path that is not yet configured. On deselection: Switch IKA inactive.

1272* **Error in IKA path input/output** **Reset key**

Scan When programming G401/411/G412

Effect Interlocking of NC Start, NC Stop

Explanation If an input/output value is specified with G410/G411/412 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** **POWER ON**

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** **Acknowledgement key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **CANCEL**

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** **Reset key**

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** **Reset key**

Scan When executing a part program

Effect
- Machining abort

Explanation The “Endlessly 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** **CANCEL**

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** **Reset key**

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** **CANCEL**

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** **POWER ON**

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** **Reset key**

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** **Reset key**

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

No.	Name	Explanation	Cause, Remedy
0	No error	There is no error in this channel, however an error may have occurred in another channel.	Find the cause in the other channel and interpret the error code
1	Result list 1	Differences in the evaluation of the safe standstill/ safe speed/safe end position functions in the NCK and drive monitoring channel	e.g. through unbalanced activation of the functions via the SGEs
2	Result list 2	Differences in the evaluation of the SN function in the NCK and drive monitoring channel	Check the tolerance of the cams
3	Actual position value	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	Incorrect encoder evaluation (check MDs) different standstill positions stored
4	No cross–comparison	–	–
5	Function enables	MD 4500*, 4504* and MD 1301 are not identical	Enter the same MD values
6	Limit value for SG1	MD 4184* and MD 1331 are not identical	Enter the same MD values
7	Limit value for SG2	MD 4188* and MD 1331 are not identical	Enter the same MD values
8	Limit value for SG3	MD 4192* and MD 1331 are not identical	Enter the same MD values
9	Limit value for SG4	MD 4196* and MD 1331 are not identical	Enter the same MD values
10	Standstill tolerance	MD 4180* and MD 1330 are not identical	Enter the same MD values
11	Upper limit SE1	MD 4200* and MD 1334 are not identical	Enter the same MD values
12	Lower limit SE1	MD 4208* and MD 1335 are not identical	Enter the same MD values
13	Upper limit SE2	MD 4204* and MD 1334 are not identical	Enter the same MD values
14	Lower limit SE2	MD 4212* and MD 1335 are not identical	Enter the same MD values
15	Safe cam 1+ (+ Tolerance)	MD 4216* + MD 4248* and MD 1336 + MD 1340 are not identical	Enter the same MD values
16	Safe cam 1+	MD 4216* and MD 1336 are not identical	Enter the same MD values
17	Safe cam 1– (+ Tolerance)	MD 4232* + MD 4248* and MD 1337 + MD 1340 are not identical	Enter the same MD values
18	Safe cam 1–	MD 4232* and MD 1337 are not identical	Enter the same MD values
19	Safe cam 2+ (+ Tolerance)	MD 4220* + MD 4248* and MD 1336 + MD 1340 are not identical	Enter the same MD values
20	Safe cam 2+	MD 4220* and MD 1336 are not identical	Enter the same MD values
21	Safe cam 2– (+ Tolerance)	MD 4236* + MD 4248* and MD 1337 + MD 1340 are not identical	Enter the same MD values
22	Safe cam 2–	MD 4236* and MD 1337 are not identical	Enter the same MD values
23	Safe cam 3+ (+ Tolerance)	MD 4224* + MD 4248* and MD 1336 + MD 1340 are not identical	Enter the same MD values
24	Safe cam 3+	MD 4224* and MD 1336 are not identical	Enter the same MD values
25	Safe cam 3– (+ Tolerance)	MD 4240* + MD 4248* and MD 1337 + MD 1340 are not identical	Enter the same MD values
26	Safe cam 3–	MD 4240* and MD 1337 are not identical	Enter the same MD values
27	Safe cam 4+ (+ Tolerance)	MD 4228* + MD 4248* and MD 1336 + MD 1340 are not identical	Enter the same MD values
28	Safe cam 4+	MD 4228* and MD 1336 are not identical	Enter the same MD values
29	Safe cam 4– (+ Tolerance)	MD 4244* + MD 4248* and MD 1337 + MD 1340 are not identical	Enter the same MD values
30	Safe cam 4–	MD 4244* and MD 1337 are not identical	Enter the same MD values
31	Position tolerance	MD 4256* and MD 1342 are not identical	Enter the same MD values
32	Reference position tolerance	MD 4252* and MD 1344 are not identical	Enter the same MD values
33	Time/velocity switchover	MD 4264* and MD 1351 are not identical	Enter the same MD values
34	Tolerance time/ SGE switchover	MD 4260* and MD 1350 are not identical	Enter the same MD values

No.	Name	Explanation	Cause, Remedy
35	Delay time pulse deletion	MD 4268* and MD 1356 are not identical	Enter the same MD values
36	Time for pulse deletion check	MD 4272* and MD 1357 are not identical	Enter the same MD values
37	Transition time STOP C to SBH	MD 4276* and MD 1352 are not identical	Enter the same MD values
38	Transition time STOP D to SBH	MD 4280* and MD 1353 are not identical	Enter the same MD values
39	Transition time STOP E to SBH	MD 4284* and MD 1354 are not identical	Enter the same MD values
40	Stop reaction after SG	MD 4508*.4,4508*.5 and MD 1361 are not identical	Enter the same MD values
41	Stop reaction after SE	MD 4508*.2,4508*.3 and MD 1362 are not identical	Enter the same MD values
42	Shut–down speed pulse deletion	MD 4288* and MD 1360 are not identical	Enter the same MD values
43	Memory test stop reaction	–	–
44	Position actual value+limit value SG1	Position actual value (error code 3) different or MD 4184* and MD 1331[0] not equal (error code 6)	–
45	Position actual value–limit value SG1	Position actual value (error code 3) different or MD 4184* and MD 1331[0] not equal (error code 6)	–
46	Position actual value+limit value SG2	Position actual value (error code 3) different or MD 4188* and MD 1331[1] not equal (error code 7)	–
47	Position actual value–limit value SG2	Position actual value (error code 3) different or MD 4188* and MD 1331[1] not equal (error code 7)	–
48	Position actual value+limit value SG3	Position actual value (error code 3) different or MD 4192* and MD 1331[2] not equal (error code 8)	–
49	Position actual value–limit value SG3	Position actual value (error code 3) different or MD 4192* and MD 1331[2] not equal (error code 8)	–
50	Position actual value+limit value SG4	Position actual value (error code 3) different or MD 4196* and MD 1331[3] not equal (error code 9)	–
51	Position actual value–limit value SG4	Position actual value (error code 3) different or MD 4196* and MD 1331[3] not equal (error code 9)	–
52	Standstill position + tolerance	Position actual value (error code 3) different or MD 4180* and MD 1330 not equal (error code 10)	–
53	Standstill position – tolerance	Position actual value (error code 3) different or MD 4180* and MD 1330 not equal (error code 10)	–
54	Position actual value+n_x+tolerance	Position actual value (error code 3) different or MD 4292* and MD 1346 not equal (error code 75) or MD 4256* and MD 1342 not equal (error code 31)	–
55	Position actual value+n_x	Position actual value (error code 3) different or MD 4292* and MD 1346 not equal (error code 75)	–
56	Position actual value–n_x	Position actual value (error code 3) different or MD 4292* and MD 1346 not equal (error code 75)	–
57	Position actual value–n_x–tolerance	Position actual value (error code 3) different or MD 4292* and MD 1346 not equal (error code 75) or MD 4256* and MD 1342 not equal (error code 31)	–
58	Stop request	MD 1301 bit 6 is not 0	–
59	SG correction factor 1	MD 1301 bit 5 is not 0	–
60	SG correction factor 2	MD 1301 bit 5 is not 0	–
61	SG correction factor 3	MD 1301 bit 5 is not 0	–
62	SG correction factor 4	MD 1301 bit 5 is not 0	–
63	SG correction factor 5	MD 1301 bit 5 is not 0	–
64	SG correction factor 6	MD 1301 bit 5 is not 0	–
65	SG correction factor 7	MD 1301 bit 5 is not 0	–
66	SG correction factor 8	MD 1301 bit 5 is not 0	–
67	SG correction factor 9	MD 1301 bit 5 is not 0	–
68	SG correction factor 10	MD 1301 bit 5 is not 0	–
69	SG correction factor 11	MD 1301 bit 5 is not 0	–
70	SG correction factor 12	MD 1301 bit 5 is not 0	–
71	SG correction factor 13	MD 1301 bit 5 is not 0	–
72	SG correction factor 14	MD 1301 bit 5 is not 0	–

No.	Name	Explanation	Cause, Remedy
73	SG correction factor 15	MD 1301 bit 5 is not 0	–
74	SG correction factor 16	MD 1301 bit 5 is not 0	–
75	Velocity limit n_x	MD 4292* and MD 1346 not equal	Enter MDs equal
76	Stop reaction with SG1	MD 4508*.4, 4508*.5 and MD 1361 not equal	Enter MDs equal
77	Stop reaction with SG2	MD 4508*.4, 4508*.5 and MD 1361 not equal	Enter MDs equal
78	Stop reaction with SG3	MD 4508*.4, 4508*.5 and MD 1361 not equal	Enter MDs equal
79	Stop reaction with SG4	MD 4508*.4, 4508*.5 and MD 1361 not equal	Enter MDs equal
80	SI modulo value for SN	MD 1367 is not 0	Enter MDs equal
81	Speed tolerance for SBR	MD 4296* and MD 1348 not equal	Enter MDs equal
1000	Control timer expired	The SGE modification timer did not expire within the time of the control timer (i.e. too many switching operations in SGEs).	e.g. contact problems (loose contact)
1001	Control timer initialization error	The SGE modification timer did not start the control timer.	–
1002	User enable timer expired	Different status of user enable from drive and NCK	–
1003	Reference tolerance violated	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	–
1004	Plausibility violation of user enable	The user enable has been specified for an axis which is – already referenced – not yet referenced	–
1005	Pulses already deleted on test stop selection	The ”pulses are deleted” signal is already active on test stop selection	Test stop selection on pulse enable error during wiring of the ”pulses are deleted” SGE
1006	Error on SGA forced dynamic response	An error was detected on the cyclic check of the SGAs.	–
1007	Breakdown of the communication between PLC and drive	If the drive releases a breakdown in communication, either the PLC or the NC has broken down.	
1008	Erroneous data transfer between PLC and drive	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.	
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 safe
- 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 **Reset key**

Scan After selection of SG, SE

Effect Interlocking of NC START
Initiation of ESR
Activation of SBH
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 **Reset key**

Scan After selection of SG, SE

Effect Interlocking of NC START
Braking on the path
Activation of SBH
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 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** **Reset key**

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** **POWER ON**

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** **POWER ON**

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** **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.

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, whjich 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 postion displayed.
- If the actual postion 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

2003* Zero speed monitoring **Reset key**

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 **POWER ON**

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 **POWER ON**

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 groand
- are absent

Remedy
- Check wether 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

2009* Contamination measuring system spindle **POWER ON**

Scan
- Cyclic

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

Explanation
- 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 **Reset key**

Scan
- Cyclic

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

Explanation
- Transmission error or interference from encoder

Remedy
- Check encoder, cable, connecter

2011* Zero marks monitoring has responded **Reset key**

Scan
- Cyclic, depending on the tolerance band set for the difference pulses

Effect
- Interlocking of NC START
- Machining stops

Explanation
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 **Reset key**
2014* Speed setpoint value alarm limit responded **Reset key**

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

Explanation
- 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 **Reset key**

Scan
With input of NC MD 401* or with semi-automatic drift compensation (axis only)

Effect
Interlocking of NC START

Explanation
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.

2016* **Terminal assigned more than once** **POWER ON**
as from SW 3: **Reset key**

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*.

2018* **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

2019* Parameterization error NC MD **Reset key**
2019* Parameterization error NC–MD **Reset key**

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 (K_V) 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

2021* Spindle not synchronized **Reset key**

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.

2028* MD M19 not selected **Reset key**

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

Effect
- Machining stops

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

Explanation
- Check program

Remedy
- Check NC MD

2029* **Drive fault** **Reset key**

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** **Reset key**

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** **POWER ON**

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** **POWER ON**

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** **Reset key**

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** **Acknowledgement key**

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** **Acknowledgement key**

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 is 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** **Acknowledgement key**

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 calculations.

Explanation Maximum value programmed for the following spindle has been exceeded. Synchronism is 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

2061* Aut. contr. corr. of following spindle **Reset key**

Cause An error has occurred which 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 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.

Remedy Rectify axis/spindle error.

Note Applies as from SW 3

2065* Reconfiguration not allowed **Acknowledgement key**

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* GI configuration not allowed **Acknowledgement key**

Scan When programming DEFINE CONFIGURATION with G function (from NCK).

Effect
- Command is not executed
- Interlocking of NC START

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

2067* Change of KF not allowed **Acknowledgement key**

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

Effect
- Command is not executed, the previous link factor is maintained
- Interlocking of NC START

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

2068* **Link factor KF illegal** **Acknowledgement key**

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

Effect
- Command is not executed, the previous link factor is maintained
- Interlocking of NC START

Explanation Denominator J=0 programmed

Remedy Correct link factor

Note Applies as from SW 3

2069* **Overwriting of position not allowed** **Acknowledgement key**

Scan When programming a position with GI command.

Effect
- G command not executed
- Interlocking of NC START

Explanation GI positions must not be overwritten (enable with MD 525*, bit 3)

Remedy Correct input

Note Applies as from SW 3

2070* **Reconfiguration/deletion not allowed** **Reset key**

Scan 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).

Effect Interlocking of NC START; NC Stop, stopping of the channel, command is not executed, JOG mode still possible.

Explanation A RECONFIGURATION or DELETE CONFIGURATION is not allowed without being preceeded by LINK_OFF.
Reconfiguration not allowed (MD 525, bit 1)
New configuration block; following spindle already exists

Remedy Precede by LINK_OFF for the specified GI combination.

2073* **Change of link factor KF illegal** **Reset key**

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

Effect Command is not executed, the previous link factor is maintained. Interlocking of NC Start; NC Stop, channel stopped: JOG mode still possible.

Explanation The link factor entered is not in the range 0.00000001 <= /KF/ <= 10.000000 or denominator J=0 or the individual values are so large that internal overflows occur.

Remedy Correct the link factor KF.

2074* **Change of link factor KF not allowed** **Reset key**

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

Effect
- Command is not executed, the previous link factor is maintained
- Interlocking of NC START
- NC STOP
- Channel is stopped: JOG mode still possible

Explanation The link factor must not be switched over from the default setting (MD525*).

Remedy Change default setting if necessary.

2075* **GI configuration not allowed** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

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** **Reset key**

Note Alarm description see 1344*

2089* **Stop E triggered** **Reset key**

Note Alarm description see 1348*

2090* **Stop D triggered** **Reset key**

Note Alarm description see 1352*

2091* **Stop C triggered** **Reset key**

Note Alarm description see 1356*

2092* **Stop B triggered** **Reset key**

Note Alarm description see 1360*

2093* **Stop A triggered** **Reset key**

Note Alarm description see 1364*

2094* **Tolerance for safe standstill exceeded** **POWER ON**

Note Alarm description see 1324*

2095* **Safe speed exceeded** **Reset key**

Note Alarm description see 1328*

2096* **Safe end position exceeded** **Reset key**
Note Alarm description see 1332*

2097* **Failure in a monitoring channel** **Reset key**
Note Alarm description see 1336*

100001 **Connection to keyboard faulty!**
Scan When initializing and with every input
Effect Entries through operator panel no longer possible
Explanation Connection between operator panel and MMC CPU interrupted
Remedy Restore connection

100002 **Operator panel: buffer overflow** **OK softkey**
Scan Permanent
Effect MMC crash
Explanation Operator panel signals are lost
Remedy None

100003 **Operator panel interface not ready**
Scan Permanently
Effect Operator panel cannot be used
Explanation –
Remedy Power on

100005 **... (Alarm text is variable)** **OK softkey**
Scan –
Effect Special error text
Explanation Depending on operation
Remedy –

100006 **The area ... is to be terminated** **OK softkey**
Scan –
Effect Application is terminated
Explanation Memory required for another application. The operation can be aborted with softkey ABORT.
Remedy –

100007 **Area ... could not be terminated** **OK softkey**
Scan –
Effect The application has not been terminated
Explanation Application is still active
Remedy Terminate application

100008 ... (Alarm text is variable) OK softkey

Scan –
Effect Special error text
Explanation Explained by context of operation
Remedy –

100009 The area ..... is terminated OK softkey

Scan –
Effect –
Explanation –
Remedy –

101000 NCK system being loaded

Scan When NCK system is being loaded
Effect None
Explanation Message appears in the red bar when the system is being loaded
Remedy –

101001 PLC system being loaded

Scan When PLC system is being loaded
Effect None
Explanation Message appears in the red bar when the system is being loaded
Remedy –

101002 NCK software not available on hard disk

Scan –
Effect NCK is not powering-up: MMC powers up without NCK
Explanation
- Required data for loading not available in defined directory

Remedy
- Install NCK software on MMC

101002 NCK user data being loaded

Scan When user data are being loaded.
Effect None
Explanation Data in user/NC/data directory being loaded
Remedy
Note Alarm in SW 5 and higher

101003 Checksum error when booting the NCK

Scan –
Effect NCK is not powering-up: MMC powers up without NCK
Explanation
- Faulty loaded file (wrong checksum or wrong format)

Remedy
- POWER ON
- Re-install NC software, if necessary

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
- Faulty loaded file

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 **OK softkey**

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 –

102010 Configuring error **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 chkdisk;
replace MMC
Note Aplies 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 oftkey**

Scan ASCII editor
Effect
Explanation Possible causes are
1. File is $\geq$ 8 MB
2. File $\geq$ 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

105006 System crash – Please switch control off/on **POWER ON**
105006 !!! System crash – reboot !!! **POWER ON**
Scan Power up
Effect MMC is rebooted after 5 seconds
Explanation Either applications or the operating system has crashed or there is an MMC hardware fault
Remedy POWER ON

105007 Operator system initialization failed **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: ...
Scan –
Effect Alarm 105006 is also output —> see alarm 105006
Explanation DPR driver recognizes NMI because of a MMC hardware error: I/O channel check error or RAM parity error
Remedy POWER ON

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 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).
Remedy 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 the log with message 105011
Remedy Check customer UMS, POWER ON

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

105030 Except... 386–Error... Task...

105031 CS: ... EIP: ...

105032 SS: ... ESP: ...

105033 EFLAGS: ...

105034 DS: ... ES: ...

105035 FS: ... GS: ...

105036 EAX: ... EBX: ...

105037 ECX: ... EDX: ...

105038 ESI: ... EDI: ...

105039 EBP: ... LDTR: ... CR0: ...

Scan Permanent

Effect See alarm 105020

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.

105040 Wrong text number for message no. ... Acknowledgement key

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

105041 Incorrect reference to message description for no. ... Acknowledgement key

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. ... Acknowledgement key

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 Acknowledgement key

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 Acknowledgement key

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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

110004 **No data selected** **OK softkey**

Scan In the SERVICES area with data selection

Effect –

Explanation The data selector is positioned on the directory .. or -

Remedy Select with the cursor

110005 **No read access for this data** **OK softkey**

Scan DATA MANAGEMENT **/** COPY **/** COPY **/** DATA IN-OUT **/** PRINT **/** START

Effect Data cannot be processed

Explanation No authorization for reading the selected data or printing exists for the set user class

Remedy Set a password, enable keyswitch

110006 **No write access at this point** **OK softkey**

Scan DATA MANAGEMENT **/** NEW **/** OK **/** COPY **/** PASTE

Effect Data cannot be created**/**copied or written

Explanation No authorization to write the selected data exists for the set user class

Remedy Set a password, enable keyswitch

110007 **Data must not be deleted** **OK softkey**

Scan MANAGEMENT **/** DELETE **/** OK

Effect Data are not deleted

Explanation No authorization to delete the selected data exists for the set user class, i.e. they cannot be deleted at all

Remedy Set a password, enable keyswitch

110008 **Selected data cannot be edited** **OK softkey**

Scan MANAGEMENT **/** EDIT

Effect Editor is not started

Explanation The selected data cannot be edited (e.g. a directory)

Remedy Select alternative data

110009 **No interface file** **OK softkey**

Scan –

Effect The interface is not parameterized and can therefore not be used.

Explanation See above

Remedy Select or create valid interface

110010 **Workpiece archiving in punch tape format only** **OK softkey**

Scan DATA IN-OUT **/** DATA OUTPUT **/** WORKPIECES

Effect –

Explanation A workpiece or job list can only be archived in punch tape format

Remedy Select punch tape format via toggle field

110011 **There is no error log** **OK softkey**

Scan Error log

Effect None

Explanation No error log was created for the previous data transfer

Remedy –

110012 **Selected data cannot be printed** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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.

110019 Observe error log **OK softkey**

Scan DATA IN-OUT **/** (INPUT OR OUTPUT)

Effect –

Explanation 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

Remedy Rectify the cause (if possible) and read in again

110020 Floppy is not formatted **OK softkey**

Scan DATA IN-OUT **/** (INPUT OR OUTPUT) **/** START
(INSERT NEXT DISKETTE) OK

Effect Data are not read in**/**written

Explanation The floppy is either not formatted or incorrectly formatted

Remedy Insert formatted diskette

110021 Error on reading the archive **OK softkey**

Scan DATA IN-OUT **/** DATA INPUT **/** START

Effect Data are not read

Explanation Archive file is faulty

Remedy –

110022 No workpiece selected **OK softkey**

Scan LOAD NC **/** SHOPFLOOR SHEET

Effect No display

Explanation Selected data are not workpieces

Remedy Select workpiece under LOCAL or GLOBAL

110023 There are no comments for ... **OK softkey**

Scan LOAD NC **/** SHOPFLOOR SHEET **/** COMMENT

Effect –

Explanation No comment available for current workpiece

Remedy Enter comment in program

110024 Archive list/job list is empty **OK softkey**

Scan DATA IN-OUT **/** DATA OUTPUT **/** ARCHIVE LIST

Effect No data are being read out

Explanation No object in the archive list can be accessed

Remedy Check archive list

110025 Floppy is full **OK softkey**

Scan DATA IN-OUT **/** DATA OUTPUT **/** ... **/** START

Effect Wait

Explanation The diskette is full

Remedy Insert another diskette, continue by pressing the OK softkey

110026 **Archive not created or not found** **OK softkey**

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** **OK softkey**

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 ...** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 ... **OK softkey**

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 **OK softkey**

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 ... **OK softkey**

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 **OK softkey**

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

110041 **Error in NCK name** **OK softkey**

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** **OK softkey**

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** **OK softkey**

Scan MANAGEMENT **/** NEW **/** OK

Effect Data are not created

Explanation –

Remedy Use the proposed name

110044 **Too many print jobs in queue** **OK softkey**

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** **OK softkey**

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 ...** **OK softkey**

Scan None

Effect The last action has not been executed correctly

Explanation None

Remedy Inform system service

110047 **Interface is still active** **OK softkey**

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 **OK softkey**

Scan DATA IN-OUT **/** DATA INPUT **/** START

Effect Data are not read in correctly

Explanation Hardware problem

Remedy –

110049 Check interface parameterization **OK softkey**

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 **OK softkey**

Scan DATA IN-OUT **/** DATA OUTPUT **/** ... **/** START
(INSERT NEXT DISKETTE) OK

Effect Data are not are not archived

Explanation A full diskette has been inserted

Remedy Insert new diskette

110051 ... was not printed **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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 ...** **OK softkey**

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

110062 ... not found in job list **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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** **OK softkey**

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** **OK softkey**

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 ...** **OK softkey**

Scan Computer link / error listing

Effect Error during transmission

Explanation Error number reported during transmission

Remedy –

110100 **There is no data/part program** **OK softkey**

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.** **OK softkey**

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 ...** **OK softkey**

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** **OK softkey**

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

110104 **Error in data/part-program ...** **OK softkey**

Scan LOAD NC or AUTOMATIC basic display, LOAD WORKPIECE

Effect Data are not transferred or only partly

Explanation
- NC data to be loaded have errors
- Read error on hard disk when executing from hard disk

Remedy Check data

110105 **Error during job processing** **OK softkey**

Scan LOAD NC, SAVE NC or AUTOMATIC basic display, LOAD WORKPIECE

Effect –

Explanation –

Remedy –

110107 **NC data/part program cannot be created here** **OK softkey**

Scan SAVE NC **/** NC SOURCE **/** START
MANAGEMENT **/** COPY **/** PASTE
DATA IN-OUT **/** BUFFER **/** INSERT

Effect Data are not saved, copied or inserted in buffer

Explanation The data cannot be stored in the current directory

Remedy Select a different directory

110108 **There is no workpiece . . .** **OK softkey**

Scan (AUTOMATIC MODE)

Effect Workpiece will not be loaded

Explanation The workpiece required by the NCK does not exist in the MMC

Remedy Check entered names

110109 **Only workpieces/NCK data can be loaded** **OK softkey**

Scan LOAD NC **/** START

Effect None

Explanation Only workpieces or NCK data can be loaded

Remedy Using the data selector, select a workpiece under LOCAL or GLOBAL or an NCK object under a workpiece or from NC data

110110 **No access to SPF0** **OK softkey**

Scan SAVE NC **/** NC SOURCE **/** START

Effect SPF0 is not saved

Explanation The name SPF0 is not permissible

Remedy Deselect from SPF1

110111 **... being processed or cycle inhibit** **OK softkey**

Scan SAVE NC **/** NC SOURCE **/** START **/** LOAD NC **/** START

Effect Data will not be saved to MMC or loaded in NCK

Explanation The part program either has cycle disable or is being processed

Remedy Remove disable or discontinue processing

Note Applies up to SW 2

110112 ... is not a correct NCK name **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 ... **OK softkey**

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 **OK softkey**

Scan SAVE NC **/**. .. **/** START

Effect No data transmission

Explanation The channel number must be $\geq 0 \geq 4$ (≥ 6 as from SW 4)

Remedy –

110118 Storage of ... not allowed here **OK softkey**

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 **OK softkey**

Scan Computer link / save start
Computer link / load start / OK

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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.

120010 Error while generating alarm log **OK softkey**

Scan Log could not be created.
Effect No log is displayed.
Explanation The master control creates the logs when demanded by diagnosis
Remedy Check the entry for the length of the logs in the configuration file of the master control and alter if necessary.

120011 Error on creating service log **OK softkey**

Scan Log could not be created.
Effect No log is displayed.
Explanation The master control creates the logs when demanded by diagnosis
Remedy Check the entry for the length of the logs in the configuration file of the master control and alter if necessary.

120012 ... cannot be created **OK softkey**

Scan An error has occurred while creating the specified data object.
Effect The object will not be created or only partially.
Explanation –
Remedy Delete a file, possibly there are too many files in this directory. Check position of keyswitch and capacity of hard disk.

120013 No write access at this point **OK softkey**

Scan 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.
Effect Data cannot be stored.
Explanation Check the position of the keyswitch.
Remedy Leave editor using RECALL key.

120014 ... not available **OK softkey**

Scan The specified file (e.g. PCF17) has not been found in the NCK.
Effect None
Explanation Existing PLC error messages can only be saved in the NC.
Remedy Select a different program number for PCF file.

120015 Operating system – error ... **OK softkey**

Scan An error has been caused in an operating system call during data transfer.
Effect System failure
Explanation Operating system error [0x4005]
i.e.: no communication to NCK
Remedy Inform service

120016 NCK password not set **OK softkey**

Scan An attempt has been made to transfer NC files to the NCK for which a password is required.
Effect File is not transferred.
Explanation None
Remedy Set the password on the NCK side.

120017 Transmission aborted **OK softkey**

Scan The user has aborted data transfer with softkey.
Effect The data have not been transferred or only incompletely.
Explanation –
Remedy Select another file, restart transmission.
Note Applies as from SW 4.4

120018 Error in channel no. / TO area **OK softkey**

Scan The channel no. or TO area entered is not permissible with the NC source specified.
Effect File is not transferred.
Explanation None
Remedy Correct number.

120019 Name ... not allowed **OK softkey**

Scan An illegal file name has been entered.
Effect The file with the name is not created on the MMC side.
Explanation Letters A...Z, numbers 0...9 and the underscore character are permissible.
Remedy Please enter the correct name, e.g. ABC _123

120020 There is no data/part program **OK softkey**

Scan The error occurred while a file was being transferred.
Effect File has not been transferred or only partially.
Explanation –
Remedy –

120021 Error in NCK name **OK softkey**

Scan The error occurred while a file was being transferred.
Effect File has not been transferred or only partially.
Explanation 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
Remedy Correct the name and/or channel number

120022 No read/write access for ... **OK softkey**

Scan The error occurred while transferring a file.
Effect File has not been transferred or only partially.
Explanation –
Remedy Set keyswitch for data.

120023 Memory on NC is full **OK softkey**

Scan An error occurred during transfer of a file.
Effect File has not been transferred or only partially.
Explanation The NC part program is full.
Remedy If necessary, delete part programs from the memory.

120024 Error in data/part program ... OK softkey

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 OK softkey

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 OK softkey

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 OK softkey

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 OK softkey

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
Effect
Explanation
Remedy

120030 Option not available OK softkey

Scan When activating the PG function
Effect S5 package for programming functions cannot be called up.
Explanation None
Remedy Activate option

120031 Wrong option password **OK softkey**

Scan The password entered for the options is incorrect.
Effect The displayed options cannot be altered.
Explanation None
Remedy Enter correct password.

120032 Error in options list ... **OK softkey**

Scan When activating option <Nxxx>.
Effect The option in question cannot be activated or deactivated.
Explanation None
Remedy Call service!

120033 Help text ... not found **OK softkey**

Scan When operating the I key in the diagnosis alarm basic display.
Effect No alarm/message help texts displayed.
Explanation None
Remedy Copy the file “MELDINFO” 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.

120034 The hard disk is full **OK softkey**

Scan PC data preset
Save PLC program
Effect It is not possible to store or create the data.
Explanation –
Remedy Delete data not required.

120035 PLC program ... cannot be created **OK softkey**

Scan Save PLC program
Effect The PLC user program could not be saved on the hard disk in the usual way.
Explanation –
Remedy –

130000 Workpiece/file exists already **OK softkey**

Scan NEW / CREATE / mask for entering an object name
Effect No new object can be created
Explanation Workpiece or file already exists in the data management and cannot be created again.
Remedy Enter a new/different name

130001 No element selected **OK softkey**

Scan PROGRAM or EDIT
Effect A file cannot be processed
Explanation Cursor is positioned on “..” or “–”, the file that can be processed has not been selected
Remedy Select a file with the cursor

130002 No file type selected **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

Scan NEW / JOG 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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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

130009 Please state name **OK softkey**

Scan NEW / CREATE / mask for entering object name

Effect No new workpiece or file is created

Explanation No name was entered
The name was not terminated with input

Remedy Enter a name or terminate input with input key

130010 Only NCK-data/part programs can be edited **OK softkey**

Scan EDIT

Effect File cannot be processed

Explanation A file was not selected (recognizable by the length, length 0 also possible) for processing with the editor

Remedy Place the cursor on an element with a length entry

130011 Select a workpiece for job list **OK softkey**

Scan JOB LIST

Effect Job list cannot be processed

Explanation The job list of the selected workpiece cannot be processed

Remedy Place the cursor on a workpiece

130012 There is no programming system **OK softkey**

Scan PROGRAMMING

Effect Graphic programming not possible

Explanation Graphic programming system does not exist.

Remedy Install GRAPHIC PROGRAMMING SYSTEM option.

130013 Name not allowed **OK softkey**

Scan NEW / CREATE / mask for entering file name

Effect No new object created

Explanation Syntax of entered name is incorrect, only alphanumeric characters and “_” permitted

Remedy Enter correct name

130014 No workpiece/file may be created **OK softkey**

Scan Softkey NEW at top level “LOCAL” “GLOBAL”

Effect No new object created

Explanation The data management tree does not allow the creation of a directory on this level

Remedy –

130015 Access denied **OK softkey**

Scan PROGRAMMING

Effect Workpiece cannot be processed

Explanation Incorrect keyswitch setting
No authorization for processing workpiece

Remedy Turn keyswitch to setting 1 or 2; enter password in DIAGNOSIS

130016 No more memory space available **OK softkey**

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 **OK softkey**

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 **OK softkey**

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? **Abort/OK softkey**

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? **Abort/OK softkey**

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

Note 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 !"

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 programmmed 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 app.+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!”

144353 ”Spindle %2 not in rotary axis mode !”
144354 ”Setting setpoint for axis %1 not allowed!”
144355 ”Setting setpoint for axis %1 not allowed!”
144356 ”Limit on software limit switch”
144357 ”Spindle in other channel active !”
144358 ”Rotary axis mode not possible for spindle !”
144359 ”Spindle %1 currently being moved as an axis !”
144450 ”@71x: Unable to read R parameters”
144451 ”@71x: Unable to write R parameters”
144452 ”@71x: Unable to copy R parameters”
144453 ”@711: No direction straight line defined”
144454 ”@711: No contour element stored in R para.”
144455 ”@711: No circle element stored in R para.”
144456 ”@711: Circle element exceeds 2 quadrants”
144457 ”@711: No point of intersection available”
144458 ”@710: %1 could not be opened”
144459 ”@710: Wrong control parameter in R%1”
144460 ”@710: NC block from contour %1 cannot be read”
144461 ”@710: Invalid NC block in contour %1”
144462 ”@710: Invalid ident. for direct. of rotation”
144463 ”@710: NC block in contour %1 has error”
144464 ”Circle not programmed in selected plane”
144465 ”DIN: %1”
144501 ”No more memory space available !”
144502 ”No more memory space available !”
144504 ”Error in ’%1’ geometry !”
146000 ”DIN: ... %1 ...”
146001 ”Overlong line cut off”
146002 ”Block not concluded with Line Feed”
146003 ”Jump destination %1 not found”
146004 ”Program SPF%1 not available”
146005 ”Too many SPFs: SPF%1 not opened”
146006 ”M17 not allowed in MPF”
146007 ”M02/M30 not allowed in SPF”
146010 ”Comments/program coordination nested”
146011 ”End of line in comments/program coordination”

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”

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”

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”

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* Simulation must be cancelled and a corrected set of machine data activated with the load list by reselecting.

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: transfomation”

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 desel., 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”**

146600 **”DIN: ... %1 ...”**

146700 **”G%1 block: too much information in block”**

146701 **”Block information before jump ignored”**

146702 **”Block with G92 P: too much info in block”**

146703 **”Too much information in spline coeff. block”**

146704 **”Block with G92 T: too much info in block”**

146705 **”Too much information in block with G92 angle”**

146706 **”Block with G92 S: too much info in block”**

146707 **”Block with M19 S: too much info in block”**

146708 **”Block with @710: too much info. in block”**

146709 ”Block with @711: too much info. in block”

146730 ”Axis not allowed here –> ignored”

146731 ”IPO parameters not allowed here –> ignored”

146732 ”Radii not allowed here –> ignored”

146733 ”Angle not allowed here –> ignored”

146734 ”F word not allowed here –> ignored”

146735 ”M words not allowed here –> ignored”

146736 ”S word not allowed here –> ignored”

146737 ”T word not allowed here –> ignored”

146738 ”H word not allowed here –> ignored”

146739 ”D word is not allowed here –> ignored”

146740 ”Comments not allowed here”

146741 ”:–word not allowed here –> ignored”

146742 ”Only @714 allowed here. Other @ ignored”

146743 ”@706/@715/@720 not allowed here –> ignored”

146744 ”Progr. coord. [...] illegal here –> ignored”

146745 ”L word not allowed here –> ignored”

146746 ”N word not allowed here –> ignored”

146747 ”P word not allowed here –> ignored”

160001 Axis already assigned **OK softkey**

Scan On “START”

Effect The selected function is not started

Explanation No further startup functions can be started with the defined axis number

Remedy Terminate the startup function already active for this axis

160002 Axis not configured or configured wrongly **OK softkey**

Scan Startup application

Effect Startup function is not executed

Explanation Selected axis is not available

Remedy Select available axis

160003 Drive module is not configured or incorrectly **OK softkey**

Scan Startup application

Effect Startup function is not executed

Explanation Selected drive number is not available

Remedy Select available drive module

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

160011 File name ... invalid **OK softkey**
Scan When selecting file functions
Effect Entries rejected
Explanation File names can only contain alphanumeric characters
Remedy Correct input and repeat procedure

160012 Invalid input resolution (...) **OK softkey**
Scan Parameterization/starting startup functions
Effect The startup function cannot be started
Explanation See machine data description
Remedy Check/correct machine data input resolution

160013 Invalid position control resolution (...) **OK softkey**
Scan Parameterization/starting startup functions
Effect The startup function cannot be started
Explanation See machine data description
Remedy Check/correct machine data position control resolution

160014 Invalid maximum current of power section **OK softkey**
Scan Parameterization/starting startup functions
Effect The startup function cannot be started
Explanation See machine data description
Remedy Check/correct machine data maximum current

160015 Invalid maximum axis velocity/spindle speed **OK softkey**
Scan Parameterization/starting startup functions
Effect The startup function cannot be started
Explanation See machine data description
Remedy Check/correct machine data for maximum velocities

160016 Invalid scan time of current controller **OK softkey**
Scan Parameterization/starting startup functions
Effect The startup function cannot be started
Explanation See machine data description
Remedy Check/correct machine data for current controller scan time

160017 Invalid scan time of position controller **OK softkey**
Scan Parameterization/starting startup functions
Effect The startup function cannot be started
Explanation See machine data description
Remedy Check/correct machine data for position controller scan time

160018 Invalid scan time of speed controller **OK softkey**
Scan Parameterization/starting startup functions
Effect The startup function cannot be started
Explanation See machine data description
Remedy Check/correct machine data for speed controller scan time

160019 Invalid tacho adaptation **OK softkey**

Scan Parameterization/starting startup functions
Effect The startup function cannot be started
Explanation See machine data description
Remedy Check/correct machine data for tacho adaptation

160020 A measuring function is already active **OK softkey**

Scan Starting startup functions
Effect The startup function cannot be started
Explanation Only one measuring function at a time can be active
Remedy Stop previous measuring function and repeat procedure

160022 Illegal bus selection **OK softkey**

Scan When starting DAC output
Effect DAC output cannot be started
Explanation Startup application internal error; it is not possible to access 611D hardware
Remedy End application and repeat procedure

160023 Illegal component **OK softkey**

Scan When starting DAC output
Effect DAC output cannot be started
Explanation Signal selection does not correspond to drive components
Remedy Correct parameterization

160024 There is no signal **OK softkey**

Scan Starting DAC output
Effect DAC output cannot be started
Explanation The selected signal is not available
Remedy Correct signal selection

160025 Protected data area selected (segment) **OK softkey**

Scan Starting DAC output from memory location
Effect DAC output cannot be started
Explanation Selected address area is not allowed
Remedy Correct segment parameterization

160026 Protected data area selected (offset) **OK softkey**

Scan When starting DAC output from memory location
Effect DAC output cannot be started
Explanation Selected address area is not allowed
Remedy Correct offset parameterization

160027 Illegal offset parameterized **OK softkey**

Scan When starting DAC output
Effect DAC output cannot be started
Explanation Offset value is outside the permissible range
Remedy Correct offset value

160028 Illegal shift factor parameterized **OK softkey**
Scan When starting DAC output
Effect DAC output cannot be started
Explanation Shift factor is outside permissible range
Remedy Correct shift factor

160029 Missing target hardware **OK softkey**
Scan When starting DAC output
Effect DAC output cannot be started
Explanation –
Remedy –

160030 Non-available DAC started **OK softkey**
Scan When starting DAC output
Effect DAC output cannot be started
Explanation A drive module which is not configured has been selected
Remedy Select available drive module

160031 Max. number of servo signals exceeded **OK softkey**
Scan When starting DAC output
Effect DAC output cannot be started
Explanation A maximum of 4 SERVO signals can be output through DAC channels
Remedy Reduce number of output SERVO signals

160032 Max. number of active DACs exceeded **OK softkey**
Scan Parameterization/starting DAC output
Effect DAC output cannot be started
Explanation Internal startup application error
Remedy End application and repeat procedure

160033 DAC busy from other half of two-axis module **OK softkey**
Scan Parameterization/starting DAC output
Effect DAC output cannot be started
Explanation Three DAC channels exist on two-axis modules for both axes
Remedy Select other output channel and repeat procedure or stop busy DAC

160034 No axis configured **OK softkey**
Scan When selecting startup menus for axes
Effect Startup menu for axes disabled
Explanation Startup menu for axes needs at least one NC axis
Remedy Enter NC axis configuration

160035 No drive module configured **OK softkey**
Scan Selecting menu for DAC output
Effect Startup menu for DAC is disabled
Explanation Menu for DAC output needs at least one 611D module
Remedy –

160036 No mixed I/O module configured **OK softkey**

Scan When selecting menus for mixed I/O output
Effect Startup menu for mixed I/O output is disabled
Explanation Menu for mixed I/O output requires mixed I/O hardware
Remedy –

160037 No spindle configured **OK softkey**

Scan When selecting startup menu for spindles
Effect Startup menu for spindles is disabled
Explanation Startup menu for spindles requires at least one NC spindle
Remedy Enter NC spindle configuration

160038 Error on DAC initialization **OK softkey**

Scan When starting startup application
Effect DAC output cannot be started
Explanation Internal startup application error
Remedy Restart system and repeat procedure

160039 Error in DAC selection for digital drives **OK softkey**

Scan When parameterizing DAC output
Effect DAC output cannot be started
Explanation Internal startup application error
Remedy Restart application and repeat procedure

160040 Error in DAC selection for mixed I/Os **OK softkey**

Scan When parameterizing mixed I/O output
Effect Mixed I/O output cannot be started
Explanation Internal startup application error
Remedy Restart application and repeat procedure

160041 No more memory space available **OK softkey**

Scan When starting startup application
Effect Startup functions cannot be executed
Explanation No more system memory available
Remedy End other area application and repeat procedure

160042 Measured values invalid **OK softkey**

Scan Measuring functions
Effect Measuring function is aborted
Explanation Recorded measured values cannot be used
Remedy Check measuring parameters and repeat procedure. A higher amplitude must be selected most especially for path frequency response measurement

160043 Illegal measurement/meas. value combination **OK softkey**
Scan Parameterization/starting measuring functions
Effect The measuring function cannot be started
Explanation The selected measurement is not accessible with the selected signal
Remedy Correct signal selection or measurement selection

160044 Travel function cannot be started **OK softkey**
Scan When starting startup traversing movements
Effect Function cannot be started
Explanation Traversing function not possible because of an alarm, missing controller or feedrate enable
Remedy Check enables, acknowledge alarms and repeat procedure

160045 Wrong axis/drive/channel number **OK softkey**
Scan Startup application
Effect Startup application cannot be started
Explanation Selected axis/drive number does not exist
Remedy Select available axis/drive number

160046 Axis/spindle has an analog drive **OK softkey**
Scan When starting startup function
Effect Startup function is not started
Explanation A startup function which is not available for analog drives has been selected
Remedy Select a different startup function

160047 Axis/spindle has an FDD drive **OK softkey**
Scan Softkey parameter FDD
Effect FDD parameters are not displayed
Explanation No FDD parameters exist for MSD drive
Remedy None

160048 Axis/spindle has an FDD drive **OK softkey**
Scan Softkey parameter MSD
Effect MSD parameters are not displayed
Explanation No MSD parameters exist for FDD drive
Remedy None

160049 Compare error **OK softkey**
Scan Startup application
Effect Function aborted
Explanation Error on internal consistency check
Remedy End application and restart

160050 Data not available **OK softkey**
Scan Startup application
Effect Function aborted
Explanation Error on internal data access
Remedy End application and restart

160051 Division by 0 **OK softkey**
Scan Startup application
Effect Function aborted
Explanation Error on internal consistency check
Remedy End application and restart; check measuring parameters

160052 Drive does not acknowledge messages **OK softkey**
Scan 611D communication
Effect 611D drives cannot be addressed
Explanation Communications partner on drive side is not available
Remedy Start up control/drive; deselect faulty module

160053 Function generator already active **OK softkey**
Scan When starting function generator
Effect Start command is ignored if the function generator is already running
Explanation –
Remedy –

160054 Wrong block number/file name **OK softkey**
Scan 611D communication
Effect Function aborted
Explanation Error on internal consistency check
Remedy End application and restart

160055 Absolutely no access rights **OK softkey**
Scan Startup application
Effect Startup function cannot be executed
Explanation Access to required data not possible
Remedy End application and restart

160056 Error during job processing **OK softkey**
Scan 611D communication
Effect Function aborted
Explanation Error on internal consistency check
Remedy End application and restart

160057 Status does not permit job **OK softkey**
Scan 611D communication
Effect Function aborted
Explanation Error on internal consistency check
Remedy End application and restart

160058 Job could not be processed **OK softkey**
Scan Startup application
Effect Function aborted
Explanation Error on internal consistency check
Remedy End application and restart

160059 Measurement function already active **OK softkey**

Scan When starting measuring function
Effect Start command is ignored if measuring function is already running.
Explanation –
Remedy –

160060 Measurement in progress **OK softkey**

Scan Startup applications measuring functions
Effect –
Explanation Operational message during measuring function
Remedy –

160061 PI function code ... , error 0x ... **OK softkey**

Scan Startup application
Effect Function aborted
Explanation Error on internal consistency check
Remedy End application and restart

160062 Package sequence error **OK softkey**

Scan Startup application
Effect Function aborted
Explanation Error on internal consistency check
Remedy End application and restart

160063 Press “Accept configuration” softkey **OK 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 **OK softkey**

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 **OK softkey**

Scan Startup application
Effect Undefined
Explanation Startup application is no longer stable
Remedy MMC reset

160066 Temporarily no access rights **OK softkey**

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 **OK softkey**

Scan Startup application
Effect Startup function is not executed
Explanation Timeout error on internal communication
Remedy End application and restart

160068 Illegal amplitude **OK softkey**

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 **OK softkey**

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 **OK softkey**

Scan Function generator parameterization (staircase)
Effect Function cannot be started
Explanation The stated amplitude is illegal
Remedy Enter sensible amplitude value

160071 Illegal bandwidth **OK softkey**

Scan Function generator/measuring function parameterization
Effect Function cannot be started
Explanation The bandwidth must be <= of half the sampling rate
Remedy Set permissible bandwidth

160072 Illegal scaling **OK softkey**

Scan Function generator/measuring function parameterization
Effect The function cannot be started
Explanation –
Remedy Set permissible scaling

160073 Illegal period duration **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

Scan Measuring function parameterization

Effect The function cannot be started

Explanation Stated value too high

Remedy Enter smaller value

160079 Illegal pulse width **OK softkey**

Scan Function generator parameterization

Effect Function cannot be started

Explanation –

Remedy Enter sensible value

160080 Illegal ramp duration **OK softkey**

Scan Measuring function parameterization

Effect Function cannot be started

Explanation –

Remedy Enter smaller value

160081 Illegal traversing range limits **OK softkey**

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** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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**
Initialization value too large
Fine quantization too large
Number of learning runs too large **OK softkey**

Scan
- 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)

Effect Start-up function aborts

Explanation
- 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.

Remedy
- 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** **OK softkey**
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** **OK softkey**

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** **OK softkey**

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 ...** **OK softkey**

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** **OK softkey**

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** **OK softkey**

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

160093 **File ... not saved completely** **OK softkey**
Scan Startup application file services (write)
Effect Incomplete data set created
Explanation File contents not completely transferred
Remedy Repeat procedure

160094 **File ... does not exist** **OK softkey**
Scan Startup application file services (read only)
Effect No data is read
Explanation The stated file does not exist
Remedy Correct file selection

160095 **Error on reading from file ...** **OK softkey**
Scan Startup application file services (read only)
Effect No data or only inconsistent data are read
Explanation Bulk storage device access problems
Remedy Contact service

160096 **Error in file structure ...** **OK softkey**
Scan Startup application file services (read only)
Effect No data read in
Explanation File does not have correct format
Remedy None

160097 **Hard disk full, write file ...** **OK softkey**
Scan Startup application file services (write)
Effect No data or only inconsistent data are written
Explanation Bulk storage device access problems
Remedy Remove files not required

160098 **Data block of file ... not available** **OK softkey**
Scan Startup application file services (read only)
Effect No data read in
Explanation The file does not contain any data for the selected axis/drive
Remedy None

160099 **File ... not loaded** **OK softkey**
Scan Startup application file services (read only)
Effect No data is read in
Explanation –
Remedy Repeat procedure

160100 **File ... not saved** **OK softkey**
Scan Startup application file services (write)
Effect Data set is not stored
Explanation –
Remedy Repeat procedure

160101 Internal error, end startup **OK softkey**

Scan Startup application
Effect –
Explanation Startup application cannot be executed because of internal error
Remedy No startup application or end startup application

160102 Memory area exceeded **OK softkey**

Scan Start-up application at start of neural quadrant error compensation
Effect The function cannot be started
Explanation Fine quantization * (coarse quantization +1) must be less than or equal to 1000
Remedy Reduce the size of fine and coarse quantization
Note Applies as from SW 4

160103 Invalid address assignment **OK softkey**

Scan Start-up application at start of neural quadrant error compensation
Effect The function cannot be started
Explanation Error in the parameterization of limit lower or upper area
Remedy Correct inputs
Note Applies as from SW 4

160104 Learning phase active file functions not possible **OK softkey**

Scan Start-up application at file functions in the neural quadrant error compensation
Effect Access to the file functions not possible
Explanation No file functions are allowed while measurement is taking place
Remedy Stop measurement or wait for end of measurement
Note Applies as from SW 4

160105 QEC bits not set **OK softkey**

Scan Start-up application at start of neural quadrant error compensation
Effect The function cannot be started
Explanation The activation bit of the neural QEC (NC MD) is not set
Remedy Set QEC bits
Note Applies as from SW 4

160106 Feedforward control not activated **OK softkey**

Scan Start-up application at start of neural quadrant error compensation
Effect The function cannot be started
Explanation The speed feedforward control must be activated
Remedy Activate speed feedforward control (option, NC MD, PLC bit)
Note Applies as from SW 4

160107 Axes not configured **OK softkey**

Scan Start-up application at start of circle form test
Effect The function cannot be started
Explanation Two real axes must be configured
Remedy Configure axes
Note Applies as from SW 4

160108 No trace activated **OK softkey**

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 ... **OK softkey**

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. ... **OK softkey**

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 ... **OK softkey**

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 ... **OK softkey**

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 ... **OK softkey**

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

160114 Illegal offset address ... OK softkey

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 ... OK softkey

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 ... OK softkey

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 ... OK softkey

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 ... OK softkey

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 ... OK softkey

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

160120 **Wrong Trace number (domain) ...** **OK softkey**

Scan Start-up application when reading out the TRACE buffer
Effect Trace buffer could not be displayed
Explanation –
Remedy –
Note Applies as from SW 4

160121 **Trace header not initialized (domain) ...** **OK softkey**

Scan Start-up application when reading out the TRACE buffer
Effect Trace buffer could not be displayed
Explanation –
Remedy –
Note Applies as from SW 4

160122 **Trace active, no data (domain) ...** **OK softkey**

Scan Start-up application when reading out the TRACE buffer while Trace function is running
Effect Trace buffer could not be displayed
Explanation –
Remedy –
Note Applies as from SW 4

160123 **Illegal trigger threshold ...** **OK softkey**

Scan Start-up application at start of SERVO TRACE function
Effect SERVO trace is not started
Explanation –
Remedy –
Note Applies as from SW 4

160124 **Option is not available** **OK softkey**

Scan Start-up application on selecting the circle form test function
Effect Circle form test cannot be selected
Explanation –
Remedy Set circle form test option
Note Applies as from SW 4

160125 **Trace buffer already assigned** **OK softkey**

Scan Start-up application on starting a measurement function
Effect Measurement function is not started.
Explanation Trace buffer is already assigned by Servo Trace
Remedy Stop Servo Trace and restart measurement function
Note Applies as from SW 4

160126 Data not available on Servo **OK softkey**

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

Remedy Enter permissible channel/IKA No. and restart.

Note Alarm in SW 5 and higher

161001 Function abort by the operator **OK softkey**

Scan Startup function

Effect None

Explanation Operational message after operator action

Remedy 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:

81 “Axial alarm active”
82 “Above traversing range upper limit”
83 “Below traversing range lower limit”
84 “No axial SERVO enable”
85 “No PLC enable”
86 “SERVO mode change”
87 “MF on SERVO aborted”
88 “Reset”
89 Axis/spindle not in stop state”
90 Spindle ramp-up encoder stop from PLC”

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

Scan Deleting MD files
Effect Function is not executed
Explanation <online> and STANDARD data cannot be deleted
Remedy –

165019 File cannot be edited **OK softkey**

Scan Selecting Edit or Edit new
Effect Function is not executed
Explanation BOOT files cannot be edited.
Remedy –

165020 Error on selecting file **OK softkey**

Scan Selection of Edit or Edit new
Effect Function is not performed
Explanation Internal error on file selection
Remedy Please notify Siemens Service
Note Applies as from SW 4

165021 Drive configuration has not been saved **OK softkey**

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 **OK softkey**

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 **OK softkey**

Scan Saving, loading drive MD
Effect Fucntion 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 **OK softkey**

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 **OK softkey**

Scan Copying MD files
Effect Function is not executed
Explanation The named file does not exist
Remedy –

165026 Name is reserved for standard data **OK softkey**

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 **OK softkey**
Scan Loading MD files
Effect Function is not executed
Explanation Only user or STANDARD data can be loaded
Remedy –

165028 BOOT is no valid file name **OK softkey**
Scan Edit new, editing, saving, inserting MD files
Effect Function is not executed
Explanation The name cannot be used for user files
Remedy Enter a different name.

165029 Boot files cannot be loaded **OK softkey**
Scan Loading MD files
Effect –
Explanation Boot files are automatically loaded on NCK reset
Remedy –

165030 There is no file with power section selection **OK softkey**
Scan Drive MD/module selection
Effect Power section cannot be selected
Explanation There is no system file
Remedy Please notify Siemens Service
Note Applies as from SW 4

165031 No communication to the MSD **OK softkey**
Scan Saving, loading machine data
Effect Function is not executed
Explanation Transmission either not possible or transmission interference
Remedy Repeat operation
Note Applies for SW 3 only

165032 MSD has not taken any standard values **OK softkey**
Scan Drive MD, spindle (MSD): 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

165033 Conversion has not been switched off **OK softkey**
Scan Loading drive machine data
Effect Illegal data in drive
Explanation –
Remedy Repeat operation
Note Applies as from SW 5.4.

165034 Conversion has not been switched on **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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

165041 Only possible in general reset mode **OK softkey**

Scan Softkey “Configure memory”
Effect Function is not performed
Explanation To configure memory, the control must be in the general reset mode.
Remedy Activate the general reset mode under “Diagnosis/start-up”
Note Applies as from SW 4

165042 Configuration not complete **OK softkey**

Scan Softkey “Configure memory”, check DRAM and SRAM configuration
Effect Function is not performed
Explanation Not all data belonging to the configuration are available
Remedy First enter all data
Note Applies as from SW 4

165043 Insufficient memory space **OK softkey**

Scan Softkey “Configure memory”, check DRAM and SRAM configuration
Effect Function is not performed
Explanation The calculated free memory space available is negative
Remedy Change the configuration such that the remaining memory is positive
Note Applies as from SW 4

165044 Controller data have not been calculated **OK softkey**

Scan Loading of standard drive machine data and also softkey “Calculate controller data”
Effect Invalid data in the drive
Explanation –
Remedy Repeat action
Note Applies as from SW 4

165045 No power section selected **OK softkey**

Scan Softkey “OK” in the drive machine data/selection module screen
Effect Key is ignored
Explanation Line with intermediate heading has been selected accidently. These lines serve only for the headings in the selection list.
Remedy Select the correct module and press the key again.
Note Applies as from SW 4

165046 No input authorization **OK softkey**

Scan Insert from clipboard, drive selection
Effect Function is not performed
Explanation The data block just edited cannot be modified even if password is set (e.g. standard data block)
Remedy Select another data block
Note Applies as from SW 4

165047 No curve parameterized **OK softkey**

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 ... **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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

165053 NQFK data... not loaded **OK softkey**

Scan “Load from hard disk” softkey in the File functions menu in the Diagnosis/Start-up/Machine data display
Effect The NQFK data have not been loaded.
Explanation System error
Remedy Please notify Siemens service.
Note Alarm in SW 5 and higher

165054 NQFK data for axis ... not loaded **OK softkey**

Scan “Load from hard disk” softkey in the File functions menu in the Diagnosis/Start-up/Machine data display
Effect The NQFK data of the stated axis have not been loaded.
Explanation The NQFK ASCII file of the stated axis is defective or not compatible.
Remedy Delete or correct file, repeat procedure.
Note Alarm in SW 5 and higher

165055 Equivalent circuit data have not been calculated **OK softkey**

Scan Softkey “Calculate equivalent circuit diagram”
Effect Invalid data in drive.
Explanation –
Remedy Repeat action
Note Alarm in SW 5 and higher

165056 Carry out safety acceptance test **OK softkey**

Scan Softkey ”Accept safe functions”
Effect –
Explanation Without acceptance test, the operator’s life and limb are at risk.
Remedy The acceptance test must be performed in accordance with the valid safety regulations.
Note Applies as from SW 5.4

165057 Sisitec data TEA1 axis read error **OK softkey**

Scan Softkey ”Accept safe functions”
Effect The function has not been performed.
Explanation –
Remedy If necessary, first start up the axis.
Note Applies as from SW 5.4

165058 Sisitec data TEA3 drive write error **OK softkey**

Scan Softkey ”Accept safe functions”
Effect The function has possibly been performed incompletely, data may be inconsistent.
Explanation –
Remedy If necessary, first start up the drive.
Note Applies as from SW 5.4

165059 Check input new SI password different **OK softkey**

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 $\leq$ 0) **OK softkey**

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 $\leq$ 0.
Remedy Correct value, repeat function.
Note Applies as from SW 5.4

165061 Rated voltage too small (MD x132 $\leq$ 0) **OK softkey**

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 $\leq$ 0.
Remedy Correct value, repeat function.
Note Applies as from SW 5.4

165062 Rated current too small (MD x103 $\leq$ 0) **OK softkey**

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 $\leq$ 0.
Remedy Correct value, repeat function.
Note Applies as from SW 5.4

165063 Cos Phi power factor wrong **OK softkey**

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 $\leq$ 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 **OK softkey**

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 **OK softkey**

Scan Softkey ”Calculate equivalent circuit diagram data (MSD only)”

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 **OK softkey**

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 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 **OK softkey**

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 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 **OK softkey**

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 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 **OK softkey**

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 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 **OK softkey**

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 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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 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 **OK softkey**

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 **OK softkey**

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 **OK softkey**

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 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 **POWER ON**

Scan Cyclic after control startup

Effect Machining stops, interlocking of NC Start and Mode Group Ready

Explanation

Additional information 1 (error no.)	Additional information 2	Explanation	Remedy
0x0001	Task ID	Opcode received unknown	Contact service
0x0002	Task ID	Message received unknown	Contact service
0x0003	Task ID	Faulty buffer type	Contact service
0x0004	Task ID	No queues available	Contact service
0x0011	Protocol ID	Unknown protocol ID	Contact service
0x0012	Message frame type	Unknown protocol message type	Contact service
0x0013	Service ID	Unknown protocol service ID	Contact service
0x0014	Variable length	Unknown protocol variable length	Contact service
0x0022	Task ID	Incorrect NC/servo/drive address	Contact service
0x0023	Pointer (set/actual)	Put_message pointer error	Contact service
0x0102	Version (set/actual)	Version error of boot files	Create boot files again
0x0103	Length (set/actual)	Incorrect length of boot files	Create boot files again
0x0301	Status	PI service initialization error	Contact service
0x0302	Status	PI service execution error	Contact service
0x0303	Status	PI service message error	Contact service
0x0304	Status	PI service abort error	Contact service
0x0401	Drive no.	Command with illegal drive no.	Contact service
0x0402	Message frame type	Command with illegal header (transmission)	Contact service
0x0403	Message frame type	Command with illegal header (reception)	Contact service
0x0404	–	Management overflow on transmitting orders	Contact service
0x0405	–	Management overflow on transmitting of acknowledgements	Contact service
0x0406	–	Management overflow on receiving orders	Contact service
0x0407	–	Management overflow on receiving acknowledgements	Contact service
0x0408	Status	Queue transmission error	Contact service
0x0411	–	Checksum error on receiving	Replace hardware
0x0412	Message length	Message length exceeded on receiving	Replace hardware
0x0413	Task ID	Timeout on transmitting	Replace hardware Increase cycle times
0x0414	–	Timeout + message unknown on transmitting	Replace hardware, Increase cycle times
0x0415	Task ID	Timeout on receiving	Replace hardware, Increase cycle times
0x0416	–	Timeout +message unknown on receiving	Replace hardware, Increase cycle times

0x0417	Task ID	Abort on transmitting	Replace hardware
0x0418	Task ID	Abort on receiving	Replace hardware
0x0421	Protocol ID	Error in data transmission (unknown protocol ID)	Contact service
0x0422	Message type	Error in data transmission (unknown message type)	Contact service
0x0423	Service ID	Error in data transmission (unknown service ID)	Contact service
0x0424	Variable length	Error in data transmission (unknown variable length)	Contact service
0x0431	Drive type 1= FDD 2 = MSD	Timeout on firmware booting	Replace hardware (control module 611D, drive bus or DCM), increase cycle times
0x0432	Filling level (time of 611D error)	Abort of firmware booting due to 611D system error	Replace hardware (control module 611D, drive bus or DCM)
0x0433	File ID	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.	Switch control off/on. If the error then still occurs, the 611D firmware must be re–installed.
0x0434	File ID	Error in boot sequence	Re–install 611D firmware, contact Service
0x0435	File ID	Error in boot file	Re–install 611D firmware, contact Service
0x0501	Status	No ADS block available	Contact service
0x0502	Status	No ADS send possible	Contact service
0x0510	Order no.	Acknowledgement cannot be allocated	Contact service
0x0520	Task ID	Message to illegal software component	Contact service
0x0601		Error on drive bus formation or data transmission (write FIFO not empty)	Replace hardware: NC module, control module 611D, drive bus cable
0x0602		Reserved	
0x0603		Error on bus formation: timeout or CRC error during PCU initialization	Replace hardware: control module 611D, NC module
0x0604		Error on bus formation: timeout or CRC error on timer initialization in PCU	Replace hardware: control module 611D, NC module
0x0605		Reserved	
0x0606		Sign–of–life error 611D	Ring programming with GI 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
0x0607		Invalid DCM interrupt (no timeout, no CRC)	Replace NC hardware
0x0608		Reserved	
0x0610		Reserved	
0x0611		Digital drives configured although there is no DCM (drive bus interface) on the NC hardware	Replace NC hardware
0x0612		Illegal internal ramp-up status	Replace NC hardware Reinstall NC system software Contact service
0x0613		invalid smtk_task opcode	Replace NC hardware Reinstall NC system software Contact service
0x0614		invalid smtk_status	Replace NC hardware Reinstall NC system software Contact service

0x0615		invalid status var_meldung()	Replace NC hardware Reinstall NC system software Contact service
0x0616		invalid status send_msg() – no message buffer free – error with smtk_send()	Replace NC hardware Reinstall NC system software Contact service
0x0617		invalid status mk_tea30_check() (error during interpretation of drive configuration)	Delete drive configuration Reinstall NC system software Contact service
0x0618		invalid status mk_bus_init()	Replace hardware: control module 611D, NC module Contact service
0x0619		Invalid status zustand_antrieb() Default status–0	Replace hardware: control module 611D, NC module
0x0620		Invalid status zustand_antrieb() Acknowledgement status–0	Replace hardware: control module 611D, NC module
0x0621		Invalid status zustand_antrieb() Default status–1	Replace hardware: control module 611D, NC module
0x0622		Invalid status zustand_antrieb() Acknowledgement status–1	Replace hardware: control module 611D, NC module
0x0623		Invalid status zustand_antrieb() Default status–2	Replace hardware: control module 611D, NC module
0x0624		Invalid status zustand_antrieb() Acknowledgement status–2	Replace hardware: control module 611D, NC module
0x0625		Invalid status zustand_antrieb() Default status–3	Replace hardware: control module 611D, NC module
0x0626		Invalid status zustand_antrieb() Acknowledgement status–3	Replace hardware: control module 611D, NC module
0x0627		Invalid status zustand_antrieb() Default status–4	Replace hardware: control module 611D, NC module
0x0628		Invalid status zustand_antrieb() Acknowledgement status–4	Replace hardware: control module 611D, NC module
0x0629		Invalid status zustand_antrieb() Acknowledgement status–5	Replace hardware: control module 611D, NC module
0x0630		Invalid status anstoss_hintergrund()	Replace hardware: control module 611D, NC module
0x0631		Invalid status lese_alarm_status()	Replace hardware: control module 611D, NC module
0x0632		Invalid status with drive alarm processing (al_status)	Replace hardware: control module 611D, NC module
0x0633		Invalid init-task event	Replace NC module Reinstall NC system software
0x0634		Error in drive configuration	Delete drive configuration Reinstall NC system software
0x0635		Invalid drive type (gsi_anlaufart)	Replace hardware: control module 611D, NC module
0x0636		Invalid smtk_event	Replace hardware: control module 611D, NC module

0x0637		Illegal transmission parameter in taster_übernahme()	Replace hardware: control module 611D, NC module
0x0638		Timeout during drive ramp-up – status 0 is not acknowledged by the drive	Replace 611D control module Reinstall drive firmware
0x0639		Illegal transmission parameter in meldung_servo_6xx()	Replace hardware: control module 611D, NC module
0x0640		Illegal status test formation of drive bus (gsi_zust_businit)	Replace hardware: control module 611D, NC module
0x0641		Faulty length of boot block 1	Reinstall drive firmware check hard disk replace NC module
0x0642		Faulty length of boot block 2	Reinstall drive firmware check hard disk replace NC module
0x0643		Timeout during transmission of initial program loader	Replace hardware: control module 611D, NC module, Contact service
0x0644		Faulty transmission parameter for fw_611D_urladen()	Replace hardware, reinstall NC system software Contact service
0x0645		Faulty status fw_611D_urladen()	Replace NC module reinstall NC system software Contact service
0x0701	Function no.	Overflow with orders (internal communication servo, drive)	Contact service
0x0702	–	Overflow with acknowledgements (internal communication servo, drive)	Contact service
0x0703	Function no.	Timeout (internal communication servo, drive)	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.
0x0704	Function no.	Handshake error (internal communication servo, drive)	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
0x0705	Function no	Unknown order (internal communication servo, drive)	Contact service
0x0706	Function no.	Unknown acknowledgement (internal communication servo, drive)	Contact service

Note Applies as from SW 3.

300001 Configuration error drive number **POWER ON**

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

300002 Configuration error module type **POWER ON**

Scan Establishing the 611D drive link
Effect 611D link not established
Explanation The configured module type does not correspond to the actual module type
Remedy Correct 611D module type (1/2 axis module)
Note Applies as from SW 3

300003 Configuration error bus configuration **POWER ON**

Scan Establishing the 611D drive link
Effect 611D link not established
Explanation The configured bus configuration does not correspond to the actual bus configuration (more actual drives as configured)
Remedy Correct 611D configuration; check hardware
Note Applies as from SW 3

300004 Configuration error meas. cct. components **POWER ON**

Scan Establishing the 611D drive link
Effect 611D link not established
Explanation Measuring circuit modules wrongly assigned (submodules missing or incorrect submodule type) or faulty
Remedy Replace drive module
Note Applies as from SW 3

300005 Configuration error drive type **POWER ON**

Scan Exstablishing the 611D drive link
Effect 611D link not established
Explanation The configured drive type (FDD/MSD) does not correspond to the actual drive type
Remedy Correct configuration or replace modules
Note Applies as from SW 3

300006 CRC error drive link **POWER ON**

Scan Cyclic
Effect Machining stops, interlocking of NC START and Mode Group Ready
Explanation Interference on 611D drive link
Remedy Check control cabinet wiring; consult EMC regulations
Note Applies as from SW 3
As from SW 6, the alarm 300006 ”CRC error drive link” 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.

300007 Number of defective axes, spindles, drives **POWER ON**

Scan Control startup
Effect Interlocking of NC START and Mode Group Ready
Explanation The NC axes, NC spindles and digital drives sum without setpoint assignment is larger than 15
Remedy Check setpoint assignment on digital drives and complete and match NC axis and spindle configuration if necessary
Note Applies as from SW 3

300008 FDD software not loaded **POWER ON**

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 **POWER ON**

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 **Reset key**

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 **Reset key**

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 **Message**

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 POWER ON

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

Error No. F...	Additional information (xx = for diagnostic purposes)	Explanation	Remedy	Relevant for
F001 (only for drive SW 1.x). For drive software > SW 2.x, see F034 or F035.	Incorrect address / xx	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.	Replace servo control module.	FDD
F002	Incorrect address / xx	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.	Replace servo control module.	FDD / MSD
F007	xx / xx	In the clock pulse synchronization between NC and drive, an illegal state has been read from the hardware. Synchronization could not be performed.	Replace servo control module.	FDD / MSD
F01B	xx / Axis No. xx = 0: Error	• 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.	• Replace the control module. Check the connections. Connect the power section	FDD / MSD

Note In the event of a fault, record additional information and inform hotline.

Error No. F...	Additional information (xx = for diagnostic purposes)	Explanation	Remedy	Relevant for
	xx = 1: Power section not connected	• A current of 0 is expected during power–up of the current actual value measurement and during cyclic operation on a pulse disable. If a 1–axis power section is addressed via the module selection (software configuration of the power section) as a 2–axis power section, the current actual value measurement outputs this system error, since a current > 0 is measured (NB: the software configuration and the installed hardware (power section and/or control module) do not match).	• – Change the software con figuration of the power section (2–axis power section——> 1–axis power section), or – Deactivate the 2nd axis, or – Install the 2–axis power section	
F020	xx / xx	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.	Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).	FDD / MSD
F021	xx / xx	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.	Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).	FDD / MSD
F022	xx / xx	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.	Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).	FDD / MSD

Error No. F...	Additional information (xx = for diagnostic purposes)	Explanation	Remedy	Relevant for
F023	xx / Axis No. Read K1C register of the relevant PCU ASIC NC drive number	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.	Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).	FDD / MSD
F024	xx / xx	In executing the software, an illegal internal axis number has been found. Possible causes: Defective servo control module, electromagnetic compatibility faults.	Replace servo control module. Take measures to eliminate noise (screening, check ground connections).	FDD / MSD
F025	xx / xx	In executing the software, an illegal internal physical axis number has been found. Possible causes: Defective servo control module, electromagnetic compatibility faults.	Replace servo control module. Take measures to eliminate noise (screening, check ground connections).	FDD / MSD
F026	xx / Axis No.	The NC attempts to log on an FDD module as MSD. There are possibly faults in the communication via the drive bus or servo control module is defective.	Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).	FDD
F027	xx / Axis No.	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.	Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).	MSD
F028	xx / Axis No. Read K1C register of the relevant PCU ASIC NC drive number	For the direct measuring system, only certain submodules are allowed. A submodule has been detected that is not allowed.	Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).	FDD / MSD
F031	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	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.	Replace servo control module. Check plug-on connections, take measures to eliminate noise (screening, check ground connections).	FDD / MSD
F033	Error code / xx 0x51; wrong data format in element list 0x52; wrong conversion group specified in Refresh	The drive software is no longer consistent. This is presumably caused by a hardware fault on the servo control module.	Reload drive software Replace servo control module.	FDD / MSD
F034 F035 Error numbers have different load sequences	Error code / incorrect address 0 or incorrect address 0x60; incorrect response of SERVO on STF handshake 0x61; error during RAM check 0x62; transport checksum does not correspond to that of SERVO	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.	Check drive bus cable and connectors, take measures to eliminate noise (screening, check ground connections), replace servo control module.	FDD / MSD

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

Error No. F...	Additional information (xx = for diagnostic purposes)	Explanation	Remedy	Relevant for
F003	Time slice / xx 20=current controller cycle (MD 1000) 10=speed controller cycle (MD 1001) 8=position controller cycle (NC MD) 4=1 ms (permanent) 2=4 ms (permanent) 1=monitoring cycle (MD 1102) A0=start–up synchronization B0=background computing time 40=SI monitoring cycle (MD 1300)	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). SINUMERIK Safety Integrated: Monitoring cycle too small.	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 signalling 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
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 1A: SZ <> 1 for IZ=0 2A: SZ <> 1, 2, 3, 4, 5 2B: SZ IZ <> 0, 1 2C: SZ=3 for PO parameterization error 3A: SZ <> 1, 2, 3, 4, 5 3B: SZ IZ <> 0, 1	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

Error No. F...	Additional information (xx = for diagnostic purposes)	Explanation	Remedy	Relevant for
F010	x / xx x = 1: HW undeflow 2: HW overflow 3: SW underflow 4: SW overflow	The boundaries of the processor-internal hardware stack or of the software-stack in the data memory have been violated.	Reload drive software. Replace servo control module.	FDD / MSD
F011	xx / xx	The watchdog timer on the servo control module has expired. Caused by a hardware fault in the time base on the servo control module.	Replace servo control module.	FDD / MSD
F012	xx / xx	The NC basic clock pulse generated on the NC and transferred 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.	Check drive bus cable and plug-on connectors, take measures to eliminate noise (screening, check ground connections), replace NC hardware, replace servo control module.	FDD / MSD
F013	xx / xx	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.	Check drive bus cable and plug-on connectors, take measures to eliminate noise (screening, check ground connections), replace NC hardware, replace servo control module.	FDD / MSD
F014	Incorrect address / xx	The processor has detected an illegal command in the program memory.	Replace servo control module.	FDD / MSD
F015	xx / xx 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: 0: P memory 1: X memory 2: Y memory	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.	Replace servo control module.	FDD / MSD
F016	xx / xx	An illegal interrupt of the processor has occurred.	Check drive bus cable and connector. Replace servo control module.	FDD / MSD
F017	xx / xx	An illegal interrupt of the processor has occurred.	Check drive bus cable and connector. Replace servo control module.	FDD / MSD
F018	xx / xx	An illegal interrupt of the processor has occurred.	Check drive bus cable and connector. Replace servo control module.	FDD / MSD
F019	xx / xx	An illegal interrupt of the processor has occurred.	Check drive bus cable and connector. Replace servo control module.	FDD / MSD

Error No. F...	Additional information (xx = for diagnostic purposes)	Explanation	Remedy	Relevant for
F030	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 "defective" 0x0D; illegal transmission parameter for REFRESH_PI ZUST NC drive number	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.	Check drive bus cable and plug-on connectors, take measures to eliminate noise (screening, check ground connections), replace servo control module.	FDD / MSD
F032	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	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.	Check drive bus cable and plug-on connectors, take measures to eliminate noise (screening, check ground connections), replace servo control module.	FDD / MSD
F040	xx / xx	An illegal number of current setpoint filters (>4) has been entered.	Correct number of current setpoint filters MD1200.	FDD / MSD
F041	xx / xx	An illegal number of speed setpoint filters (>2) has been entered.	Correct number of speed setpoint filters MD1500.	FDD / MSD

Error No. F...	Additional information (xx = for diagnostic purposes)	Explanation	Remedy	Relevant for
F044 (drive SW 2.5 and higher)	xx /axis no.	• 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) exceeds45°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	• Check encoder adjustment and EMC measures new sequence check mode replacee motor	FDD
F045	Error code / Axis No.	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.	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.	FDD / MSD
F046	xx / xx	As from drive software SW 4.02, startup of the drive is only possible with the drive software loaded	Re-load drive software	FDD/MSD

Note Applies as from SW 3

300501 Current monitoring — POWER ON

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 — 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 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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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

As from drive SW 2, response can be configured via MD 1612.8

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 **POWER ON**

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 * minimum(1.2*MD 1400, MD 1147) * MD1112/60
MSD
f_g = 1.12 * minimum(MD 1146, MD 1147) * number of pole pairs / 60
number of pole pairs = nominal motor frequency (MD 1134) * 60 / nominal motor speed (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)
FDD: MD 1112 (number of motor poles).

Note Applies as from SW 4

300510 Fault in center frequency measurement **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 Speed too high at center frequency measurement

Remedy Reduce speed

Note Applies as from SW 4

300511 **Meas. value memory active** **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 Measured value memory is active during power up

Remedy Start up again!

Note Applies as from SW 4

300515 **Heat sink temperature alarm** **POWER ON**

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

As from drive SW 2, response can be configured via MD 1612.15

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 3

300606 **Flux controller at end stop** **Reset key**

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** **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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

Response via MD 1613.9 configurable as from SW 4

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 positon 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 **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:
- Controllers are disabled, motor is braked
- SIMODRIVE_READY and DRIVE_READY are cancelled
- Reset error

As from drive SW 2, response can be configured via MD 1613.14

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

Scan POWER ON

Effect Drive only ramps up to ramp-up state 2

Explanation On 2-axis modules, the monitoring clock pulse MD 1002 must be identical for both axes.

Remedy Set the monitoring clock pulse to be identical for both axes.

Note Applies as from SW 3

300712 Dynamic response setting not possible (2 axes) **POWER ON**

Scan POWER ON

Effect Drive only ramps up to ramp-up state 2

Explanation For two active axes on a module, it is not possible to change the controller structure via MD 1004.

Remedy With two active axes on a module, configuration structure MD 1004 must be set to i before n.

Note Applies as from SW 3

300713 Shift of position controller clock pulse invalid **POWER ON**

Scan POWER ON

Effect Drive only ramps up to ramp-up state 2

Explanation The position controller clock pulse shift specified by the NC is greater than or equal to the position controller clock pulse.

Remedy NC Hotline

Note Applies as from SW 4

300714 Power section code wrong **POWER ON**

Scan POWER ON

Effect Drive only ramps up to ramp-up state 2

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 **POWER ON**

Scan POWER ON

Effect Drive only ramps up to ramp-up state 2

Explanation The maximum current of the power section MD 1107 has a value that is less than or equal to 0.

Remedy Enter a valid value in machine data MD 1107 “Maximum current of power section”.

Note Applies as from SW 3

300716 Torque constant invalid **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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

300727 Reactance <= 0 **POWER ON**

Scan POWER ON

Effect Drive only ramps up to ramp-up state 2

Explanation The stator reactance MD 1139 or rotor reactance MD 1140 or magnetizing reactance MD 1141 is less than or equal to zero.

Remedy Eliminate error on inputting MD 1139, MD 1140 or MD 1141.

Note Applies as from SW 4

300728 Torque/current matching factor too large **POWER ON**

Scan POWER ON

Effect Drive only ramps up to ramp-up state 2

Explanation The matching factor (set torque → cross current) in the speed controller is too large.

Remedy Eliminate error when inputting
- Rated motor current MD 1103, or
- Limit current transistor MD 1107, or
- Torque constant MD 1113.

Note Applies as from SW 4

300729 Motor zero-speed current <= 0 **POWER ON**

Scan POWER ON

Effect Drive only ramps up to ramp-up state 2

Explanation Motor zero-speed current MD 1118 is less than or equal to zero.

Remedy Eliminate error on inputting the motor zero-speed current MD 1118

Note Applies as from SW 4

300730 Rotor resistence invalid **POWER ON**

Scan POWER ON

Effect Drive only ramps up to ramp-up state 2

Explanation Rotor resistence is less than or equal to zero or format overflow has occurred.

Remedy The following machine data can have an incorrect value:
- Torque controller clock pulse MD 1001
- Rated motor frequency MD 1134
- Rotor resistence cold MD 1138
- Stator stray reactance MD 1139
- Rotor stray reactance MD 1140

Note Applies as from SW 4

300731 Rated power <= 0 **POWER ON**

Scan POWER ON

Effect Drive only ramps up to ramp-up state 2

Explanation Rated power MD 1130 is less than or equal to zero.

Remedy Eliminate error on inputting the rated power MD 1130.

Note Applies as from SW 4

300732 Rated motor speed <= 0 **POWER ON**

Scan POWER ON

Effect Drive only ramps up to ramp-up state 2

Explanation Rated motor speed MD 1140 is less than or equal to zero.

Remedy Eliminate error on inputting the rated motor speed MD 1140.

Note Applies as from SW 4

300733 Motor no-load voltage invalid **POWER ON**

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 x 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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 as from SW 3

300742 Lower limit violated MD **POWER ON**

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 **POWER ON**

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 **POWER ON**

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.
Additional information: none

Remedy
- Check parameters and save BOOT again

Note Applies for SW 3 only

300743 Function not with this 611D control module **POWER ON**

Scan When powering up the control.

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 **POWER ON**

Scan When powering up the control.

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 **POWER ON**

Scan When powering up the control.

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 **POWER ON**

Scan When powering up the control.

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 **POWER ON**

Scan When powering up the control.

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 **POWER ON**

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 **POWER ON**

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/mdegrees] 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: µm_to_incr $\leq$ 65535
The condition for the motor to load system factor is: incr_to_µm $\leq$ 1

mit $\mu m\_to\_incr = \frac{1}{incr\_to\_\mu m}$

Equation for rotary axis With a rotary motor encoder and a rotary axis:

$$incr\_to\_\mu m(n) = \frac{MD1321}{MD1322} * incr\_to\_\mu m\_rot\_rot$$

where n = 0 ... 7 (gear stage) and

$$incr\_to\_\mu m\_rot\_rot = \frac{360000}{8192} * \frac{1}{MD1318}$$

Equation for linear axis With a rotary motor encoder and a linear axis:

$$incr\_to\_\mu m(n) = \frac{MD1321}{MD1322} * incr\_to\_\mu m\_rot\_lin$$

where n = 0 ... 7 (gear stage) and

$$incr\_to\_\mu m\_rot\_lin = \frac{1000}{8192} * \frac{1}{MD1318} * MD1320$$

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
300850

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: 300750
- MD 1012.4 = 1: 300850

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

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.

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. I-set filter wrong — 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:
- 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.

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 **Reset key**

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 **Reset key**
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

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: 300754
- MD 1012.4 = 1: 300854

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 **Reset key**
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

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: 300755
- MD 1012.4 = 1: 300855

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 **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:
- 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.

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 **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:
- 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.

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 **Reset key**
300858

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: 300758
- MD 1012.4 = 1: 300858

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 **Reset key**
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 **Reset key**
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 **Reset key**
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 Reset key
300862

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: 300762
- MD 1012.4 = 1: 300862

Explanation Emergency retraction or generator is already active.

Remedy Check parameterization/machine data.

Note Applies as from SW 4

300763 Generator/emergency retraction mode invalid Reset key
300863

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

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: 300763
- MD 1012.4 = 1: 300863

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 Reset key
300864

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

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: 300764
- MD 1012.4 = 1: 300864

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 Reset key
300865

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

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: 300765
- MD 1012.4 = 1: 300865

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

300766 Blocking frequency greater than Shannon frequency Reset key

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 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 **Reset key**

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•0.01•MD 1514 < 1 / (2•MD 1001•31.25 microsec)
Speed setpoint filter 2:
MD 1521•0.01•MD 1517 < 1 / (2•MD 1001•31.25 microsec)

Note Alarm in SW 5 and higher

300768 Counter bandwidth greater than double blocking frequency **Reset key**

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 $\neq$ 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 counter bandwidth must be smaller than double the blocking frequency.

Current setpoint filter 1:
MD 1212 $\leqq$ 2•MD 1210
Current setpoint filter 2:
MD 1215 $\leqq$ 2•MD 1213
Current setpoint filter 3:
MD 1218 $\leqq$ 2•MD 1216
Current setpoint filter 4:
MD 1221 $\leqq$ 2•MD 1219
Speed setpoint filter 1:
MD 1516 $\leqq$ 2•MD 1514
Speed setpoint filter 2:
MD 1519 $\leqq$ 2•MD 1517

Note Alarm in SW 5 and higher

300769 Denominator bandwidth greater than double natural frequency **Reset key**

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 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 filterr 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 $\leqq$ 2•MD 1514•0.01•MD 1520
Speed setpoint filter 2:

MD 1518 $\leqq$ 2•MD 1517•0.01•MD 1521
Current setpoint filter 1:

MD 1211 $\leqq$ 2•MD 1210
Current setpoint filter 2:

MD 1214 $\leqq$ 2•MD 1213
Current setpoint filter 3:

MD 1217 $\leqq$ 2•MD 1216
Current setpoint filter 4:

MD 1220 $\leqq$ 2•MD 1219

Note Alarm in SW 5 and higher

300770 Filter factor cannot be represented **Reset key**

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 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
300875

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 **Reset key**

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 ≦ 0 **Reset key**

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 **Reset key**

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 **Reset key**

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 ≦ 0 **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 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

300799 Save and boot required **Power On**

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.

Explanation After automatic calculation of the controller parameters, it is necessary to save the machine data and to perform a power up.

Remedy Perform above measures.

Note Applies as from SW 4

300850 Speed controller adaptation: n–max < n–min

Note Alarm description see 300750

300854 Signal number invalid

Note Alarm description see 300754

300855 u/f operation: motor running

Note Alarm description see 300755

300858 Upper generator threshold too high

Note Alarm description see 300758

300859 Generator cut–off threshold too high

Note Alarm description see 300759

300860 Excessive emergency retraction speed

Note Alarm description see 300760

300861 Minimum generator speed too high

Note Alarm description see 300761

300862 Emergency retraction/generator active

Note Alarm description see 300762

300863 Generator/emergency retraction mode invalid

Note Alarm description see 300763

300864 No emergency retraction/generator mode possible

Note Alarm description see 300764

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **POWER ON**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 **Reset key**

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 — Reset key

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 — Reset key

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

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 **POWER ON**

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:

$$n_{max}\left[\frac{rev}{min}\right] = \frac{300000[Hz] * 60}{no.\ of\ encoder\ marks}$$

Monitoring condition: MD1331 $\leq \frac{1}{ü} * n_{max}$ with ü = 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 **POWER ON**

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= ± 737 280 000

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 **POWER ON**

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.

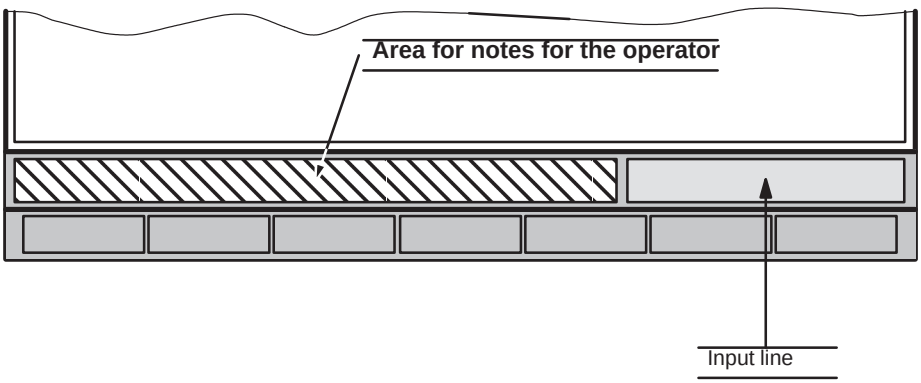
Remedy Check the modulo value for SN in MD 1305, correct if necessary and execute a POWER ON.

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.



1.6.2 Listing of dialog texts

All notes for the operator are listed in the following table in alphabetical order.

Dialog text	Appears with the following event	What must be done or What is wrong
BLOCK NOT AVAILABLE	When searching for blocks in the part program	—
BLOCK NUMBER TOO LARGE	Generating block number	Block number cannot be greater than N9999
BLOCK STRUCTURE WRONG	With “Correction block” function	Cursor is at the start of the wrong block
BLOCK TOO LONG	When editing part programs, a block must not be longer than 120 characters	Conclude block with “LF”
CHARACTER NOT ALLOWED	Taking over an input value (e.g. with the input key)	Input value has the wrong format
CHARACTER NOT AVAILABLE	When searching for characters in part programs	—
COMMENTS ERROR	Occurs when editing if the brackets do not match up	Check the number of brackets set
CYCLE DISABLE	When handling cycles (editing, copying, etc.)	Remove “Cycle disable” interface signal
CYCLE IN THE EPROM	Information while handling cycles	—
DATA TRANSMISSION RUNNING	Editing part programs	Stop interface

Dialog text	Appears with the following event	What must be done or What is wrong
DECIMAL POINT NOT ALLOWED	Taking over an input value (e.g. with the input key)	—
DELETE DATA?	“Delete” key has been pressed	If pressed again the data area specified will be deleted
DIFFERENT PROGRAM TYPES	When copying or renaming part programs	Only identical program types (L to L, % to %, etc.) can be handled
DRIFT COMPENSATION DATA ERROR	With semi-automatic drift compensation	Repeat compensation
EDITING NOT ALLOWED	When editing part programs	Repeat input
ENTER PASSWORD	When trying to enter protected data	Enter password
FORMAT ERROR	Taking over an input value (e.g. with the input key)	The control can do nothing with the value in this position. See Operator’s Guide.
FORMAT ERROR IN DISPLAY DESCRIPTION	Cannot occur with the user. (Only possible with the machine manufacturer during UMS testing.)	A format has been specified in the display description which does not agree with that to be displayed
GENERAL DATA ERROR	Taking over an input value (e.g. with the input key)	The value cannot be taken over. Taking over the value would cause an error: change value
GENERAL INPUT ERROR	Taking over an input value (e.g. with the input key)	The value was wrong. Change value
HELP NOT AVAILABLE	Operating the “Help” key	No help is available for the display selected
INPUT DISABLED	Taking over an input value (e.g. with the input key)	Operate keyswitch
INPUT ERROR (PROGRAM)	When editing part programs	The character selected cannot be entered in the part program
INPUT LINE OVERFLOW	Character input	Max. 25 characters
INTERFACE ASSIGNED	When starting data input/output	Selected interface is already operating
KEY NOT ALLOWED	Taking over an input value (e.g. with the input key)	Refers to input key and delete keys
KEYSWITCH MISSING	Selecting machine data tree or with general reset	Operate keyswitch
“MB” NOT CONFIGURED	When paging the menu tree	The menu block/tree is incorrectly configured
MD TRANSFER ERROR	Data error when fetching machine data	—
MDA CHANNEL ASSIGNED	MDA has already been started in another channel	Change channel or press “Reset”
MDA MEMORY OVERFLOW	In “MDA” mode	Max. 500 characters may be entered
NO CORRECTION BLOCK	With “Correction block” function	Correction block cannot be selected

Dialog text	Appears with the following event	What must be done or What is wrong
NO RENAME FOR CYCLES	Renaming cycles is not possible	—
NO VALUE ENTERED	Taking over an input value (e.g. with the input key)	Input value has the wrong format
ONLY 1 PROG. NO. ALLOWED	With MOVE or RENAME or EXECUTE YES/NO, of a part program	—
ONLY POSSIBLE AFTER “RESET”	When entering program numbers into the automatic basic display	The NC must be in the RESET state for safety reasons. Press RESET or wait until the current program is completed
“OPERATOR PROMPT MACRO BLOCK” SEVERAL VALUES	When editing via screen forms using operator prompt macros	If several fields are bracketed together in the display, then only one of the values can be entered
“OPERATOR PROMPT MACRO BLOCK” TOO LONG	When editing using the screen form with the aid of the operator prompt macros	Operator prompt macro has been incorrectly configured
“OPERATOR PROMPT MACRO BLOCK” VALUE MISSING	When editing via screen forms using operator prompt macros	No value has been entered
OVERSTORAGE ACTIVE	When overstoring	Wait until previous overstore operation has been completed
PROGRAM ALREADY AVAILABLE	When opening part programs, copying, renaming	Select different number
PROGRAM ERASE PROTECTED	Renaming part program number Opening Reading in via RS232C (V.24) if already present and being executed	Complete execution or reading in
PROGRAM MEMORY FULL	Inputting part programs manually or via RS232C (V.24)	On appearance of the message programs must be deleted
PROGRAM NOT AVAILABLE	Taking over a part program number during part program handling	Correct number
PROGRAM NUMBER NOT ALLOWED	Part program handling	Change part program number
PROGRAM PRESELECTION FORBIDDEN (MODE)	Selecting program for editing in MDA mode	Change mode
PROGRAM PRESELECTION NOT ALLOWED	Part program selection during TEACH IN	Abort TEACH IN (RESET)
SELECT PROGRAM	Something is to be entered in a part program	Select part program
SOURCE PROGRAM DEFECTIVE	Appears when reading out a part program	A bit has flipped in the part program just read (parity error).

Dialog text	Appears with the following event	What must be done or What is wrong
SPECIFY 2 PROGRAM NUMBERS	When copying or renaming part programs	—
STOP AXES	The actual axis value is to be read	Axis values must not change.
STOP PROGRAM	Editing the program being processed	Interrupt program (NC STOP)
TOO MANY CHARACTERS ENTERED	Taking over an input value (e.g. with the input key)	Input value has the wrong format
TOOL NUMBER NOT ALLOWED	With functions operating with tool offsets	e.g. PRESET with a rotary axis: In the PRESET display “0” must be entered for the tool offset number
RS232C (V.24) CHANNEL ALREADY IN RESET	On stop or stop all in display Data input/output	A RESET request has already been sent. When the softkey is pressed again it is ignored.
RS232C (V.24) CHANNEL NUMBER NOT CORRECT	When starting data input/output	The RS232C (V.24) interface number is too large or too small
WRONG AXIS SPECIFIED	With axis-specific functions (e.g. Preset)	Axis does not exist
WRONG DATA NUMBER	When deleting data	Data item (e.g. R parameter) with the number entered does not exist
WRONG G FUNCTION	With technology-dependent functions	Correct G function
WRONG MODE GROUP	For functions which are assigned to a mode group (e.g. channel selection)	Select an alternative mode group
WRONG PASSWORD	Password input	–
WRONG RS232C (V.24) CHANNEL NUMBER	Starting data output	The RS232C (V.24) interface number is too large or too small
WRONG VALUE ENTERED	When inputting into display screen forms (e.g. contour definition)	Change value
“–” NOT ALLOWED	Taking over an input value (e.g. with the input key)	Input value has wrong format
“=”, “CR” IN WRONG PLACE	Taking over an input value (e.g. with the input key)	Input value has the wrong format
1ST NUMBER > 2ND NUMBER	Deleting data areas	The 1st number must be smaller than the 2nd
2ND DECIMAL POINT	Taking over an input value (e.g. with the input key)	Input value has the wrong format

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:

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.

Error messages of the interpreter

Error messages of the interpreter	
01	Non-interpretable command *)
02	Illegal parameter *)
03	Data transfer into non-existent data (DB) *)
04	Substitution error *)
05	Call for a block that has not been loaded *)
06	Call for a non-existent data block *)
07	Segment not permitted with LIR/TIR *)
08	Segment error in a block transfer command *)
09	Overflow in block stack *)
0A	Overflow in interrupt stack *)
0B	Immediate system stop due to “STS” command *)
0C	Stop request by user (“STP” command) *)
0D	Processing delay *)
0E	Call for an illegal OB (OB No. 0...39) *)
0F	Call for a non-existent page (command “ACR”) *)

*) Additional information is given on this error in additional fields (see Section 2.2)

Error messages on system startup

Cold restart	
27	MD 137: Illegal address for OEM info bits [1])
28	Compress function (“Push block”) interrupt [1]) *) Note: PLC General Reset required after this error; blocks can first be saved via the programmer
29	MD8/9/10: Impermissible number of channels/spindles/axes *)
2A	Data loss
2B	Installation of NCK/MMC/COM requested
2C	MD17: Impermissible quantity of wait cycles for enabling the computer link user interface
2D	MD18: Impermissible user interface number for outputting a message to the host computer on synchronization
2E	MD19: Impermissible quantity of function nos. for core sequence initiation
2F	MD20–29: Impermissible function number for core sequences
30	MD128: Address 1st machine control panel too high (max. 120)
31	MD129: Address 2nd machine control panel too high (max. 120)
32	Reserved
33	MD error with DMP assignment lists (overlapping) *)
34	Interface-DMP incorrectly started (system start) *)
35	Reserved
36	Reserved
37	Distributed interrupt byte does not exist *)
38	Number of interrupt byte already exists (double addressing)
39	Number for interrupt byte has been assigned more than once
3A	Impermissible input value for number of the interrupt byte
3B	Reserved
3C	Reserved
3D	Reserved
3E	Reserved
3F	Interrupt byte declared more than once (with the same address) *)
40	RAM user memory: Memory capacity too small for inserted EPROM submodules
41	RAM user memory: Memory capacity set in MD too small for user program memory
42	RAM user memory: Physical capacity of user program memory too small for machine data setting
43	RAM user memory: Memory capacity set in MD too small for user data memory
44	RAM user memory: Physical capacity of user data memory too small for machine data setting
45	Invalid version of interface DMP firmware *)
46	I/O configuration: Impermissible number of interfaces plugged in
47	I/O configuration: Multiple addressing for inputs *)
48	I/O configuration: Multiple addressing for outputs *)
W49	I/O modules changed
4A	Unassigned

*) Additional information is given on this error in additional fields (see Section 2.2)

Cold restart	
4B	System parameters: Incorrect ms time frame
4C	System parameters: Incorrect 10 ms time frame
4D	System parameters: Incorrect 100 ms time frame
4E	System parameters: Incorrect MC5 time (programmer cannot be used for diagnosis in PLC)
4F	Unassigned
51	Impermissible input value for byte number of the alarm byte
51	Byte number for alarm byte assigned more than once
52	Alarm byte number specified but byte does not exist or impermissible machine control panel
53	Irregular block type: PLM block not allowed in user program memory
54	Irregular block type: C block not allowed in user program memory
55	Synchronization error in EPROM basic program memory *)
56	Synchronization error in EPROM user program memory *)
57	Synchronization error in RAM user program memory *)
58	Synchronization error in RAM user data memory *)
59	Irregular block type in EPROM basic program memory *)
5A	Irregular block type in EPROM user program memory *)
5B	Irregular block type in RAM user program memory *)
5C	Irregular block type in RAM user data memory *)
5D	Summation error with RAM for OB, FB, DB, FX, SB, PB *)
5E	Summation error with EPROM for OB, FB, DB, FX, SB, PB *)

Restart	
5F	Impermissible warm restart *)
60	Check sum error in RAM for OB, FB, DB, FX, SB, PB *)
61	Check sum error in EPROM for OB, FB, DB, FX, SB, PB *)

Cold restart and/or warm restart	
62	No RAM user program memory available
63	No user data memory available
64	Operator panel input byte in impermissible area
65	Operator panel output byte in impermissible area
66	No synchronization pattern from master in cold restart *)
67	No synchronization pattern from master in warm restart *)
68	Process image of the inputs: impermissible value for delete limit
69	Input is in retentive area of the process image
6A	Process image of the outputs: impermissible value for delete limit
6B	Output is in retentive area of the process image
6C	Function URLADE not executed, submodule not inserted or empty [1])
6D	Error during function: Save user program on MMC hard disk[1])
6E	Machine data error equivalent to FB25 on the 850 *) (see special section)
W 6F	EUs or DMP modules not switched on or incorrectly jumpered (rotary switch) *)

*) 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	
70	Check sum error in RAM for OB, FB, DB, FX, SB, PB *)
71	Check sum error in EPROM for OB, FB, DB, FX, SB, PB *)
72	RAM error in user data memory
73	RAM error in system data memory

Cyclic system monitoring	
74	NC (master) CPU in the system failed
75	PLC CPU in the system failed
76	Reserved for 840
77	Reserved
W 78	PLC STOP by request from programmer
W 79	PLC STOP by operating mode switch
W 7A	Reserved for 840
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	
80	Division error
81	Overflow error
82	“Array Bounds” error
83	Incorrect OP Code
84	Error in ESC-OP code
85	Non-interpretable interrupt (NII)
86	Error in the save routine (SAVE-UP)
87	Stack overflow
88	Semaphore buffer overflow
89	Semaphore buffer not reached
8A	Addressing error by access to an input/output not existing in the process image

Timeouts	
90	Unassigned
91	Unassigned
92	Timeout with buffered access to link/local bus *)
93	Timeout with system program processing *)
94	Timeout with LIR/TIR commands *)
95	Timeout with TNB/TNW commands *)
96	Timeout with LPB/LPW/TPB/TPW commands *)
97	Timeout with a substitution command *)

*) Additional information is given on this error in additional fields (see Section 2.2)

Timeouts	
98	Timeout with transfer in/out (see errors B0 and B1)
99	Timeout cannot be interpreted with active interpreter *)
9A	Timeout with processing a function macro *)
9B	Timeout with processing high-level language blocks *)
9C	Timeout with access to pabe commands LB CB, LB CW, LB CD, TB CB, TB CW, TB CD

Error messages of distributed I/Os	
W A0	Transfer error to an expansion unit
W A1	Overtemperature in an expansion unit or bouncing enable input with SIMATIC I/O devices
W A2	Interface DMP outputs a command output disable during operation
W A3	Transmission link to EU 185U (SIMATIC EU) has failed
W AF	Message “OUTDS” from power supply unit
W B0	Input module failed or changed and STOP set for PLC for this module via MD *)
W B1	Output module failed or changed and STOP set for PLC for this module via MD *)

Cycle time monitoring	
C0	Cycle time exceeded
C1	Cycle time exceeded; FB12 called more than twice per cycle

Error messages when using the PLM and C high-level languages

HLL call in the interpreter	
D0	Unknown type identifier in parameter declaration of the FB called
D1	Illegal type identifier block
D2	Unknown code in the parameter block of the FB called: input parameter
D3	Unknown code in the parameter block of the FB called: output parameter

HLL_HLL function	
D4	Unknown pseudo parameter in STACK
D5	Block not available
D6	HLL block not in line with paragraph
D7	Block called is not a HLL block

HLL_ADB function	
D8	DB to be opened in HLL: wrong pseudo parameter
D9	DB to be opened not available
DA	DB to be opened not in line with paragraph

*) 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	Sytem 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)

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:

Error No.	Address	Contents/Designation
01	F0000	01: Error number incorrect MC5 operation code
	F0001	OB number where incorrect operation code occurred
	F0002	—
	F0003	—
02, 03, 04, 05, 06, 07, 08, 09, 0E, 0F	F0000	Error number of interpreter
	F0001	High byte: Identifier for preceding command
	F0001	Low byte: OB number where the error occurred
	F0002	Operation code of the MC5 command which led to error
	F0003	Parameter of MC5 command in BCD code ++) Identifier for preceding command: 0: No command modification 1: Preceding command was B MW, B DW, B BS or substitution command
0A	F0000	0A: Overflow in interruption stack
	F0001	OB number where overflow occurred
	F0002	—
	F0003	—
0B	F0000	0B: Stop caused by STS command
	F0001	OB number where STS occurred
	F0002	—
	F0003	—
0D	F0000	0D: Error number processing time delay
	F0001	OB number where processing time delay occurred
	F0002	—
	F0003	—

Error No.	Address	Contents/Designation
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
		Otherwise: Error in the configuration lists DB/DX Number of the DB/DX from MD 136 (BCD format)
	F0002	When F0001=4: 0I or 0Q identifier input/output
		Otherwise: Number of the incorrect/missing data word within the configuration DB/DX (BCD format)
	F0003	When F0001=4: Byte number (BCD format)
		Otherwise: Unassigned ++)
34	F0000	34: Interface DMP/interface PLC not started correctly or EU incorrectly jumpered
	F0001	00: Interface DMP/interface PLC not started correclty (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	— ++)

Error No.	Address	Contents/Designation
3C	F0000	3C: Error number MD double addressing inputs
	F0001	Group number (BCD format)
	F0002	—
	F0003	—
3D	F0000	3D: Error number MD double addressing outputs
	F0001	Group number (BCD format)
	F0002	—
	F0003	—
3E	F0000	3E: Error number output group per MD for several PLCs
	F0001	Group number (BCD format)
	F0002	—
	F0003	—
45	F0000	45: Error number illegal version of interface DMP firmware
		Number of interface module
	F0001	Illegal (fitted) firmware interface-DMP
	F0002	Required firmware interface-DMP ++)
	F0003	
47	F0000	47: Error number double addressing inputs
	F0001	Byte number (BCD format)
	F0002	—
	F0003	—
48	F0000	48: Error number double addressing outputs
	F0001	Byte number (BCD format)
	F0002	—
	F0003	—
49	F0000	49: Error number modification of I/O modules
	F0001	3C: Changed address location of I/O byte
		00: I/O failure
	F0002	0I or 0Q identifier input/output
	F0003	Byte number (BCD format)
55, 56, 57, 58, 59, 5A, 5B, 5C, 5D, 5E, 60, 61, 70, 71	F0000	Respective error number
	F0001	Segment address of fault block
	F0002	Offset address (byte-oriented) of fault block (segment and offset point to the synchronization pattern) ++)
	F0003	—

Error No.	Address	Contents/Designation
5F		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.
	F0000	5F: Error number illegal warm restart
	F0001	00: 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.
		3C: Changed address location of I/O byte, otherwise I/O type identifier:
		01: Centralized I/Os, TPx, LPx
		03: 16-bit link
		04: DMP
	F0002	0I or 0Q identifier input/output
	F0003	Byte number (BCD format) ++)
6C [1]	F0000	6C: Error when booting the user program
	F0001	0001: Memory dump (file on MMC hard disk) does not exist or is empty
		0002: Illegal user program file
		000B: ICODE error
		000C: ADS error (e.g. no communication with MMC) ++)
6D [1]	F0000	6D: Error while saving the user program
	F0001	0001: Scare not possible (reason see F0002)
		000A: System error
		000B: ICODE error
		000C: ADS error (e.g. no communication with MMC)
	F0002	When F0001 = 0001:
		0001: User program memory empty
		0002: Boot not completely finished or data loss ++)

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
		Bus address (segment), where timeout occurs
	F0001	Bus address (offset), where timeout occurs
	F0002	Type identifier of the timeout **) ++)
	F0003	
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 Error number timeout not interpretable when interpreter active
	F0001	
	F0002	CX when timeout occurs
	F0003	IP when timeout occurs
		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
9B	F0000	9B: Error number timeout when processing high-level language
	F0001	CS when timeout occurs
	F0002	IP when timeout occurs
	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

Address		Error
F0000	**F0001**	
6E	0	Reserved
	3	Reserved
	4	Reserved
	5	Reserved
	6	Reserved
	7	PLC MD for error and operational messages (channel-specific) set
	8	PLC MD for error and operational messages (spindle-specific) set
	9	PLC MD for error and operational messages (axis-specific) set
	10	PLC MD for M decoding with extended addresses set. At least one decoding list is missing.
	11	PLC MD “1st machine control panel” set – input missing
	12	PLC MD “2nd machine control panel” set – input missing
	13	Reserved
	14	Reserved
	15	PLC MD “1st machine control panel” set – output missing
	16	PLC MD “2nd machine control panel” set – output missing
	17	Reserved
	18	Reserved
	19	PLC MD for error and operational messages (DB58) set
	20	Reserved
	21	Reserved
	22	Reserved
	23	Reserved

Synchronization error on power-up

Address		Error
F0000	F0001	
66	1	Cold restart: synchronization error master CPU
67	1	Restart: synchronization error master CPU

Error in programmer link This error is an internal software error.

Address		Error
F0000	F0001	
F8	0100	Error on fetching a receive buffer
	0200	Error on returning a receive buffer
	0300	Error on reserving a transmit buffer
	0400	Error on transmitting a receive buffer
	0500	Reserved
	0600	ADS interface between PLC and IF PLC faulty

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

LEDs for PLC		Meaning (SINUMERIK 840C)
Steady light (green only)		PLC cyclic mode
Steady light (red only)		PLC in STOP state
Steady light (red and green)		OVERALL RESET necessary (initial power-up or data loss)
Light flashing (red)	once	Error on cross-check sum over system program submodule
	3 times	Timer 0 error (process-internal timer) or watchdog error
	4 times	SW3: Module is a PLC 135 WB (can no longer be used)
	5 times	Access to link RAM not possible
	6 times	Error with test access to link RAM
	7 times	SW1 and SW2: Error in system initialization program (synchronization pattern)
		SW3: No communication with MMC
	9 times	SW3: Error when booting
	10 times	1 ACOP error (group error)
	11 times	IF PLC cannot be addressed from PLC
	12 times	RAM of the IF PLC defective (program memory or CPU RAM)
	13 times	Dual port RAM of the IF PLC defective
	14 times	ADS link to the NC defective
	15 times	ADS link to the IF PLC defective
	16 times	ADS link (reserved); SW3 and higher: ADS link to MMC defective
	17 times	ADS link (reserved)
LED for IF PLC		**Meaning**
Steady light (green only)		IF PLC in cyclic operation (no error), MPC transmission running
		IF PLC in the STOP state
Steady light (red only)		RAM of the IF PLC defective (CPU-RAM)
Light flashing (red)	12 times	Dual port RAM of the IF PLC defective
	13 times	No MPC transmission, processor running
LED off		

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

Figure	Meaning
0	Driver not loaded
1	Driver loaded but ADS power-up not yet performed
2	Jump ADS interface power-up
3	ADS interface power-up, MMC waits for ‘0’ from NC

Figure	Meaning
4	ADS interface power-up, MMC waits for ‘1’ from NC
5	ADS interface power-up state
6	ADS interface power-up state
7	Interface active (OKAY)
8	MMC powered without NC
9	State which causes removal of the driver

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).

Error code		Cause
1		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.
2		DRAM error on NCK CPU, defective during memory test after Power On
4	!R	Parity error in the DRAM
7	!R	Undefined NMI
8	!R	NMI caused by push button on CSB or CPU (486) or V24 (486)
9	!R	NMI caused by timeout (CPU local)
10	!R	NMI caused by timeout on link or local bus
11		Failure of link to the MMC (this is indicated simply by flashing, also on 486 CPU)
14	!R	NC processor exception (commonly known as software crash)
15	!R	Internal hardware fault
16		Boot transfer error (ADS transport)
17		Boot transfer error (I code protocol)
18		Faulty file booted (OMF format)
19		Faulty file booted (illegal address area)
20		Wrong file started as last in the loading list (no starting information)
21		Link area between boot EPROM and loaded system was illegally overwritten (presumably software error in the loaded system program). Remedy: Reboot

END OF SECTION

4 Errors with Function Macros

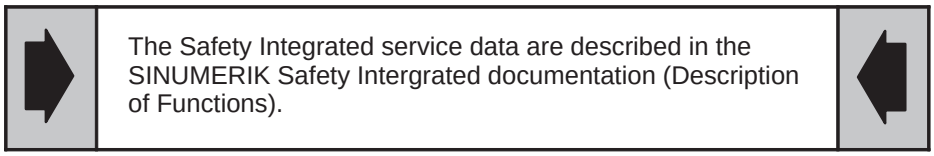
ACCU 1 (FB No.)	ACCU 2 (Error No.)	Error occurred at	Error description
11		Setting up data blocks	
	1		DB No. impermissible
	2		DB No. > 255
	3		Specified DW No. < 0
	4		Length of DB to be set up is not the same as the length of the DB already in the PLC
	5		Memory space in the PLC no longer sufficient
	6		Existing DW No. > 255
	7		DB No. = 0
	8		DB type different from DB or DX
12	1	Retriggering of cycle time monitoring	PLC Stop with error detection 0C1H on 3rd call of FB12 within one PLC cycle
52		Block transfer	
	1		Illegal mode
	2		Number of DWs to be transferred > 127
	3		Number of DWs to be transferred < 0
	4		Segment No. of 8-bit memory < 1 or > 13
	5		Segment No. of 16-bit memory < 1 or > 13
	6		Offset of 1st DW in 8-bit memory > 7FFFH
	7		Offset of 1st DW in 16-bit memory > 7FFFH
	8		Selected 8-bit memory area exceeds lower segment limit (not with segment Nos. 6, 10, 11,12)
	9		Selected 16-bit memory area exceeds lower segment limit (not with segment Nos. 6, 10, 11,12)
60		Block transfer	
	1		Number of DWs to be transferred > 2043
	2		Number of DWs to be transferred = 0
	3		Target DB No. = 0
	4		Target or source DB not available
	5		Target DB too short
	6		Target DB in EPROM
	7		Source DB too short
	8		Incorrect TYQU parameter
	9		Incorrect TYZI parameter

ACCU 1 (FB No.)	ACCU 2 (Error No.)	Error occurred at	Error description
61		Read NC data	
	v0		ANZ > 1 not permitted
	v1		NSBY not permitted
	v2		DB missing or DB No. not permitted or
	v3		MW not permitted
	v4		Data type not permitted
	v5		*ANZ = 0 or > 128
	v6		Reading / writing not permitted Number format not permitted
	v7		Value 3 for ZOA or ZOFA not equal or 1
	v8		Type data target/data source in PLC not permitted
62		Write NC data	See FB 61 (reading NC data)
65		Transfer flags → flag stacks	
	1		Stackpoint overflow
66		Transfer flag stack → flags	
	1		Stackpoint not reached
67		Transfer machine control panel signals → DB axes	
	2		Parameter axis No. > 30
	1		PLC machine data not set for signals from/to axis
68		Aperiodic user program call	
	1		Parameter tool < 0
69		G decoding	
	1		Channel number not permitted
	2		G group incorrect
	3		PLC MD: signals from/to NC channel or signals from NC channel not set
70		Transfer interfaces DB to I/Q/F	
	1		Source or target type incorrect (illegal ASCII character) Source DB does not exist in PLC
	2		Parameter limits of source or target parameter not reached or exceeded
	3		Source or target DB too short
	4		Parameter limit of flag area exceeded
	5		PII or PIQ limits exceeded
	6		Illegal source or target parameter type (not I, Q, F)
	7		

ACCU 1 (FB No.)	ACCU 2 (Error No.)	Error occurred during	Error description
71		Transfer interface DB to I/Q/F (see FB 70)	
72	1	Transfer NC channel to DB channel-specific signals	Channel address not permitted
73	1	Transfer DB channel-specific signals to NC channel	Channel address not permitted
74	1	Transfer spindle to DB spindle-specific signals	Spindle address not permitted
75	1	Transfer DB spindle-specific signals to spindle	Spindle address not permitted
76	1	Transfer axis to DB axis-specific signals	Axis address not permitted
77	1	Transfer DB axis-specific signals to axis	Axis address not permitted
78	1 2 3	Transfer machine control panel signals → channels/spindles	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
79	1 2	Transfer machine control panel signals → DB axes	PLC machine data not set for signals from/to axis Number of parameterized axes > 30
88	1 2	Mode lamp	PLC MD signals from/to channel not set Parameterized channel No. >4
89	1 2 3	Reading of block start address	Block type not permitted Address list does not exist Address list insufficient
113		Symmetrical tool search	No messages

END OF SECTION

5 Parameterization Errors Spindle/Axis



The Safety Integrated service data are described in the SINUMERIK Safety Intergrated documentation (Description of Functions).

The Service numbers can be found under DIAGNOSIS in the Service display Axes/Spindles menu.

Service number	Significance	Remedy		
		General	Axis	Spindle
	Parameterization errors spindle/axis			
300	Sampling ratio incorrect	MD 155 160 163 168	MD 1396*	MD 466*
	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.		MD 40010	MD 40010
301 to 307	(reserved)			
308	Incorrect increment weighting		MD 364* 368* 1208* 1212*	466* 456* 524* 468*
309	Incorrect actual-value resolution		MD 1116* 1204*	458*
310 311	(reserved)			
312	a) Error in encoder speed ratios (MD value = 0) b) Speed ratios not 1:1 for axis with distance-coded measuring system		MD 3032* to 3060* MD 3064* to 3092*	MD 2400* to 2407* MD 2408* to 2415*
313	(reserved)			
314	Illegal servo gain K_v factor		MD 252* 260* 256*	MD 435* to 442* 468*
315	(reserved)			
316	Illegal modulo value/axis is not a rotary axis		MD 344* 564*	
317 [1)]	Position control cycle LA/LS is not the same Position control cycle FA/FS		MD 1396*	MD 466*
318 [1)]	Incorrect LA/LS/FA/FS number parameterized			

1) SW 3 and higher

Service number	Significance	Remedy		
		General	Axis	Spindle
319	Illegal maximum speed (scaling overrun)		MD 264* 256* 268* 260* 1736*	MD 403* to 410* MD 419* to 426* 468* 2522*
320	(reserved)			
321	Feedforward control parameterization incorrect		MD 312* 1124* 1260*	MD 465*
322	Incorrect clock cycle setting	MD 168*		
323	Illegal position control resolution [1]		MD 1800*	MD 524*
324	Incorrect C axis assignment: (axis does not exist) no spindle encoder available [2]		MD 200*	MD 400* 461* 520*
325	Position control sampling time for C axis ≠ position control sampling time for spindle		MD 1396*	MD 466*
326	Incorrect measuring gear		MD 364* 368* 1208* 1212*	MD 455* 456* 524*
327	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.		MD 1808* Bit 4 Bit 5	
328	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.		MD 1244* 1248* 1252* 1368* 1376* 1812*	MD 1368* 1376* 1812* Bit 0

1) or position control resolution (spindle) = position control resolution (axis)
2) or mode group (spindle) = mode group (axis)

Service number	Significance	Remedy		
		General	Axis	Spindle
329 (SW 3 and higher)	Errors in setpoint/actual value assignment. Double assignment of measuring circuit input/ output.		MD 200* 384* 1388* 1824* Bit 2	MD 400* 460* 522* Bit 2
	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.		MD 4100*	MD 4100*
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		MD 1336* 1340*	MD 2700* 2701*
331 (SW 5.4 and higher)	Errors have occurred during conversion of SI-MD.		MD 4184* to 4196* 4200* to 4244* 4248* to 4260* 4180*	MD 4184* to 4196* 4200* to 4244* 4248* to 4260* 4180*
			Evaluate detailed information in the SI SERVICE SCREEN (service data 1000).	

END OF SECTION