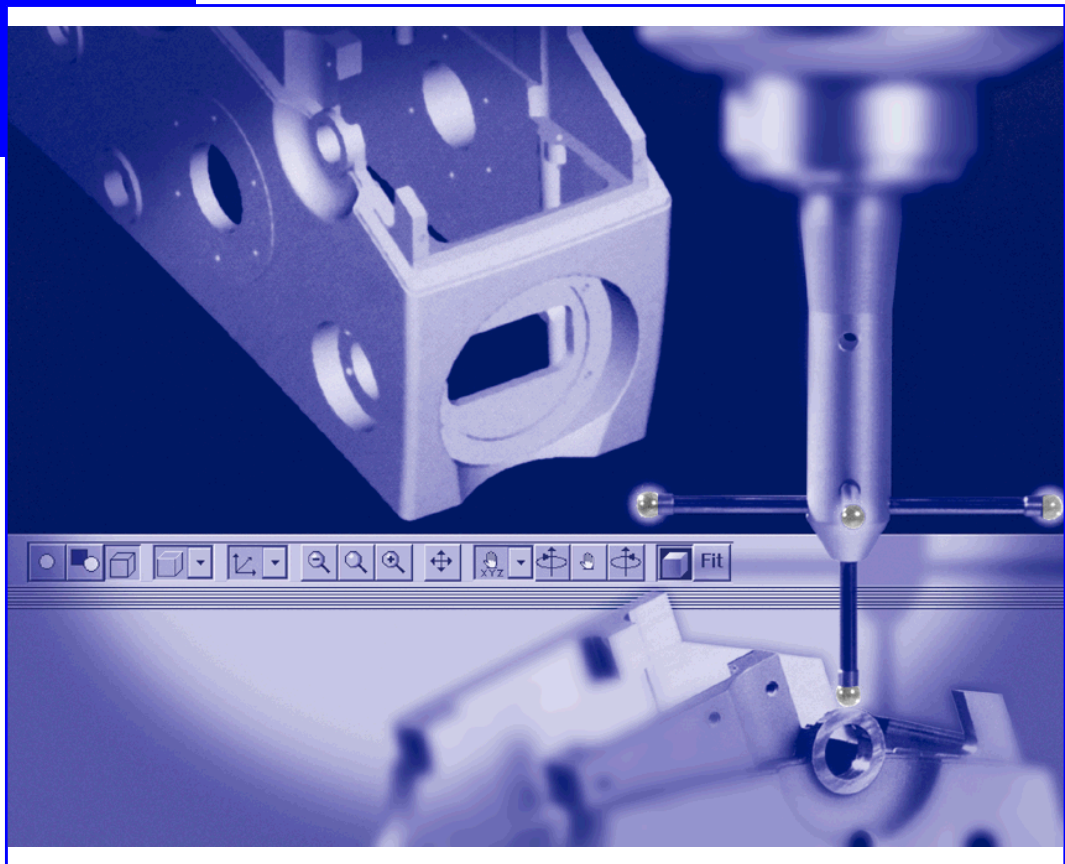


CALYPSO

Option 18 Barcode



Operating Instructions

ZEISS

The design and delivered components of the CMM, its options, the program packages, and the relevant documentation are subject to change.

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Preface

Information about these operating instructions

The CALYPSO program consists of a base module and additional options for special purposes. You can customize the scope of program to fit your requirements.

These operating instructions describe an option of CALYPSO and are based on the assumption that the user is familiar with the operating instructions for the base module of CALYPSO.

NOTE

The additional CALYPSO options are described in separate manuals.

Reference information about the windows and dialogs can be found in the dialog reference in the CALYPSO Online Help.

Simply Measure – And what you should know to do it right, A metrology primer

Carl Zeiss, Industrial Metrology Division,

Order no.: 612302-9002

Text conventions

The following text conventions are used in these instructions.

Example

Description

Features

Text element of the graphics screen display.

Comment

The **Comment** button on the screen.

<machine name>

Variable text or dummy for a name.

C:\windows\w.ini

The w.ini file in the windows directory on the C:\ drive.

For this section...

A passage containing important information.

Example

➤ *Preface* [⇒ *Preface-1*]

Description

This is a cross reference. When viewing this manual on the screen, you will be guided to the indicated text passage by clicking the reference.

Plan → CNC-Start → Run

The **Run** command in the **CNC-Start** submenu of the **Plan** menu.

CTRL+A

Press the CTRL key and the letter A at the same time.

Icons

Three special symbols containing important information are used in this manual. The icons appear in the marginal column next to the respective text.

You will find a detailed explanation of the safety instructions under Configuration of safety instructions.

Configuration of safety instructions

Safety instructions indicate a personal health hazard. We distinguish three different levels: Danger, warning and caution. All three safety instructions are marked with the same warning symbol. The designation of the safety instruction is shown beside the symbol. The safety instructions used are described below.

Configuration of a safety instruction

A safety instruction may have the following components:

- Warning symbol and designation of the safety instruction (signal word): Danger, warning or caution.
- Source and cause of the danger
- Consequences for the user due to non-observance of the safety instruction
- Required measures to be taken by the user to avoid possible consequences
- A measure may cause an intermediate result.
- At the end of all measures, a final result may be caused.

Personal health hazard



⚠ DANGER

A »danger« indicates an imminent risk to life and limb.

Non-observance of this safety instruction when the described risk occurs causes death or serious injuries.

Example: Electric shock due to high electric voltage.



⚠ WARNING

A »warning« indicates a possible risk to life and limb.

Non-observance of this safety instruction when the described risk occurs may cause death or serious injuries.

Example: Risk of severe crushing of the body caused by heavy loads.



⚠ CAUTION

A »caution« indicates a personal health hazard.

Non-observance of this safety instruction when the described risk occurs may cause slight to moderate injuries.

Example: Risk of minor crushing of the limbs caused by small loads.

Risk of material damage

If there is no personal health hazard, but the CMM or components may get damaged, this is pointed out by the following notice.



This symbol refers to possible damage to the CMM.

Non-observance of this safety instruction when the event occurs may cause damage to the CMM or one of its components.

Example: Collision of the ram with a workpiece.

Chapter

1

Barcode (option)

This chapter contains:

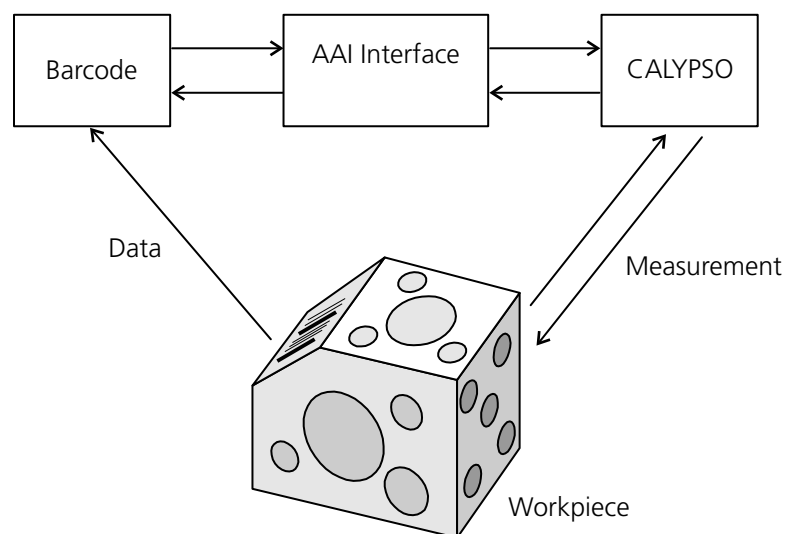
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Basics about Barcode

The CALYPSO Barcode option allows you to evaluate barcode information on the workpieces when performing measurements with CALYPSO. It is thus no longer necessary to enter the printout header parameters via the keyboard.

Advantages

Measurement plan names, mini-plans or printout header parameters can be read in via the barcode scanner. This avoids typing faults and reduces the risk of errors. Every workpiece "knows" its name and the parameters applicable for its measurement.



Restrictions

The CALYPSO Barcode option cannot be used together with the following components and options of CALYPSO:

- AutoRun
- Preset module
- FACS Automation / FACS user interface

AAI interface

Control of CALYPSO via barcode and feedback from CALYPSO to the barcode take place via the CALYPSO AAI interface, which you need to configure for this purpose.

After starting the AAI interface, CALYPSO is in automatic mode. This means that the CMM is only controlled by the Barcode program, the control of CALYPSO itself is disabled.

If necessary, e.g. in case of problems, the AAI interface can be switched to manual mode.

Configuration

Before using the Barcode program in practice, it must be configured. This is to define, among other things, the scope of data to be scanned and the type of barcode evaluation.

Working with Barcode

Overview: Working with Barcode

When using the Barcode option, proceed as follows:

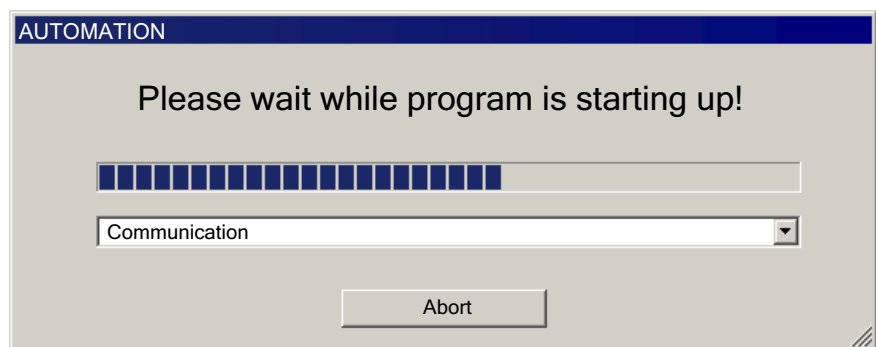
- Starting Barcode
- Using Barcode
- Exiting Barcode

A prerequisite is that both CALYPSO and Barcode have been prepared by the system administrator for work with the Barcode option.

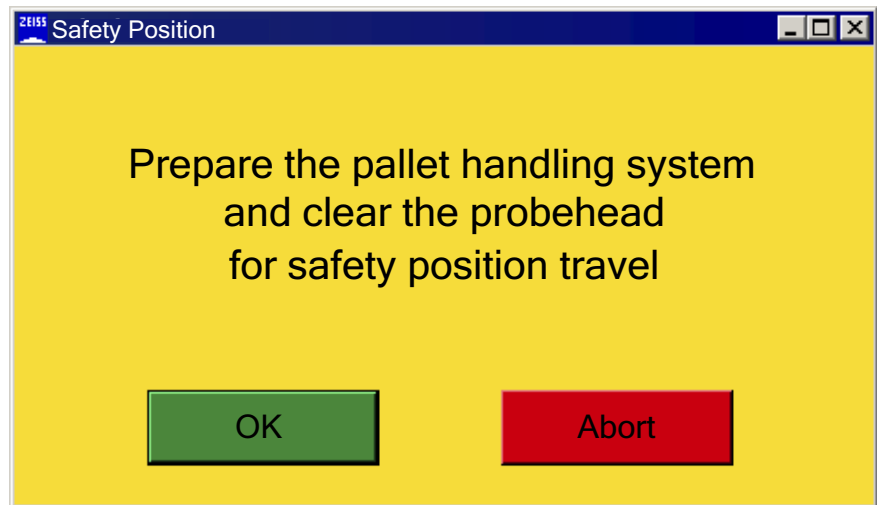
Starting Barcode

You start Barcode via the icon on the desktop.

- 1** Double-click the **Barcode** icon.
The Barcode program will be started. If CALYPSO is not running yet, CALYPSO will be started as well.
If several CALYPSO versions have been installed on your system, these will be offered for selection.
- 2** Tick the check box for the desired CALYPSO version and set the time in seconds after which the window should be closed next time you start Barcode.
The version selected last will already be enabled on the next start of Barcode. However, you may change the selection. You can stop the “countdown” for closing the window by means of the ESC key or by clicking with the mouse.
- 3** Press **OK** to confirm.
At first, a window appears showing the progress of the starting process.




Once Barcode has established connection to CALYPSO, a prompt is displayed.



- 4 Prepare the pallet handling system, clear the probe for safety position travel and confirm with **OK**.
The CMM moves to the configured safety position with the ram starting by moving in the Z axis.
The starting process continues and the **Zeiss - Barcode** window appears.

Using Barcode

After the start of Barcode, the main program window opens. This window is where you work and it remains in the foreground until the program is closed.

Zeiss - Barcode	
File Settings	
Station	Station 1
Status	on CMM
Inspection	
Measurement task	
Mini-Run	Completely
Parameter 1	
Parameter 2	
Parameter 3	
Parameter 4	
Parameter 5	
Parameter 6	
Statistics >> QS-STAT	<input checked="" type="checkbox"/>
Print Yes//No	<input checked="" type="checkbox"/>
Status	
 <input type="button" value="Start"/>	

The window may appear differently depending on the configuration: The number of parameters can be set and the check boxes for qs-STAT and printing can be hidden.

- 1 Scan the workpiece to be processed using the barcode scanner. In the main window you can see how the parameter data is entered one after the other. According to the configuration, the Barcode program fills the **In-
spection**, **Measurement task** and **Mini-Run** fields as well as the configured number of printout header parameters.
- 2 Check the values entered by scanning and define those parameters for which no scanning has been set.
- 3 If necessary, activate output to qs-STAT and printing of the printout.
- 4 Click the **Start** button. As soon as CALYPSO has all the data, the CNC run of the measurement plan starts. The **Status** field indicates the current state of the measurement:

Status	Meaning
CMM	The pallet is on the CMM.
Measurement	The pallet is being measured.
CMM - good	The pallet has been measured: all characteristics are within the tolerance
CMM - warn	Pallet was measured, at least one nominal has exceeded the warning zone.
CMM - bad:	Pallet was measured, at least one nominal is out of tolerance.

If you have configured output in a printout, the printout defined in CALYPSO will be displayed after the measurement. You can print it or save it as a PDF.

If you have set the output to qs-STAT, the results will automatically be output in qs-STAT format.

Exiting Barcode

- 1 Select **File** → **Exit**.

Barcode is closed. Modifications made to the configuration take effect.

Barcode for system administrators

Overview: Barcode for system administrators

The Barcode program has to be configured before it can be used. As the system administrator, you define the form of the main window for the user.

Perform the following steps:

- Preparing CALYPSO for Barcode
- Configuring Barcode
- Assigning a password

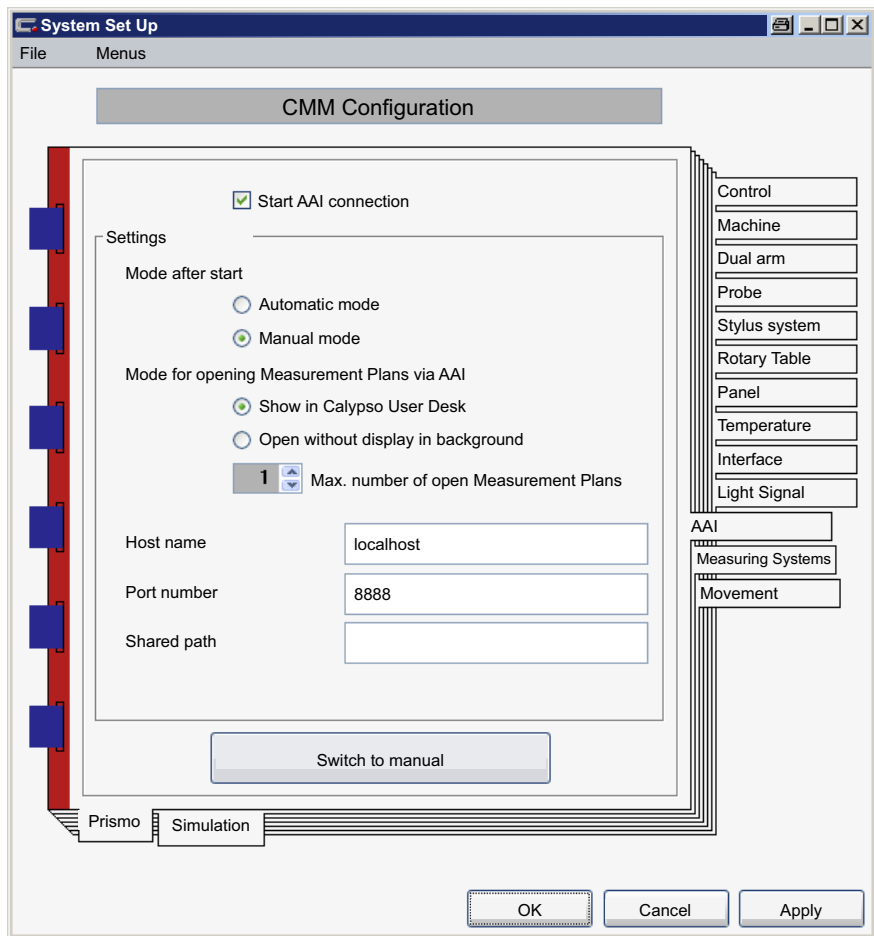
In case of problems, there are special remedies:

- Solving problematic cases

Preparing CALYPSO for Barcode

To use the Calypso Barcode option, CALYPSO must be prepared for this purpose: AAI must have been activated in the system settings.

- 1** Select **Extras** → **Settings** → **CMM**.
- 2** Select the current measuring system and click the **AAI** tab.



- 3 Tick the **Start AAI connection** check box.
- 4 Close CALYPSO.

NOTE

At the start, Barcode will also open CALYPSO unless it has already been opened.

If CALYPSO is already open, neither AutoRun, nor FACS, nor the Preset module must be open. Otherwise the CALYPSO will not be able to communicate with CALYPSO.

Configuring Barcode

The configuration defines the scope and appearance of the Barcode main window. You configure Barcode in the **Parameter Configuration** window.

- 1 In the main window, select **Settings** → **Configuration**.

Parameter Configuration

Enabled	Caption	Calypso-Variable	Barcode-Scan	Barcode-Startpos.	Barcode-Stringlength
	Measurement task		<input type="checkbox"/>		
	Mini-Run		<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Parameter 1	u_Parameter1	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Parameter 2	u_Parameter2	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Parameter 3	u_Parameter3	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Parameter 4	u_Parameter4	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Parameter 5	u_Parameter5	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Parameter 6	u_Parameter6	<input type="checkbox"/>		
<input type="checkbox"/>	Parameter 7	u_Parameter7	<input type="checkbox"/>		
<input type="checkbox"/>	Parameter 8	u_Parameter8	<input type="checkbox"/>		
<input type="checkbox"/>	Parameter 9	u_Parameter9	<input type="checkbox"/>		
<input type="checkbox"/>	Parameter 10	u_Parameter10	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Statistics >> QS-STAT				
<input checked="" type="checkbox"/>	Print Yes/No				

Add parameter

Caption: Calypso-Variable:

Folder of inspections / ASCII files

Type to get inspection

ASCII-file-extension: *.

Make your settings in the **Parameter Configuration** window.

- In the **Enabled** column, define the elements to be contained in the Barcode main window.
Up to 10 different printout header parameters can be read in via Barcode.
Note: The **Measurement Task** and **Mini-Run** selection lists cannot be deactivated.
- Under **Caption**, define the names under which the parameters are to be shown in the main window.
- Select **Calypso-Variable** to define which of the CALYPSO printout variables is to be assigned a value by the given parameter.
- Under **Barcode-Scan**, define the parameters to be read in via the barcode scanner.
- For the parameters to be read in via barcode, define the starting position in the barcode and the length of the character string to be evaluated.

Example: The barcode is "192394787Testblock96500".

The starting position is 10, the length of the character string is 9.

The Barcode program will then read "Testblock" from the barcode and transfer this value to CALYPSO.

- 7** If necessary, add further printout header parameters to the *user-fields.txt* file.
These parameters immediately appear in the **Calypso-Variable** selection lists as well.
- 8** Enter the directory for the measurement plans or measurement plan names to be used by the Barcode program.
- 9** Define how Barcode is to determine the measurement plans to be selected:
 - via the names of the measurement plans contained in the directory or
 - via form entries in an ASCII file (with the name entered) in the directory mentioned above.

NOTE

Any modifications made in the Barcode program will only take effect after the program has been closed and reopened.

Assigning a password

You can define a password to prevent unintentional access to the **Parameter Configuration** window. After installation of Barcode, a password is not required by default.

- 1** In the main window of Barcode, select **Settings** → **Change password**.

The screenshot shows a dialog box titled "Change password!". It has a light blue background and a dark blue title bar. There are three text input fields arranged vertically, labeled "Old password", "New password", and "Confirm password". Below the input fields are two buttons: "OK" and "Abort".

- 2 Enter your password and confirm it by re-entering it.
The new password takes immediate effect.

The password entered protects the **Settings → Configuration** menu items and thus the **Parameter Configuration** window from unauthorized input.

Solving problematic cases

In case of problems with the Barcode program, you have several options.

Collision during the measurement

If a collision occurs during the measurement, the Barcode program is usually informed by CALYPSO. You will then see the safety position travel window and the joysticks will be enabled.

- 1 Clear the probe in a way to allow it to safely reach the clearance position.

If Barcode is *not* informed by CALYPSO that a collision has occurred, the CMM will be blocked.

- 1 In this case, switch the stop light to red in the Stop Light window on the CMM computer.

CALYPSO can no longer be operated

If CALYPSO has not switched to manual mode when Barcode was closed, CALYPSO cannot be operated, nor is it possible to restart the Barcode program.

- 1 Then select **Connection** → **New** in the Stop Light window, open the **AAI** notebook page and click the **Switch to manual** button. The manual mode is now active again.
- 2 In the extreme case, exit the "vwnt.exe" application in the Windows Task Manager.

Barcode can no longer be operated

If the Barcode program does not react any more:

- 1 First check if the program is in manual mode.
- 2 Select **File** → **Automatic** to switch the system to automatic mode. Make sure that the speed regulator on the panel is not set to 0 in order to allow the CMM to reach the safety position.
- 3 In the extreme case, exit the "Loader.exe" application in the Windows Task Manager.

Log files

Barcode supports a system of log files where all important messages and events occurring during a measuring run are recorded.

These log files are stored by default in the `C:\temp\` directory. Complete access rights are needed to access this directory.

NOTE

If an error occurs, you should save the log files to allow for error analysis.

The name of the current file is "*PalletManager.log*". As soon as this file exceeds a certain number of lines after the last measurement, a new *PalletManager.log* file is created and the previous file gets a name with an index: "*PalletManager.000.log*".

If a "*PalletManager.000.log*" file exists from a previous measurement, this file will be renamed into "*PalletManager.001.log*" in a shift register, in order to allow the current "*PalletManager.log*" file to be shifted to "*PalletManager.000.log*", etc.

A limited number of files is thus created. Once the maximum number of files has been reached, the oldest file will no longer be copied and its content will be overwritten.

Reference: Barcode

Version selection

In this dialog box, you may select the desired version from several available CALYPSO versions and set the time for the “countdown” on the next start.



You can stop the “countdown” by means of the ESC key or by clicking with the mouse in the window.

Dialog element	Function
Input field for the time	This is where you set the time after which the window should be closed automatically on the next start.
List of installed versions	Shows the CALYPSO versions installed on your system. Enable the version you want to be started in combination with Barcode.
OK	Immediately closes the dialog box and starts CALYPSO.

Zeiss - Barcode

The **Zeiss - Barcode** dialog box is the main window of the Barcode program. In the dialog box you operate and control the Barcode program.


Some window elements depend on the entries under **Settings** → **Configuration**.

Dialog element	Function
File menu	<p>Automatic Switches between <i>Manual mode</i> and <i>Automatic mode</i>. In the automatic mode, the menu item is ticked.</p> <p>Safety Position Travel Performs a travel to the safety position.</p> <p>Exit Closes Barcode.</p>
Settings menu	<p>Change password Opens the dialog for changing the password.</p> <p>Configuration Opens the Parameter Configuration dialog.</p>
Station	Shows station 1. Entries are not possible here.

Dialog element	Function
Status	Shows the status of the current pallet: <ul style="list-style-type: none"> – on CMM: The pallet is on the CMM. – measuring: The pallet is being measured. – on CMM - good: The pallet has been measured: all characteristics are within the tolerance. – on CMM - warn: Pallet was measured, at least one nominal has exceeded the warning zone. – on CMM - bad: Pallet was measured, at least one nominal is out of tolerance.
Inspection	Shows the measurement plan name defined by the measuring job.
Measurement task	Select here one of the measuring jobs from the selection list or define it using the barcode scanner. All measurement plans known to CALYPSO are available. This defines the measurement plan as well.
Mini-Run	In this selection group, select the mini-plan to be measured. The name of the mini-plan is added to the measurement plan name. The "Completely" mini-plan contains the entire measurement plan.
Parameter 1 ...Parameter 10	(Number and name of the parameters can be configured) Select the printout header parameters for the current measurement or read them using the barcode scanner.
Statistics >> QS-STAT	(Configurable dialog element) Defines the output of the measuring results to a qs-STAT file. The check box is ticked by default.
Print Yes/No	(Configurable dialog element) Defines that the printout will be printed after the measurement. The printout format defined in CALYPSO will be used then. The check box is ticked by default.
Status	Line 1: Displays the currently performed operations. Line 2: Displays error messages and warning texts.
Start	Starts the measurement associated with the selected measuring job.

Parameter Configuration

In this dialog box you configure the Barcode program and the elements of the main window.

Group	Dialog element	Function
Parameter		
	Enabled	Individually enables display of the parameters 1 to 10
	Caption	Shows the text for the respective dialog element.
	Calypso-Variable	Select here the printout header variable and the parameter to be assigned to.
	Barcode-Scan	Here you activate the option of parameter input via barcode.
	Barcode-Startpos.	Indicates the position within the barcode from which the parameter will be evaluated.
	Barcode-Stringlength	Displays the length of the evaluated string.
'userfields.txt': Add parameter		
	Caption	Enter the name of the parameter as it is to be shown in the list of parameters.
	Calypso-Variable	Enter the associated printout header variable in CALYPSO.
	Add	Adds, with correct syntax, the parameter entered to the left into the <i>userfields.txt</i> file.
Folder of inspections / ASCII-files		
	Input field 	Enter here the directory for storing the measurement plans or the ASCII files with measurement plan name or select it after clicking the Find folder icon in the path selection dialog.
Type to get inspection		
	Directly via name of inspection	The measurement plan name is taken from the entry.
	Name of inspection is stored in ASCII-file	The measurement plan name is taken from the specified ASCII file.
	ASCII-file-extension	Enter the ASCII file extension for the measurement plan names.
OK	Closes the window. The settings will become effective at the next Barcode start.	
Abort	Closes the window without applying the settings.	

Change password!

In this dialog box, you can change your password for access to the **Parameter Configuration** dialog box.

Dialog element	Function
Old password	Enter your current password.
New password	Enter the desired new password.
Confirmpassword	Enter once again the desired new password.
OK	Closes the window and applies the new password.
Abort	Closes the window without applying the changes.

Safety position

In this dialog box you confirm the probe's travel to the safety position.



Prepare the possibly existing pallet handling system and clear the probe for safety position travel. Risk of collision if this procedure is not adopted.

Dialog element	Function
	Prepare the pallet handling system and clear the probe for safety position travel
OK	Closes the window. The probe moves to the safety position.
Abort	Closes the window without moving the probe to the safety position.

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