



# Environment OEM

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**END OF SUMMARY**

# Notes for the reader

<b>General information</b>	<p>The information in this manual only applies to the software versions indicated on the frontispiece.</p> <p>Not all the available functions may be described in this manual. In these cases, Esa/Gv shall be obliged to neither guarantee these functions nor include them in future versions.</p>
<b>Purpose</b>	<p>The purpose of this document is to help the operator and/or the technician to resolve faults or malfunctions.</p>
<b>Users</b>	<p>This document contains information for:</p> <ul style="list-style-type: none"><li>• the servicing technician;</li><li>• the machine operator.</li></ul>
<b>Use of the document</b>	<p>The document is divided into chapters that describe:</p> <ul style="list-style-type: none"><li>• a list of errors due to incorrect use of the numeric control;</li><li>• machine alarms;</li><li>• troubleshooting (message-cause-remedy);</li><li>• identification of faults and malfunctions;</li><li>• known errors and remedies.</li></ul>
<b>Notification of difficulties</b>	<p>Please contact Esa/Gv if any difficulties should arise when this manual is used.</p>

## Explanation of the symbols

Graphic symbols may appear beside the text. These are used to emphasize information of particular importance.



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**Attention**

This symbol is used when failure to take the appropriate precautions **could cause slight damage to persons and property.**

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**Danger**

This symbol appears when failure to take the appropriate precautions or accomplishment of incorrect manoeuvres **could cause serious damage to persons and/or property.**

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**Important**

This symbol appears in the manual to indicate information of particular importance. It is essential to read these sections in order to fully understand the manual.

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**Option**

This symbol indicates sections of the manual that describe optional functions or parts. Use of optional performances must be established with the machine manufacturer.

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**Manufacturer**

This symbol indicates those sections of the manual reserved to the machine manufacturer.

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**Password**

This symbol indicates sections of the manual that describe functions access to which is safeguarded by software passwords.

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**CN**

This symbol indicates sections of the manual that describe functions only available in CN and not in the PC.

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**PC**

This symbol indicates sections of the manual that describe functions only available in the PC and not in CN.

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## Printer's conventions

Particular printer's conventions are used to make it easier to identify the information in this manual. These conventions are illustrated below.

### Keyboard and video

The following conventions are used.

- The names of the screen-printed keys are indicated in **boldface** and are enclosed within square brackets. If the name of the key is preceded by "button", reference is being made to a key on the push button panel.
  - **[ENTER]**. Identifies the key that bears the word ENTER.
  - **[+]** indicates the + key of the keyboard, while button **[+]** indicates the + key of the push button panel.
- The names of the function keys are indicated in **boldface italics** and are enclosed within square brackets.
  - **[Plc Menu]**. Identifies the function key that bears the words Plc Menu.
- References to fields and/or messages on the video are written in **boldface italics**.
- The specific text to be digitized by the user is underlined.
  - If the manual indicates "digitize ok", the user must digitize exactly "ok".
- DIRECTION or DIRECTIONAL keys is the collective name used to indicate the UP, DOWN, LEFT and RIGHT keys.
- Pressure, in sequence, on a series of keys is written by separating the identifiers of the required keys with the ">" character.
  - **[Manual] > [START]**. Describes pressure, in sequence, on the **[Manual]** and **[START]** keys.
- Pressure on several keys at the same time is indicated by separating the identifiers of the keys themselves with the "+" character.
  - **[SHIFT] + [→]** Describes contemporaneous pressure on the **[SHIFT]** and **[→]** keys.

### Text

The following conventions are used.

- *Italics* are used to identify specialistic terms.
- **Boldface** is used to emphasize words of particular importance.

## Glossary

**CNC** This is an abbreviation of *Computerized Numerical Control* and indicates the instrument that governs the machine, i.e. the electronic device through which the machining cycles are programmed, the axes moved, etc..  
It corresponds to one of the devices whose operation is described in this manual.

**NC** Represents the Normally Closed status of an input or an output.

**NO** Represents the Normally Open status of an input or an output.

**END OF PREFACE**



# 1 System Alarms

## 1.1 Introduction

This chapter describes the meanings of the system alarms, i.e.:

- system alarms
- axes alarms

The system alarms contain the following information:

- data integrity monitoring
- CNC diagnostics
- PLC operation diagnostics
- I/O board diagnostics
- voltage diagnostics
- temperature diagnostics

### 1.1.1 Terminology

The following terms are used in the manual:

I/O	general digital Input or Output board. This term has recently been extended to include analog devices. It can now be affirmed that an I/O board is any peripheral board used by the CNC, with the exclusion of the peripherals that handle the axes.
Node	The node is a transmission board that connects groups of I/O boards to the CNC.
Ring	Connection of the various nodes to the CNC (and, thus, the boards connected to them) is called I/O ring (or more simply ring). This name derives from the nature of the electrical connection, which is made in a ring.
MFB	Multi Function Board.  Multifunction board to which certain analog inputs and outputs are connected and to which the I/O ring is connected.

## 1.2 System Alarms

The system alarms are identified by the PH code followed by a 4-digit number and a brief text describing the alarm.

The alarm codes are described below

<b>0000 POWER FAIL</b>	
<b>Cause:</b>	An excessive voltage drop has been detected in the CNC power source.
<b>Effect:</b>	The CNC is in the block status or off and all the functions are inhibited.
<b>Remedy:</b>	Check the CNC's power supply and start the entire machine again.
<b>Notes:</b>	<p>A CNC block usually also blocks the operator interface as a preventive way to avoid data being lost.</p> <p>If the voltage drop in the CNC's power source is only momentary, the POWER FAIL status is also indicated by code 7 on the CNC's fault segment display.</p>

<b>0023 MACHINE DATA INCORRECT</b>	
<b>Description of Cause:</b>	The machine parameters of the CNC are not correct.
<b>Effect:</b>	The handling functions of the CNC are inhibited.
<b>Remedy:</b>	Download the parameters.
<b>Notes:</b>	

<b>0024 CONFIGURATION NULL</b>	
<b>Description of Cause:</b>	The CNC configuration has not been defined. Or the central memory of the CNC has been cancelled.
<b>Effect:</b>	The handling functions of the CNC are inhibited.
<b>Remedy:</b>	Download the parameters.
<b>Notes:</b>	

0025 CNC BLOCKED	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	<p>The CNC has blocked. The possible causes are:</p> <ul style="list-style-type: none"> <li>• an infinite loop has been programmed</li> <li>• the control parameter of the watch dog that generated the alarm is too low</li> <li>• the PLC has not been initialized</li> </ul> <p>It could also have been due to hardware problems in the CNC board.</p>
<b>Effect:</b>	All movements are blocked.
<b>Remedy:</b>	Check the program in progress and the parameter that regulates the watch dog.
<b>Notes:</b>	

0026 FAST PLC TIMEOUT	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The fast PLC has an execution cycle that lasts longer than the scanning cycle.
<b>Effect:</b>	All movements are blocked.
<b>Remedy:</b>	Increase the scanning time of the fast PLC or revise the code of the fast PLC in order to speed up the procedure.
<b>Notes:</b>	

0027 MACHINE DATA INCORRECT	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The machine parameters of the CNC are not correct.
<b>Effect:</b>	The handling functions of the CNC are inhibited.
<b>Remedy:</b>	Download the parameters.
<b>Notes:</b>	

0028 SLOW PLC TIMEOUT	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The slow PLC has an execution cycle that lasts longer than the scanning cycle.
<b>Effect:</b>	All movements are blocked.
<b>Remedy:</b>	Increase the scanning time of the slow PLC or revise the code of the slow PLC in order to speed up the procedure.
<b>Notes:</b>	

0029 PLC LOADING ERROR	
<b>Description</b>	<b>of</b> The PLC program cannot be downloaded into the memory.
<b>Cause:</b>	
<b>Effect:</b>	The handling functions of the CNC are inhibited.
<b>Remedy:</b>	Carry out the PLC <i>transfer</i> and <i>downloading</i> operations using the PLC case or the PLC memory in the CNC (only for versions where this is available).
<b>Notes:</b>	If the fault persists, turn off the CNC and then power it again. Now carry out the indicated operations.

0030 PLC BLOCKED	
<b>Description</b>	<b>of</b> The PLC is not operating. The code of the PLC program is therefore not being executed. The cause can be a STOP requested by the person operating on the PLC case or on the PLC menu in the CNC.
<b>Cause:</b>	If the PLC sets to the block status for reasons differing from a manual request, the reasons for which the PLC program cannot be executed must be identified (error in the loaded program, problems concerning the I/O board link ....).
<b>Effect:</b>	The handling functions of the CNC are inhibited.
<b>Remedy:</b>	Set the PLC back to the RUN status. If it fails to start, check whether there are any errors associated with it by means of the PLC menu (using the [ <i>Show Error</i> ] function).
<b>Notes:</b>	

0032 I/O Error: CRC	
<b>Description</b>	<b>of</b> Error during data transmission in the I/O ring to be ascribed to a defect in the optic fiber.
<b>Cause:</b>	
<b>Effect:</b>	The I/O link fails and all the outputs are set to the low level.
<b>Remedy:</b>	Make sure that the optic fiber is in a good condition and make sure that it is cut well in the connection points with the communication nodes or with the CNC.
<b>Notes:</b>	

0033 I/O Error: TIMEOUT	
<b>Description</b>	<b>of</b> The I/O ring is open.
<b>Cause:</b>	
<b>Effect:</b>	The I/O link fails and all the outputs are set to the low level.
<b>Remedy:</b>	Check the optic fiber connection.
<b>Notes:</b>	

0034 I/O Error: NACK	
<b>Description</b>	<b>of</b> A board has been addressed with address incorrect node.
<b>Cause:</b>	
<b>Effect:</b>	The I/O link fails and all the outputs are set to the low level.
<b>Remedy:</b>	Check the definition of the I/O boards (IOREDIR editor) or the dip-switch settings on the nodes.
<b>Notes:</b>	To detect the node that generated the fault, access the function in the PLC MENU and activate the [ <b>Show Error</b> ] function. The node to which the alarm is associated will appear on the display.

00035 I/O Error: INVALID ID	
<b>Description</b>	<b>of</b> The type of board defined fails to correspond to the physically addressed board, e.g. board 1 of node 1 has been defined as an OUTPUT but there is an INPUT at that address.
<b>Cause:</b>	
<b>Effect:</b>	The I/O link fails and all the outputs are set to the low level.
<b>Remedy:</b>	Check the definition of the I/O boards (IOREDIR editor) the board configuration or dip-switch settings in the nodes.
	To detect the node that generated the fault, access the function in the PLC MENU and activate the [ <b>Show Error</b> ] function. The node to which the alarm is associated will appear on the display.
<b>Notes:</b>	

0038 I/O Error: RX not READY	
<b>Description</b>	<b>of</b> There are faults in the master node board.
<b>Cause:</b>	
<b>Effect:</b>	The I/O link fails and all the outputs are set to the low level.
<b>Remedy:</b>	Contact the assistance service.
<b>Notes:</b>	

0039 I/O Error: GENERIC ERROR	
<b>Cause:</b>	An unexpected error has occurred during communication between I/O and CNC.
<b>Effect:</b>	The I/O link interrupts and all the outputs are set to the low level.
<b>Remedy:</b>	Contact the assistance service.
<b>Notes:</b>	

0040 I/O Error: KO NODE POWER SUPPLY	
<b>Description</b>	<b>of</b> The node is not powered or the voltage value is off limits.
<b>Cause:</b>	
<b>Effect:</b>	The I/O link fails and all the outputs are set to the low level.
<b>Remedy:</b>	Check the power supplied to the node.
<b>Notes:</b>	To detect the node that generated the fault, access the function in the PLC MENU and activate the [ <b>Show Error</b> ] function. The node to which the alarm is associated will appear on the display.

0041 I/O Error: OUTPUT PROTECTED	
<b>Description</b>	<b>of</b> The output is short-circuited.
<b>Cause:</b>	
<b>Effect:</b>	The link remains activated but the short-circuited output is brought to the low level.
<b>Remedy:</b>	Check the electrical circuit connected to the output in question and eliminate the short-circuit.
<b>Notes:</b>	To identify the output that created the fault, access the PLC MENU function and activate the [ <b>Show Error</b> ] function. The node, board and associated with the alarm will be displayed.

00042 I/O Error: NO 24 VOLTS	
<b>Cause:</b>	The pressure/back pressure board for pressure bending is not powered or is faulty.
<b>Effect:</b>	The board is not activated.
<b>Remedy:</b>	Check the board's power supply.
<b>Notes:</b>	To detect the output that generated the fault, access the function in the PLC MENU and activate the [ <b>Show Error</b> ] function. The node and the board to which the alarm is associated will appear on the display.

0043 I/O Error: ADC BUSY	
<b>Cause:</b>	The ADC converter of an analog input board is not activated.
<b>Effect:</b>	The I/O link remains activated but the board inputs are not read.
<b>Remedy:</b>	Check the power supply of the analog board.
<b>Notes:</b>	To detect the output that generated the fault, access the function in the PLC MENU and activate the [ <b>Show Error</b> ] function. The node and the board to which the alarm is associated will appear on the display.

<b>0046 I/O Error: BOARD NOT PRESENT</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	An addressed I/O board is not present in the ring. The reason for this malfunction may be incorrect configuration of the ring or a broken or badly configured node. For example, if the address of two nodes with respectively 2 and 3 boards is inverted, one of the nodes will have an extra board in relation to those configured (situation ignored by the CNC) while the other node will have one less board (situation that creates the problem).
<b>Effect:</b>	The I/O link fails and all the outputs are set to the low level.
<b>Remedy:</b>	Check the ring configuration (IOREDIR editor) or the configuration of the nodes and their addresses.
<b>Notes:</b>	

<b>0064 V+12 OFF LIMITS</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The 12V voltage supplied by the power supplier is beyond the 5% tolerated limit. The possible causes may be: <ul style="list-style-type: none"> <li>Faulty CNC power supplier.</li> <li>The load requested by the CNC on the analog outputs that pilot the axes or the analog outputs of the MFB board is too high</li> </ul>
<b>Effect:</b>	Axes management malfunction with possible uncontrolled movement of one or more of the axes (movement controlled by the follow error management function).
<b>Remedy:</b>	Disconnect all the analog outputs. Replace the power supplier if the fault persists.  If the fault disappears, re-connect the connectors one by one and check each to see whether the CNC connection is causing the problem. Check the load connected to that connector as soon as the fault occurs again.
<b>Notes:</b>	

<b>0065 V-12 OFF LIMITS</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The 12V voltage supplied by the power supplier is beyond the 5% tolerated limit. The possible causes may be: <ul style="list-style-type: none"> <li>Faulty CNC power supplier.</li> <li>The load requested by the CNC on the analog outputs that pilot the axes or the analog outputs of the MFB board is too high.</li> </ul>
<b>Effect:</b>	Axes management malfunction with possible uncontrolled movement of one or more of the axes (movement controlled by the follow error management function).
<b>Remedy:</b>	Disconnect all the analog outputs. Replace the power supplier if the fault persists.  If the fault disappears, re-connect the connectors one by one and check each to see whether the CNC connection is causing the problem. Check the load connected to that connector as soon as the fault occurs again.
<b>Notes:</b>	

0066 V ENCODER OFF LIMITS	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	<p>The VE voltage (encoder voltage) supplied by the power supplier is beyond the 10% tolerated limit. The possible causes may be:</p> <ul style="list-style-type: none"> <li>Faulty CNC power supplier.</li> <li>The load requested from the CNC by the encoders is too high.</li> </ul>
<b>Effect:</b>	Axes management malfunction with possible uncontrolled movement of one or more of the axes (movement controlled by the follow error management function).
<b>Remedy:</b>	<p>Disconnect all the encoders. Replace the power supplier if the fault persists.</p> <p>If the fault disappears, re-connect the encoder connectors one by one and check each to see whether the CNC connection is causing the problem. Check the load connected to that connector as soon as the fault occurs again.</p>
<b>Notes:</b>	

0067 V BATTERY OFF LIMITS	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The voltage supplied by the battery of CNC is too low.
<b>Effect:</b>	The machine parameters may be lost if the fault is ignored for a long period of time.
<b>Remedy:</b>	Replace the battery.
<b>Notes:</b>	<p>The battery must be replaced when the machine is off.</p> <p>Once the battery has been removed, do not allow more than 8 hours to elapse before it is replaced.</p>

0071 TEMPERATURE OFF LIMITS	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The temperature in the CNC is off limits (+5° ÷ +55°C).
<b>Effect:</b>	The CNC may behave in an abnormal way.
<b>Remedy:</b>	Condition the ambient temperature (or the electric panel) to bring the operating temperature to within the tolerated values.
<b>Notes:</b>	The temperature of the electric panel is normally about 5, 10 degrees lower than the temperature in the CNC.



<b>0072 RACK1 V+12 OFF LIMITS</b>	
<b>Cause:</b>	<p>The +12V voltage supplied by the power supplier on CNC rack1 is beyond the tolerated 5% limit. This may be caused by:</p> <ul style="list-style-type: none"> <li>• CNC rack1 power supplier fault</li> <li>• The load requested from CNC rack1 on the analog outputs that pilot the axes or analog outputs of the MFB board is too high.</li> </ul>
<b>Effect:</b>	Axes handling malfunction through which one or more of the axes could escape (controlled by follow error management).
<b>Remedy:</b>	<p>Disconnect all the analog outputs. Replace the power supplier if the fault persists.</p> <p>If the fault disappears, re-connect the connectors one by one and check each to find out whether the connection to the CNC is causing the fault. As soon as the fault occurs again, check the load connected to that connector.</p>
<b>Notes:</b>	The alarm is the same as code 0064 but concerns the CNC rack1 of a CNC multirack configuration.

<b>0073 RACK1 V-12 OFF LIMITS</b>	
<b>Cause:</b>	<p>The -12V voltage supplied by the CNC rack1 power supplier is beyond the tolerated 5% limit. This may be caused by:</p> <ul style="list-style-type: none"> <li>• CNC rack1 power supplier fault</li> <li>• The load requested from CNC rack1 on the analog outputs that pilot the axes or analog outputs of the MFB board is too high.</li> </ul>
<b>Effect:</b>	Axes handling malfunction through which one or more of the axes could escape (controlled by follow error management).
<b>Remedy:</b>	<p>Disconnect all the analog outputs. Replace the power supplier if the fault persists.</p> <p>If the fault disappears, re-connect the connectors one by one and check each to find out whether the connection to the CNC is causing the fault. As soon as the fault occurs again, check the load connected to that connector.</p>
<b>Notes:</b>	The alarm is the same as code 0065 but concerns the CNC rack1 of a CNC multirack configuration.

<b>0074 RACK1 V ENCODER OFF LIMITS</b>	
<b>Cause:</b>	The VE voltage supplied by the CNC rack1 power supplier is beyond the tolerated 10% limit. This may be caused by: <ul style="list-style-type: none"> <li>• CNC rack1 power supplier fault</li> <li>• The load requested from CNC rack1 by the encoders is too high.</li> </ul>
<b>Effect:</b>	Axes handling malfunction through which one or more of the axes could escape (controlled by follow error management).
<b>Remedy:</b>	Disconnect all the encoders. Replace the power supplier if the fault persists.  If the fault disappears, re-connect the encoder connectors one by one and check each to find out whether the connection to the CNC is causing the fault. As soon as the fault occurs again, check the load connected to that connector.
<b>Notes:</b>	The alarm is the same as code 0066 but concerns the CNC rack1 of a CNC multirack configuration.

<b>0079 RACK1 TEMPERATURE OFF LIMITS</b>	
<b>Cause:</b>	The internal temperature of CNC rack1 is beyond the processing range (+5° ÷ +55°).
<b>Effect:</b>	The CNC may behave in an abnormal way
<b>Remedy:</b>	Condition the ambient temperature (or the electric panel) so as to bring the operating temperature within the tolerated range.
<b>Notes:</b>	The temperature of the electric panel is normally lower than the temperature inside the CNC by about 5, 10 degrees.  The alarm is the same as code 0071 but concerns the CNC rack1 of a CNC multirack configuration.

<b>0080 RACK2 V+12 OFF LIMITS</b>	
<b>Cause:</b>	The +12V voltage supplied by the CNC rack2 power supplier is beyond the tolerated 5% limit. This may be caused by: <ul style="list-style-type: none"> <li>• CNC rack2 power supplier fault</li> <li>• The load requested from CNC rack2 on the analog outputs that pilot the axes or analog outputs of the MFB board is too high.</li> </ul>
<b>Effect:</b>	Axes handling malfunction through which one or more of the axes could escape (controlled by follow error management).
<b>Remedy:</b>	Disconnect all the analog outputs. Replace the power supplier if the fault persists.  If the fault disappears, re-connect the connectors one by one and check each to find out whether the connection to the CNC is causing the fault. As soon as the fault occurs again, check the load connected to that connector.
<b>Notes:</b>	The alarm is the same as code 0064 but concerns the CNC rack2 of a CNC multirack configuration.

<b>0081 RACK2 V-12 OFF LIMITS</b>	
<b>Cause:</b>	The -12V voltage supplied by the power supplier on CNC rack2 is beyond the tolerated 5% limit. This may be caused by: <ul style="list-style-type: none"> <li>• CNC rack2 power supplier fault</li> <li>• The load requested from CNC rack2 on the analog outputs that pilot the axes or analog outputs of the MFB board is too high.</li> </ul>
<b>Effect:</b>	Axes handling malfunction through which one or more of the axes could escape (controlled by follow error management).
<b>Remedy:</b>	Disconnect all the analog outputs. Replace the power supplier if the fault persists.  If the fault disappears, re-connect the connectors one by one and check each to find out whether the connection to the CNC is causing the fault. As soon as the fault occurs again, check the load connected to that connector.
<b>Notes:</b>	The alarm is the same as code 0065 but concerns the CNC rack2 of a CNC multirack configuration.

<b>0082 RACK2 V ENCODER OFF LIMITS</b>	
<b>Cause:</b>	The VE voltage supplied by the CNC rack2 power supplier is beyond the tolerated 10% limit. This may be caused by: <ul style="list-style-type: none"> <li>• CNC rack2 power supplier fault</li> <li>• The load requested from CNC rack2 by the encoders is too high.</li> </ul>
<b>Effect:</b>	Axes handling malfunction through which one or more of the axes could escape (controlled by follow error management).
<b>Remedy:</b>	Disconnect all the encoders. Replace the power supplier if the fault persists.  If the fault disappears, re-connect the encoder connectors one by one and check each to find out whether the connection to the CNC is causing the fault. As soon as the fault occurs again, check the load connected to that connector.
<b>Notes:</b>	The alarm is the same as code 0066 but concerns the CNC rack2 of a CNC multirack configuration.

<b>0087 RACK2 TEMPERATURE OFF LIMITS</b>	
<b>Cause:</b>	The internal temperature of CNC rack2 is beyond the processing range ( $+5^{\circ} \div +55^{\circ}$ ).
<b>Effect:</b>	The CNC may behave in an abnormal way
<b>Remedy:</b>	Condition the ambient temperature (or the electric panel) so as to bring the operating temperature within the tolerated range.
<b>Notes:</b>	The temperature of the electric panel is normally lower than the temperature inside the CNC by about 5, 10 degrees.  The alarm is the same as code 0071 but concerns the CNC rack2 of a CNC multirack configuration.

<b>0088 RACK3 V+12 OFF LIMITS</b>	
<b>Cause:</b>	<p>The +12V voltage supplied by the CNC rack3 power supplier is beyond the tolerated 5% limit. This may be caused by:</p> <ul style="list-style-type: none"> <li>• CNC rack3 power supplier fault</li> <li>• The load requested from CNC rack3 on the analog outputs that pilot the axes or analog outputs of the MFB board is too high.</li> </ul>
<b>Effect:</b>	Axes handling malfunction through which one or more of the axes could escape (controlled by follow error management).
<b>Remedy:</b>	<p>Disconnect all the analog outputs. Replace the power supplier if the fault persists.</p> <p>If the fault disappears, re-connect the connectors one by one and check each to find out whether the connection to the CNC is causing the fault. As soon as the fault occurs again, check the load connected to that connector.</p>
<b>Notes:</b>	The alarm is the same as code 0064 but concerns the CNC rack3 of a CNC multirack configuration.

<b>0089 RACK3 V-12 OFF LIMITS</b>	
<b>Cause:</b>	<p>The -12V voltage supplied by the power supplier on CNC rack3 is beyond the tolerated 5% limit. This may be caused by:</p> <ul style="list-style-type: none"> <li>• CNC rack3 power supplier fault</li> <li>• The load requested from CNC rack3 on the analog outputs that pilot the axes or analog outputs of the MFB board is too high.</li> </ul>
<b>Effect:</b>	Axes handling malfunction through which one or more of the axes could escape (controlled by follow error management).
<b>Remedy:</b>	<p>Disconnect all the analog outputs. Replace the power supplier if the fault persists.</p> <p>If the fault disappears, re-connect the connectors one by one and check each to find out whether the connection to the CNC is causing the fault. As soon as the fault occurs again, check the load connected to that connector.</p>
<b>Notes:</b>	The alarm is the same as code 0065 but concerns the CNC rack3 of a CNC multirack configuration.

<b>0090 RACK3 V ENCODER OFF LIMITS</b>	
<b>Cause:</b>	The VE voltage supplied by the CNC rack3 power supplier is beyond the tolerated 10% limit. This may be caused by: <ul style="list-style-type: none"> <li>• CNC rack3 power supplier fault</li> <li>• The load requested from CNC rack3 by the encoders is too high.</li> </ul>
<b>Effect:</b>	Axes handling malfunction through which one or more of the axes could escape (controlled by follow error management).
<b>Remedy:</b>	Disconnect all the encoders. Replace the power supplier if the fault persists.  If the fault disappears, re-connect the encoder connectors one by one and check each to find out whether the connection to the CNC is causing the fault. As soon as the fault occurs again, check the load connected to that connector.
<b>Notes:</b>	The alarm is the same as code 0066 but concerns the CNC rack3 of a CNC multirack configuration.

<b>0095 RACK3 TEMPERATURE OFF LIMITS</b>	
<b>Cause:</b>	The internal temperature of CNC rack3 is beyond the processing range (+5° to +55°).
<b>Effect:</b>	The CNC may behave in an abnormal way
<b>Remedy:</b>	Condition the ambient temperature (or the electric panel) so as to bring the operating temperature within the tolerated range.
<b>Notes:</b>	The temperature of the electric panel is normally lower than the temperature inside the CNC by about 5, 10 degrees.  The alarm is the same as code 0071 but concerns the CNC rack3 of a CNC multirack configuration.

<b>0096 ANEXP BUSY</b>	
<b>Cause:</b>	The ADC converter of the pressure/back pressure board for kvara 6 for pressure bending, is not activated.
<b>Effect:</b>	The analog inputs do not operate
<b>Remedy:</b>	Replace the board.
<b>Notes:</b>	

<b>0097 ANEXP 24 VOLTS OFF LIMITS</b>	
<b>Cause:</b>	The pressure/back pressure board for kvara 6 for pressure bending, is not powered
<b>Effect:</b>	The board is not activated
<b>Remedy:</b>	Check the board's power supply
<b>Notes:</b>	

### 1.3 Axes Alarms

The codes of the axes alarms are identified by the code AX.

Each axis has 288 alarm messages (not all are used) common to all the axes installed. However, numbering is different for each axis.

The following table shows how the axes alarms are divided.

Axis	Alarm activation
0	AX0000 ÷ AX0287
1	AX0288 ÷ AX0575
2	AX0576 ÷ AX0863
...	....
n	$n*288 \div (n+1)*288 - 1$

The last item in the table illustrates the general rule used to find the number of al alarm for the various axes configured.

The sequence of the alarms of the first axis is repeated for the following axes, i.e. alarm 0 (the first alarm of axis 0) is equivalent to 288 (the first alarm of axis 1) and 576 (first alarm of axis 2), etc...

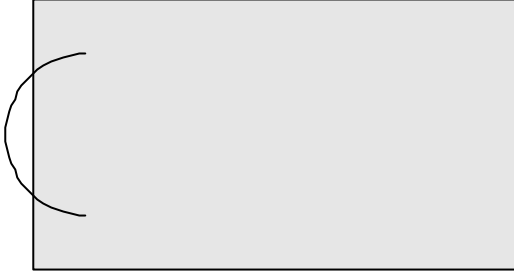
The axes alarms are then divided into two sub-categories.

- From 0 to 31 standard Axes alarms
- From 32 to 287 Digital drive alarms

### 1.3.1 List of alarms standard

<b>0000 + axis: [AXIS n] Forward L.S.</b>	
<b>Description of Cause:</b>	The axis has reached end of forward travel.
<b>Effect:</b>	CNC in the alarm status and message displayed.
<b>Remedy:</b>	Make sure that the limit switch operates correctly.
<b>Notes:</b>	<p>If the axis has effectively reached end of travel, move it in the opposite direction in JOG mode.</p> <p>If the machine has not been sized, manual movement of an axis could bring this latter to end of travel if the person operating it does not stop it in time.</p> <p>If the machine has been sized, this alarm can only occur after another axis fault (e.g. follow error near end of travel). It can also occur if the maximum limit of the axis has not been set correctly.</p>

<b>0001 + axis: [AXIS n] Backward L.S.</b>	
<b>Description of Cause:</b>	The axis has reached end of backward travel.
<b>Effect:</b>	CNC in the alarm status and message displayed.
<b>Remedy:</b>	Make sure that the limit switch operates correctly.
<b>Notes:</b>	<p>If the axis has effectively reached end of travel, move it in the opposite direction in JOG mode.</p> <p>If the machine has not been sized, manual movement of an axis could bring this latter to end of travel if the person operating it does not stop it in time.</p> <p>If the machine has been sized, this alarm can only occur after another axis fault (e.g. follow error near end of travel). It can also occur if the minimum limit of the axis has not been set correctly.</p>

0002 + axis: [AXIS n] Software L.S.	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	<p>During a movement, the axis has been asked to exceed the set minimum limit or maximum limit.</p> <p>This can only occur if the CNC is carrying out a circular interpolation that begins and ends within the limits of the axis and a section of the arc it was covering is beyond the limits.</p>  <p>The figure shows the area delimited by two hypothetical X and Y axes (grey rectangle). Circular interpolation represents the cause of the alarm in question that occurs as soon as X axis bypasses its minimum limit.</p>
<b>Effect:</b>	CNC in the alarm status and message displayed.
<b>Remedy:</b>	Check the programming or the values of the minimum and maximum limits of the axis to which the alarm refers.
<b>Notes:</b>	<p>The CNC checks to make sure that all programmed points are within the limits of the axes involved. This ensures that no linear interpolation can cause this alarm, Circular interpolations beginning or ending beyond the axes limits are indicated by another alarm message (see <i>execution alarms, target off limits</i>).</p> <p>Sometimes, small variations to the limit target of an axis allow the part program to function. This modification must therefore be established with the machine manufacturer.</p>

0003 + axis: [AXIS n] Axis Alarm External request	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	Alarm generated by a request from the operator that acts on one of the devices that set the machine to the emergency status.
<b>Effect:</b>	All movements immediately stop and an alarm message is displayed.
<b>Remedy:</b>	Reset the emergency.
<b>Notes:</b>	Other emergency signals can also activate this emergency.



<b>0004 + axis: [AXIS n] Sizing Error</b>	
<b>Description of Cause:</b>	The sizing cycle of the axis has not concluded correctly. The sizing signal (zero micro or mark) has not been detected within the range set as <i>sizing limit</i> .
<b>Effect:</b>	The sizing cycle of all the axes involved is blocked. The machine cannot be considered to have been sized.
<b>Remedy:</b>	Check the function of the sizing cycle or enlarge the sizing limit.
<b>Notes:</b>	The sizing signal is sometimes in a critical position in relation to the slowing micro. It is sometimes possible to resolve this situation by moving this micro a few millimeters towards the nearest limit of the axis in order to stagger the release time settings of the micro in relation to those that activate the sizing signal.

<b>0005 + axis: [AXIS n] Axis not defined</b>	
<b>Cause:</b>	An attempt has been made to move an axis that has not been configured
<b>Effect:</b>	CNC in alarm status and alarm present
<b>Remedy:</b>	Check the machine configuration to ascertain the consistency of the parameters and configuration of the axis in the alarm status
<b>Notes:</b>	The consistency of the configuration is checked when the machine is powered for all the axes defined in the channels. This alarm therefore occurs when an axis is used via automation language without configuring it in a channel.

<b>0006 + axis: [AXIS n] Axis not present and fly</b>	
<b>Cause:</b>	An axis movement sequence contains an axis positioning to a target that is too near and that is bypassed with the deceleration ramp of the axis in relation to the output speed of the previous positioning.
<b>Effect:</b>	CNC in alarm status and message displayed
<b>Remedy:</b>	Check the programming sequence.
<b>Notes:</b>	This error is normally prevented by the command interpreter. Check to make sure that there are no syntactical errors in the movement programming.

0007 + axis: [AXIS n] Tolerance Error	
<b>Description</b>	<b>of</b> The axis is not within the tolerance limit at the end of a positioning.
<b>Cause:</b>	The possible causes are: <ul style="list-style-type: none"> <li>• axis not prompt enough</li> <li>• limit and timeout parameters too tight.</li> </ul>
<b>Effect:</b>	CNC in the alarm status and message displayed.
<b>Remedy:</b>	Check the tolerance target machine parameters (rough or fine) and the tolerance monitoring waiting time. <ol style="list-style-type: none"> <li>Increase and gain and/or lower the maximum speed if the axis sets to the error status a long way from the final target.</li> <li>Increase the gain and/or increase the tolerance monitoring waiting time and/or decrease the deceleration and/or increase the tolerance if the axis sets to the error status near to the final target.</li> <li>Decrease the gain and/or decrease the tolerance monitoring waiting time and/or increase the deceleration and/or increase the tolerance if the axis sets to the error status near to the final target and bypasses it.</li> </ol>
<b>Notes:</b>	

0008 + axis: [AXIS n] Follow Error	
<b>Description</b>	<b>of</b> The axis is unable to follow the trajectory it has been assigned.
<b>Cause:</b>	
<b>Effect:</b>	All movements immediately stop. The CNC sets to the alarm status and an alarm message is displayed.
<b>Remedy:</b>	Check the maximum follow error parameter and the direction of the analog signal. If they are correct, check that the ramp to which the axis is subjected is not too steep for the actuator and, if this is the case, increase the gain of the axis or lower the speed.
<b>Notes:</b>	

0009 + axis: [AXIS n] Offset Error	
<b>Description</b>	<b>of</b> An excessively high offset value has been detected.
<b>Cause:</b>	The possible causes are: <ul style="list-style-type: none"> <li>• The settings of the parameters that define the maximum tolerated offset value are too restrictive.</li> <li>• The offset of the drive of the axis in question is too high.</li> </ul>
<b>Effect:</b>	CNC in the alarm status and message displayed.
<b>Remedy:</b>	Check the settings that govern monitoring of the offset and/or eliminate the offset on the drive.
<b>Notes:</b>	

<b>0010 + axis: [AXIS n] Monitoring I/O alarm request</b>	
<b>Cause:</b>	There no coherence between the on motor output and axis loop closing ring in an axis with On motor management via the PLC.
<b>Effect:</b>	CNC in alarm status and message displayed
<b>Remedy:</b>	Check automation language programming
<b>Notes:</b>	

<b>0011 + axis: [AXIS n] DAC interface or Encoder missing</b>	
<b>Description</b>	<b>of</b> The axis configuration has been mapped on a DAC (analog output) or encoder on a slave or I/O board that is not installed on the machine.
<b>Cause:</b>	
<b>Effect:</b>	CNC in the alarm status and message displayed.
<b>Remedy:</b>	Make sure that the axis configuration is coherent with the hardware of the machine (I/O boards and slave board).
<b>Notes:</b>	

<b>0012 + axis: [AXIS n] Counting fault Encoder</b>	
<b>Description</b>	<b>of</b> The counting channels of the encoder fail to provide the signals correctly.
<b>Cause:</b>	
<b>Effect:</b>	CNC in the alarm status and message displayed.
<b>Remedy:</b>	Check the encoder connection and the operation of all the signals it supplies to the CNC.
<b>Notes:</b>	

<b>0014 + axis: [AXIS n] Range not present</b>	
<b>Cause:</b>	A spindle movement has been commanded without any range having been selected in the spindle control register.
<b>Effect:</b>	CNC in alarm status and message displayed
<b>Remedy:</b>	Check the command of the range selected by the automation language.
<b>Notes:</b>	

<b>0015 + axis: [AXIS n] Encoder not connected</b>	
<b>Description</b>	<b>of</b> The encoder is not connected to the CNC.
<b>Cause:</b>	
<b>Effect:</b>	CNC in the alarm status and message displayed.
<b>Remedy:</b>	Check the encoder connection and make sure that the connector is properly fixed.
<b>Notes:</b>	

<b>0016 + axis: [AXIS n] Axis not available</b>	
<b>Cause:</b>	There has been a request to move an unsynchronized shared axis
<b>Effect:</b>	CNC in alarm status and message displayed
<b>Remedy:</b>	Check programming of synchronisms for axis sharing.
<b>Notes:</b>	This alarm may occur following failure to comply with the axes sharing synchronisms amongst several channels, or amongst channels and automation language

<b>0017 + axis: [AXIS n] Digital Servodrive alarm</b>	
<b>Cause:</b>	The digital servodrive that manages the axis is in the alarm status
<b>Effect:</b>	CNC in alarm status and message displayed
<b>Remedy:</b>	Check the type of alarm and consult the specific manual
<b>Notes:</b>	This alarm indicates that the axis is in an alarm status and is accompanied by a specific alarm indicated by a digital axes alarm code.

<b>0018 + axis: [AXIS n] Gantry axes misalignment</b>	
<b>Cause:</b>	The maximum misalignment tolerated for the gantry axis has been exceeded
<b>Effect:</b>	CNC in alarm status and message displayed
<b>Remedy:</b>	Check the axes parameters and make sure that there are no mechanical faults.
<b>Notes:</b>	The gantry axes must have similar mechanical and dynamic characteristics.

### 1.3.2 Digital Drive alarms

The digital axes alarm codes (numbered from AX0032 to AX0287) are followed by a further hexadecimal numeric code with two digits.

The alarms of the digital drives depend on the type of drive used. The alarm codes for drives with the Mecatrolink and Sercos/Danaher system are listed below.

Refer to the relative manuals for greater details about the meanings, causes, effects and remedies.

#### **Mecatrolink drives**

The alarm codes of the mecatrolink drives are listed below. The missing codes refer to unknown or unused alarms

A.00: No errors  
 A.02: Parameters Breakdown  
 A.03: Main Circuit Encoder Error  
 A.04: Parameter Setting Error  
 A.05: Combination Error  
 A.10: Overcurrent or Heat Sink Overheated  
 A.30: Regeneration Error Detected  
 A.32: Regenerative Overload  
 A.40: Overvoltage  
 A.41: Undervoltage  
 A.51: Overspeed  
 A.71: Overload: High Load  
 A.72: Overload: Low Load  
 A.73: Dynamic Brake Overload  
 A.74: Overload of Surge Current Limit Resistor  
 A.7A: Heat Sink Overheated  
 A.81: Absolute Encoder Backup Error  
 A.82: Encoder Checksum Error  
 A.83: Absolute Encoder Battery Error  
 A.84: Absolute Encoder Data Error  
 A.85: Absolute Encoder Overspeed  
 A.86: Encoder Overheated  
 A.91: Overload // Warning  
 A.92: Regenerative Overload // Warning  
 A.94: Parameter Setting Warning // Warning  
 A.95: MECHATROLINK Command Warning // Warning  
 A.96: MECHATROLINK Communications Warning // Warning  
 A.B1: Reference Speed Input Read Error  
 A.B2: Reference Torque Input Read Error  
 A.B6: Communications LSI Error Alarm  
 A.BF: System Alarm  
 A.C1: Servo Overrun Detected  
 A.C6: Fully-closed Encoder A-,B- phase Disconnection Alarm  
 A.C7: Fully-closed Encoder C- phase Disconnection Alarm  
 A.C8: Absolute Encoder Clear Error  
 A.C9: Encoder Communications Error  
 A.CA: Encoder Parameter Error  
 A.CB: Encoder Echoback Error  
 A.CC: Multiturn Limit Disagreement Alarm  
 A.D0: Position Error Pulse Overflow

A.E0: Option Unit No Response Alarm  
A.E1: Option Unit Time Out Alarm  
A.E2: Option Unit WDC Error  
A.E5: MECHATROLINK Synchronization Error  
A.E6: MECHATROLINK Communications Error ( Twice Consecutively )  
A.EA: SERVOPACK Malfunction  
A.EB: SERVOPACK Initial Access Error  
A.EC: SERVOPACK WDC Error  
A.ED: Command Execution Incomplete  
A.F1: Power Line Open Phase  
A.FB: (aux) Error transferring data to servodrive EEPROM  
A.FC: (aux) Error during Setpoint  
A.FD: (aux) Error during Torque Enable phase  
A.FE: (aux) CNC Shared memory/Servodrive EEPROM Parameters mismatch  
A.FF: (aux) Link is interrupted or malfunctioning

### Sercos/Danaher drives

The alarm codes of the mecatrolink drives are listed below. The missing codes refer to unknown or unused alarms

A.00: No errors  
A.01: Overload fault (IDN 114)  
A.02: Amplifier over temperature fault (IDN 203)  
A.03: Motor over temperature fault  
A.04: Cooling system fault (IDN 205)  
A.05: Control voltage fault ( $\pm 15V$ )  
A.06: Feedback loss fault  
A.07: Commutation fault. Set to 0  
A.08: Over current fault  
A.09: Over voltage fault  
A.0A: Under voltage fault  
A.0B: Power supply phase fault  
A.0C: Excessive position deviation (IDN 159)  
A.0D: Communication interface fault (IDN 14)  
A.0E: Software limit switch fault (IDN 49 and 50)  
A.10: Manufacturer defined fault (IDN 129)  
A.12: Non-volatile memory check-sum fault  
A.13: Warning fault (actual warning is mask to a fault)  
A.14: Motor brake fault  
A.15: Supply voltage not present  
A.16: A/D converter fault  
A.17: Regeneration fault  
A.18: System fault  
A.1A: Motor over speed fault  
A.1B: Excessive position command difference  
A.1C: Non-permissible software-enable  
A.20: Overload warning  
A.21: Amplifier over temperature warning  
A.22: Motor over temperature warning  
A.23: Cooling system warning  
A.25: Positioning velocity  $\geq n$  Limit  
A.2D: Target position outside of travel range  
A.2F: Manufacturer defined warning flags  
A.F3: Sercos Board not present  
A.F4: Write data error  
A.F5: Read data error  
A.F6: Check velocity error  
A.F7: Spindle Positioning error  
A.F8: Driver Config error  
A.F9: Switch Phase error  
A.FA: Class 1 diagnostic  
A.FB: (aux) Error transferring data to servodrive EEPROM  
A.FC: (aux) Error during Setpoint  
A.FD: (aux) Error during Torque Enable phase  
A.FE: (aux) CNC Shared memory/Servodrive EEPROM Parameters mismatch  
A.FF: (aux) Link is interrupted or malfunctioning

### END OF CHAPTER





## 2 Interpreter Alarms

### 2.1 Introduction

Following a programming error, the channel stops execution and sets to an alarm status. The operator is informed about this condition by a few brief diagnostic messages, which should allow the programming error to be identified.

This manual examines the contents of the alarm messages which, by their very nature, must be brief (and necessarily not very explanatory at certain times) in order to explain the possible causes of the errors and suggest corrective operations required.

### 2.2 Alarm code conventions

The alarm condition is displayed by a message, the channel alarm codes are identified by the letters CH followed by an error number that depends on the number of the channel and the type of error that has occurred. The alarm code is followed by the name of the channel and a brief description of the fault.

Each channel has 100 alarm codes (not all used) common to all the available channels. However, the numbering differs for each channel.

The table below illustrates how the channel alarms are divided:

Channel	Alarms range
0	CH0000 ÷ CH0999
1	CH1000 ÷ CH1999
2	CH2000 ÷ CH2999
...	....
n	$n*1000 \div (n+1)*1000 - 1$

The last data item in the table shows the general rule used to form the number of an alarm for the various channels configured.

The alarm sequence of the first channel repeats for the following ones. This means that alarm 0 (first alarm of channel (0) equals 1000 (first alarm of channel 1) and also 2000 (first alarm of channel 2), etc...

The # and x characters in the error message strings given in the next section are to be interpreted in the following way:

# indicates the number of the channel where the error has occurred.

x the letter x in the error code should be substituted by the number of the channel.

$x = (\#)$

The error code depends on the channel in which the error occurred

code	CH( 0 )	CH( 1 )	CH( 2 )	...
x127	5127	6127	7127	...

## 2.3 Alarm Messages

<b>x000 CH(#) Wait for character [</b>	
<b>Description</b>	<b>or</b>
<b>Cause:</b>	This error occurs if a '[' character has been omitted from the syntax of the command; for example in the definition of an array or in the use of a command of the ACC[X] type, etc.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the syntax of the current block and insert the '[' character where required.
<b>Notes:</b>	

x001 CH(#) Incorrect register number		
<b>Description</b> <b>Cause:</b> <b>Effect:</b> <b>Remedy:</b>   		

<b>x002 CH(#) Function not valid</b>	
<b>Description</b>	<b>or</b>
<b>Cause:</b>	The error indicates that the automation language function has not been written correctly.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that all the parameters to pass on to the function are present and in the correct order.
<b>Notes:</b>	

<b>x003 CH(#) Parametrics: character not valid</b>	
<b>Cause:</b>	The syntax of the ISO block is wrong
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check syntax of ISO block.
<b>Notes:</b>	

<b>x004 CH(#) IF: Wait for character =</b>	
<b>Description</b>	<b>of</b> This error occurs when the != (different) operator syntax in the condition of an IF statement, is not correct.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the syntax of the expression within brackets ( ) in the IF statement.
<b>Notes:</b>	

<b>x005 CH(#) JSR: Incorrect subroutine nesting level</b>	
<b>Description</b>	<b>of</b> The maximum tolerated nesting level has been exceeded. Too many nested calls to subroutines (JSR) or fixed cycles.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that all the RET commands are present in each fixed cycle and subroutine and, if necessary, rearrange the architecture of the part program in order to reduce the nesting levels.
<b>Notes:</b>	

<b>x006 CH(#) RET: Incorrect subroutine nesting</b>	
<b>Description</b>	<b>of</b> The error is signalled when there is a RET command in the main of the part program.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the main PP and remove that RET.
<b>Notes:</b>	

<b>x007 CH(#) Function unavailable</b>	
<b>Description</b>	<b>of</b> The Gxx code is not amongst those permitted, or a non-permitted arithmetic or trigonometric function has been used.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	If the current block contains a call to a fixed cycle, check the code of the Gxx function or check the call to a function.  for example LON(VA1) instead of LOGN(VA1).
<b>Notes:</b>	

<b>x008 CH(#) Too many consecutive M functions</b>	
<b>Description</b>	<b>of</b> The maximum number of M functions tolerated in the same block has been exceeded.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	To remedy this error, just restart the M functions present in several blocks. If they maintain the same order, there will be no variation to PP execution.
<b>Notes:</b>	

<b>x009 CH(#) Radius without G2/G3</b>	
<b>Description</b>	<b>of</b> Code R of the radius has been set in a command that is not G2 or G3.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the current block is coherent and enter a circular interpolation function (G2 or G3), or eliminate radius programming.
<b>Notes:</b>	

<b>x010 CH(#) Radius inconsistent</b>	
<b>Description</b>	<b>of</b> The radius set is not coherent with the initial and final points of the arc, or the radius is null.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check circular interpolation programming. If the programmed points are correct, evaluate the possibility of increasing the tolerance on the radius control.
<b>Notes:</b>	Checks as to the consistency of the radius in relation to the programmed points of the circumference arc is conditioned by the <i><b>Radius control tolerance</b></i> machine parameter. If this parameter is too restrictive, high precision is required when programming the radius and/or circular interpolation points.

<b>x011 CH(#) Channel initializing error</b>	
<b>Description</b>	<b>of</b> An internal error has occurred.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Inform the assistance service about the problem.
<b>Notes:</b>	

<b>x012 CH(#) Channel deadlock</b>	
<b>Description</b>	<b>of</b> An internal error has occurred.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Inform the assistance service about the problem.
<b>Notes:</b>	

<b>x013 CH(#) Fixed cycle inexistent</b>	
<b>Description</b>	<b>of</b> The file containing the subroutine or fixed cycle required has not been found, or this file has been found but with an incorrect heading, which should include the character : followed by the name or number of the fixed cycle.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the file required exists and make sure that it is in a directory accessible from the channel. Check the file heading.  Heading for a PP <code>comment % PP number</code>  Heading for a Fixed cycle <code>prototype: cfs number</code>  Subroutine heading <code>comment: subname number or name.</code>
<b>Notes:</b>	The directories that can be accessed from the channel are specified in the KVARA.INI system file along with the extensions permitted for the subroutine and/or fixed cycle files.

<b>x014 CH(#) Too many bracket levels (</b>	
<b>Description</b>	<b>of</b> The algebraic expression cannot be resolved as it contains too many bracket levels or is generally too complex.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	To face this problem, the expression must be divided using auxiliary variables.  For example /*ERROR*/ Radius2 = ( SQRT( POW((Px4-Px3),2)+POW((Py4-Py3),2) ) ) / 2  Radius2 = SQRT( POW((Px4-Px3),2) + POW((Py4-Py3),2) ) Radius2 = (Radius2) / 2
<b>Notes:</b>	

<b>x015 CH(#) Allocation: wait for character =</b>	
<b>Description</b>	<b>of</b> The ' = ' character is missing from the allocation of a register, or a preset variable or a symbolic variable. Or it is missing from the syntax of a parameter programming instruction.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the syntax of the current block and insert the ' = ' character where required.  ACC[X] 2     →  ACC[X] = 2 VA0 1000   →  VA0 = 1000
<b>Notes:</b>	

<b>x016 CH(#) Wait for character CR</b>	
<b>Description</b>	<b>of</b> The carriage return [↵] is missing from a part program block, or a character or word that cannot be interpreted has been inserted in the block.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	The CR is required in order to signal the end of the block. Check whether it is missing from the block in question. Make sure that the current block does not contain a meaningless word.
<b>Notes:</b>	

<b>x017 CH(#) Operating mode changed</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The operating mode has been changed (from AUTOMATIC to JOG for example) without resetting the channel, or a <START> request has been made without the Operating Mode having been selected.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Press the STOP and RESET buttons before changing the operating mode.
<b>Notes:</b>	

<b>x018 CH(#) JMP: Block Number not found</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The label or block to which a JMP or RPT command refers has not been found. For example <pre>IF ( VA0 == 0 ) JMP .SLTO /*syntactical error*/ .... .JUMP</pre>
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the relative command (JMP or RPT) is correct and that the label or block number to which it refers is present.
<b>Notes:</b>	

<b>x019 CH(#) Program not found</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	Program opening has failed.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the file required exists and make sure that it is in a directory accessible from the channel.
<b>Notes:</b>	The directories that can be accessed from the channel are specified in the KVARA.INI system file along with the extensions permitted for the part program and/or fixed cycle files.

<b>x021 CH(#) Target off limits</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The targets are off range: calculation of the axes targets has failed.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the selected targets are correct and correct the value of the Software Saddle Stop register of the machine parameters if necessary.
<b>Notes:</b>	

<b>x022 CH(#) Axis not configured</b>	
<b>Description</b>	<b>of</b> One of the axes involved in the movement has not been configured, or it is not amongst the path axes.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the configuration parameter of the <i>Channel Axes Mask</i> channel: make sure that the axes involved in the movement are present.  If one of the axes involved may not be torqued for programming of CON[axis]=0, just torque it before requesting the movement.
<b>Notes:</b>	

<b>x023 CH(#) Spindle not configured</b>	
<b>Description</b>	<b>of</b> The current block sets the spindle speed or asks for movement without this belonging to the mask of the channel axes.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Enter the spindle in the relative machine parameters register.
<b>Notes:</b>	

<b>x024 CH(#) Incorrect Plane Selected</b>	
<b>Description</b>	<b>of</b> An attempt has been made to machine on a plane that is not allowed by the selected contouring plane, or an attempt has been made to make an impossible interpolation (e.g.: a linear section with 7 axes and a helicoid with 5 axes on a version where this option is not available).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check whether programming of the machining plane is coherent. Change the machining plane selected or check the axes involved in the programming.
<b>Notes:</b>	

<b>x025 CH(#) Axis not available</b>	
<b>Description</b>	<b>of</b> An axis is unavailable for the use required, or has not been configured.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the addresses of the axes in the part program or the channel configuration.
<b>Notes:</b>	



<b>x026 CH(#) Tapping step null</b>	
<b>Description</b>	<b>of</b> Tapping (G63) with null pitch has been requested.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the tapping pitch is different from zero.
<b>Notes:</b>	<p>Tapping pitch</p> <p><math>K &lt; 0</math> spindle rotation towards the right during tapping</p> <p><math>K = 0</math> tapping impossible.</p> <p><math>K &lt; 0</math> spindle rotation towards the left during tapping</p>

<b>x027 CH(#) Axis in Alarm status</b>	
<b>Description</b>	<b>of</b> A channel axis is in the alarm status.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the type of axis alarm.

<b>x028 CH(#) Feed Null</b>	
<b>Description</b>	<b>of</b> The interpolation speed is null.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Enter a non-null feed by programming address F before a linear (G1) or circular (G2,G3) interpolation.
<b>Notes:</b>	

<b>x029 CH(#) Tool Radius Null</b>	
<b>Description</b>	<b>of</b> The error occurs if the tool selected by the tool corrector has null radius.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the selected tool corrector and the relative tool radius. If null, enter a value differing from zero in the relative data area of the machine parameters in the tool table.
<b>Notes:</b>	

<b>x030 CH(#) Symbol % not found</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The % symbol has not been found in the part program or a generic error occurred when the part program was opened.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Each part program must begin with a line containing the % character, generally followed by the name (number) of the part program.  For example Test CUT %111.
<b>Notes:</b>	

<b>x031 CH(#) Change Selected Plane with CUT Activated</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The error occurs if the selected plane is changed with the tool corrector enabled, or if the type of tool correction has been rapidly changed from G41 to G42 (or vice versa).
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	The moment it is activated alone, the tool corrector samples the information about the type of plane selected. This information therefore cannot be modified since the CUT would not be aware of the change. If you wish to change the selected plane, disable the tool corrector with the G40 command, then change the selected plane (G17 or G18 or G19) after which, the tool corrector can be re-enabled with the G41 or G42 commands.  If you must change the G41/G42 correction side, you must deactivate the CUT (by programming G40) and then re-enable it by re-programming it in the required status G41/G42.
<b>Notes:</b>	

<b>x032 CH(#) Spindle without Encoder</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	A spindle without encoder has been used in a threading (G33) or tapping (G63) or spindle positioning (M19) operation.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	A spindle without encoder cannot be used for the above mentioned operations. Check the machine parameters of the spindle in question and select a spindle with encoder if necessary.
<b>Notes:</b>	

<b>x033 CH(#) Address without number</b>	
<b>Description</b>	<b>of</b> There is no number at the beginning of the line an N address.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Enter the number that specifies the block after the N address. for example N G0 X100 → N10 G0 X100
<b>Notes:</b>	

<b>x034 CH(#) SQRT: negative argument</b>	
<b>Description</b>	<b>of</b> The error occurs if the argument of the square root is negative (value not tolerated).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the argument of the square root is more than zero.
<b>Notes:</b>	$\text{SQRT}(x) \ x \geq 0$

<b>x035 CH(#) TAN: infinite value</b>	
<b>Description</b>	<b>of</b> This error occurs if the argument of the <i>tangent</i> trigonometric operator is +90 degrees or – 90 degrees and, thus, the result of the tangent operation would be infinite (positive or negative).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the argument of the tangent is within the limits tolerated by the function.
<b>Notes:</b>	$\text{TAN}(\alpha) \ \alpha \in [-90, +90]$ .

<b>x036 CH(#) ASIN, ACOS: Argument off range</b>	
<b>Description</b>	<b>of</b> This error occurs if the argument of the arc cosine or arc sine operation is not within the range between –1 and +1 tolerated by the trigonometric operation.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the argument of the trigonometric functions belongs to values tolerated by the function.
<b>Notes:</b>	$\text{ACOS}(x), \ x \in [-1, +1]$ . $\text{ASIN}(x), \ x \in [-1, +1]$ .

<b>x037 CH(#) Division by zero</b>	
<b>Description</b>	<b>of</b> This error occurs if there is a division with null denominator.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check whether the expression contains a division with null denominator. If so, modify the calculation procedure so that the denominator has a valid value.
<b>Notes:</b>	

<b>x038 CH(#) Address not used</b>	
<b>Description</b>	<b>of</b> This error may occur if an unavailable address is used (for example: N100 <b>H0</b> X200 Y300 ); or if the incorrect syntax of an instruction in the block prevents the successive words from being correctly interpreted.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check whether the block contains a code that is impossible to interpret and replace it with the correct code. Alternatively, check the syntax of the words and the instructions in the entire block.  for example N100 <b>H0</b> X200 Y300 → N100 <b>G0</b> X200 Y300 .
<b>Notes:</b>	

<b>x039 CH(#) Number without address</b>	
<b>Description</b>	<b>of</b> This error occurs if there is a number without the relative address.
<b>Cause:</b>	for example N100 <b>G0 200</b> .
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the syntax of the block and enter the correct address.  for example N100 <b>G0 X200</b> .
<b>Notes:</b>	

<b>x041 CH(#) Program without M2-M30</b>	
<b>Description</b>	<b>of</b> The part program terminates without end of program instruction M2 or M30.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Enter M2 or M30 at the end of the program.
<b>Notes:</b>	

<b>x042 CH(#) Interpolation using incompatible axes</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	Interpolation has been attempted in the same block of axis, which cannot be interpolated with each other. This is what happens to an axis with N speed established by digital I/O and a proportional axis with analog piloting, e.g.:
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the type of axis used for the interpolation.
<b>Notes:</b>	

<b>x043 CH(#) Spindle RPM too high</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The spindle speed exceeds the speed limit for the selected range or is higher than the maximum tolerated speed during a tapping operation (G63).
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the programmed speed of spindle S and lower it if necessary, otherwise check the machine parameters that limit the spindle speed.
<b>Notes:</b>	

<b>x044 CH(#) Z Axis Speed &gt; Max Channel Speed</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The speed of Z axis during a tapping operation (G63) is higher than the maximum speed of the channel set by the machine parameters.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the maximum speed of the channel in the machine parameters or re-program the tapping parameters so that the speed of Z axis (which depends on S and K) decreases.
<b>Notes:</b>	

<b>x045 CH(#) G18 Lathe Correction</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	A tool of the lathe type has been used with a selected plane differing from plane ZX.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	With the tool corrector enabled and if the selected tool is lathe, the selected plane must be plane ZX. Command G18 must therefore be set in front.
<b>Notes:</b>	

<b>x046 CH(#) Type of Tool Geometry not handled</b>	
<b>Description</b>	<b>of</b> The type of tool selected is not amongst the available ones.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the selected tool corrector and the parameters of the tool associated with it. Particularly check to make sure that the type of tool is amongst those available: lathe, fluted mill, angular cutter, boring bit.
<b>Notes:</b>	

<b>x047 CH(#)Transmission Queue Terminated</b>	
<b>Description</b>	<b>of</b> An internal fault has occurred.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Inform the assistance service about the fault.
<b>Notes:</b>	

<b>x048 CH(#) Vacant Package Queue Terminated</b>	
<b>Description</b>	<b>of</b> An internal error has occurred.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Inform the assistance service about the problem.
<b>Notes:</b>	

<b>x049 CH(#) Profile Radius less than Tool Radius</b>	
<b>Description</b>	<b>of</b> Error signalled by the tool corrector: a type G2 or G3 machining operation has been attempted with a radius less than the tool radius.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Select a tool with a smaller radius or program a profile that suits the type of tool selected.
<b>Notes:</b>	

<b>x050 CH(#) Final Arc Point inconsistent</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	Error signalled by the tool corrector: a type G2 or G3 machining operation has been requested where the final point of the circumference arc fails to match the beginning of the next section.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check how the circular section has been programmed and make sure that the selected profile is not discontinuous.
<b>Notes:</b>	

<b>x051 CH(#) The Path cannot be followed</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	Error signalled by the tool corrector: there is no intersection between two consecutive sections or there is more than one between two consecutive sections, or a general inconsistency has been added to the profile.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the machining profile is continuous.
<b>Notes:</b>	

<b>x052 CH(#) Segment null</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	Error signalled by the tool corrector: there is a segment with null length in the profile.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check how the profile has been programmed and eliminate this fault.
<b>Notes:</b>	

<b>x053 CH(#) Angle null</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	An internal fault has occurred.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Inform the assistance service about the problem
<b>Notes:</b>	

<b>x054 CH(#) Operation illegal</b>	
<b>Description</b>	<b>of</b> Identifies a generic forbidden operation. For example, a forbidden arithmetical operation or a generic programming error in a section where the tool corrector is activated.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the syntax of the current block.
<b>Notes:</b>	

<b>x057 CH(#) Overcut on Linear Segment</b>	
<b>Description</b>	<b>of</b> Error signalled by the tool corrector: there will be an overcut if the direction of the compensated path is different from that of the programmed linear path. This will lead to an unwanted removal of material.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Select a tool with a smaller radius, or re-program the profile so that it can be followed by the current tool.
<b>Notes:</b>	

<b>x058 CH(#) Overcut on Circumference Arc</b>	
<b>Description</b>	<b>of</b> Error signalled by the tool corrector: there will be an overcut if the direction of the compensated path is different from that of the programmed circumference arc path. This will lead to an unwanted removal of material.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Select a tool with a smaller radius, or re-program the profile so that it can be followed by the current tool.
<b>Notes:</b>	

<b>x059 CH(#) Wait for character ]</b>	
<b>Description</b>	<b>of</b> This error occurs if a ']' character has been omitted from the syntax of the command; for example in the definition of an array or in the use of a command of the ACC[X] type, etc.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the syntax of the current block and insert the ']' character where required.
<b>Notes:</b>	



<b>x060 CH(#) Value too high</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	<p>This error occurs if an attempt has been made to assign an excessively high value to a register: the range of valid values depends on the size of the registers.</p> <p>This message is given if an excessively high value has been assigned to a parameter. In this case, the range of tolerated values depends on the meaning of the parameter itself.</p> <p>Example:</p> <pre>TGR K1.5 120 45</pre> <pre>/*the angular values must be within 0 and 90</pre>
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the syntax of the command, the size of the register and the value to assign are correct.
<b>Notes:</b>	

<b>x061 CH(#) File access error</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	A file error has occurred in reading mode.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the consistency of the file.
<b>Notes:</b>	

<b>x062 CH(#)Tool Descriptor wrong</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The value programmed for D address (tool selected) is beyond the tolerated limits.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the D address.
<b>Notes:</b>	

<b>x063 CH(#) Too many parameters</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	Too many parameters passed to a fixed cycle C.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Change the structure of the fixed cycle so that it asks for a lower number of parameters.
<b>Notes:</b>	

<b>x064 CH(#) Too many characters in the string fields</b>	
<b>Description</b>	<b>of</b> The names of the symbolic or system variables, or the string fields to display with \$( ) are too long.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Change the structure of the code by reducing the length of the names or string fields.
<b>Notes:</b>	

<b>x065 CH(#) Wait for object after ^</b>	
<b>Description</b>	<b>of</b> This error occurs when variables of the record type are assigned or when a significant value is missing in the call to a fixed cycle C where a variable for reference is to be passed after the ^ character.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that there is a significant value after the ^ character. A pre-defined variable, a symbolic variable or a system variable can be passed for reference.  Example:  CALL MyFunct( ^123, "string" ) /*^123 is not allowed  CALL MyFunct( ^%retval, "string" ).
<b>Notes:</b>	

<b>x066 CH(#) Allocation to inexistent register</b>	
<b>Description</b>	<b>of</b> The number of the register (or the pre-defined variable VAx, VGx, VLx) is not correct, or a non-valid bit has been specified.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the name of the register is correct, if the addressed register exists and if addressing of a specific bit is coherent.
<b>Notes:</b>	

<b>x067 CH(#) Argument inexistent</b>	
<b>Description</b>	<b>of</b> A request has been made to refresh a register that is not within the range of registers to refresh.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	To momentarily obviate the problem, synchronous execution can be disabled with the executor. Contact the assistance service.
<b>Notes:</b>	

<b>x068 CH(#) Code SPC not recognized</b>	
<b>Description</b>	<b>of</b> The SPC code is not amongst those envisaged..
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the SPC code. Contact the manufacturer or the DLL [KCVBUSR] servicing technicians for information about the tolerated codes. If no SPC code is permitted, make sure that the DLL [KCVBUSR] is linked in [Kvara.Ini].
<b>Notes:</b>	

<b>x071 CH(#) CFC: Subroutine not found</b>	
<b>Description</b>	<b>of</b> The routine to call up with CALL is not envisaged.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the name of the routine called. Make sure that the capital and lower case letters are correct. Contact the manufacturer or the DLL [KCFCUSR] servicing technicians for information about the routines available. If no routine can be called up, make sure that the DLL [KCFCUSR] is linked in [Kvara.Ini].
<b>Notes:</b>	

<b>x072 CH(#) CFC: Wrong parameters</b>	
<b>Description</b>	<b>of</b> The combination of parameters specified is not permitted for a routine called up by means of CALL.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the parameters. Contact the manufacturer or the DLL [KCFCUSR] servicing technicians for information.
<b>Notes:</b>	

<b>x073 CH(#) CFC: Error negotiating resources</b>	
<b>Description</b>	<b>of</b> The DLL [KCFCUSR] version is not consistent with the <i>User extension lengths</i> field setting in the general parameters
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Contact the manufacturer or the DLL [KCFCUSR] servicing technicians to obtain further information about the inspections required.
<b>Notes:</b>	

<b>x080 CH(#) CVB: Unknown opcode</b>	
<b>Description</b>	<b>of</b> The SPC address of the specified operating code is not envisaged.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Contact the manufacturer or the DLL [KCFCUSR] servicing technicians for informations .
<b>Notes:</b>	

<b>x081 CH(#) CVB: Error negotiating resources</b>	
<b>Description</b>	<b>of</b> The DLL [KCVBUSR] version is not consistent with the <i>User extension lengths</i> field setting in the general parameters.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Contact the manufacturer or the DLL [KCFCUSR] servicing technicians to obtain further information about the inspections required.
<b>Notes:</b>	

<b>x159 CH(#) X Axis Target Off Limits</b>	
<b>Description</b>	<b>of</b> The targets of X axis are off range:
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum target of the axis and the programmed targets.
<b>Notes:</b>	

<b>x160 CH(#) Y Axis Target Off Limits</b>	
<b>Description</b>	<b>of</b> The targets of Y axis are off range:
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum target of the axis and the programmed targets.
<b>Notes:</b>	

<b>x161 CH(#) Z Axis Target Off Limits</b>	
<b>Description</b>	<b>of</b> The targets of Z axis are off range:
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum target of the axis and the programmed targets.
<b>Notes:</b>	

<b>x162 CH(#) U Axis Target Off Limits</b>	
<b>Description</b>	<b>of</b> The targets of U axis are off range:
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum target of the axis and the programmed targets.
<b>Notes:</b>	

<b>x163 CH(#) V Axis Target Off Limits</b>	
<b>Description</b>	<b>of</b> The targets of V axis are off range:
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum target of the axis and the programmed targets.
<b>Notes:</b>	

<b>x164 CH(#) W Axis Target Off Limits</b>	
<b>Description</b>	<b>of</b> The targets of W axis are off range:
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum target of the axis and the programmed targets.
<b>Notes:</b>	

<b>x165 CH(#) A Axis Target Off Limits</b>	
<b>Description</b>	<b>of</b> The targets of A axis are off range:
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum target of the axis and the programmed targets.
<b>Notes:</b>	

<b>x166 CH(#) B Axis Target Off Limits</b>	
<b>Description</b>	<b>of</b> The targets of B axis are off range:
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum target of the axis and the programmed targets.
<b>Notes:</b>	

<b>x167 CH(#) C Axis Target Off Limits</b>	
<b>Description</b>	<b>of</b> The targets of C axis are off range:
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum target of the axis and the programmed targets.
<b>Notes:</b>	

<b>x169 CH(#) Error in defining record variable [symbol]</b>	
<b>Description</b>	<b>of</b> This error occurs if a non-valid reference to a symbolic variable is assigned (during the declaration phase) to a symbolic variable of the record type.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the consistency of the assigned value (in the initializing phase or afterwards), particularly if the variable to assign is definite.  <pre> REC POINT1 = ^PIPP0 /*error PIPPO is indefinite DBL PIPPO  DBL PIPPO REC POINT1 = ^PIPP0 /*correct </pre>
<b>Notes:</b>	

<b>x170 CH(#) Error in assigning record variable [symbol]</b>	
<b>Description</b>	<b>of</b> This error occurs if a non-valid reference to a symbolic variable is assigned to a symbolic variable of the record type.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the correctness of the assigned value, particularly if the system variable exists.  REC POINT1 /*error PIPPO is indefinite  DBL side  REC POINT1 = ^LTO /*not definite var correct

<b>x171 CH(#) Error in defining record variable [var defcn]</b>	
<b>Description</b>	<b>of</b> This error occurs if the reference of a non-valid symbolic system variable is assigned to a variable of the record type during the declaration phase.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the correctness of the assigned value (during the initializing phase), particularly if the system variable exists.  REC POINT1 = ^%sign_enab /*error if %sign_enab does not exist
<b>Notes:</b>	

<b>x172 CH(#) Error in assigning record variable [var defcn]</b>	
<b>Description</b>	<b>of</b> This error occurs if the reference of a non-valid symbolic system variable is assigned to a variable of the record type.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the assigned value is correct, particularly if the system variable exists.  REC POINT1  POINT1= ^%sign_enab /*error if %sign_enab does not exist
<b>Notes:</b>	

<b>x173 CH(#) Error in defining record variable [INPUT]</b>	
<b>Description</b>	<b>of</b> This error occurs if a non-valid reference to an input register is assigned (possibly during the declaration phase) to a variable of the record type.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the correctness of the assigned value (possibly during the initializing phase), particularly if the input register exists.  REC POINT1 = ^%IW15 /*error if % IW15 does not exist
<b>Notes:</b>	

<b>x174 CH(#) Unable to assign input register</b>	
<b>Description</b>	<b>of</b> This error occurs if the reference of a non-value input register is assigned to a variable of the record type.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the correctness of the assigned value in particular, if the input register exists.  REC POINT1  POINT1= ^%IW15 /*error if %IW15 does not exist
<b>Notes:</b>	

<b>x175 CH(#) Error in defining/assigning record variable [OUT]</b>	
<b>Description</b>	<b>of</b> This error occurs if a variable of the record type assigns during the initializing phase to the reference of a non-valid output register.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the correctness of the assigned value (possibly during the initializing phase), particularly if the output register exists.  REC POINT1 = ^%QW8 /*error if % QW8 does not exist
<b>Notes:</b>	

<b>x176 CH(#)Record variable definition error [OUT]</b>	
<b>Description</b>	<b>of</b> This error occurs if the reference of a non-valid output register is assigned to a variable of the record type.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	in particular, if the output register exists.  REC POINT1  POINT1= ^%QW8 /*error if %QW8 does not exist
<b>Notes:</b>	



<b>x177 CH(#) Error in defining record variable [logic register]</b>	
<b>Description</b>	<b>of</b> This error occurs if a non-valid reference to an output register is assigned (during the declaration phase) to a variable of the record type.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the correctness of the assigned value, particularly if the system variable exists. REC POINT1 = ^%C260 /*error if %C260 does not exist
<b>Notes:</b>	

<b>x178 CH(#) Error in assigning record variable [automatic variable]</b>	
<b>Description</b>	<b>of</b> This error occurs if a non-valid reference to an automatic variable (VAXx, VLxx, VGxx) is assigned (possibly during the declaration phase) to a variable of the record type.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the correctness of the assigned value (possibly during the initializing phase), particularly if the automatic variable exists. REC POINT1 = ^%VA100 /*error if %VA100 does not exist or REC POINT1 POINT1= ^%VG130 /*error if %VG130 does not exist.
<b>Notes:</b>	

<b>x180 CH(#) Array beyond tolerated maximum</b>	
<b>Description</b>	<b>of</b> Declaration of an array with an excessively high number of elements.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Limit the size of the array to within the maximum tolerated.
<b>Notes:</b>	

<b>x181 CH(#) Symbol already defined</b>	
<b>Description</b>	<b>of</b> This error occurs if a symbolic variable has been declared whose name is associated with a variable already defined at the same subroutine level.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Two variables with the same name cannot be declared at the same subroutine level. Change the same of one of the two.
<b>Notes:</b>	

<b>x182 CH(#) Impossible to initialize the Arrays</b>	
<b>Description</b>	<b>of</b> This error occurs if initializing of a vector of elements is requested during the declaration phase.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Several variables cannot be assigned in a single operation. This is why it is necessary to state the allocation operations required to initialize the vector one by one at the end of the declaration section.  <pre>DBL VERTEXES[6] = 0.0 /*error  DBL VERTEXES[6], CNT = 0.0  RPT .START, .END, 6  JMP .END  .START   VERTEX[CNT] = 0.0   CNT = CNT+1  .END</pre>
<b>Notes:</b>	

<b>x184 CH(#) Parametric definition syntax error</b>	
<b>Description</b>	<b>of</b> A generic syntactical error has occurred during the definition of symbolic variables.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the syntax of the variables declaration: pay attention to the ',' character used as a separator, and to the allocations.  <pre>DBL LINE SIDE /*error  DBL SIDE, LINE /*correct</pre>
<b>Notes:</b>	

<b>x185 CH(#) Symbol defined more than once</b>	
<b>Description</b>	<b>of</b> We try to specify, for example, a field string where is necessary a numeric value or vice versa.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check data type used.
<b>Notes:</b>	

<b>x187 CH(#) Symbol not defined</b>	
<b>Description</b>	<b>of</b> This error occurs if there are more than one undeclared variables in an expression to evaluate, or in an allocation operation.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that all the symbolic variables used are present.
<b>Notes:</b>	

<b>x188 CH(#) String allocation error</b>	
<b>Description</b>	<b>of</b> This error occurs if there is an incongruence in the allocation of a string type variable.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the type of operand to assign is coherent. It can be: a string constant, a symbolic variable of the string type or a string type variable in defcn.
<b>Notes:</b>	

<b>x189 CH(#) Numeric allocation error</b>	
<b>Description</b>	<b>of</b> This error occurs if there is an incongruence in the allocation of a string type variable.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the type of operand to assign is coherent. It can be: a numeric constant or an expression, a symbolic variable of the numeric type or a numeric type variable in defcn.
<b>Notes:</b>	

<b>x190 CH(#) Symbol inexistent</b>	
<b>Description</b>	<b>of</b> This is a generic error that occurs during management of the symbolic variables. It may be determined by the fact that the symbolic variable to which it refers does not exist, or by a reading or writing error.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the utilization syntax of the symbolic variables. Make sure that the types of variables used are coherent if it is an expression.
<b>Notes:</b>	

<b>x191 CH(#) Record variable definition error [logical register]</b>	
<b>Description</b>	<b>of</b> This error occurs if the reference of a non-valid logic register is assigned to a variable of the record type.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the assigned value is correct, in particular, if the system variable exists.  REC POINT1  POINT1= ^%C260 /*error if %C260 does not exist
<b>Notes:</b>	

<b>x192 CH(#) Wait for parametric symbol</b>	
<b>Description</b>	<b>of</b> This error occurs if there is no valid name for a symbolic variable after key words DBL, STR, REC.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Typically, this error can occur if a key word has been accidentally assigned as symbolic name of a variable.  DBL VEL /*key word VEL error VEL[X] = 50000  DBL VELOCITY
<b>Notes:</b>	

<b>x193 CH(#) Error during access to register in defcn</b>	
<b>Description</b>	<b>of</b> Connection to a register in defcn has failed.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the register is present in defcn. Make sure that there are record variables that point towards a system register and check the syntax.
<b>Notes:</b>	

<b>x194 CH(#) Maximum number of symbolic variables exceeded</b>	
<b>Description</b>	<b>of</b> The error occurs if the variables defined by the channel exceed the maximum number of variables tolerated.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	The number of variables that can be used is limited by the <i>Local variables for subroutine level</i> parameter. The value of the parameter can be increased (with consequent increase in the amount of memory occupied) or the code re-organized in order to use less variables.
<b>Notes:</b>	This error can occur if the Local variables for subroutine level is zero and, thus, use of symbolic variables for the channel is not envisaged. Update the parameter in this case.

<b>x214 CH(#) DEBUG: PMI: Uninitialized User Extension</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	An error has occurred in relation to synchronizing with the computer that must transmit the part-program in the through mode ( <i>Passthru, Dripfeed execution</i> ).
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Contact the manufacturer of supplier of the program that transmits the data to the CNC for information about how to investigate and resolve the problem.
<b>Notes:</b>	

<b>x219 CH(#) Cutter Data not found</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	Access to data concerning tool correction (CED,THD,RH,...) has failed. )
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that the type of data in defcn exist and that they are consistent.
<b>Notes:</b>	

<b>x220 CH(#) Kinematics not supported</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The spindle is unable to support the type of movement chosen.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the Spindle Data in the machine parameters.
<b>Notes:</b>	

<b>x221 CH(#) Incorrect positioning of TWI entity</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The Positioning field of the selected spindle is not correct.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the Spindle Data in the machine parameters.
<b>Notes:</b>	

<b>x222 CH(#) Undefined tool orientation</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	Vector EP, EQ, ER which describes tool positioning is not defined and a non-punctiform tool has been selected (different from D0).
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check whether EP, EQ, ER have been assigned and that they contain correct values.
<b>Notes:</b>	

<b>x223 CH(#) TCP not found</b>	
<b>Description</b>	<b>of</b> Vector EP, EQ, ER which describes tool positioning is not defined and three-dimensional tool radius compensation is activated (EI,EJ and EK $\neq$ 0).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check whether EP, EQ, ER have been assigned and that they contain correct values.
<b>Notes:</b>	

<b>x224 CH(#) THD conversion not supported</b>	
<b>Description</b>	<b>of</b> The Conversion field of the selected toolholder is not correct.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the Toolholder Data in the machine parameters.
<b>Notes:</b>	

<b>x225 CH(#) Cutter selection impossible, IJK absent</b>	
<b>Description</b>	<b>of</b> The ICDSID address has been set so as to select the cutter most suitable for machining with a tool with thickness (e.g.: a blade), while EI, EJ and EK have not been specified. Cutter determination requires the presence of the surface vector.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check how ICDSID has been programmed and/or program EI, EJ and EK to suit the machining process.
<b>Notes:</b>	

<b>x226 CH(#) Cutter Violation</b>	
<b>Description</b>	<b>of</b> The ICDSID address has been set so as to select a determined tool cutting edge, and a machining process whose surface vector is expressed by EI, EJ and EK cannot be carried out with the selected cutter since it would be opposed by the tool.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check how ICDSID has been programmed and/or check the feasibility of the machining operation with the specified cutter.
<b>Notes:</b>	

<b>x227 CH(#) XCL: See Manual</b>	
<b>Description</b>	<b>of</b> An internal error has occurred.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Contact the assistance service.
<b>Notes:</b>	

<b>x229 CH(#) Polar axes driver not supported</b>	
<b>Description</b>	<b>of</b> The actuator for rotation around Z axis is not amongst those available.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the Spindle Data in the machine parameters.
<b>Notes:</b>	

<b>x230 CH(#) Incoherent pitching</b>	
<b>Description</b>	<b>of</b> Pitching consistency monitoring for a manual presetting tool has failed.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the angle set for the tool along with the programmed one.
<b>Notes:</b>	

<b>x231 CH(#) Yawing incoherent</b>	
<b>Description</b>	<b>of</b> Yawing consistency monitoring for a manual presetting tool has failed.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the angle set for the tool along with the programmed one.
<b>Notes:</b>	

<b>x232 CH(#) ICDSID mode not supported</b>	
<b>Description</b>	<b>of</b> The value assigned to ICDSID is not amongst the tolerated ones.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the syntax of the ICDSID command.
<b>Notes:</b>	

<b>x233 CH(#) Ambiguous relation between cutter and machining process</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The ICDSID address has been set so as to select a cutting edge of the tool in relation to the infeed trajectory. Vectors EP, EQ and ER and EI, EJ and EK appear coherent or opposed or null when viewed by an observer looking in the direction of the infeed trajectory. The machining side cannot be determined.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check how ICDSID has been programmed and/or check the correctness of the surface and tool positioning vectors.
<b>Notes:</b>	

<b>x234 CH(#) Machining block request after G00</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The ICDSID address has been set so as to select a cutting edge of the tool in relation to the infeed trajectory, or PADSID is activated. After a G0 workpiece insertion command, no infeed section has been found before the successive G0, deactivation of the selected mode, an SYN or the end of the program.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the command sequence.
<b>Notes:</b>	

<b>x235 CH(#) Too many non-movement steps</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The ICDSID address has been set so as to select a cutting edge of the tool in relation to the infeed trajectory, or PADSID is activated. There are too many blocks that do not refer to the axes (e.g.: M functions) between the successive G0 and the first infeed command or between two successive infeed commands.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the command sequence.
<b>Notes:</b>	

<b>x236 CH(#) Axes path sequence not handled</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	An internal error has occurred.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Contact the assistance service.
<b>Notes:</b>	



<b>x240 CH(#) Too many non-movement blocks</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The FDCDLE address has been set to 1 and there are too many blocks that do not refer to the axes (e.g.: M functions) between the successive G0 and the first infeed command or between two successive infeed commands.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the command sequence.
<b>Notes:</b>	

<b>x255 CH(#) Tool positioning not defined with ICDSID</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The ICDSID address has been set so as to select a cutting edge of the tool in relation to the infeed trajectory, and the EP, EQ and ER vector has not been defined. The machining side cannot be determined.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check how ICDSID has been programmed and/or that the above mentioned vector is correct.
<b>Notes:</b>	

<b>x256 CH(#) Surface vector not defined with ICDSID</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	The ICDSID address has been set so as to select a cutting edge of the tool in relation to the infeed trajectory, and the EI, EJ and EK vector has not been defined. The machining side cannot be determined.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check how ICDSID has been programmed and/or that the above mentioned vector is correct.
<b>Notes:</b>	

<b>x257 CH(#) Tool pitching incompatible with the machining process</b>	
<b>Description</b>	<b>of</b>
<b>Cause:</b>	PADSID is activated and tool pitching is less than the angle that the trajectory forms with the interpolation plane. It is not possible to find a yawing value that allows the tool to be perpendicular to the trajectory.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check how PADSID has been programmed, that pitching is correct and that the machining operation is feasible with the selected tool.
<b>Notes:</b>	

<b>x258 CH(#) Tool yawing undetermined with PADSID activated</b>	
<b>Description</b>	<b>of</b> PADSID is activated, tool pitching is 90 degrees and the trajectory is perpendicular to the interpolation plane. There are thus infinite yawing values suitable for the process.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the PADSID programming. Disable PADSID and state the required tool positioning with EP, EQ and ER.
<b>Notes:</b>	

<b>x259 CH(#) PADSID mode not supported</b>	
<b>Description</b>	<b>of</b> The value assigned to PADSID is not amongst the tolerated ones.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the syntax of the PADSID command.
<b>Notes:</b>	

<b>x260 CH(#) Unsupported PADCHK behavior</b>	
<b>Description</b>	<b>of</b> The value assigned to PADCHK is not amongst the tolerated ones.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the syntax of the PADCHK command.
<b>Notes:</b>	

<b>x261 CH(#) Surface edge detected</b>	
<b>Description</b>	<b>of</b> Reserved for future use
<b>Cause:</b>	
<b>Effect:</b>	
<b>Remedy:</b>	
<b>Notes:</b>	

<b>x262 CH(#) Machining path violation</b>	
<b>Description</b>	<b>of</b> Reserved for future use
<b>Cause:</b>	
<b>Effect:</b>	
<b>Remedy:</b>	
<b>Notes:</b>	

<b>x264 CH(#) TWI code too high</b>	
<b>Description</b>	<b>of</b> The spindle code selected with TWI is too high.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the above instruction. Check the maximum number of descriptors in DEFCN and that declared in the parameters.
<b>Notes:</b>	

<b>x265 CH(#) THD code too high</b>	
<b>Description</b>	<b>of</b> The toolholder code selected with THD is too high.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the above instruction. Check the maximum number of descriptors in DEFCN and that declared in the parameters.
<b>Notes:</b>	

<b>x266 CH(#) D code too high</b>	
<b>Description</b>	<b>of</b> The tool/cutter code selected with D is too high.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the above instruction. Check the maximum number of descriptors in DEFCN and that declared in the parameters.
<b>Notes:</b>	

<b>x269 CH(#) Suitable tool positioning request with xSCMOD</b>	
<b>Description</b>	<b>of</b> <i>Compensation along the trajectory depending on a tool section (ESCMOD, XSCMOD) is activated and tool positioning is not normal in relation to the trajectory within a certain tolerance.</i>
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the programming of ESCMOD and XSCMOD. Check the relation between tool positioning and the trajectory.
<b>Notes:</b>	

<b>x270 CH(#) Suitable surface vector request with xSCMOD</b>	
<b>Description</b>	<b>of</b> <i>Compensation along the trajectory depending on a tool section (ESCMOD, XSCMOD) is activated and the vector normal in relation to the surface is not normal in relation to the trajectory within a certain tolerance.</i>
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the programming of ESCMOD and XSCMOD. Check the relation between the vector normal to the surface and the trajectory.
<b>Notes:</b>	

<b>x271 CH(#) Tool positioning not defined with xSCMOD</b>	
<b>Description</b>	<b>of</b> <i>Compensation along the trajectory depending on a tool section (ESCMOD, XSCMOD) is activated and tool positioning has not been specified.</i>
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the programming of ESCMOD and XSCMOD. Set the tool position.
<b>Notes:</b>	

<b>x272 CH(#) Surface vector not defined with xSCMOD</b>	
<b>Description</b>	<b>of</b> <i>Compensation along the trajectory depending on a tool section (ESCMOD, XSCMOD) is activated and the vector normal to the surface has not been specified.</i>
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the programming of ESCMOD and XSCMOD. Enter the vector normal to the surface.
<b>Notes:</b>	

<b>x273 CH(#) Only blocks G1 allowed with xSCMOD</b>	
<b>Description</b>	<b>of</b> <i>Compensation along the trajectory depending on a tool section (ESCMOD, XSCMOD) is activated and the trajectory is not linear.</i>
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the programming of ESCMOD and XSCMOD. Compensation cannot be carried out automatically on curved sections of this type.
<b>Notes:</b>	

<b>x274 CH(#) Block length at start incompatible with ESCMOD</b>	
<b>Description</b>	<b>of</b> ESCMOD is activated, and the initial machining section is not long enough to allow tool compensation in the insertion point.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check ESCMOD programming, the length of the section, the machining depth (DER) relative to the insertion point and the tool geometry.
<b>Notes:</b>	

<b>x275 CH(#) Single block length incompatible with xSCMOD</b>	
<b>Description</b>	<b>of</b> ESCMOD and XSCMOD are activated at the same time. The machining operation consists of a single block G1 and the machining section is not as long as the sum of the two compensations at least.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check ESCMOD and XSCMOD programming, the length of the sole section, the machining depth (DER) relative to both the insertion and detaching point, and the tool geometry.
<b>Notes:</b>	

<b>x276 CH(#) Block length at end incompatible with XSCMOD</b>	
<b>Description</b>	<b>of</b> XSCMOD is activated, and the final machining section is not long enough to allow tool compensation in the detaching point.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check XSCMOD programming, the length of the section, the machining depth (DER) relative to the detaching point and the tool geometry.
<b>Notes:</b>	

<b>x289 CH(#) DEBUG: PMI: Uninitialized User Extension&gt;</b>	
<b>Description</b>	<b>of</b> A synchronizing error has occurred amongst processes, or the customizing parameters of the filesystem for graphic simulation or other uses have not been entered correctly.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Contact the manufacturer or supplier of the operator interface application for information about how to investigate and resolve the problem.
<b>Notes:</b>	

<b>x291 CH(#) Spindle Speed &lt; Min Speed</b>	
<b>Description</b>	<b>of</b> The spindle speed is lower than the minimum limit speed for the selected range.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check spindle speed programming S and increase it if necessary, otherwise check the machine parameters that limit the spindle speed.
<b>Notes:</b>	

<b>x399 CH(#) Maximum number of control structures overridden</b>	
<b>Description</b>	<b>of</b> The maximum number of RPT or structured programming statement nestings (IF-THEN, WHILE, REPEAT) has been exceeded within the same fixed cycle.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make the program less complex; divide it into a greater number of fixed cycles; use JPM for the simpler statements.
<b>Notes:</b>	

<b>x400 CH(#) IF () and THEN must be on the same block</b>	
<b>Description</b>	<b>of</b> THEN must be in the same IF block.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the IF and THEN location.
<b>Notes:</b>	

<b>x401 CH(#) BREAK was not issued inside a control structure</b>	
<b>Description</b>	<b>of</b> BREAK can only be used to quit a monitoring structure.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the BREAK location.
<b>Notes:</b>	

<b>x402 CH(#) ELSE without IF/THEN</b>	
<b>Description</b>	<b>of</b> ELSE must follow a sequence of instructions beginning with IF-THEN.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the ELSE location.
<b>Notes:</b>	

<b>x403 CH(#) Duplicate ELSE statement</b>	
<b>Description Cause:</b>	<b>of</b> One single ELSE is permitted after a sequence of instructions that begins with IF-THEN.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the ELSE location.
<b>Notes:</b>	

<b>x404 CH(#) Control structures misalignment</b>	
<b>Description Cause:</b>	<b>of</b> An M2-M30 or an RET has been encountered when not all structured programming statements have been closed (IF with ENDIF, WHILE with ENDWHILE, etc..).
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Make sure that all the statements have been closed before accomplishing RET. Use BREAK if interactive statements must be interrupted before the normal quitting conditions.
<b>Notes:</b>	

<b>x405 CH(#) ENDW,ENDFOR,REPEAT must not be followed by statements on the same block</b>	
<b>Description Cause:</b>	<b>of</b> Instructions must not appear in the same ENDW, ENDFOR and REPEAT block.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the location of the above mentioned key words. Move any code to the next block.
<b>Notes:</b>	

<b>x406 CH(#) UNTIL without REPEAT</b>	
<b>Description Cause:</b>	<b>of</b> UNTIL must follow a sequence of instructions that begins with REPEAT.
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the location of REPEAT and UNTIL.
<b>Notes:</b>	

<b>x407 CH(#) FOR without range value</b>	
<b>Description Cause:</b>	<b>of</b> FOR <allocation as initial value> must be followed by TO <final value>
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the syntax of FOR
<b>Notes:</b>	

<b>x408 CH(#) RPT/BREAK: attempt to jump outside structured cycle</b>	
<b>Description</b>	<b>of</b> An attempt has been made to quit an RPT cycle with BREAK or with a jump outside.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Modify the program by replacing RPT with FOR for example.
<b>Notes:</b>	

<b>x411 CH(#) Can't retrieve Block Search information (DEFCN)</b>	
<b>Description</b>	<b>of</b> The block search data are not present in DEFCN or are incorrect.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Contact the manufacturer or the supplier of the PLC or application that prepares the block search data for information about how to investigate and resolve the problem.
<b>Notes:</b>	

<b>x412 CH(#) Overstore procedure: motion blocks are NOT allowed</b>	
<b>Description</b>	<b>of</b> Only auxiliary functions (M, S, T, ...) are permitted in the overstore cycle.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Carry out the axes moving operation in MDI before accomplishing the block search and overstore.
<b>Notes:</b>	

<b>x419 CH(#) File sharing violation</b>	
<b>Description</b>	<b>of</b> An attempt has been made to run a part-program when its transfer from the CNC disk to the file management or another operator interface application has not yet terminated.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Wait until the transfer operation has terminated and then try again. Contact the manufacturer or supplier of the interface application if the error occurs again and you consider that there are no transfers in progress.
<b>Notes:</b>	



<b>x420 CH(#) Not enough core to handle file</b>	
<b>Description</b>	<b>of</b> Further memory is required in order to open the file.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Contact the manufacturer or supplier of the CNC's customizing parameters.
<b>Notes:</b>	

<b>x421 CH(#) Unknown file error</b>	
<b>Description</b>	<b>of</b> A file access error has occurred and the cause cannot be determined.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Contact the technical assistance service.
<b>Notes:</b>	

<b>x423 CH(#) Tool is worn out</b>	
<b>Description</b>	<b>of</b> The counter of the cycles that can be accomplished with the same tool has reached the limit value specified in the tool data.
<b>Cause:</b>	
<b>Effect:</b>	Error message displayed. Also the channel in the alarm status, depending on the type of customizing.
<b>Remedy:</b>	Replace the tool and reset the tool life counter.
<b>Notes:</b>	

<b>x521 CH(#) Axis X target measure out of range</b>	
<b>Description</b>	<b>of</b> The X axis targets are off range (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum targets of the axis, and the programmed targets.
<b>Notes:</b>	

<b>x522 CH(#) Axis Y target measure out of range</b>	
<b>Description</b>	<b>of</b> The Y axis targets are off range (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum targets of the axis, and the programmed targets.
<b>Notes:</b>	

<b>x523 CH(#) Axis Z target measure out of range</b>	
<b>Description</b>	<b>of</b> The Z axis targets are off range (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum targets of the axis, and the programmed targets.
<b>Notes:</b>	

<b>x524 CH(#) Axis U target measure out of range</b>	
<b>Description</b>	<b>of</b> The U axis targets are off range (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum targets of the axis, and the programmed targets.
<b>Notes:</b>	

<b>x525 CH(#) Axis V target measure out of range</b>	
<b>Description</b>	<b>of</b> The V axis targets are off range (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum targets of the axis, and the programmed targets.
<b>Notes:</b>	

<b>x526CH(#) Axis W target measure out of range</b>	
<b>Description</b>	<b>of</b> The W axis targets are off range (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum targets of the axis, and the programmed targets.
<b>Notes:</b>	

<b>x527 CH(#) Axis A target measure out of range</b>	
<b>Description</b>	<b>of</b> The A axis targets are off range (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum targets of the axis, and the programmed targets.
<b>Notes:</b>	

<b>x528 CH(#) Axis B target measure out of range</b>	
<b>Description</b>	<b>of</b> The B axis targets are off range (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum targets of the axis, and the programmed targets.
<b>Notes:</b>	

<b>x529 CH(#) Axis C target measure out of range</b>	
<b>Description</b>	<b>of</b> The C axis targets are off range (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the machine parameters that define the minimum and maximum targets of the axis, and the programmed targets.
<b>Notes:</b>	

<b>x658 CH(#) Unrecognized SPC code</b>	
<b>Description</b>	<b>of</b> The SPC code is not amongst those envisaged.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the SPC code. Contact the manufacturer or DLL [KCVBUSR] servicing technicians for information about the tolerated codes.
<b>Notes:</b>	

<b>x681 CH(#) Unsupported Kinematics</b>	
<b>Description</b>	<b>of</b> The type of movement selected for the spindle is not tolerated (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the relative Spindle Data in the machine parameters.
<b>Notes:</b>	

<b>x691 CH(#) TWI code out of range</b>	
<b>Description</b>	<b>of</b> The spindle code selected with TWI is too high (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the above mentioned instruction. Check the maximum number of descriptors established in DEFCN and that declared in the parameters.
<b>Notes:</b>	

<b>x692 CH(#) THD code out of range</b>	
<b>Description</b>	<b>of</b> The toolholder selected with THD is too high (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the above mentioned instruction. Check the maximum number of descriptors established in DEFCN and that declared in the parameters.
<b>Notes:</b>	

<b>x693 CH(#) D code out of range</b>	
<b>Description</b>	<b>of</b> The tool/cutter code selected with D is too high (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the above mentioned instruction. Check the maximum number of descriptors established in DEFCN and that declared in the parameters.
<b>Notes:</b>	

<b>x694 CH(#) Unsupported polar axis driver</b>	
<b>Description</b>	<b>of</b> The actuator for rotation around Z axis is not amongst those available (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the relative Spindle Data in the machine parameters.
<b>Notes:</b>	

<b>x713 CH(#) Unsupported Kinematics</b>	
<b>Description</b>	<b>of</b> The type of movement selected for the spindle is not tolerated (graphic simulation)).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the relative Spindle Data in the machine parameters.
<b>Notes:</b>	

<b>x714 CH(#) Bad TWI orientation</b>	
<b>Description</b>	<b>of</b> The selected spindle Positioning field is not correct (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the relative Spindle Data in the machine parameters.
<b>Notes:</b>	

<b>x715 CH(#) Undefined tool orientation</b>	
<b>Description</b>	<b>of</b> The EP, EQ, ER vector that described the tool position has not been defined and a non-pointed tool (different from D0) has been selected (graphic simulation).
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check whether EP, EQ, ER have been assigned and that they contain correct values
<b>Notes:</b>	

<b>x716 CH(#) Unable to locate TCP</b>	
<b>Description Cause:</b>	<b>of</b> The EP, EQ, ER vector that described tool positioning has not been defined and three-dimensional tool radius compensation has been activated (EI,EJ and EK $\neq$ 0) (graphic simulation).
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check whether EP, EQ, ER have been assigned and that they contain correct values
<b>Notes:</b>	

<b>x717 CH(#) Unsupported THD transformation</b>	
<b>Description Cause:</b>	<b>of</b> The Conversion field of the selected toolholder is not correct (graphic simulation).
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the Toolholder Data in the machine parameters
<b>Notes:</b>	

<b>x718 CH(#) Could not select cut edge, IJK not given</b>	
<b>Description Cause:</b>	<b>of</b> The ICDSID address has been set-up so as to select the most suitable cutting edge for the process with a tool possessing thickness (e.g.: a blade), while EI, EJ and EK have not been specified. Cutter determination requires the presence of the area vector (graphic simulation).
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check ICDSID programming and/or program EI, EJ and EK in a suitable way for the machining process.
<b>Notes:</b>	

<b>x719 CH(#) Cut edge violation</b>	
<b>Description Cause:</b>	<b>of</b> The ICDSID address has been set-up so as to select a determined tool cutting edge, and a process with area vector expressed by EI, EJ and EK which cannot be accomplished with the selected cutting edge as this would be opposed by the tool itself (graphic simulation).
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check ICDSID programming and/or whether the process is feasible with the specified cutting edge.
<b>Notes:</b>	

<b>x748 CH(#) Cannot seek to a label with PassThru execution</b>	
<b>Description</b>	<b>of</b> The jumps are not possible in the through mode in view of the sequential nature of the data transfer operation.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Give the part-program an instruction sequence without jumps. To do this, it may be necessary to repeat certain lines one or several times if they were originally part of iteration statements (e.g.: FOR or IF-JMP in reverse).

<b>x750 CH(#) PassThru Buffer Overflow</b>	
<b>Description</b>	<b>of</b> There are too many characters between one <CR> and the next (or between the beginning of the transmission and the first <CR>, or between the last <CR> and the end of the file) in the part-program transmitted in the through mode.
<b>Cause:</b>	
<b>Effect:</b>	Channel in the alarm status and error message displayed.
<b>Remedy:</b>	Check the transmitted part-program if the process sends one compiled by the user, otherwise contact the supplier of the application program for information about how to investigate and resolve the problem.

**END OF CHAPTER**





## 3 Specific application alarms

### 3.1 Introduction

This chapter merely describes how to identify the types of specific machine alarms. There are 3 different categories of alarms

- PLC alarms
- PLC messages
- Application alarms

The alarm codes of these categories of alarms are set up according to the type of machine and the customer manufacturer's requirements. refer to the specific manual of the application for a description of the codes with their meanings, causes and remedies.

### 3.2 PLC alarms

The PLC alarms are identified by the PE code followed by a 4-digit number and by a brief text in red describing the alarm.  
E.g.: PE0020

### 3.3 PLC messages

The PLC messages are identified by the PM code followed by a 4-digit number and a brief text in blue describing the alarm.  
E.g.: PM0127

### 3.4 Application alarms

The application alarms are identified by the RT code followed by a 4-digit number and a brief text in red describing the alarm.  
E.g.: RT0001

**END OF CHAPTER**



*We would be grateful for opinion about the following aspects of this manual:*

Aspect in question	Excellent	Good	Sufficient	Insufficient	Very bad
Ease with which the data can be consulted					
Way in which the descriptions of the various subjects are given					
Completeness					
Accuracy					
Readability					
Correctness of the terminology					
Page layout					
Number of illustrations					
Quality of the illustrations					

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