

iBox COSI 221

Operating Manual

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Contact

We are contactable world-wide:

Contact: contact@laetus.com

Hotline: hotline@laetus.com

Homepage: <http://www.laetus.com>

You can find your regional Laetus representatives in the Internet on the page "Contact".

Operating Manual Laetus web technology iBox-COSI 221

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1.1.x	2.0.x	2009-09	Moneke	Zorn	New hardware => Installation Manual

Access Rights for the Users Accounts

The functions of the wt-devices can be accessed after entering the user name and the corresponding password and that applies only for the main control device. (See as well chapter "Logging On and Of as a User" in the "Operating Manual-NAVIGATOR").

If the wt-device is integrate into ARGUS wt10-Server, then apply the "User Management" in the ARGUS wt10-Server.

For the main control device is three fixed users. This cannot changed:

- ◆ OP
- ◆ TECH
- ◆ ADMIN



Note You cannot blocked the passwords in the main control device, even if you repeatedly wrong entering.

In the **standard version** are possible the following acces rights (in the various menus) for the users:

User	Production	Setup	Service	Administration
Without login	view only	limited access	blocked	only wt-device info
OP ****	-Current Data, -Timing Diagram, -Contrast Level, -Installation (Setup 1, Setup 2, Configuration, Identification) view. -Fault Readings delete.	-Setup 1, -Setup 2, modification allowed. -Configuration, Identification view.	blocked	-wt-Device Infos (under "Identification") and Accounts Infos view.
TECH ****	-Current Data, -Timing Diagram, -Contrast Level, -Installation (Setup 1, Setup 2, Configuration, Identification) view -Fault Readings delete. -Reset Counters	-Setup 1, -Setup 2, -Configuration modification allowed, -Identification view.	-switch on the position LED. -load factory settings.	-wt-Device Infos (under "Identification") and Accounts Infos view.
ADMIN ****	full access	full access	full access	full access

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1. Introduction

1.1 Device Description

The **COSI 221** is a **barcode reader** that recognizes and identifies code on packaging material.

Our developments unite comfortable operation and a graphic user interface. Together with the Laetus **web technology** (wt), the COSI 221 stands for reliable recognition of PHARMA-CODE™ on various different products.

The iBox-COSI 221 is connected with the evaluation unit (e.g. COMMANDER 12-01) via the Ethernet interface.



Fig.1 COSI 221 - Barcode reader

The **iBox** was developed by us and processes and transmits sensor data to the control device or computer. For this, you need the graphical user interface of the Laetus NAVIGATOR, from which all Laetus wt-devices can be operated.

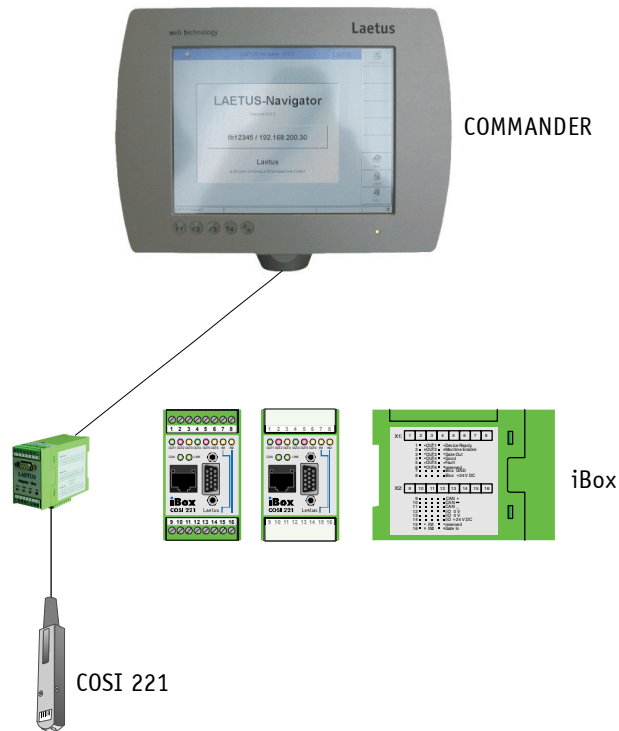


Fig.2 iBox-COSI 221

The **operation** of the COSI 221 is easily learned. Commands are entered using a touch-sensitive screen (touchscreen) or common entry devices of a computer such as mouse and keyboard.

The device is **started** using the machine. You do not have to switch on the COSI 221 and the iBox separately.

2. Selecting the iBox-COSI 221 in the "Laetus NAVIGATOR"



Press the **wt-Devices** button in the "Main Menu" of the "Laetus NAVIGATOR". The "Discovery of wt-Devices" menu (in the NAVIGATOR) appears.

Discovery of wt-Devices				Laetus	
Serial No.	Device Name	IP-Address	Route		
92305	iBox-COSI221 / 92305	192.168.200.158	✓	▲	
111891	iBox-COSI221 / DOKU	192.168.200.74	✓		
112074	iBox-LLS540 112074	192.168.200.165	✓		
999999	iBox-LLS570 / 999999	192.168.201.160	✗		
101661	iBox-LLS5X0 / DOKU	192.168.5.74	✓		
080274	INSPECTwt	192.168.200.130	✓		
BENCH	INSPECTwt	192.168.200.30	✓		
976431	Master Account Server	192.168.5.17	✓		
94059	POLYPHEM_wt40@C15_94059	0.0.0.0	✗		
110974	POLYPHEM_wt@C15_110974	192.168.200.102	✓	▼	
Idle					
Laetus-NAVIGATOR		/MWDDiscovery		ADMIN	

Fig. 3 List of active wt-devices in the NAVIGATOR

The right column labelled **Route** indicates the following:



The wt-device is located in the same network, i.e. a connection is possible.



The wt-device is not located in the same network. IP-configuration must be carried out.

The "Discovery of wt-devices" menu enables you to sort the wt-devices by serial number, name, IP address or route. They are sorted by pressing the corresponding column header: press "Device Name" in order to sort the wt-devices by name.



Select the desired wt-device from this list (e.g. iBox-COSI221 / DOKU). Then press the **Connect to** button in order to establish a connection to the iBox-COSI 221.

The Main Menu of the iBox-COSI 221 appears.

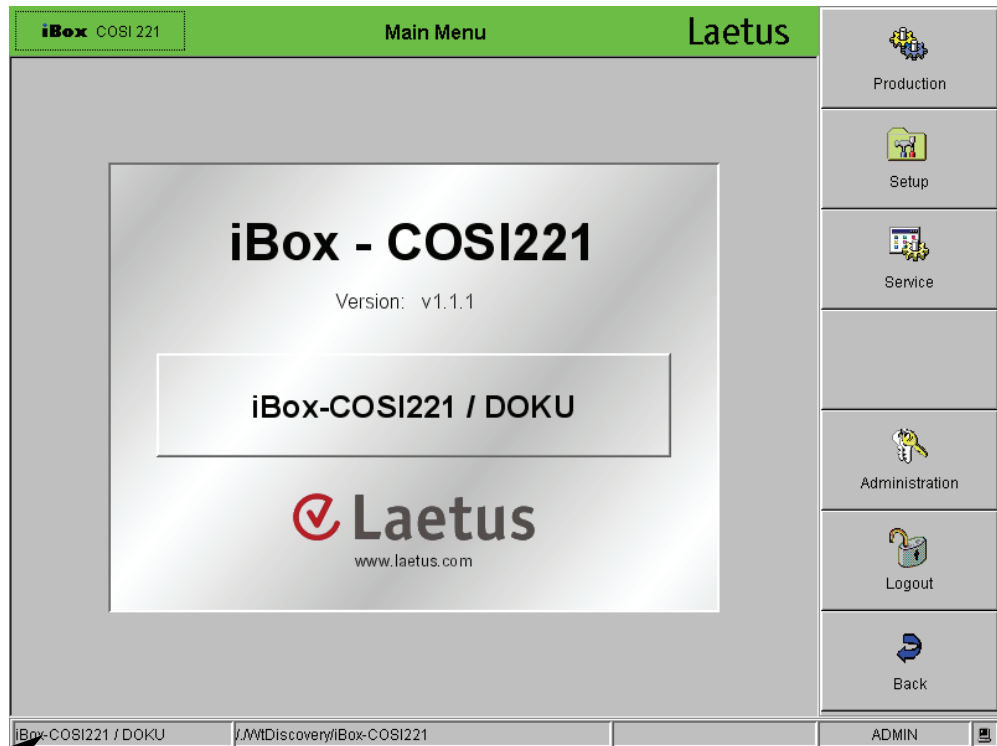


Fig. 4 Main Menu of the wt-device – iBox-COSI 221

Press the field with the name of COSI 221.

In the status bar of the main menu is this description also used in the iBox-COSI 221 for the tabular display of a menu containing information on the session number, IP- address and the logged in user.

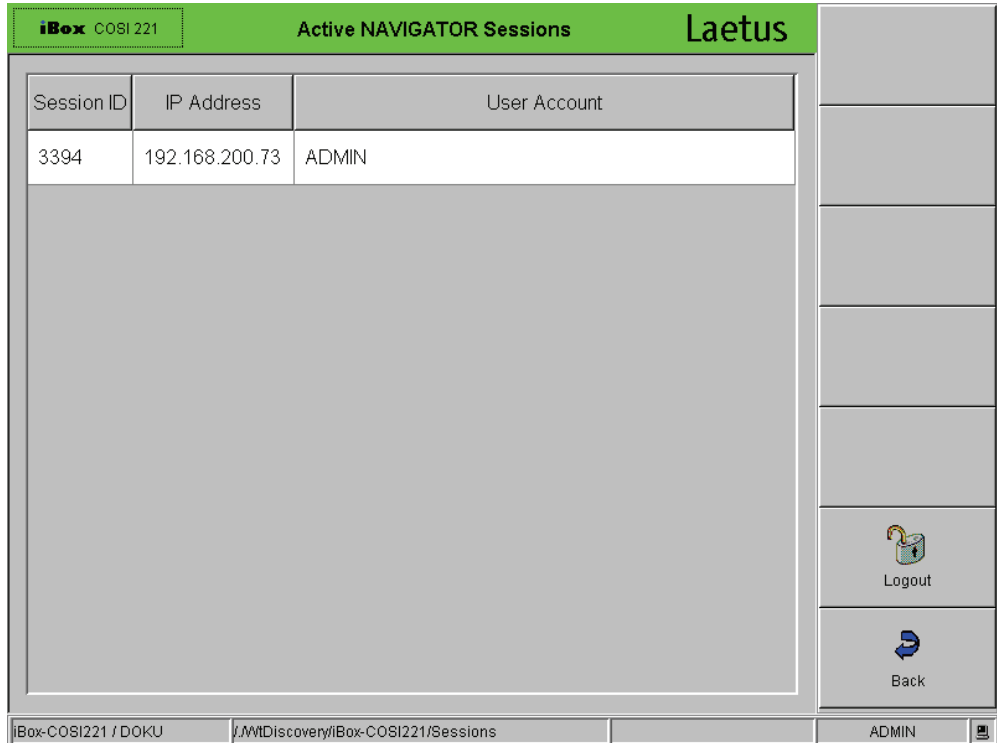
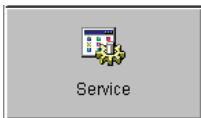


Fig. 5 Active NAVIGATOR-Sessions

3. Service – Operation




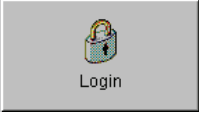
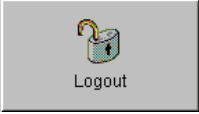



Note Inactive buttons have a gray symbol and gray writing. Entry fields are displayed in gray. This means that either the user does not have the corresponding access rights or the current operating mode does not permit this function.



Once you have established a connection to the wt-device, press the **Service** button in the Main Menu. The "Service" menu appears.

3.1 "Service" Menu – Overview

<p>Factory Settings</p>		<p>Clicking on the Factory Settings button causes the iBox-COSI221 to revert to the Laetus shipping status (predefined values).</p>
		<p>This function turns the red positioning lamp on the sensor head on and off.</p>
		
<p>Login / Logout</p>	 	<p>If you are logged in and do not perform any operations, you will be automatically logged out after the time period set under Auto logout time (in the "NAVIGATOR") has elapsed. The operating elements become inactive.</p>
<p>Back</p>		<p>The Back button returns you to the "Main Menu".</p>

3.2 "Service" Menu in Detail

The "Service" menu appears:

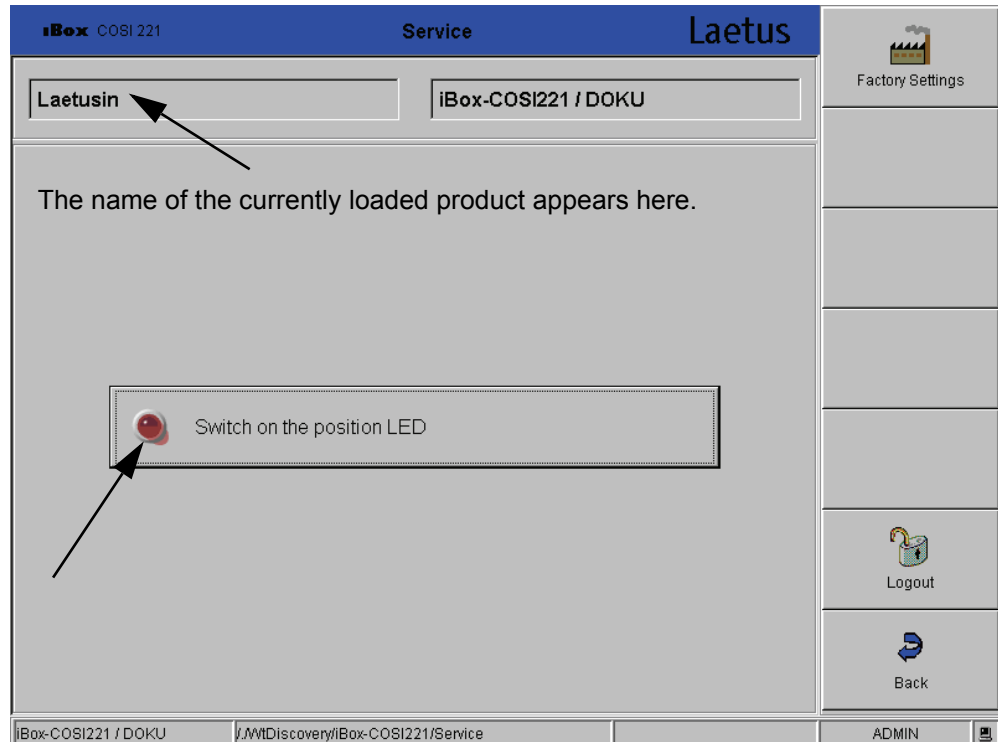


Fig. 6 Service menu

The **Product Name** field displays the current product name of the loaded product, if the sensor head is integrated into the ARGUS wt10-Server.

Sensor Name displays the name of the wt-device, e.g. iBox-COSI 221 / DOKU.

Switch on the position LED: this function switches on or off the red position LED in the sensor head. A thin red line is produced on the code level. This positioning aid allows you to adjust the sensor head parallel to the code and to center it on the code.

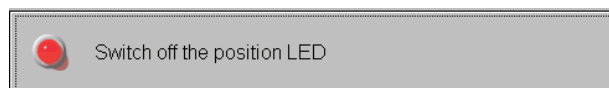


Fig. 7 Switch off the position LED



If you would like to return the iBox-COSI221 to the Laetus shipping status, click on the **Factory Settings** button.

The following menu appears:

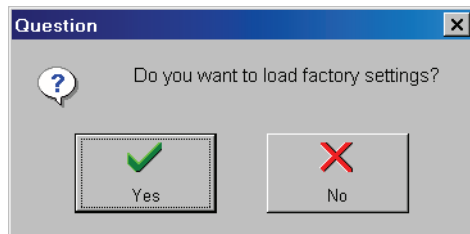


Fig. 8 Question to load the factory settings

If you select **Yes**, the factory settings will be loaded.

The product data will be loaded:

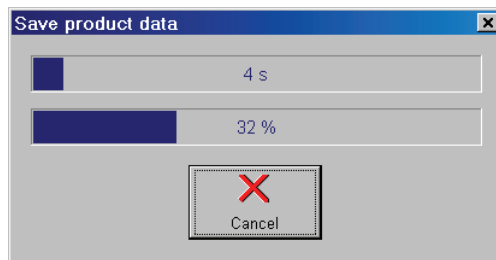


Fig. 9 Loading and saving the product data

If you click on **Cancel**, the process is terminated.

No entries can be made in this menu (Fig. 6).











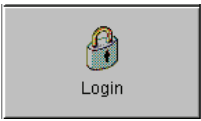
Note All parameters of the sensor head are reset to their factory settings.

4. Setup – Product Format Parameters

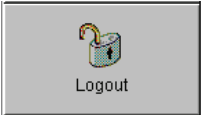
In the main menu, press the **Setup** button. The "Setup - Setup1" menu appears.

4.1 "Setup" – Overview

		By selecting one of the tab cards, menu dialogs appear for setting parameters or the sensor data can be visualised (under "Identification").
Next		With Next and Previous , you can switch between the tab cards.
Previous		
Setup 1 – setting parameters		<ul style="list-style-type: none"> ◆ Select evaluation status ◆ Select code type ◆ Enter reference code
Setup 2 – setting parameters		Select: digital level, sensitivity, result pulse output, tube orientation signal, orientation parameter, code print, decoder.
Configuration		<ul style="list-style-type: none"> ◆ Select gate ◆ Select gate polarity ◆ Select result pulse width ◆ Select reading direction
Identification		View data: sensor name, sensor type, serial number, batch number, software version, hardware version.
Save		Save changed data.



If you are logged in and do not perform any operations, you will be automatically logged out after the time period set under Auto logout time (in the "NAVIGATOR") has elapsed. The operating elements become inactive.



The **Back** button returns you to the "Main Menu".



Note Inactive buttons have a gray symbol and gray writing. Entry fields are displayed in gray. This means that either the user does not have the corresponding access rights or the current operating mode does not permit this function.

Saving Data

To store your settings permanently, you have to save them before leaving a menu. To do so, press the **Save** button. A small window is opened displaying the progress of the saving process. Once saving is completed, the sensor uses the set values.

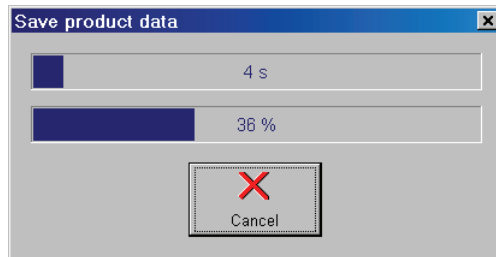


Fig. 10 Save product data



Note As long as the save is still in progress, you can still interrupt it. To do so, press the **Cancel** button in the save window. The process is interrupted and the system reverts to the previously used data.

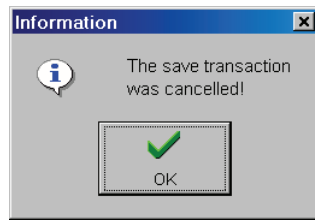


Fig. 11 Information

Close this window by pressing **OK**. The system only becomes active after you perform this confirmation. If you close the window and if you press the **Back** button, the following question appears:

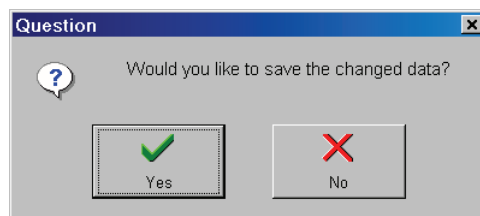
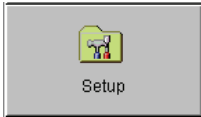


Fig. 12 Reminder for saving changed data

4.2 "Setup" Menu in Detail – Setup1



In order to setup the wt-device and ready it for operation, press the **Setup** button in the "Main Menu".



The "Setup – **Setup 1**" menu is opened.

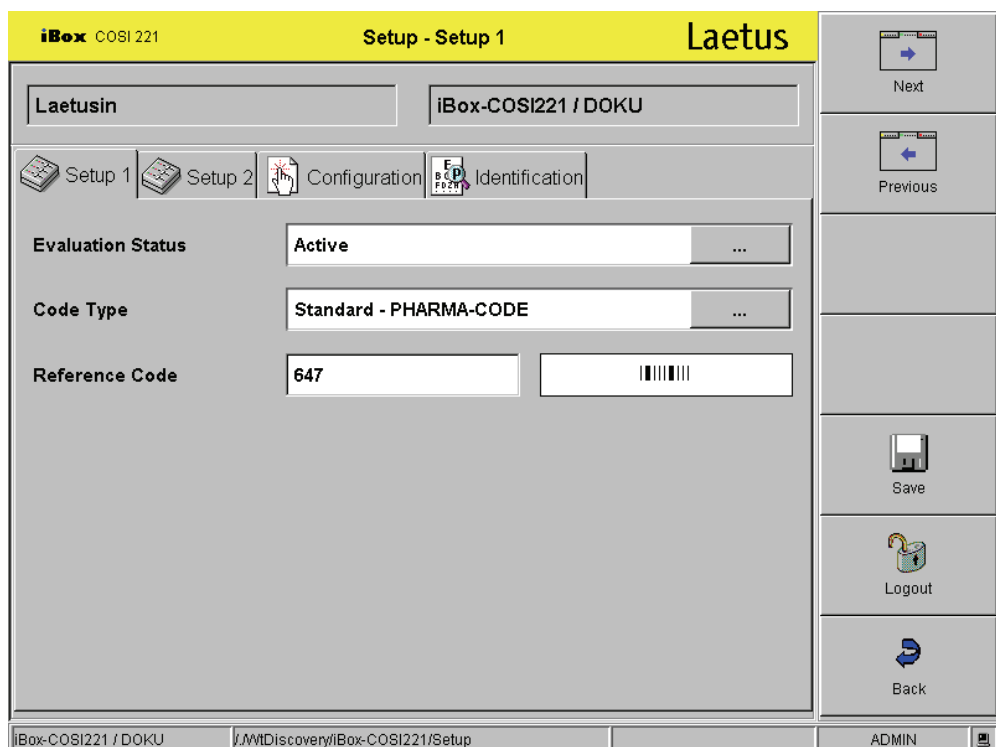


Fig. 13 Setup – Setup 1 menu

Here you can select and edit the:

- ◆ **Evaluation Status**
- ◆ **Code Type**
- ◆ **Reference Code**

4.2.1 Evaluation Status – Active / Bypassed



Press the "..." button (Fig. 13).

In the selection menu for the evaluation status, you can select from the following:

- ◆ **Bypassed** a static GOOD and FAULT signal is produced
- ◆ **Active** (the read results of the COSI 221 are actively processed)

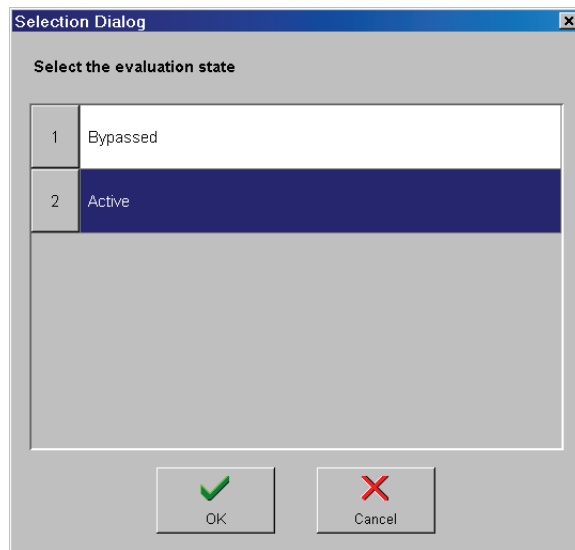


Fig. 14 Selecting the evaluation status

A static signal is necessary, for example when you change the sensor and the packaging material is not controlled at this point. The rest of the system continues to run normally.

Once the sensor head has been mounted again, activate the function "Evaluation Status". After activation, the system checks the automatic configuration with the data from the iBox and the sensor and makes it available for code control again.

"Bypassing" the sensor head switches off the evaluation.

For this, please also read the "Installation Instructions COSI 221".

Use **OK** to confirm your selection. Use **Cancel** to discard your selection.



If you press the **Save** button, the changes will be stored and also be applied in future.

4.2.2 Code Type

Standard - PHARMA-CODE / Mini-PHARMA-CODE / Print Mark / No Code

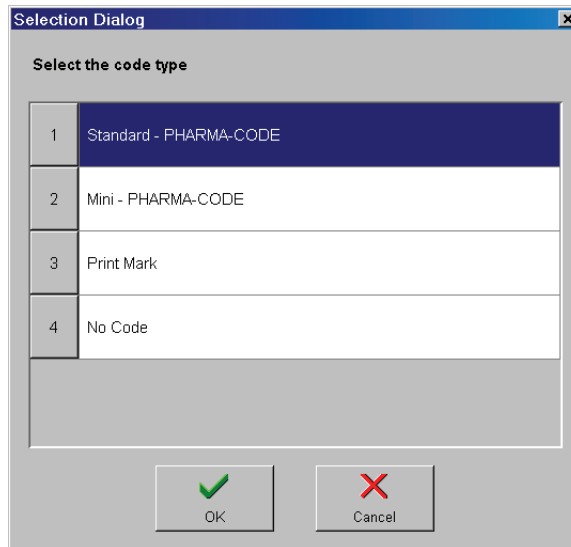


Fig. 15 Selecting the code type



Pressing the "..." button (Fig. 13) calls up a window in which you can select between:

- ◆ **Standard - PHARMA-CODE**
- ◆ **Mini - PHARMA-CODE**
- ◆ **Print Mark**
- ◆ **No Code**

Standard - PHARMA-CODE

Select this setting if the code to be controlled corresponds to Standard - PHARMA-CODE. More information on code design is available in the Laetus "PHARMA-CODE Guide".

Mini - PHARMA-CODE

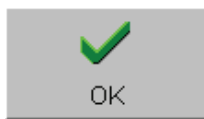
Select this setting, if the code to be controlled corresponds to Mini - PHARMA-CODE. More information on code design is available in the Laetus "PHARMA-CODE Guide".

Print Mark

A print mark is not a code, as it consists of one bar only. This bar is used, for example for correctly orienting a tube in a filling machine. More information on this is available in section 7.1 "Tube Filler".

No Code

The system verifies that neither a code nor a print mark is located within the reading gate.



Make the appropriate selection and confirm with **OK**, or close the window without accepting any changes by pressing **Cancel**.



If you press the **Save** button, the changes will be stored and also be applied in future.

4.2.3 Reference Code

The **reference code** is provided in the work order or similar and is transferred to the sensor.

In the "reference code" field, enter a numerical value using a keyboard (external or on-screen keyboard) and confirm your entry with ENTER.



Fig. 16 Entering the reference code

Alternatively, you can use the bar keys, thick and thin. Select the corresponding white field to enter the PHARMA-CODE.

The "<<" button means: delete backwards.

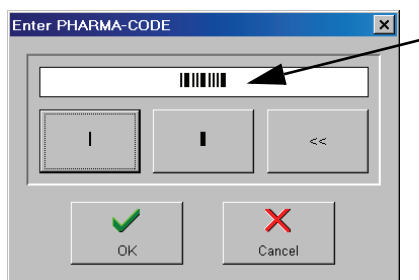


Fig. 17 Entry using bar keys



If you press the **Save** button, the changes will be stored and also be applied in future.



Note If you enter a reference code using the bar keys, you risk making entry errors, if the code is taken from a wrong product. Preferably, you should enter PHARMA-CODE numerically.

4.3 Setup Menu in Detail – Setup 2



Press the **Setup 2** button. The menu "Setup – Setup 2" appears.

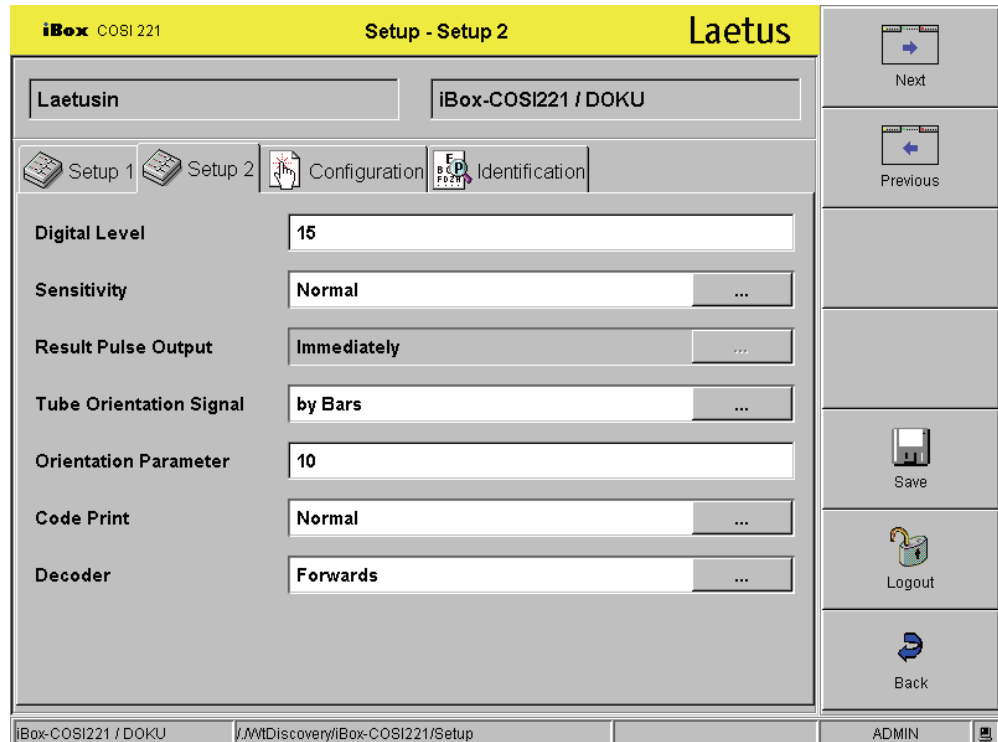


Fig. 18 Setup – Setup 2 menu

Here you can select and edit the:

- ◆ Digital Level
- ◆ Sensitivity
- ◆ Result Pulse Output
- ◆ Tube Orientation Signal
- ◆ Orientation Parameter
- ◆ Code Print
- ◆ Decoder

4.3.1 Digital Level: 0 to 30%



Fig. 19 Enter the digital level

The "Digital Level" of the COSI 221 is set so that the sensor can recognize codes with sufficient contrast. Permitted print colors can be found in the "PHARMA-CODE Guide".

If the consistency or structure of the paper (code background) does not provide a uniform background signal, codes corresponding to the reference value may be evaluated as FAULT. Transparent or recycled paper can produce this effect. **In this case, you can avoid frequent fault readings by changing the digital level.** Values up to 15 % are usually sufficient.

If higher values should be necessary, please contact the Laetus hotline.

The disadvantage of the changed level is that the color sensitivity of the sensor is reduced. Not all permitted colors are recognized anymore. This may allow faulty, colored code to interfere. As a rule of thumb, the color sensitivity is reduced by the set %-value of the digital level. Interferences can be avoided by suitably selecting the code colors or through organizational measures.

In the "Digital Level" field, enter a numerical value using a keyboard (external or on-screen keyboard) and confirm with ENTER.



If you press the **Save** button, the changes will be stored and also be applied in future.

4.3.2 Sensitivity – Normal / Medium / High



Press the "..." button (Fig. 18). The "Sensitivity level" selection menu appears. You can choose between the following settings:

- ◆ **Normal**
- ◆ **Medium**
- ◆ **High**

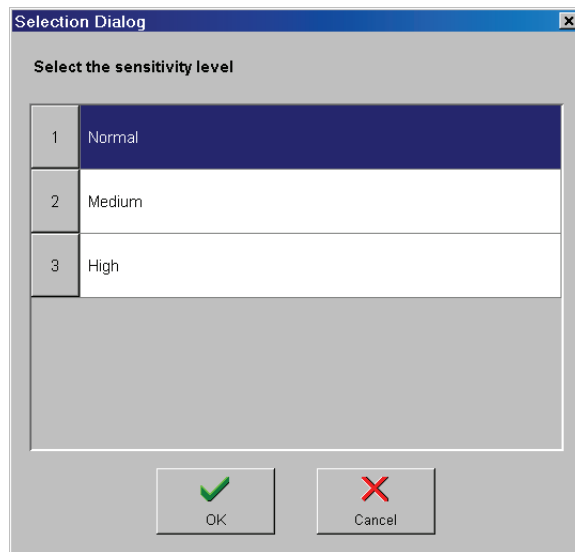


Fig. 20 Selecting the sensitivity level

Make the appropriate selection and confirm by pressing **OK**, or close the selection menu without accepting changes by pressing **Cancel**.

Insufficient contrast between background and print image may lead to FAULT readings. This may occur, for example, when reading code on a tube where the background color is not white. To compensate for this, you can increase the sensitivity of the COSI 221 in two steps.



If you press the **Save** button, the changes will be stored and also be applied in future.

4.3.3 Result Pulse Output – Immediately / End of Gate

In most applications, the GOOD signal is transmitted for processing at the end of the reading. In tube filling machines, the result output is expected immediately after coding. In this case, the GOOD signal appears immediately after the clearance distance behind the code.



If you press the "... " (Fig. 18) button, a window is called up in which you can choose between:

- ◆ **Immediately**
- ◆ **End of gate**

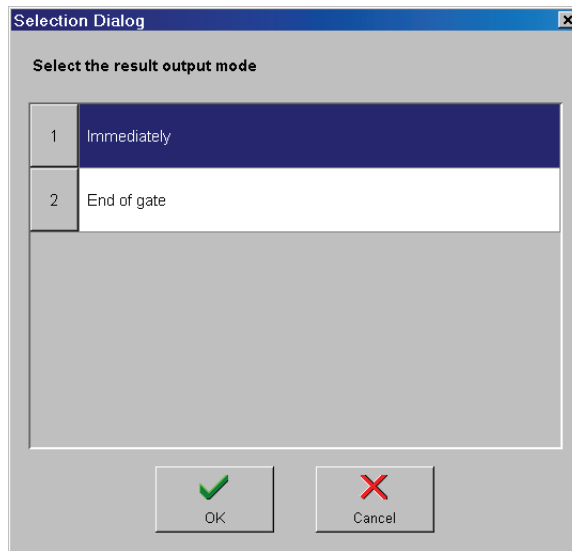
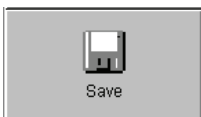


Fig. 21 Result output mode

Make the appropriate selection and confirm by pressing **OK**, or close the selection menu without making any changes by pressing **Cancel**.



If you press the **Save** button, the changes will be stored and also be applied in future.

4.3.4 Tube Orientation Signal – Deactivated / by Length / by Bars / by Time

These settings are required if you are using a COSI 221 for image orientation in a tube filler. For this, read the chapter "7.1 Tube Filler".

Select the function that suits your application.



Press the "..." button (Fig. 18). The tube orientation selection menu appears. You can choose between the following:

- ◆ Deactivated
- ◆ by Length
- ◆ by Bars
- ◆ by Time

Orientation signal - "**Deactivated**" - the sample (e.g. a tube) should not be oriented.



Note If you select the setting "Deactivated", the "orientation parameter" will not be set. The corresponding field remains inactive.

Tube Orientation Signal	Deactivated	...
Orientation Parameter	0	

Fig. 22 Orientation signal - "Deactivated"

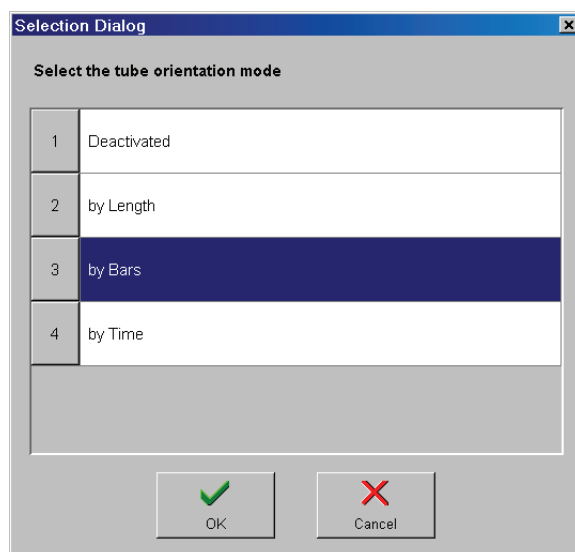


Fig. 23 Selecting the tube orientation mode

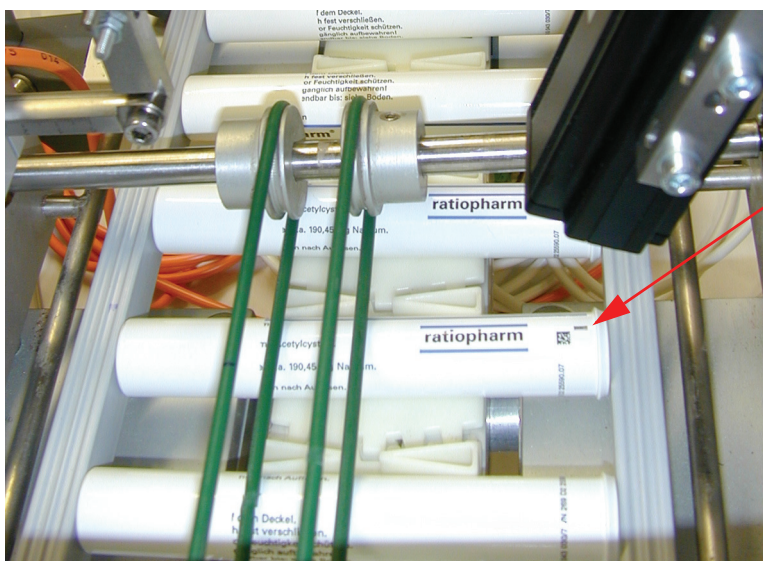


Fig. 24 Example - Tube with a bar

Tube Orientation Signal	Orientation Parameter
Deactivated	---
by Length	6–310 mm
by Bars	1–16
by Time	10–500 ms

Table 1: Setting the follow-up control

The GOOD signal begins 6 mm behind the last code bar. In the case of the orientation modes **by Time** and **by Length**, the motor of the turning station is stopped when the time in ms, the distance in mm or the number of bars specified under "Orientation Parameter" is reached.

For this, please read the "Installation Instructions COSI 221".

Make the appropriate selection and confirm by pressing **OK** or discard any changes made by pressing **Cancel**.



If you press the **Save** button, the changes will be stored and also be applied in future.

4.3.5 Orientation Parameter

The **Bar** orientation signal means that orientation is done using a barcode (see Fig. 24).

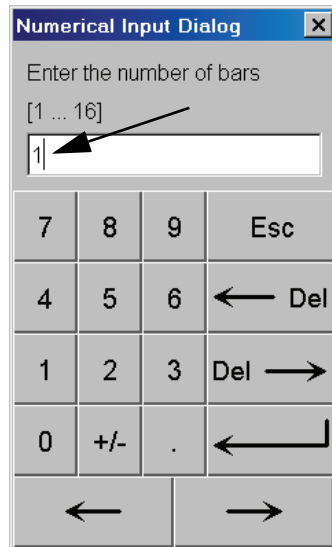


Fig. 25 Entering the bar number

The turning station must be able to turn the tube almost one complete turn after reading the code. This is the most exact form of orientation. In this case, the number (1...16) of the bar to be used for orientation is entered under "Orientation parameter".

Orientation signal **Length**.

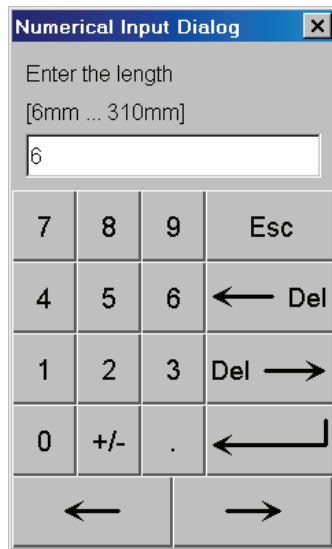


Fig. 26 Entering the value for the length

Orientation signal **Time**.



Fig. 27 Entering the value for the time

4.3.6 Code Print – Normal / Inverse



Pressing the "..." button (Fig. 18) opens the selection menu for the code print.

You can choose between:

- ◆ **Normal**
- ◆ **Inverse**

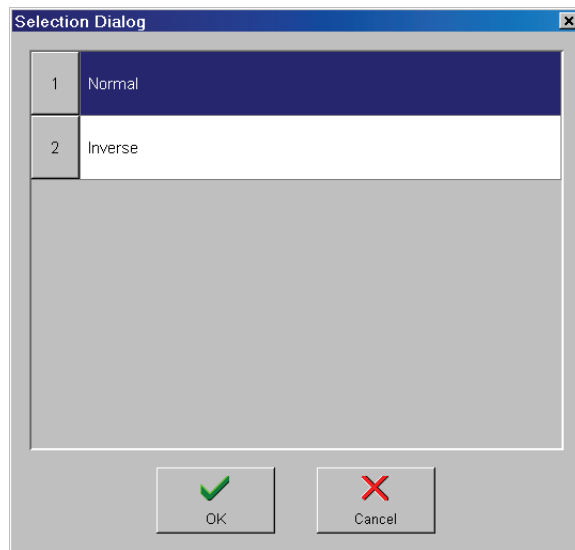


Fig. 28 Selecting the code print type

The PHARMA-CODE on packaging usually consists of dark code bars on a light background. If, however, packaging design requires a light code on a dark background, select the "inverse" function for the "Code Print".

Make the appropriate selection and confirm by pressing **OK** or close the menu without accepting any changes by pressing **Cancel**.



If you press the **Save** button, the changes will be stored and also be applied in future.

4.3.7 Decoder – Forwards / Backwards

A PHARMA-CODE does not include any start/stop symbols and can be read in both directions. The standard code number is based on a movement of the code from right to left, i.e. the left bar of the code has the highest significance and is read first.

If the direction of movement of the coded packaging does not correspond to the direction that was intended during coding, the parameter can be set to "backwards", so that the entered reference code corresponds with the requirements list.



Pressing the "..." button (Fig. 18) calls up the "Decoding" selection menu.

You can select between:

- ◆ **Forwards**
- ◆ **Backwards**

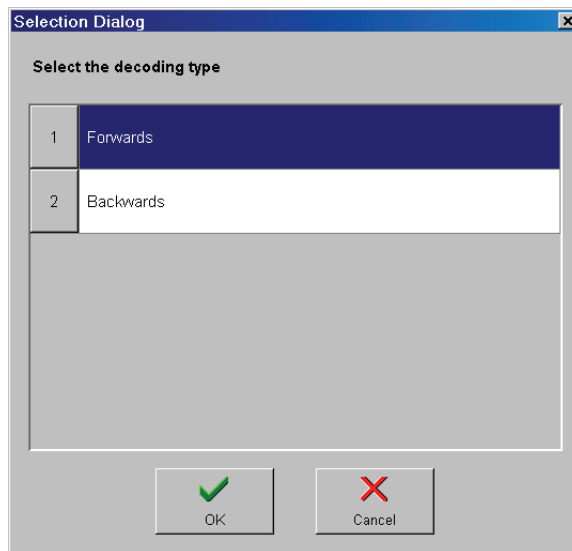


Fig. 29 Selecting the decoding direction

Make the appropriate selection and confirm by pressing **OK** or close the menu without accepting any changes by pressing **Cancel**.



If you press the **Save** button, the changes will be stored and also be applied in future.

4.4 Setup – Configuration



Press the **Configuration** button. The menu "Setup-Configuration" appears.

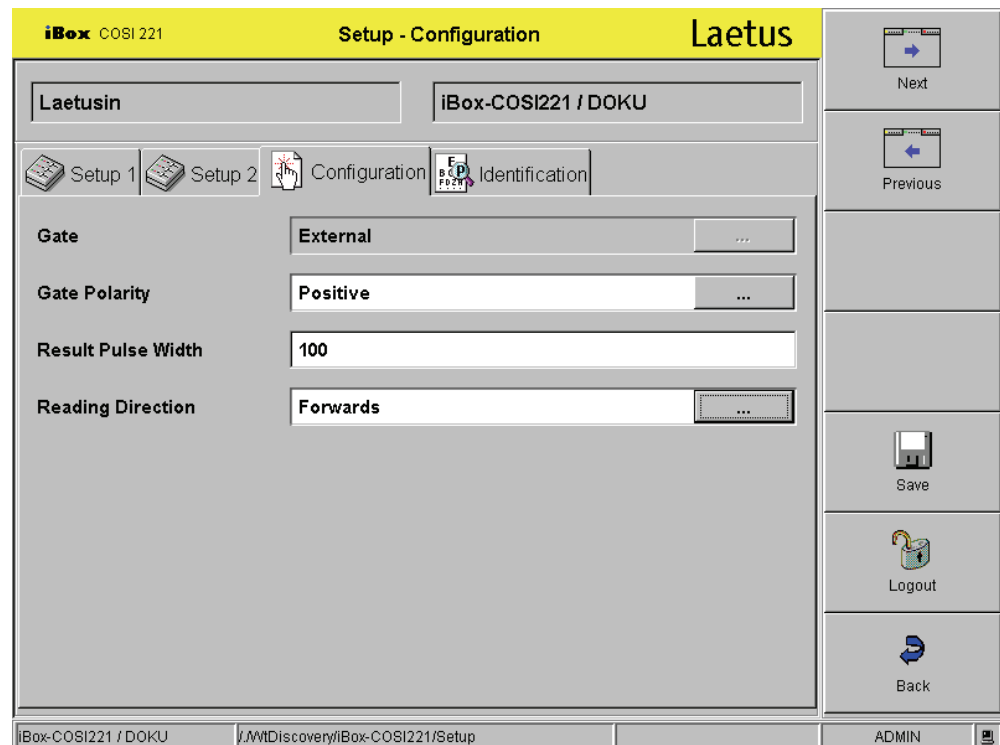


Fig. 30 Setup – Configuration menu

Here you can select and edit the following:

- ◆ **Gate**
- ◆ **Gate Polarity**
- ◆ **Result Pulse Width**
- ◆ **Reading Direction**

4.4.1 Gate – External / Internal



Press the "..." button (Fig. 30) in order to call up the "Gate" selection menu, where you can choose between:

- ◆ **External**
- ◆ **Internal**

This is where you define the gate type. If you select "**External**", the gate is created outside of the COSI 221, for example by the machine control.

If you select "**Internal**", the gate is created by the sensor itself (only with Laetus tab guidance).



Note You can only switch between the "External" and "Internal" gates when "Deactivated" has been selected as the orientation signal.

If "Internal" has been selected, the "Gate Polarity" can not be set. The corresponding field remains inactive.

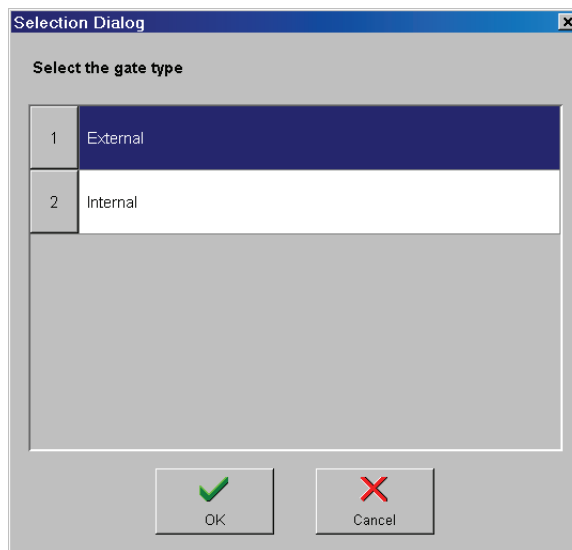


Fig. 31 Gate

For this, please also read the "Installation Instructions COSI 221".

Make the appropriate selection and confirm by pressing **OK** or close the menu without accepting any changes by pressing **Cancel**.



If you press the **Save** button, the changes will be stored and also be applied in future.

4.4.2 Gate-Polarity – Negative / Positive



Pressing the "..." button (Fig. 30) calls up the "Polarity" selection menu, where you can choose between:

- ◆ **Negative**
- ◆ **Positive**

(Polarity at the iBox: IN2-signal)

According to the gate polarity, select **Positive** if the gate is **not to be inverted**. If you select **Negative**, the gate is inverted **internally**.

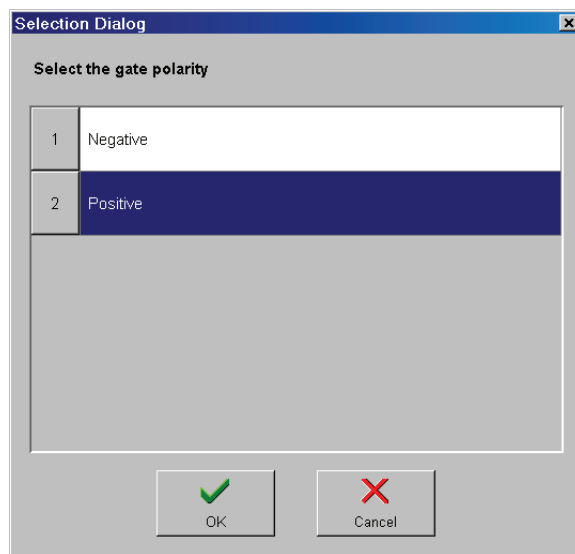


Fig. 32 Selecting polarity

Make the appropriate selection and confirm by pressing **OK** or close the menu without accepting any changes by pressing **Cancel**.



If you press the **Save** button, the changes will be stored and also be applied in future.

4.4.3 Result Pulse Width: 1ms...500ms



If you press the "..." button (Fig. 30), the "Time" selection menu appears.

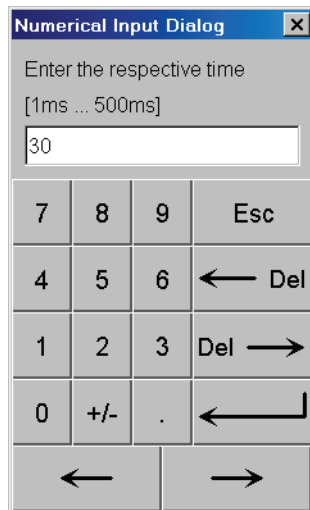


Fig. 33 Time setting for the result pulse width

This is where you set the width of the result pulses. The predefined value should only be changed if the control results are transmitted to the machine control for shift tracking. The required impulse width depends on the machine control.



If you press the **Save** button, the changes will be stored and also be applied in future.

4.4.4 Reading Direction – Forwards / Backwards

If the code is moving in the same direction as indicated by the arrow on the sensor, select "**Forwards**". If the code is moving in the opposite direction, select "**Backwards**".



Pressing the "... " button (Fig. 30) opens a window in which you can choose between

- ◆ **Forwards**
- ◆ **Backwards**

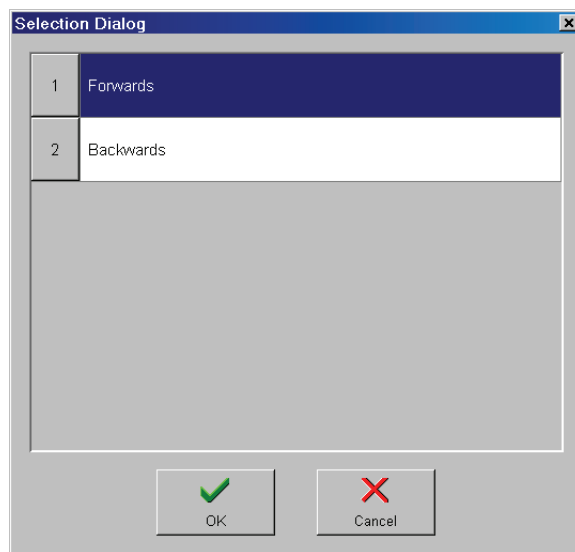


Fig. 34 Reading direction

Make the appropriate selection and confirm by pressing **OK** or close the menu without accepting any changes by pressing **Cancel**.



If you press the **Save** button, the changes will be stored and also be applied in future.

4.5 Setup – Identification



Press the **Identification** button.

The "Setup-Identification" menu is displayed.

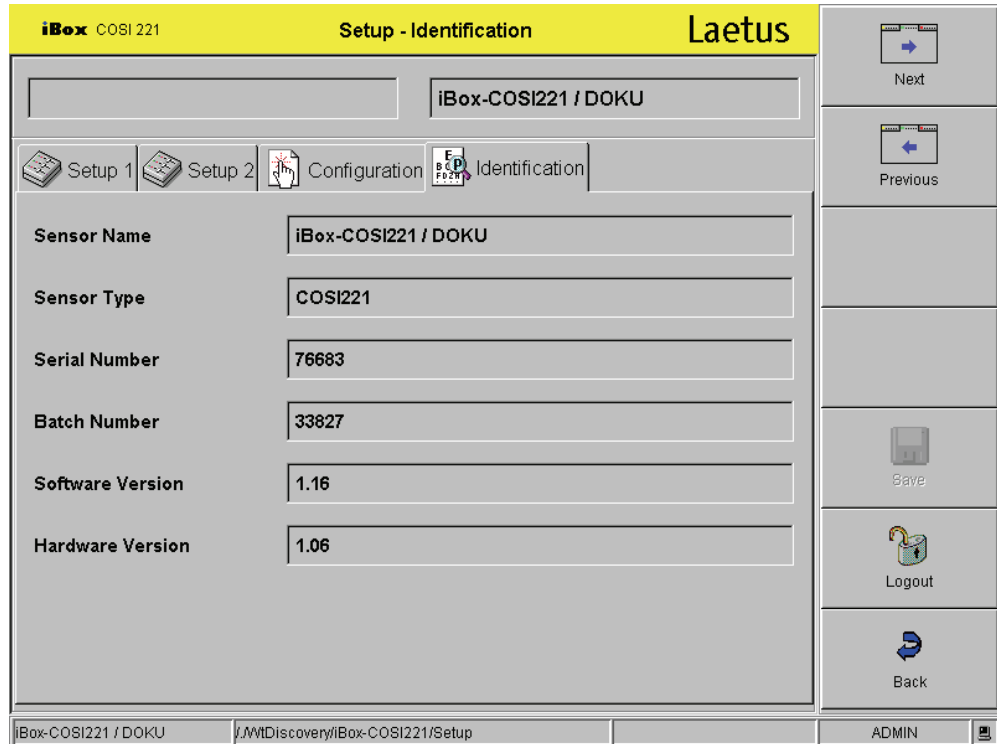


Fig. 35 Setup-Identification menu

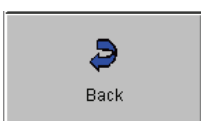
This menu displays the descriptions for product and sensor name that you specified:

- ◆ **Sensor Name**
- ◆ **Sensor Type**
- ◆ **Serial Number**
- ◆ **Batch Number**
- ◆ **Software Version**
- ◆ **Hardware Version**

No entries can be made in this menu.



You have successfully completed the installation process.

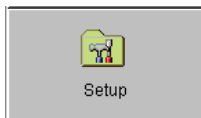


Press the **Back** button. The "Main Menu" appears.

4.6 Setting variable data / iBox-COSI 221 as a slave device in the ARGUS wt10-Server



Note If the COSI 221 is integrated in the ARGUS wt10, you can change variable data (the reference code) in just a few steps. There are additional menus for this purpose.



Press the **Setup** button in the ARGUS wt10 main menu in order to select a product and change its settings.

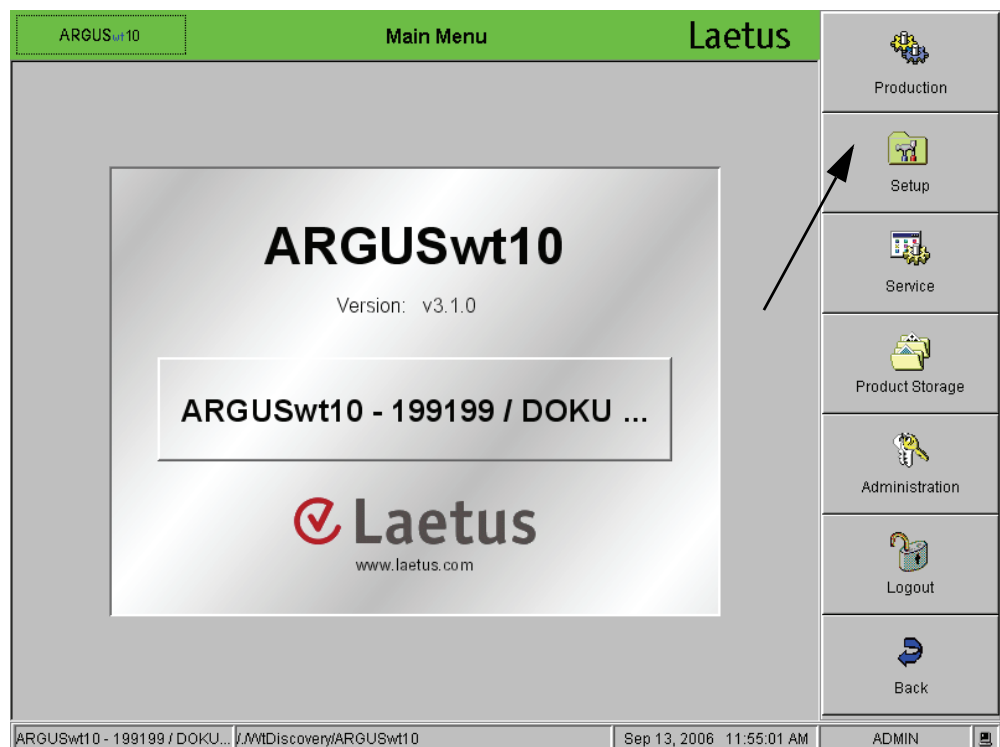


Fig. 36 Main menu ARGUS wt10

The "Setup Product" menu appears:

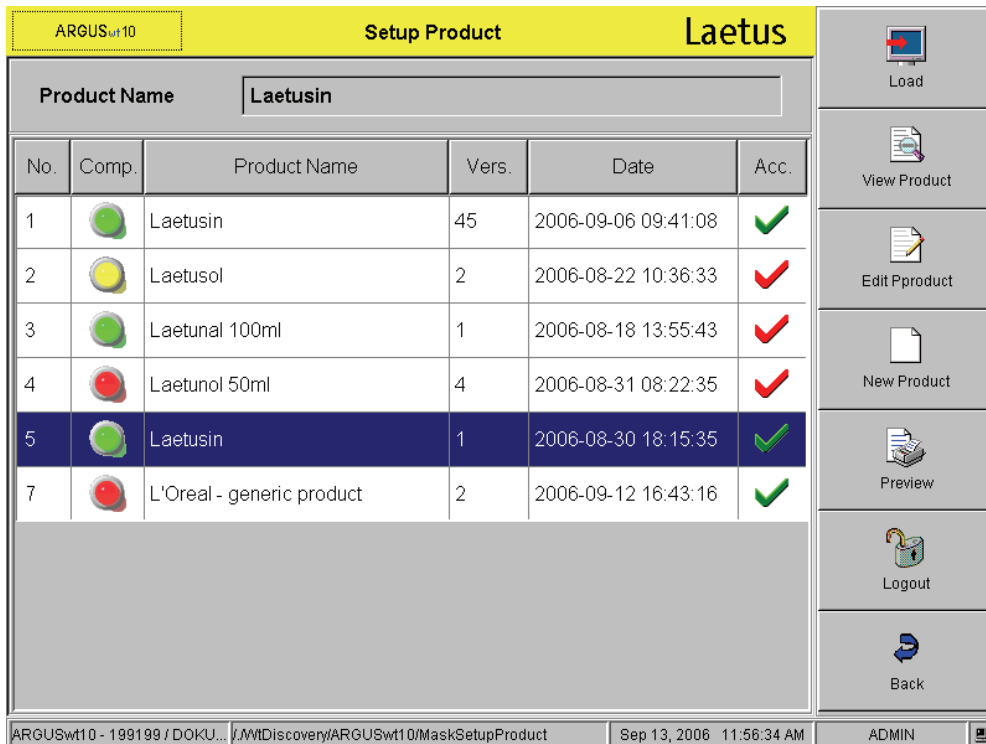


Fig. 37 Selecting and loading a product



- ◆ If the product was created with the same grouping, the LED symbol appears in green.



- ◆ If the product corresponds with a compatible grouping, the LED symbol appears in yellow.



- ◆ If the product cannot be loaded for the current grouping, the LED symbol is red.



Mark the desired product whose settings you wish to change and **Load** it.

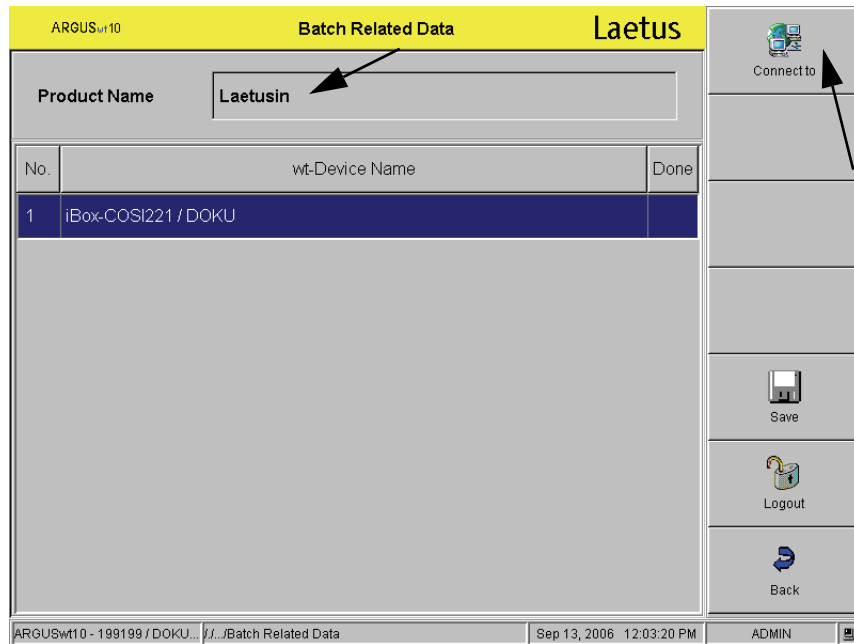
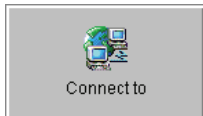


Fig. 38 Establishing a connection to the sensor



Select the sensor and then press the **Connect to** button. This establishes a connection to the iBox-Cosi221. You can enter new codes:

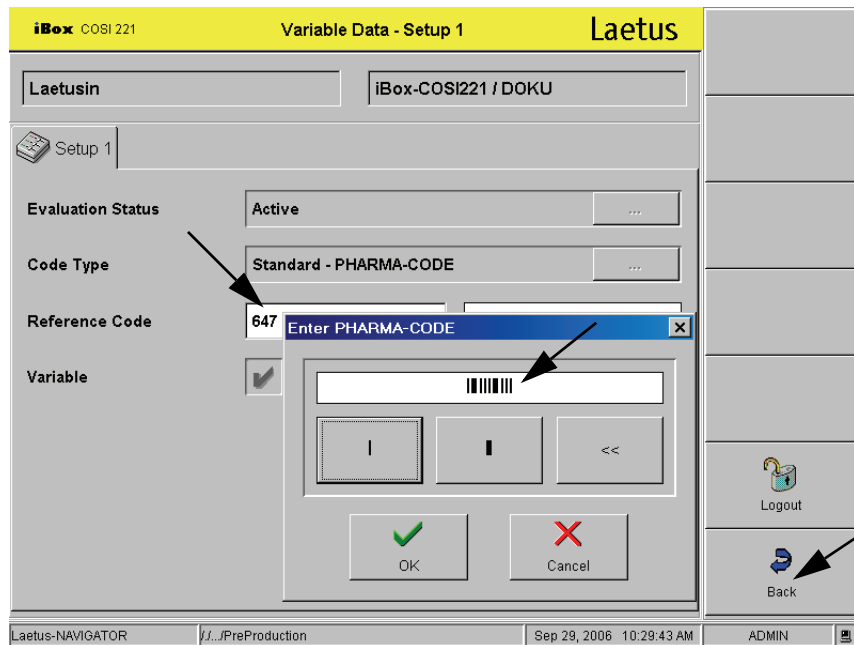


Fig. 39 Entering a new reference code

Enter the reference code via numerical input or using "Enter PHARMA-CODE" and press the button **Back**.

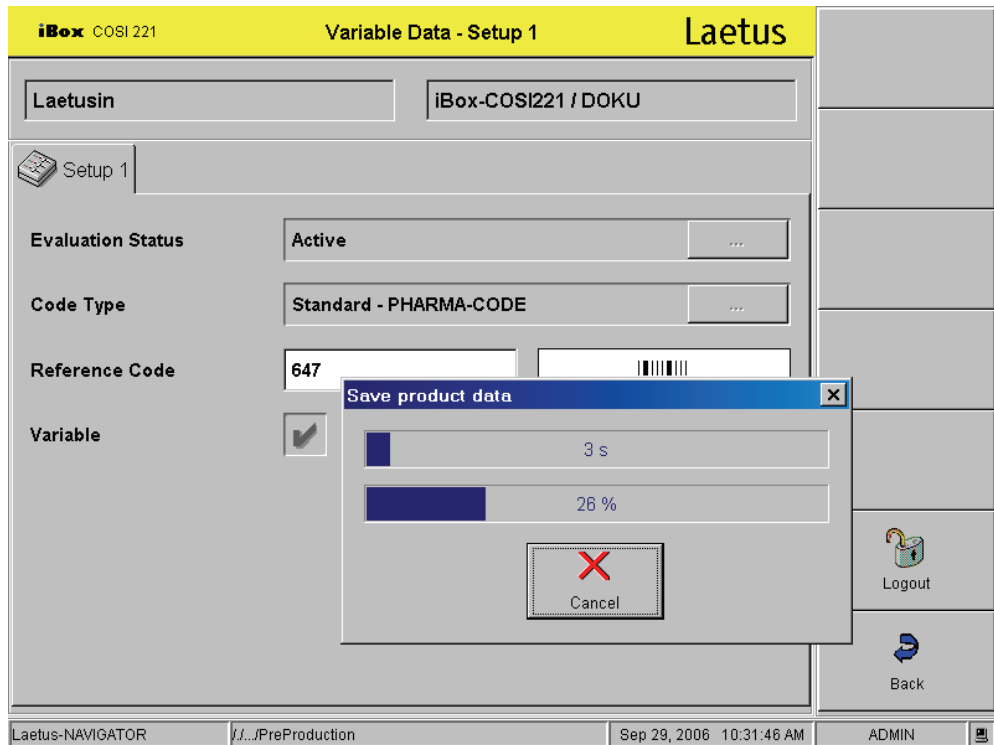
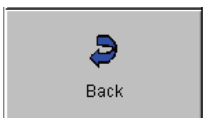


Fig. 40 Saving the product data



When you press the **Back** button, the following warning appears:

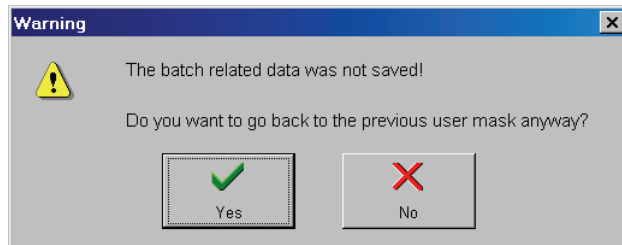


Fig. 41 Warning about saving batch related data

If you press **Yes**, the "Setup Product" menu will be displayed and the modified product data is not logged in the ARGUS wt10.

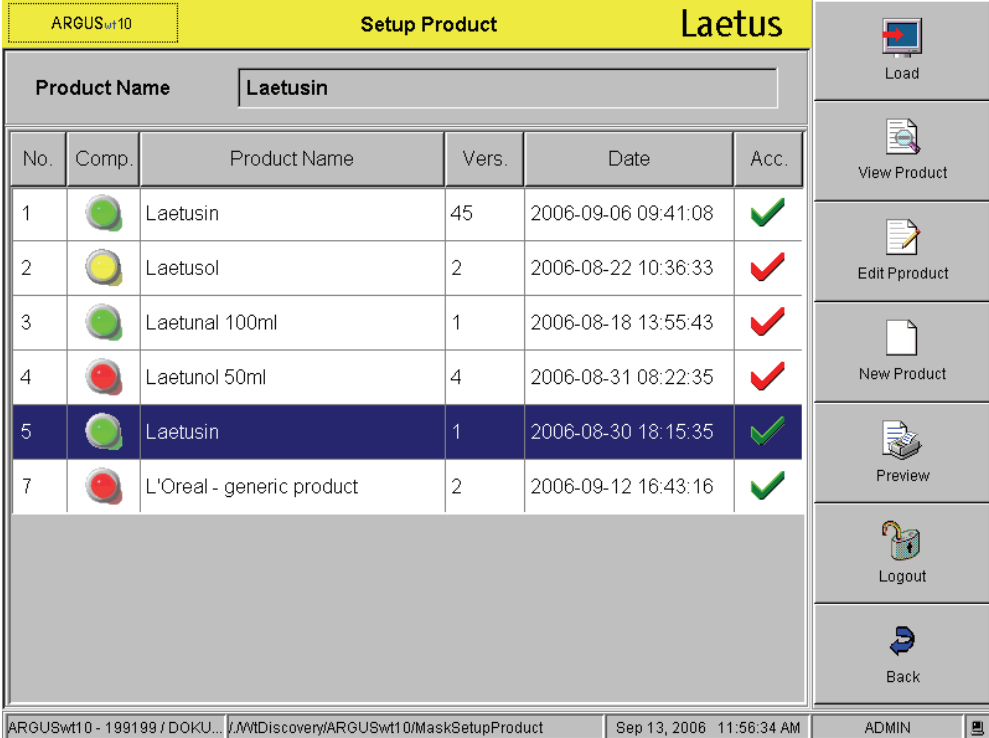
If you press **No**, the "Batch Related Data" menu is displayed and you can select the **Save** button. The changed product data are logged in the ARGUS wt10.

The ARGUS wt10 main menu appears.













4.7 Meaning of the "Variable" setting - activated or deactivated in the "Setup - Setup 1" menu

The COSI 221 is integrated in the Argus wt10.

Press the **Setup** button in the ARGUS wt10 main menu. The "Setup Product" menu appears:

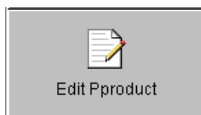


The screenshot shows the "Setup Product" interface in the ARGUS wt10. At the top, there is a yellow header with "ARGUS wt10" on the left, "Setup Product" in the center, and "Laetus" on the right. Below the header, there is a "Product Name" field containing "Laetusin". The main area is a table with the following data:

No.	Comp.	Product Name	Vers.	Date	Acc.
1		Laetusin	45	2006-09-06 09:41:08	
2		Laetusol	2	2006-08-22 10:36:33	
3		Laetunal 100ml	1	2006-08-18 13:55:43	
4		Laetunol 50ml	4	2006-08-31 08:22:35	
5		Laetusin	1	2006-08-30 18:15:35	
7		L'Oreal - generic product	2	2006-09-12 16:43:16	

On the right side of the screen, there is a vertical menu with the following buttons: Load, View Product, Edit Pproduct, New Product, Preview, Logout, and Back. At the bottom of the screen, there is a status bar with the following information: ARGUSwt10 - 199199 / DOKU... / WWDISCOVERY/ARGUSwt10/MaskSetupProduct, Sep 13, 2006 11:56:34 AM, ADMIN.

Fig. 42 Product list in the ARGUS wt10



Mark the product in the list that you would like to edit and then press the **Edit Product** button.

The "Edit Product First Step" menu appears:

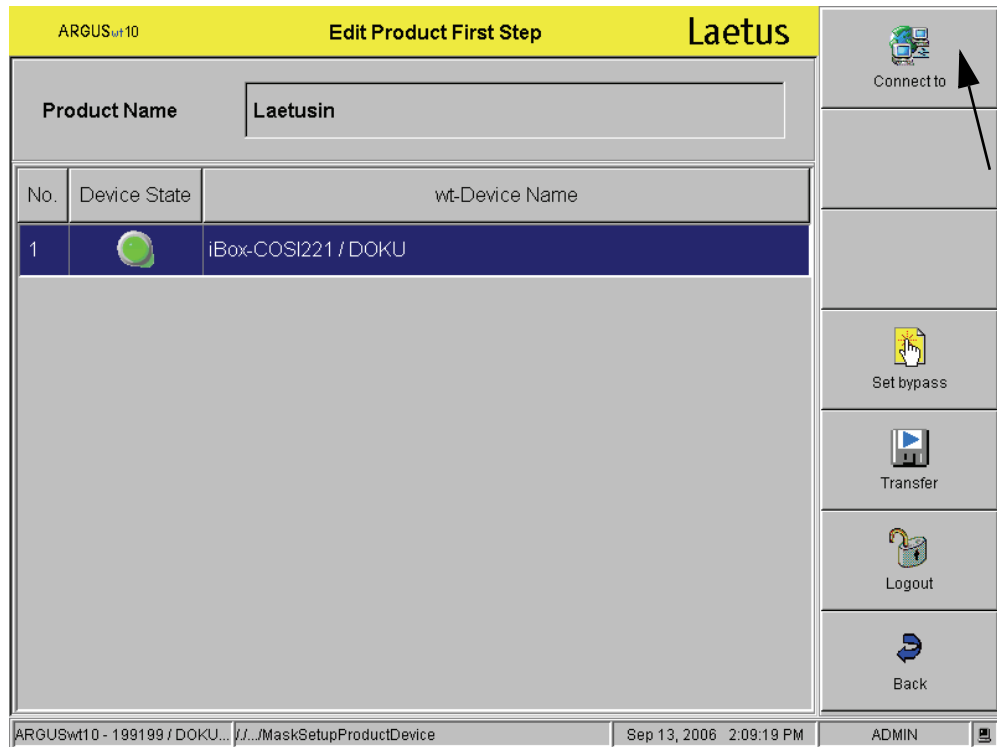
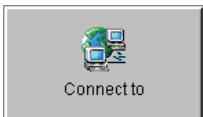


Fig. 43 Edit product, first step



In order to edit the selected product, press the **Connect to** button. A connection is then established to the COSI 221.

The "Setup - Setup1" menu appears:

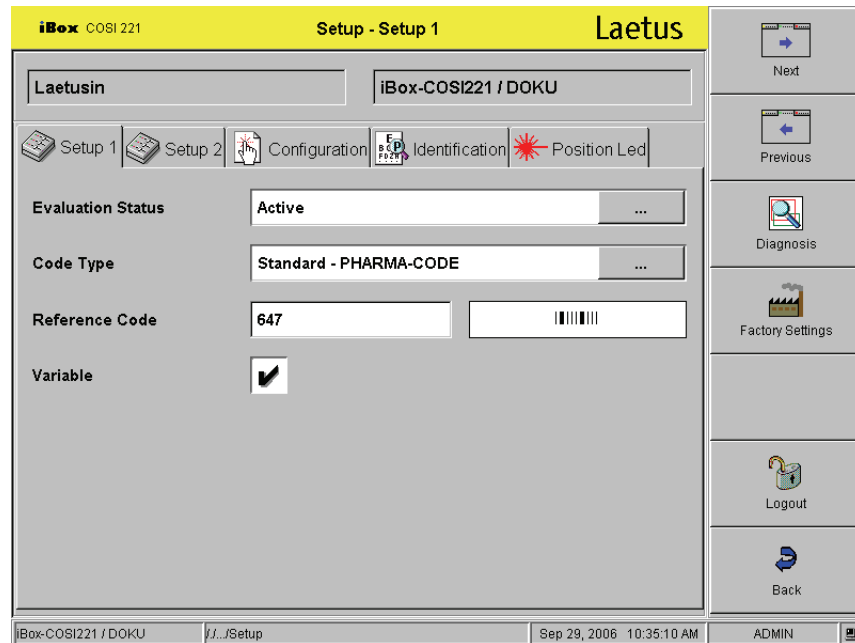
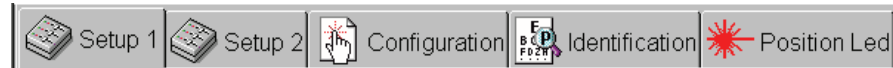
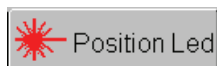


Fig. 44 Changing a sensor's settings

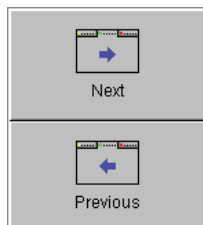


In the respective tab cards, you can check the current settings or make the desired changes and define new settings.

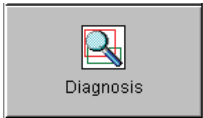


With **Position LED** (Fig. 44), you can turn the red positioning lamp on the sensor head on and off.

This function switches the red positioning lamp on the sensor head on and off. A thin red line is depicted on the code level. With this aid, the sensor head can be positioned parallel to and over the middle of the code.



With **Next** and **Previous**, you can switch between the tab cards.



4.7.1 Diagnosis

To check the current data of the loaded product, press the **Diagnosis** button. The following information appears:

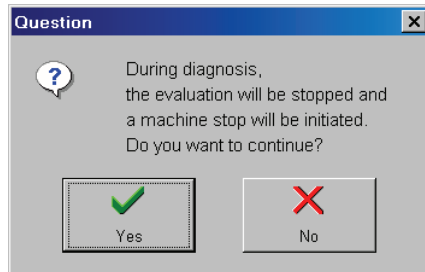


Fig. 45 Information - Diagnosis

Press the **Yes** button to continue the procedure.

The product data will be saved, the evaluation will be halted and a machine stop initiated.

The menu "Diagnosis - Current Data" appears:

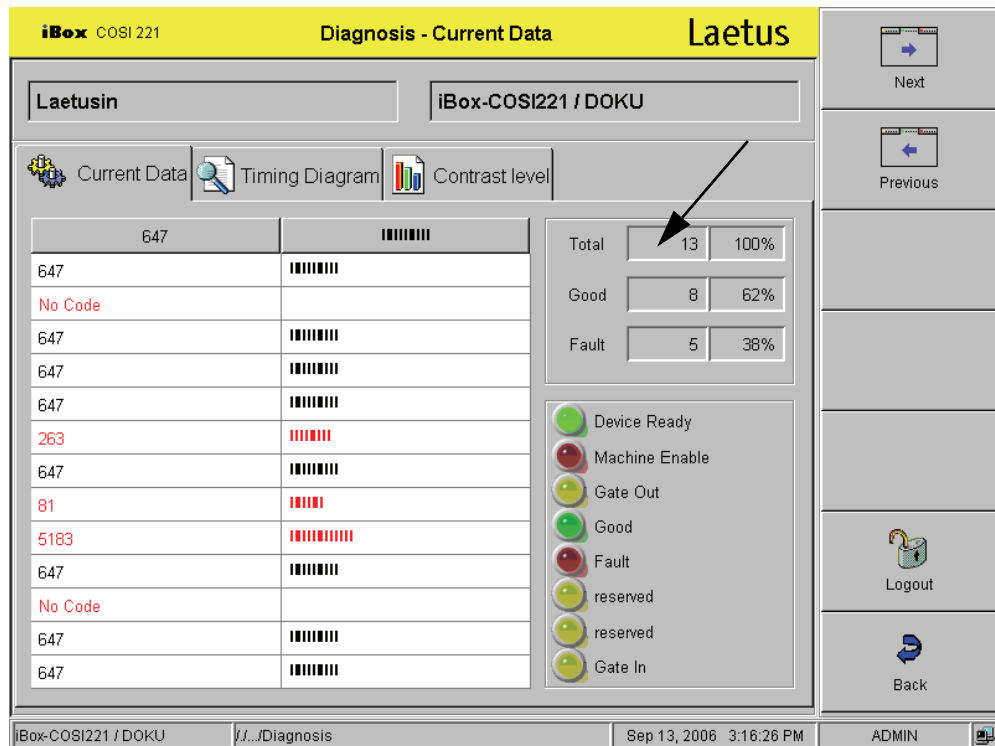


Fig. 46 Diagnosis menu - Current Data

In this menu, you can check the current reference code, the timing diagram and the contrast levels.

The counter is reset.

4.7.2 Factory Settings

If you press the **Back** button, the product data will be restored and you can decide whether these settings should continue to be saved.



If you would like to return the iBox-COSI221 to the Laetus delivery status, click on the **Factory Settings** button.

The following menu appears with the question:

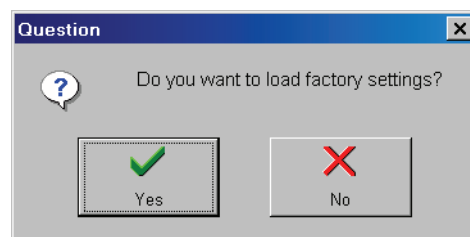


Fig. 47 Question to load the factory settings

If you select **Yes**, the factory settings will be loaded.

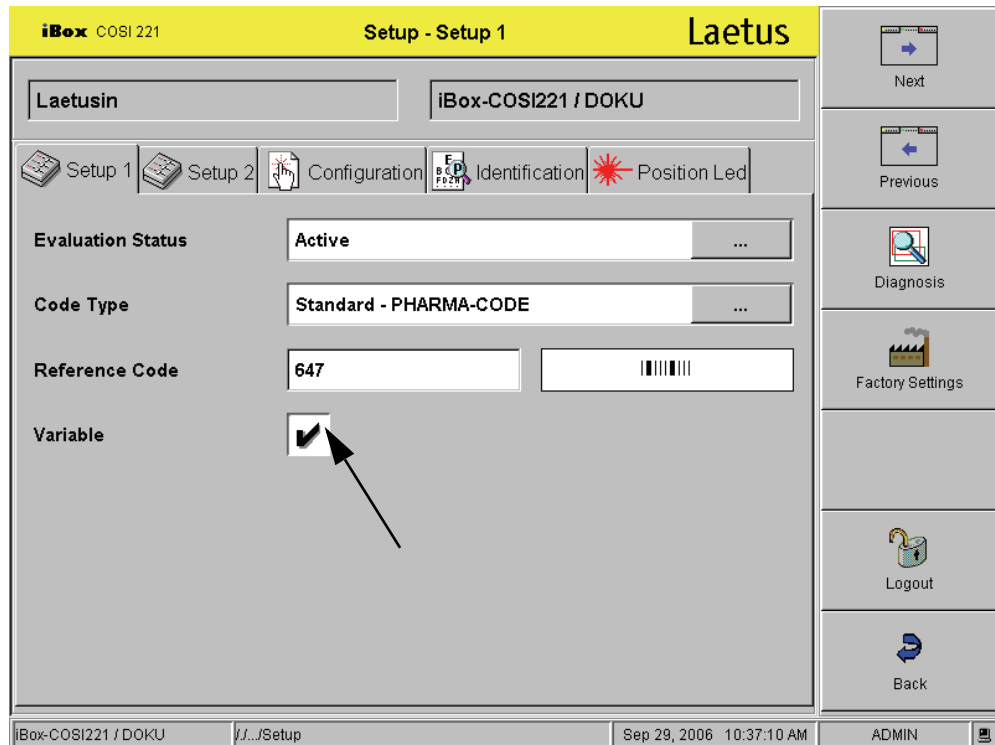


Fig. 48 "Variable" setting active or inactive

Verification of variable data

Variable data on packaging is used to provide a product with product identification details such as a serial number, batch number or use-by date. During production, these identification details are then checked or interpreted with respect to their values and meanings.

For an identification detail to be verified successfully, all the printed characters must correspond with either the code type or the expected code (reference code).

In the case of the iBOX-COSI221, the setting "Variable" can be activated or deactivated for two code types:

- ◆ **Standard PHARMA-CODE**
- ◆ **Mini PHARMA-CODE**

Example:

If you have a number of different PHARMA-CODEs for a packaging or packaging insert format, you have the option of activating the "Variable" setting in the "Setup – Setup 1" menu by putting a tick in the appropriate box. As a result, you then only have to **enter the reference code** when loading a product.

The "Variable" setting is activated:

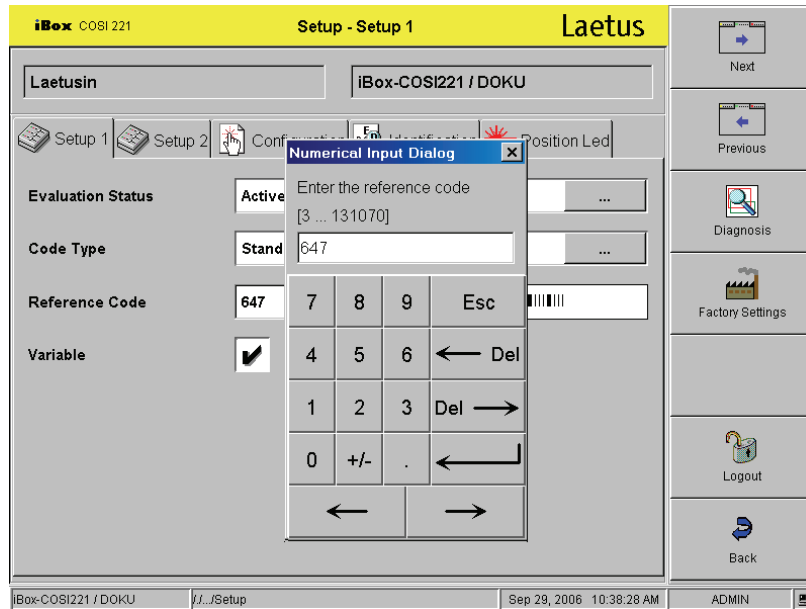


Fig. 49 Variable Data menu - Setup1

Enter the desired reference code.



Note A reference code must be entered here. Otherwise the batch related data will not be processed fully. A zero (0) cannot be entered here. A 3 (two thin bars) is entered automatically when you leave the menu (using the **Back** button).

Once you have entered the reference code, press the **Back** button. The "Edit Product First Step" menu reappears:

Press the **Transfer** button.



The following question appears:

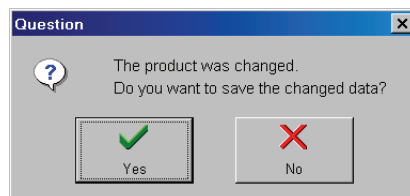


Fig. 50 Question about saving a changed product

With **Yes** , you arrive at the "Edit Product Second Step" menu. Define the **Status** of the product: "accepted" or "not accepted".

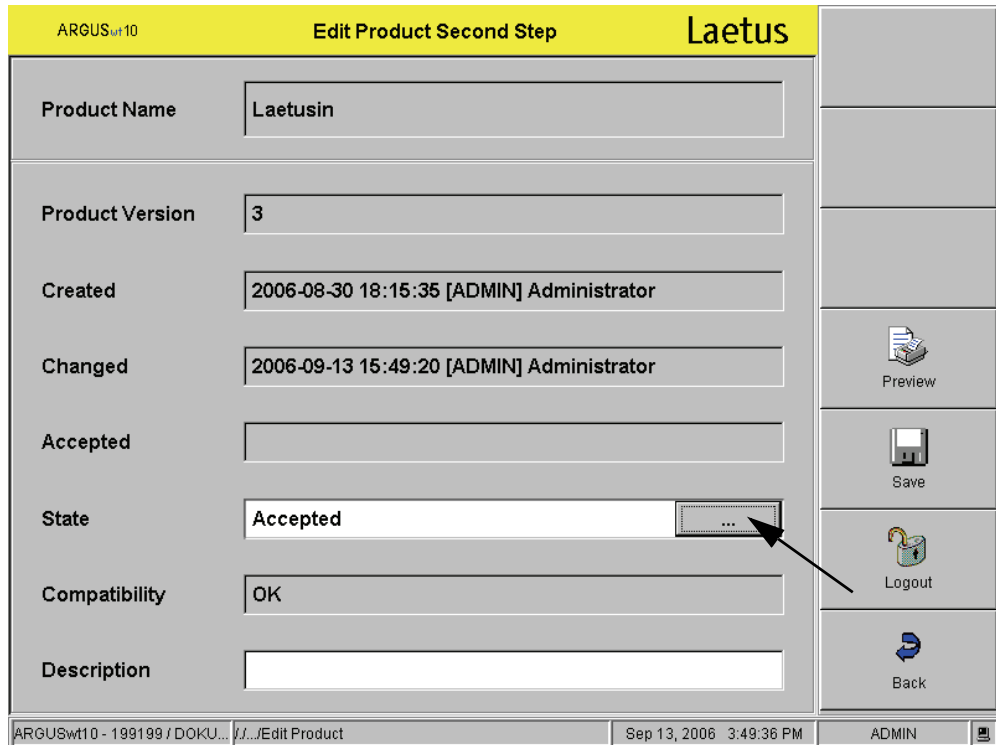


Fig. 51 Edit product, second step



Save your selection.

The following information appears:

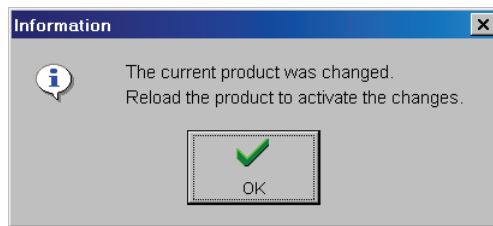
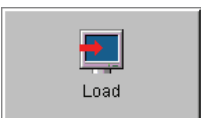


Fig. 52 Information about the changed product



Press the **OK** button. In the "Setup Product" menu, **Load** the changed product.

The "Batch Related Data" menu appears upon loading the product.

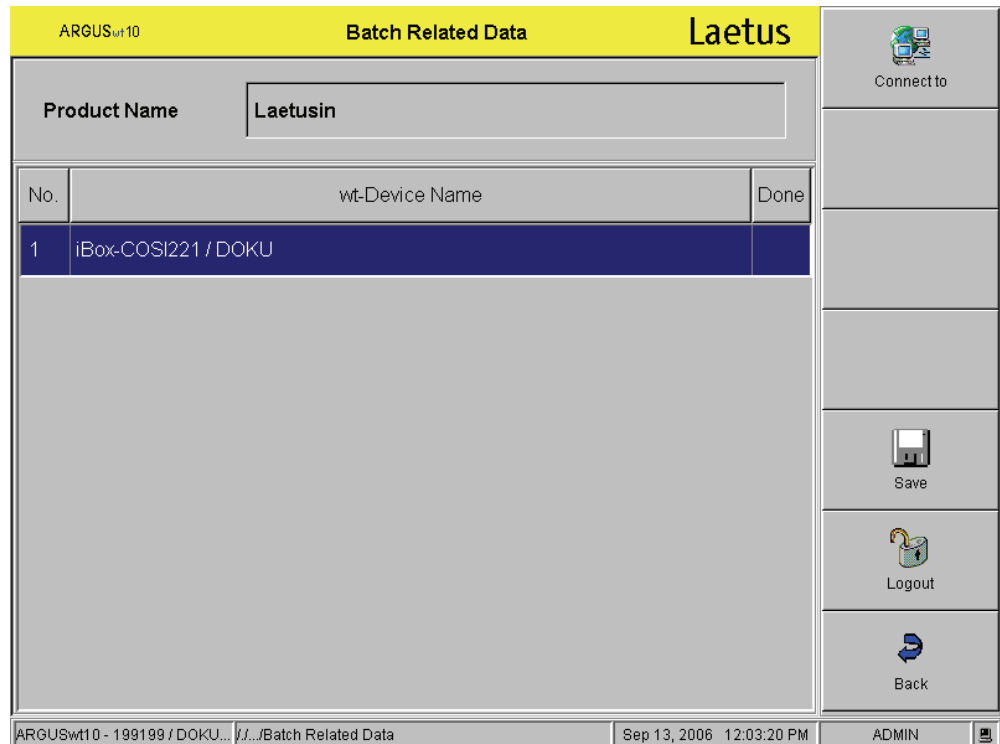


Fig. 53 "Batch Related Data" menu

When you press the **Save** button, the following warning appears:

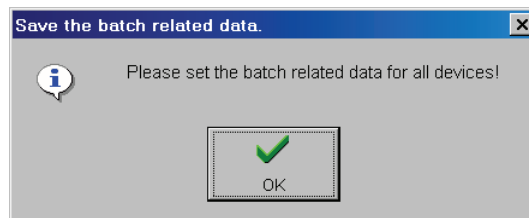
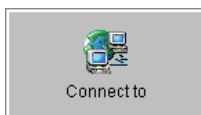


Fig. 54 Warning

Press the **OK** button.

Now continue editing the data. Select the **Connect to** button.



You will need to enter a new reference code in order to continue editing the data.

Change the reference code and press the **Back** button. Then save the change.

The ARGUS wt10 main menu appears.

The "Variable" setting is not activated:










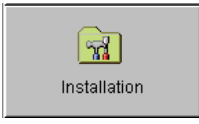
When the "Variable" setting is **inactive** (in the "Setup - Setup1" menu), the product can still be edited, but **a reference code cannot be entered after loading the product.**

The main menu of the ARGUS wt10 server is displayed after loading.

5. Production – Control

5.1 "Production" Menu – Overview

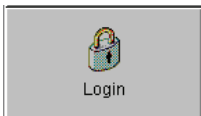
Press the **Production** button in the "main menu" in order to view and edit the production data. The menu "Production - Current Data" appears. According to your needs, you can select the following:

		Selecting a tab card displays menus with the results of the readings.
Next		With Next and Previous , you can switch between the tab cards.
Previous		
Current Data		View the results of the current data.
Fault Readings		View and delete fault readings.
Timing Diagram		View: gate inactive, gate length, code length, result pulse width.
Contrast Level		Depict the contrasts of read code bars.
Installation		View, inspect settings of the installation process. Changes are not possible.

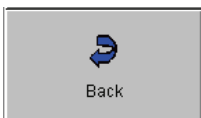
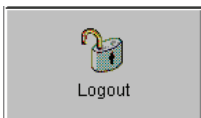


In order to set the counters to "0", press the button **Reset counters**.

You can confirm this process with **Yes**. **No** terminates the process without changes.



If you are logged in and do not perform any operations, you will be automatically logged out after the time period set under Auto logout time (in the "NAVIGATOR") has elapsed. The operating elements become inactive.



The **Back** button returns you to the "Main Menu".



Note Inactive buttons have a gray symbol and gray writing. Entry fields are displayed in gray. This means that either the user does not have the corresponding access rights or the current operating mode does not permit this function.

5.2 "Production" Menu in Detail

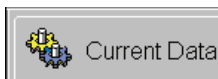


Press the **Production** button in the "Main Menu".

Here you can view and edit the following production data:

- ◆ **Current Data**
- ◆ **Fault Readings**
- ◆ **Timing Diagram**
- ◆ **Contrast Level**
- ◆ **Installation**

5.2.1 Current Data



Press the **Current Data** button. The "Production – Current Data" menu appears, displaying an overview of the reading results. This menu also appears if you press the **Production** button in the "Main Menu".

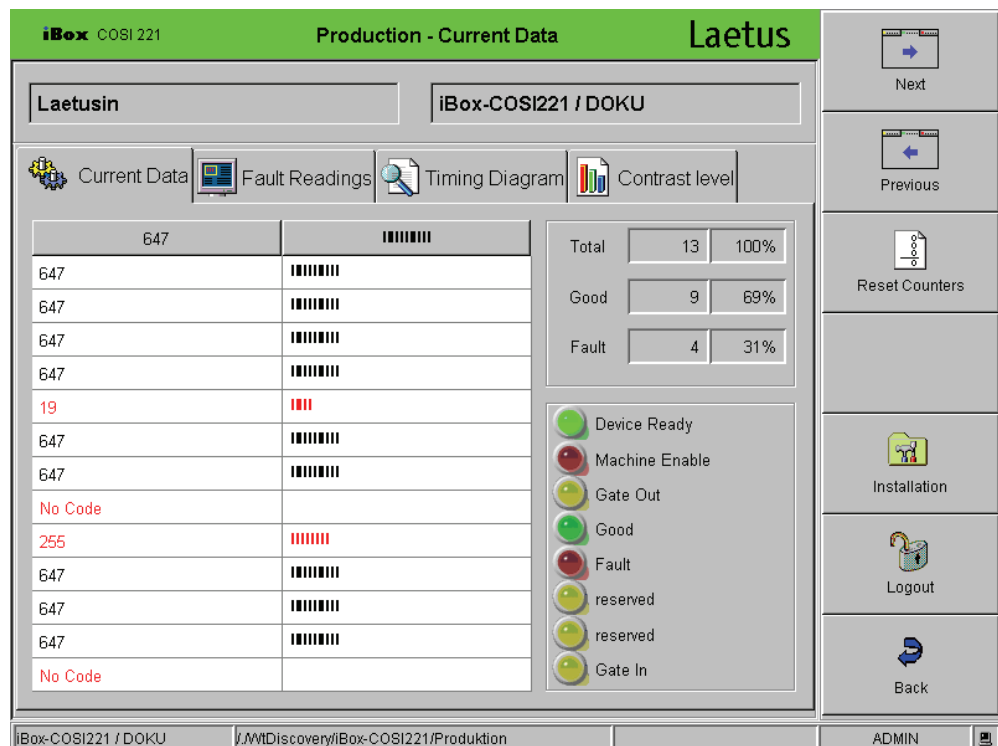


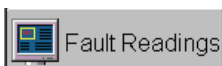
Fig. 55 Production – Current Data menu

The window on the left displays the last 13 gate cycles. The column header of this window displays the reference code numerically and graphically. A 0 indicates: no code.

A counter at the top right, labelled "Total", displays the total number of read codes, the "Good" counter the number of read codes that correspond to the reference code and the "Fault" counter the number of read codes that deviate from the reference code.

At the bottom right, several LEDs indicate different states of the iBox.

5.2.2 Fault Readings



Press the **Fault Readings** button. The menu "Production – Fault Readings" is displayed.

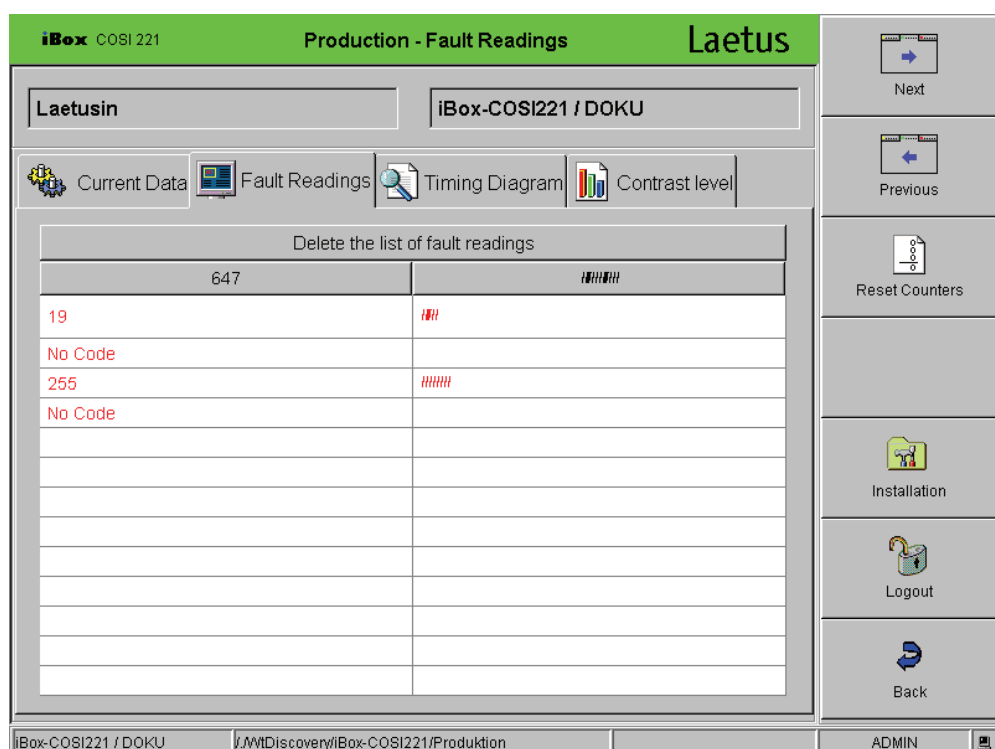


Fig. 56 Production – Fault Readings menu

This menu displays the last 13 fault readings. The column header displays the reference code numerically and graphically. The reading results are displayed underneath. "Fault Readings" are codes that do not correspond with the specified reference code. Codes that deviate from the reference code are displayed here in order to enable better control of the reading results. A 0 indicates: no code in the gate.



Fig. 57 Delete Fault Readings

Press the **Delete the list of fault readings** button in order to delete the last fault readings from the memory.

5.2.3 Timing Diagram



Press the **Timing Diagram** button.

The "Production – Timing Diagram" menu appears, displaying the following for the selected sensor head:

- ◆ **Gate Inactive**
- ◆ **Gate Length**
- ◆ **Code Length**
- ◆ **Result Pulse Width**

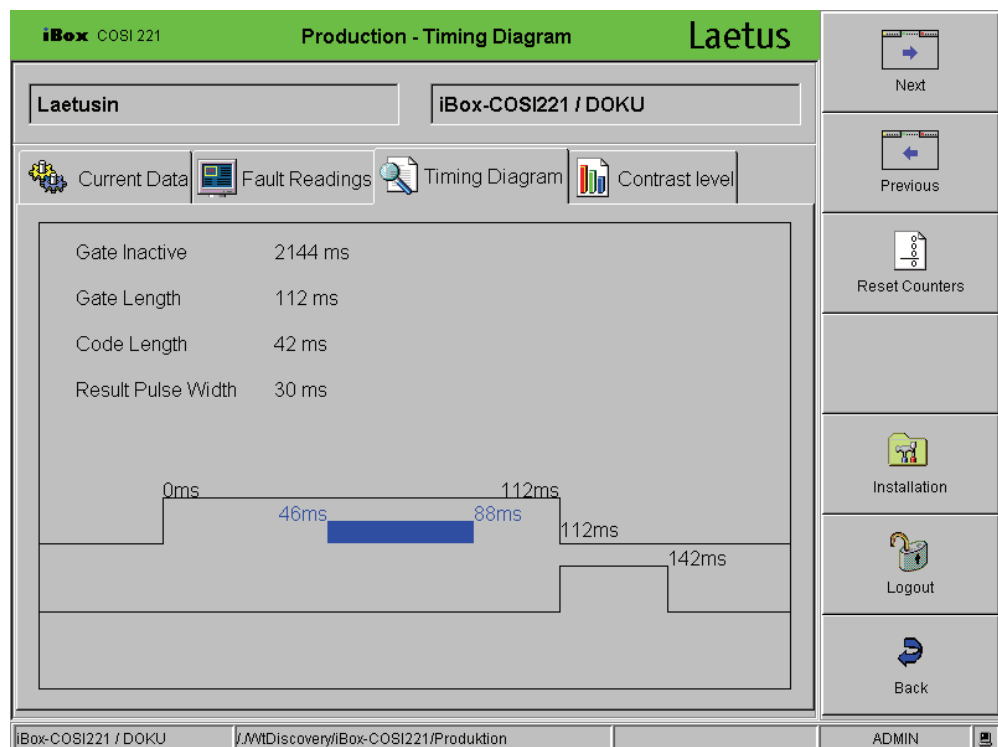


Fig. 58 Production – Timing Diagram menu

Starting with the falling edge of the last gate, all important events up to the next falling edge are listed and depicted graphically with their distance in time. This allows you to determine the position of the code within the gate. (The last reading is displayed). The system continues running while displaying the timing diagram, i.e. the machine does not need to be stopped.

The significance of the individual times is depicted in the following:

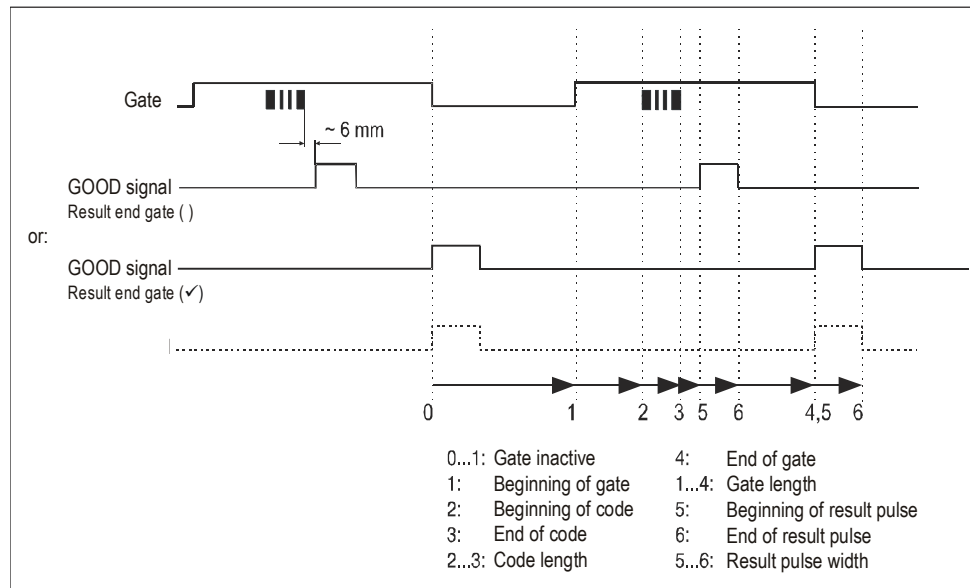
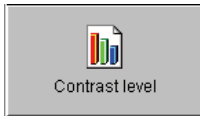


Fig. 59 Explanation of signal edges

5.2.4 Contrast Level



Press the **Contrast Level** button. The "Production – Contrast Level" menu is called up.

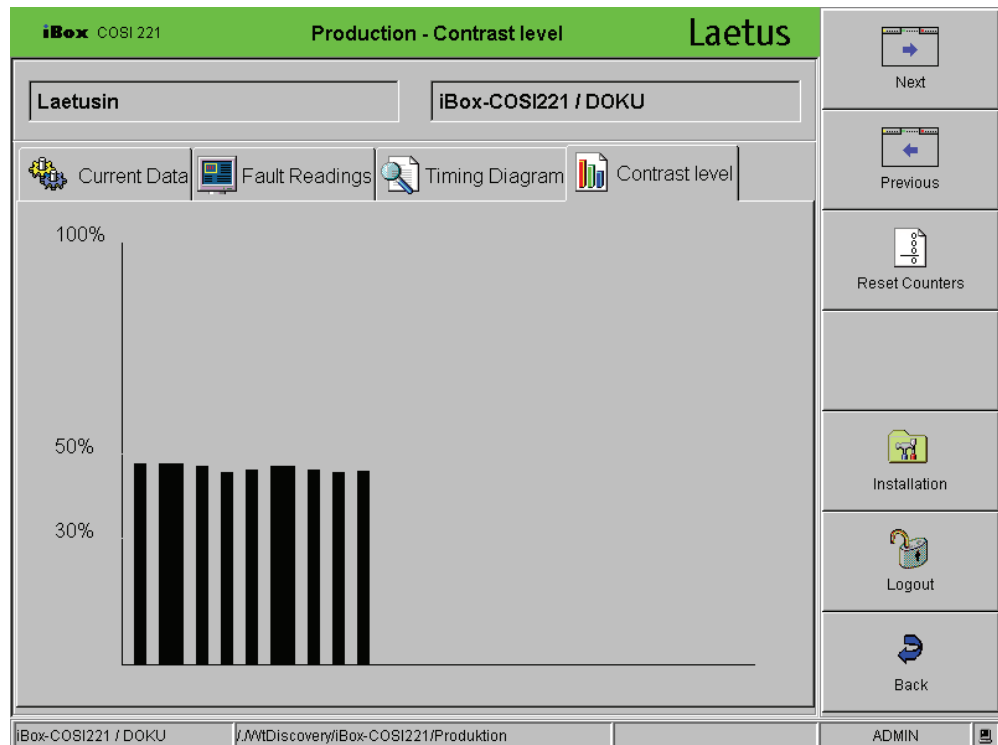


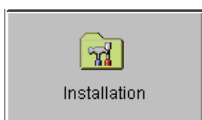
Fig. 60 Production – Contrast Level

This menu displays the contrasts of the read code bars. The broad rectangle indicates that a thick bar was recognized, the thin rectangle correspondingly indicates a thin bar. A contrast of 100 % can be attained with an immaculate optical depiction of the code if the bars were printed with an ideal black color on to an ideal white color. The higher the contrast values, the more reliable the code evaluation.



Note Contrasts under 25 % cannot be read anymore.

5.2.5 Installation



Press the **Installation** button. The "Setup - Setup1" menu is called up.

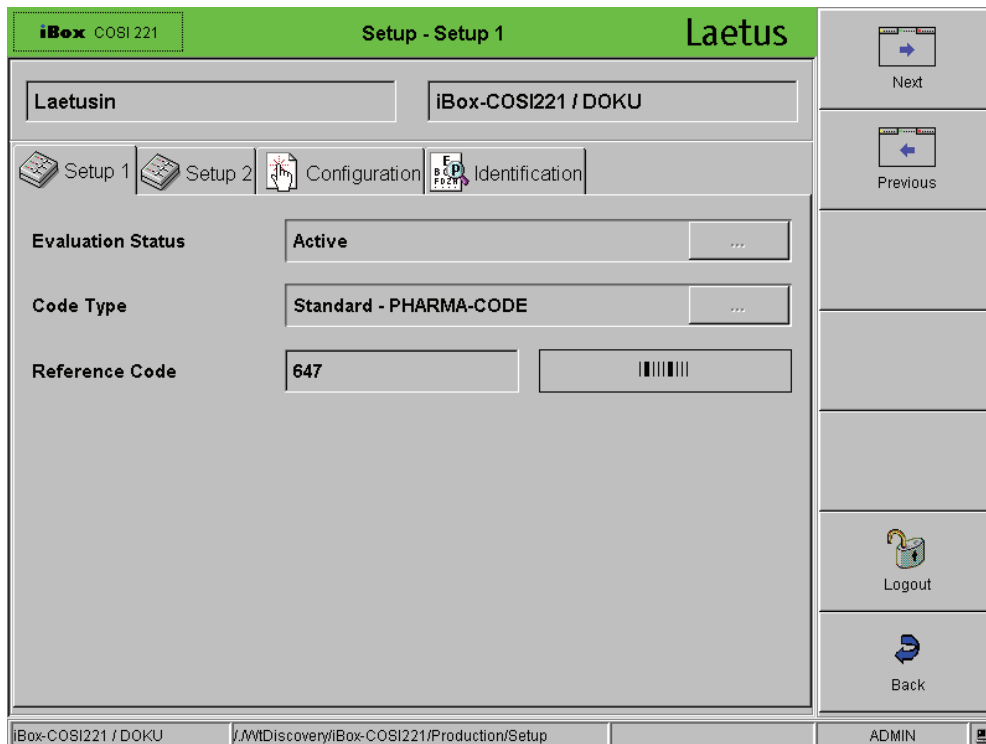


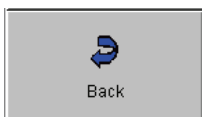
Fig. 61 Setup - Setup 1 below Production / Installation

In this menus: "Setup - Setup1", "Setup - Setup2", " Setup - Configuration", "Setup - Identification" you can view, inspect settings of the setup process.

No entries can be made in these menus.




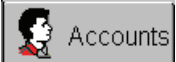



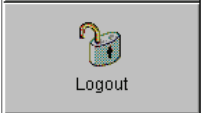

You have completed "Production – Control".



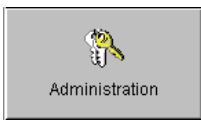
The **Back** button returns you to the "Main Menu".

6. Administration

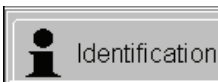
6.1 "Administration" Menu – Overview

Identification		<p>Verify administration data:</p> <ul style="list-style-type: none"> ◆ Equipment Name ◆ Equipment ◆ Serial Number ◆ Software Version ◆ Hardware Version ◆ Device Class ◆ Device Sub-Class ◆ Operational Time [s] <p>Possibility of entering name of wt-device only for the user ADMIN.</p>
Account		<p>View account and user list. Select user language.</p>
Next		<p>With Next and Previous, you can switch between the tab cards.</p>
Previous		
Save		<p>Save changed data.</p>
Login / Logout		<p>If you are logged in and do not perform any operations, you will be automatically logged out after the time period set under Auto logout time (in the "NAVIGATOR") has elapsed. The operating elements become inactive.</p>
Back		<p>The Back button returns you to the "Main Menu".</p>

6.2 "Administration" Menu in Detail



The "Administration-Identification" menu displays the data of the iBox. To call up this menu, press the **Administration** button in the "Main Menu". The following is displayed:



- ◆ **Equipment Name**
- ◆ **Equipment**
- ◆ **Serial Number**
- ◆ **Software Version**
- ◆ **Hardware Version**
- ◆ **Device Class**
- ◆ **Device Sub-Class**
- ◆ **Operational Time [s]**

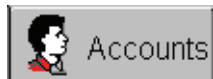
Fig. 62 Administration menu

You can assign a name to the sensor with the iBox, for example a name indicating the location of the sensor installation (in our example, we chose: "iBox-COSI221/DOKU").

Only the ADMIN user has the access rights to change a device name.

Place the cursor into the "Equipment Name" field and enter the name using a keyboard (external or on-screen keyboard). Confirm your entry by pressing ENTER.

No other entries can be made in this menu.



Press the **Accounts** button.

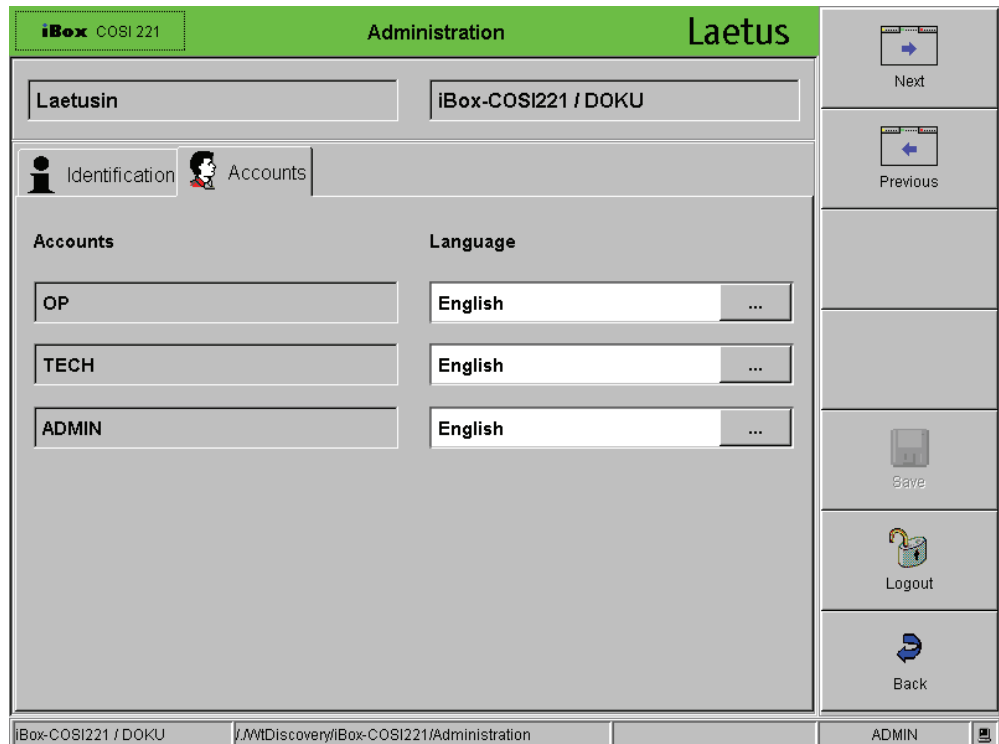


Fig. 63 Administration – Accounts



Here, you can select the user language for the selected user account. Press the "..."
button.

The selection menu for the user language appears. Select the desired user language.

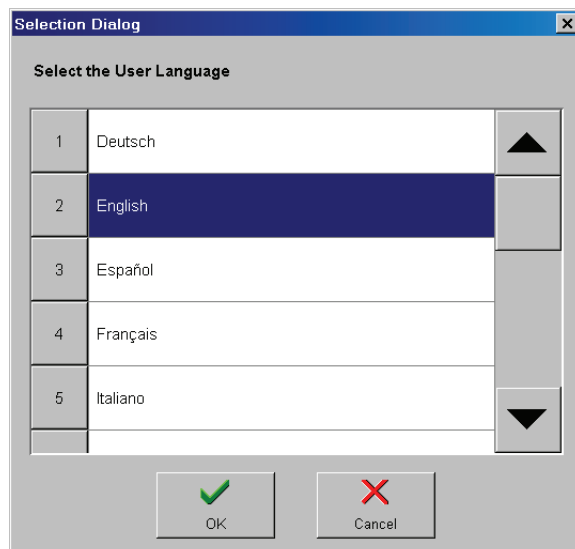
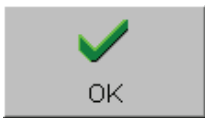
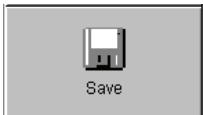


Fig. 64 Selecting the user language



Press **OK** to confirm your selection. To discard your changes, press the **Cancel** button.



Save your settings. Press the **Save** button.

If you press the **Back** button without saving your changes, the following question appears:

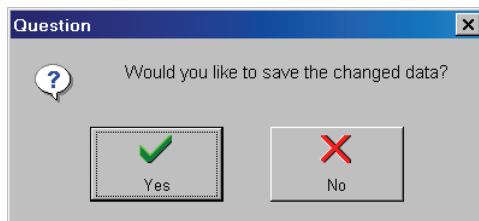
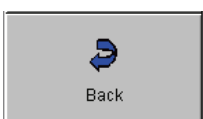


Fig. 65 Question on saving changed data

Yes accepts the changes.



You have completed the "Administration" process.



Press the **Back** button in order to return to the "Main Menu".

7. Sample Configuration

7.1 Tube Filler

The tube usually must be oriented after the code has been read when operating a tube filler. The COSI 221 disposes of a signal that switches the motor for turning the tube off at exactly the right time.

For this, you have to select the parameter "Print mark" in the "Code Type" field in the "Setup – **Setup 1**" menu. This selection allows you to define the desired type of orientation.

Then call up the "Setup – **Setup 2**" menu and select one of the "Orientation Parameters": "by Length", "by Bars" or "by Time". The following ranges are predefined:

Orientation Signal	Orientation Parameter
Deactivated	---
by Length	6–310 mm
by Bars	1–16
by Time	10–500 ms

The GOOD signal begins 6 mm after the last code bar.

The orientation types **by Time** and **by Length** cause the motor of the turning station to stop when the time in ms or the distance in mm set under "Orientation parameter" is reached.

The orientation type **by Bars** means that the tube is oriented by a code bar. The turning station has to be able to turn the tube by almost another whole revolution after the code has been read. This is the most accurate type of orientation. In this case, the number of the bar by which the tube is to be oriented must be entered under "Orientation parameter".

If the tube cannot be turned any further although orientation has not been completed, this tube is regarded as FAULT. Filling is suppressed and the tube is ejected.

8. Error Messages and Remedies

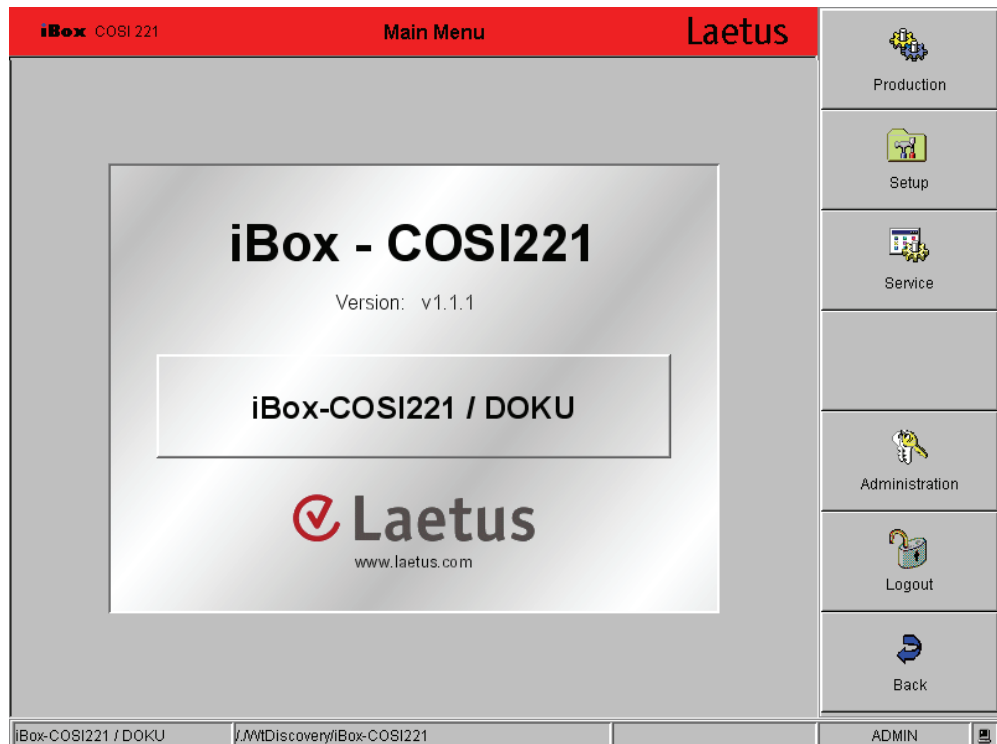


Fig. 66 Error message

Error message:

The background color of the title bar is red.

Remedy:

- ◆ Check the cable connection between the sensor (or iBox) and the evaluation unit.
- ◆ Check the power supply cable between the iBox and the sensor.