

ibaAnalyzer-Reportgenerator

Creating and Generating Reports

Manual
Issue 1.2

Measurement Systems for Industry and Energy
www.iba-ag.com

Manufacturer

iba AG
Koenigswarterstrasse 44
90762 Fuerth
Germany

Contacts

Main office	+49 911 97282-0
Fax	+49 911 97282-33
Support	+49 911 97282-14
Engineering	+49 911 97282-13
E-mail	iba@iba-ag.com
Web	www.iba-ag.com

Unless explicitly stated to the contrary, it is not permitted to pass on or copy this document, nor to make use of its contents or disclose its contents. Infringements are liable for compensation.

© iba AG 2023, All rights reserved.

The content of this publication has been checked for compliance with the described hardware and software. Nevertheless, discrepancies cannot be ruled out, and we do not provide guarantee for complete conformity. However, the information furnished in this publication is updated regularly. Required corrections are contained in the following regulations or can be downloaded on the Internet.

The current version is available for download on our web site www.iba-ag.com.

Version	Date	Revision	Author	Version SW
1.2	05-2023	E-mail report, new option, GUI	rm	8.0.0

Windows® is a brand and registered trademark of Microsoft Corporation. Other product and company names mentioned in this manual can be labels or registered trademarks of the corresponding owners.

Contents

1	About this documentation	5
1.1	Target group and previous knowledge	5
1.2	Notations	5
1.3	Used symbols.....	6
2	Introduction.....	7
2.1	What is ibaAnalyzer-Reportgenerator	7
2.2	System Requirements and Installation	8
3	The Data interface.....	9
3.1	The "Report setup" window	10
3.2	The "Info columns" window	11
3.3	The "Computed columns" window.....	15
3.4	The "Chart fields" window.....	18
3.5	The "Table data" window.....	21
3.6	The "Text variables" window	24
3.7	The "Notifications" window.....	25
3.8	The "E-mail Report" window	26
4	The Report Designer.....	28
4.1	The Project Wizard	28
4.2	The Report Designer window	29
4.2.1	The toolbar ribbon.....	30
4.2.2	The Objects, Layers, and Preview windows.....	31
4.2.3	The "Properties" window	33
4.2.4	The "Report view" window.....	33
4.2.5	The "Variables-/Field-List" window	34
4.3	The report output.....	36
4.3.1	Generating a report manually	36
4.3.2	The "Report info" window	38
4.4	Command line options	39
4.4.1	Using the post-processing command	40
5	An exhaustive example	42

5.1	Basic report definition	44
5.2	Adding data to the report	50
5.3	Layers and dynamic tables.....	62
6	Support and contact.....	67

1 About this documentation

This documentation describes the function and application of the software *ibaAnalyzer-Reportgenerator*.

1.1 Target group and previous knowledge

This manual is aimed at qualified professionals who are familiar with handling electrical and electronic modules as well as communication and measurement technology. A person is regarded as professional if he/she is capable of assessing safety and recognizing possible consequences and risks on the basis of his/her specialist training, knowledge and experience and knowledge of the standard regulations.

This documentation addresses in particular professionals who are in charge of analyzing measured data and process data. Because the data is supplied by other iba products in data files the following knowledge is required or at least helpful when working with *ibaAnalyzer-Reportgenerator*:

- Operating system Windows
- ibaAnalyzer (open and analyze iba data files)

1.2 Notations

In this manual, the following notations are used:

Action	Notation
Menu command	Menu <i>Logic diagram</i>
Calling the menu command	<i>Step 1 – Step 2 – Step 3 – Step x</i> Example: Select the menu <i>Logic diagram – Add – New function block</i> .
Keys	<Key name> Example: <Alt>; <F1>
Press the keys simultaneously	<Key name> + <Key name> Example: <Alt> + <Ctrl>
Buttons	<Key name> Example: <OK>; <Cancel>
Filenames, paths	<i>Filename, Path</i> Example: <i>Test.docx</i>

1.3 Used symbols

If safety instructions or other notes are used in this manual, they mean:

Danger!



The non-observance of this safety information may result in an imminent risk of death or severe injury:

- Observe the specified measures.
-

Warning!



The non-observance of this safety information may result in a potential risk of death or severe injury!

- Observe the specified measures.
-

Caution!



The non-observance of this safety information may result in a potential risk of injury or material damage!

- Observe the specified measures
-

Note



A note specifies special requirements or actions to be observed.

Tip



Tip or example as a helpful note or insider tip to make the work a little bit easier.

Other documentation



Reference to additional documentation or further reading.

2 Introduction

2.1 What is ibaAnalyzer-Reportgenerator

ibaAnalyzer-Reportgenerator is an integral part of the software *ibaAnalyzer* and provides the user with the tools to create customized reports. These tools enable the free design and layout of analysis, quality, production and fault reports with different output formats.

An analysis report can be used to present the signal graphs from *ibaAnalyzer* as well as all kinds of process data (such as technostings, calculated values, etc.). Graphic objects (squares, circles, pictures, etc.), diagrams, editable text fields, bar codes as well as charts and tables can also be generated.

A report can be compiled and prepared on a workpiece-related basis and can be subsequently printed or exported into a file (for example, pdf format). Furthermore, automatic generation and output of a report is also possible using *ibaDatCoordinator* or via a post-processing command from *ibaPDA*.

The manual is divided into 3 major parts:

- The description of the data interface between *ibaAnalyzer* and the combit "List & Label Reporting Tool", see chapter ↗ *The Data interface*, page 9.
- A short description of the combit "List & Label Reporting Tool Report Designer", see chapter ↗ *The Report Designer*, page 28.
- A comprehensive example for the design of an individual report with exhaustive explanations for frequently used objects, see chapter ↗ *An exhaustive example*, page 42.

Other documentation



A more comprehensive description of the combit "List & Label Reporting Tool Report Designer" can be found in combit's online documentation;

see: <https://www.combit.net/en/reporting-tool/royalty-free-designer/>

Note



The iba AG offers standard training courses on *ibaAnalyzer-Reportgenerator*. Please visit our website for course times or contact your local iba representative.

2.2 System Requirements and Installation

For the usage of *ibaAnalyzer-Reportgenerator* the following is needed:


- An installation of *ibaAnalyzer*
- A standard printer driver must be installed on the computer.

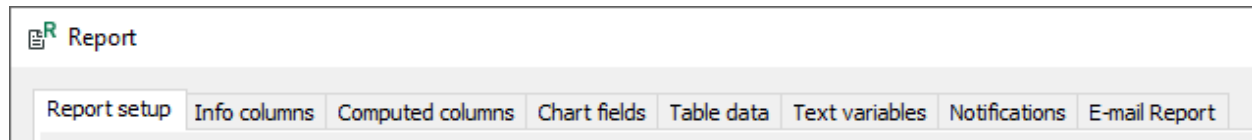
Note



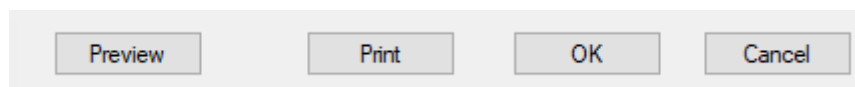
A separate installation of *ibaAnalyzer-Reportgenerator* is not required since it is installed automatically by the *ibaAnalyzer* installer.

3 The Data interface

ibaAnalyzer-Reportgenerator is started by clicking on the symbol  in the main toolbar of *ibaAnalyzer*. This opens the *Report* window with the *Report setup* window automatically selected. The *Report* window is an easy to use interface for providing data to the combit "List & Label Reporting Tool Report Designer" in various formats. The following windows are available for defining the variables which can be used to create a report. Every window is explained in detail in the subsequent subsections.



The following buttons are always visible and can be used to print, and save the report.



<Preview>

This opens the *Print Options* window with restricted options (see chapter [↗ The report output](#), page 36).

<Print>

This opens the *Print Options* window containing all options (see chapter [↗ The report output](#), page 36).

<OK>

Keeps all changes and returns to the *ibaAnalyzer* window.

<Cancel>

Ignores all changes and returns to the *ibaAnalyzer* window.

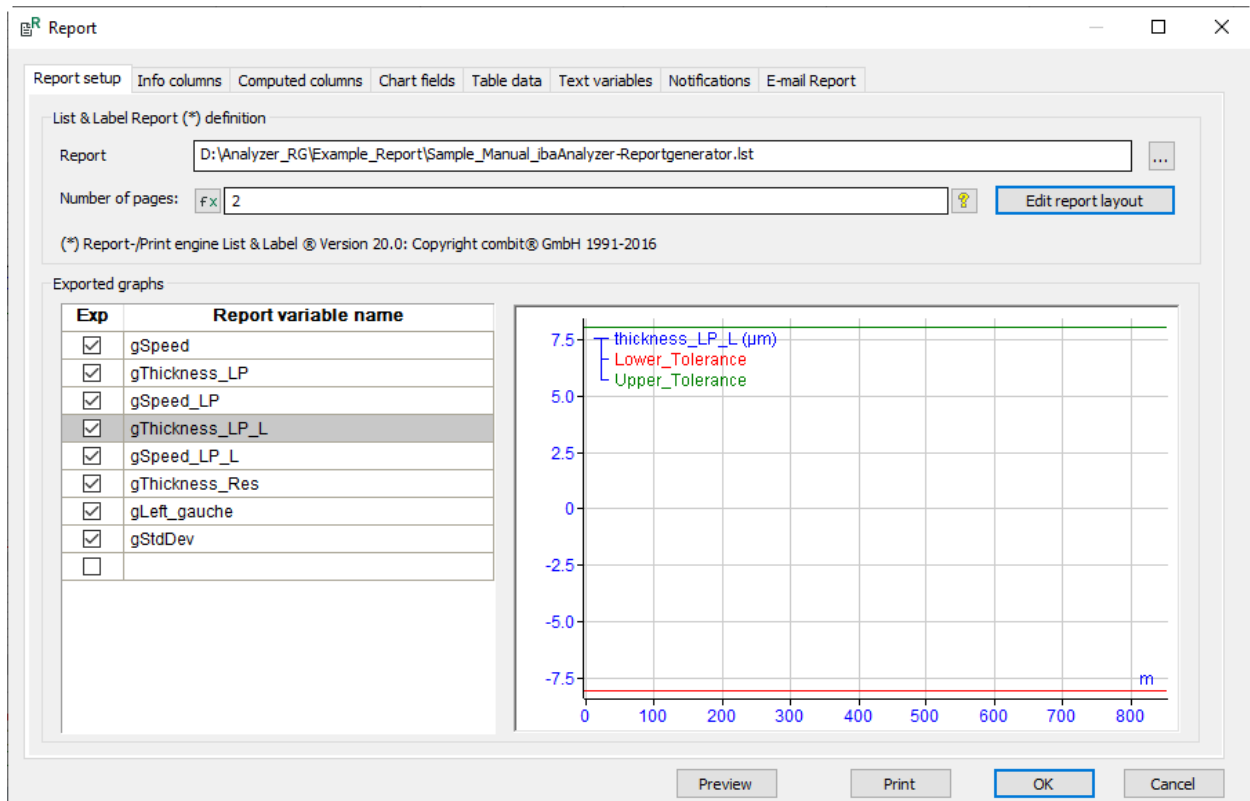
Note



Changes are only saved permanently, if the PDO file is also saved.


3.1 The "Report setup" window

The standard view when the Reportgenerator is started is the *Report setup* window.




The upper part of the window contains general settings and a button to start the combit "List & Label Reporting Tool Report Designer".

Report

Report designs can be saved as .lst files. Existing files can be found using the browser  and edited as required. This field can be left empty if a new report is to be created.

Number of pages

This specifies the number of pages which will be output to a printer/file. This number of pages will always be output irrespective of the number of pages specified in the Report Designer. However, if the report includes a dynamic table the number of pages may be increased.

The number of pages can also be a function defined using the expression builder . This is useful if the number of pages shall depend on the signals in the dat file.

<Edit report layout>

Starts the Report Designer. This should only be selected once all the parameters in the *Report* window have been defined. See chapter [↗ The Report Designer](#), page 28 for details.

In the lower part of the window the *Exported graphs* are selected.

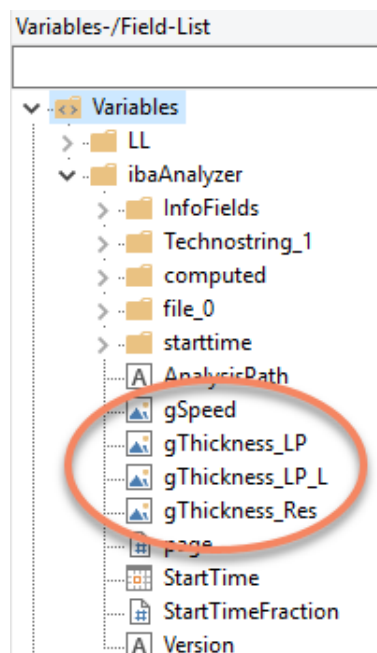
The graphs which are to be displayed in the report must be selected here by clicking the appropriate check box in the *Exp* column. The rows in the *Report variable name* correspond to the assigned variable name which will be used in the Report Designer.

Exported graphs	
Exp	Report variable name
<input checked="" type="checkbox"/>	gSpeed
<input type="checkbox"/>	
<input checked="" type="checkbox"/>	gThickness_LP
<input type="checkbox"/>	gSpeed_LP
<input checked="" type="checkbox"/>	gThickness_LP_L
<input type="checkbox"/>	gSpeed_LP_L
<input checked="" type="checkbox"/>	gThickness_Res
<input type="checkbox"/>	gLeft_gauche
<input type="checkbox"/>	gRight_gauche
<input type="checkbox"/>	gStdDev

Clicking on an individual row causes the preview window on the right to display the corresponding signal graph (like e.g. "gThickness_LP_L" in the figure above).

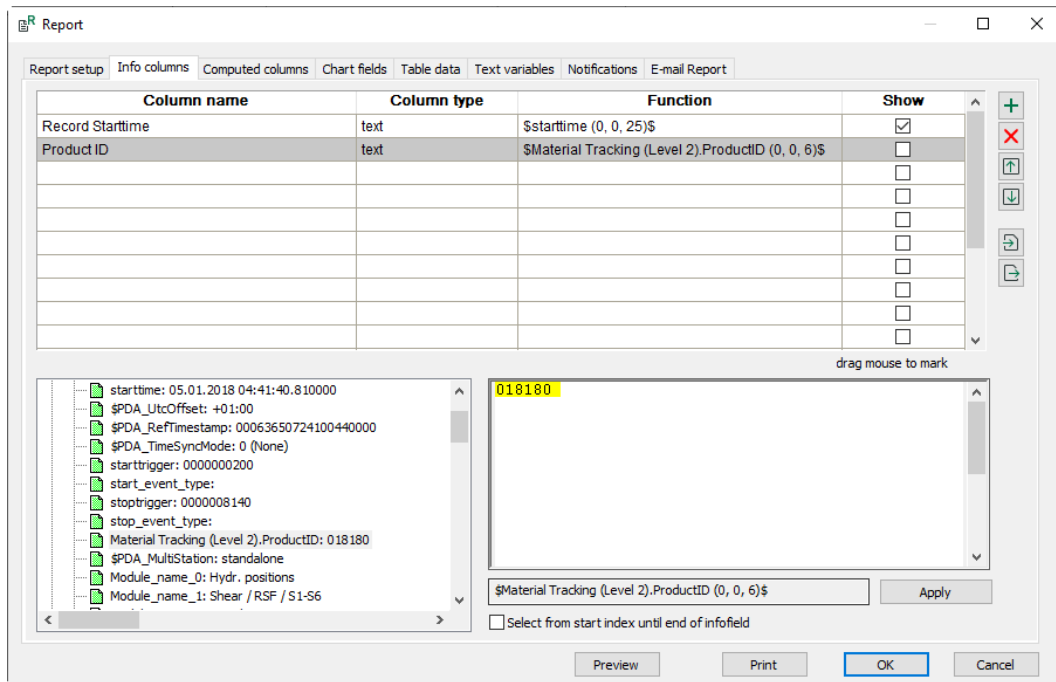
The *Report variable name* should be used to assign a suitable name to the signal as this name will be shown in the Report Designer. Any signal graphs which are required for the report must be ticked off in the *Exp* column.

The selected graphs are displayed in the *Variables-/Field-List* of the Report Designer:



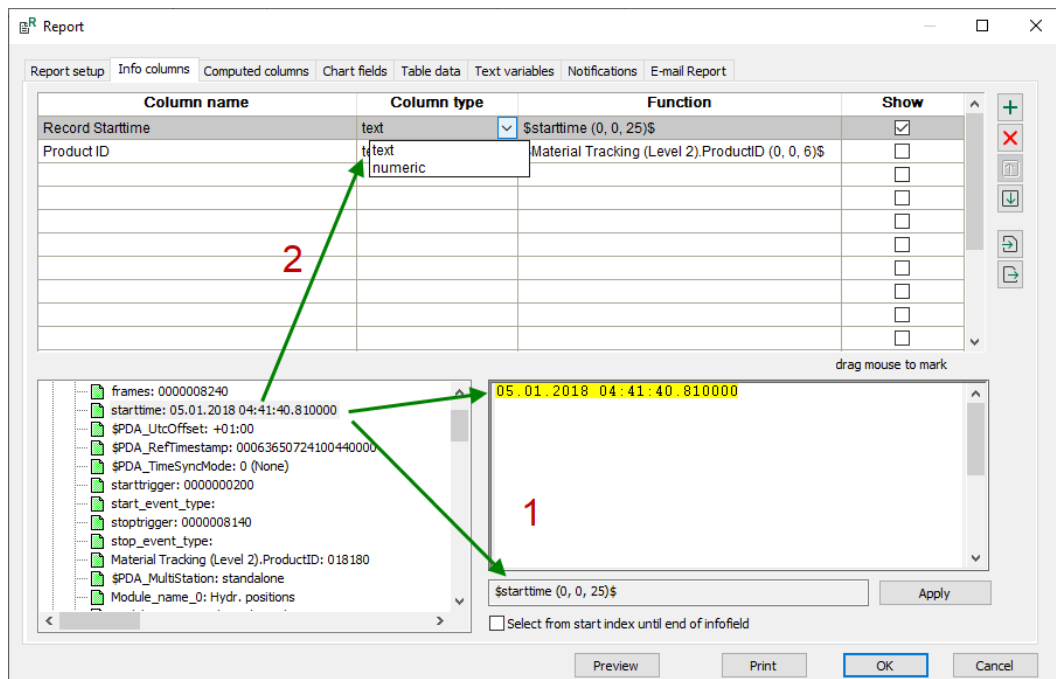
3.2 The "Info columns" window

This window is used to assign additional information from the "info" section of a data file to individual fields which are to be displayed in the report layout. All info fields which are available in the data file can be used. Specifically configured info fields can be used in addition to the standard information in the data files.



The available info fields are displayed in the lower left part of the dialog. By clicking on the desired source field the field information will be transferred to the processing field.

By default the complete content is highlighted in yellow and is transferred to the column field once the <Apply> button is clicked.



The info columns window with the processing field (1) and the column field (2).

It is also possible to select a group of characters from the contents of the processing field. To select an excerpt, click on the first of the required characters, drag the mouse to the last required character and release it. By pressing <Apply> the excerpt from the source string is transferred to the column field.

Column name	Column type	Function
RecordStartTime	char (STR)	\$starttime (0, 0, 9)\$

C:\Users\Karl\Nextcloud\04_Manual_ibaAnalyzer
12.03.2014 03:28:50.501589

It is also possible to select all characters after a starting position. This is done by clicking on the first character and then clicking on the *Select from start index to end of info field* checkbox.

Note



In the *Show* column, the individual fields can be selected to be displayed in the *Report info* information window (see chapter [↗](#) *The "Report info" window*, page 38).

For faster processing it is also possible to double-click on the source field. The column line will be filled in addition to the processing field. The *Column type* can be selected from the drop-down list, which contains the available data types. The *Column name* can be renamed if required. The range of characters within the *Function* can be altered in the processing window.

Note



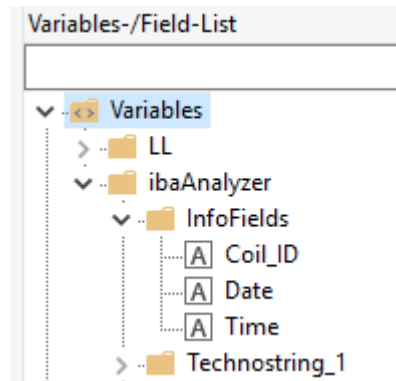
For reports only "text" and "numeric" types will be available.
Blanks and hyphens will be converted to underscores in the Report Designer.
If full stops "." are used the preceding text will specify a directory in the Report Designer (Example: see the chapter [↗](#) *The "Computed columns" window*, page 15).
Avoid special characters!

Caution



When marking the characters in the technostring area, be sure that the correct row in the table above has been selected. The last marked excerpt before leaving the row or closing the window is valid and will be kept.

The "info" data are available in the *Variables-/Field-List* of the Report Designer.



Procedures for manipulating info columns

Several options are available for sorting, import and export of the selected info fields.

	Add line	Adds a new empty line above the currently selected line.								
	Delete line	Deletes the currently selected line.								
	Move line up	Moves currently selected line up.								
	Move line down	Moves currently selected line down.								
	Import info file	Import info column information from text file. The "Open text file" dialog appears.								
		Alternative: right click on header, select "Import"								
		<table><thead><tr><th>Column name</th><th>Column type</th></tr></thead><tbody><tr><td>PDA_StartTime</td><td>char(26)</td></tr><tr><td>PDATimeSyncMode</td><td>char(10)</td></tr><tr><td>PDA_RefTimestamp</td><td>char(20)</td></tr></tbody></table>	Column name	Column type	PDA_StartTime	char(26)	PDATimeSyncMode	char(10)	PDA_RefTimestamp	char(20)
Column name	Column type									
PDA_StartTime	char(26)									
PDATimeSyncMode	char(10)									
PDA_RefTimestamp	char(20)									
	Export info file	Export info column information to text file. The "Save text file" dialog appears.								
		Alternative: right click on header, select "Export"								
		<table><thead><tr><th>Column name</th><th>Column type</th></tr></thead><tbody><tr><td>PDA_StartTime</td><td>char(26)</td></tr><tr><td>PDATimeSyncMode</td><td>char(10)</td></tr><tr><td>PDA_RefTimestamp</td><td>char(20)</td></tr></tbody></table>	Column name	Column type	PDA_StartTime	char(26)	PDATimeSyncMode	char(10)	PDA_RefTimestamp	char(20)
Column name	Column type									
PDA_StartTime	char(26)									
PDATimeSyncMode	char(10)									
PDA_RefTimestamp	char(20)									

Tip



Import and export of info/computed columns settings

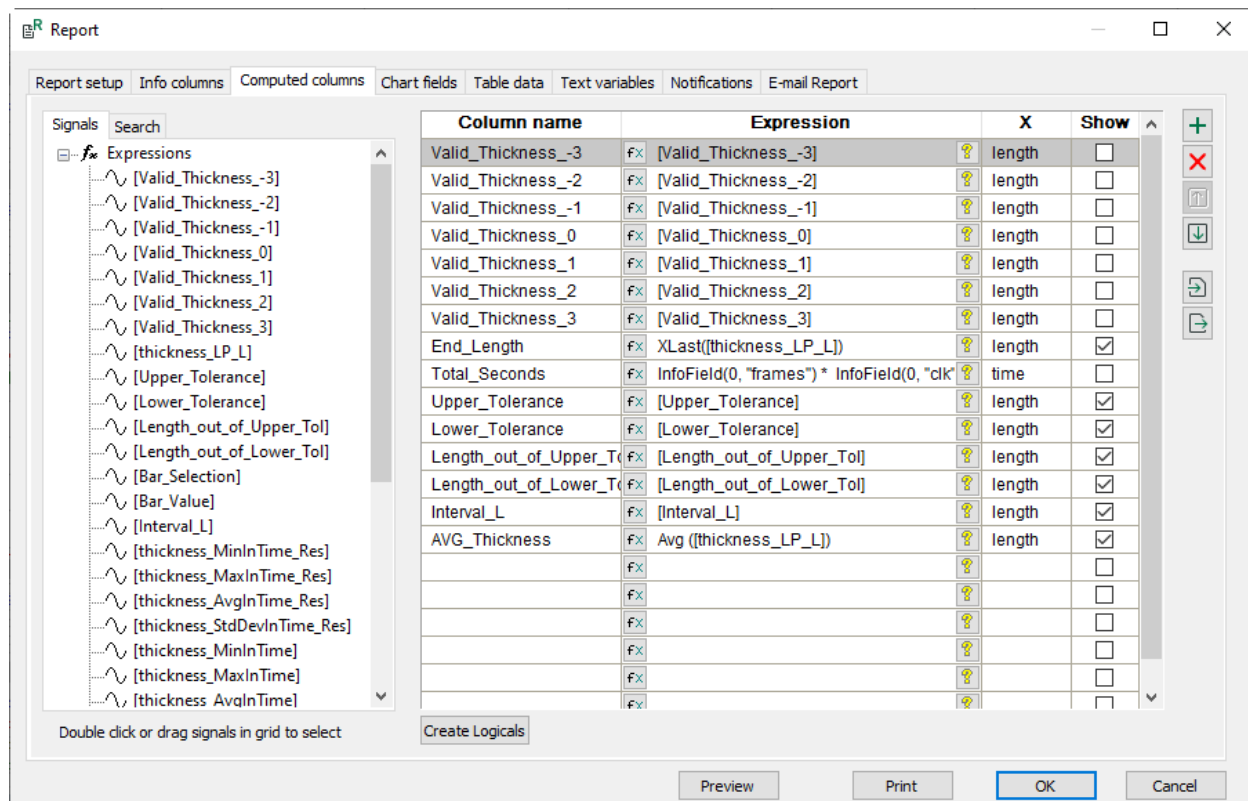
This function is very helpful if the same expressions are to be used elsewhere, e.g. for the data base extraction or when handling large numbers of computed columns.

The exported text file is easy to edit using an editor or MS Excel.

An import always overwrites all current columns.

3.3 The "Computed columns" window

In the *Computed columns* window computations can be carried out like in the signal grid. These operations will create one value for the associated signal (e.g. the average, maximum, or minimum of all the data in one signal). Values which are defined as *Computed columns* will be passed on to the Report Designer. Since none of the *ibaAnalyzer* functions of the expression builder are available in the Report Designer, all computations must be made here.



Note



The procedures on the right side for manipulating the *Computed columns* are the same as described in chapter [↗ The "Info columns" window](#), page 11.

Select and prepare a signal

Double-click on required signal (drag and drop also works). The signal will be copied into the *Computed columns* list.

The *Column name* initially takes the source signal name but this can be altered as required.

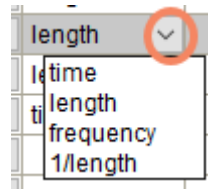
The *Expression* column initially takes the source signal number or name. The expression can be altered by selecting the Expression builder .

Note



If no explicit function is specified in the expression *ibaAnalyzer* automatically uses the average.

The "X"-axis cell is automatically filled with the "time" cycle mode. This must be altered to the cycle mode of the selected signal by choosing one of the options in the drop-down menu. Failure to do this will prevent the signal value from being transferred to the Report Designer.

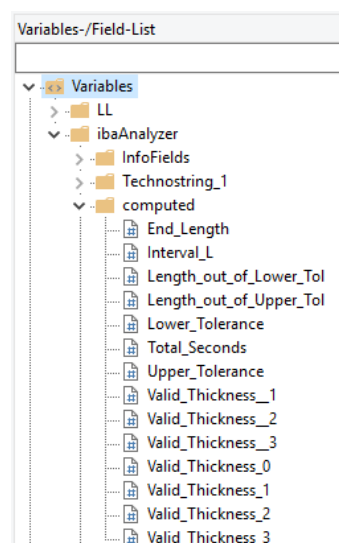


Note



The checkbox in the *Show* column must be activated in order for the value to be available in the *Report info* window (see chapter [↗ The "Report info" window](#), page 38)

The *Computed column* data are located in the *Variables-/Field-List* of the Report Designer.



Tip

Using a full stop "." in the *Column name* instructs the Report Designer to create a directory named by the preceding characters, which contains all signals which have this prefix.

Using e.g. "Valid.Thickness" creates the following structure in the *Variables-/Field-List* of the Report Designer.

Computed columns | Chart fields | Table data | Text variables | Notifications | E-mail Report

	Column name	Expression	X	Show
textcloud\04_Manual_	Valid.Thickness_-3	[Valid_Thickness_-3]	length	<input type="checkbox"/>
	Valid.Thickness_-2	[Valid_Thickness_-2]	length	<input type="checkbox"/>
	Valid.Thickness_-1	[Valid_Thickness_-1]	length	<input type="checkbox"/>
	Valid.Thickness_0	[Valid_Thickness_0]	length	<input type="checkbox"/>
	Valid.Thickness_1	[Valid_Thickness_1]	length	<input type="checkbox"/>
	Valid.Thickness_2	[Valid_Thickness_2]	length	<input type="checkbox"/>
	Valid.Thickness_3	[Valid_Thickness_3]	length	<input type="checkbox"/>
	End_Length	XLast(thickness_LP_	length	<input checked="" type="checkbox"/>

crnss_-3]
crnss_-2]
crnss_-1]
crnss_0]
crnss_1]
crnss_2]

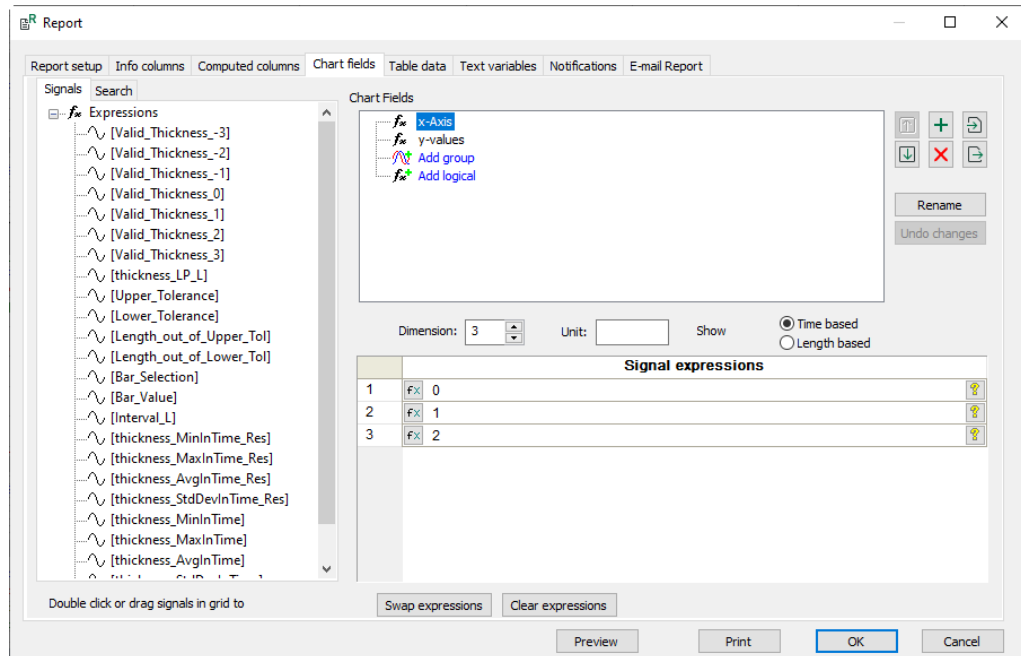
Variables-/Field-List

- Variables
 - LL
 - ibaAnalyzer
 - InfoFields
 - Technostring_1
 - computed
 - Valid
 - Thickness_1
 - Thickness_2
 - Thickness_3
 - Thickness_0
 - Thickness_1
 - Thickness_2
 - Thickness_3
 - End_Length
 - Interval L

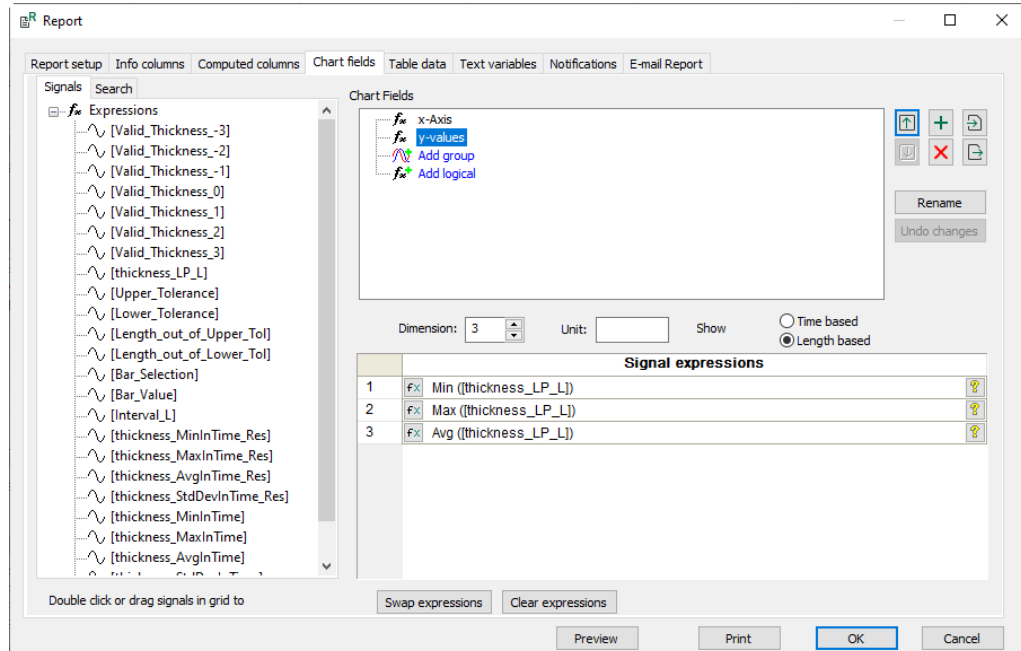
3.4 The "Chart fields" window

The *Chart fields* window is used to provide data which are to be used by diagrams specified in the Report Designer (e.g. bar, scatter, or pie diagram).

A typical view of the chart field (x-Axis) window:



A typical view of the chart field (y-values) window:



For the creation of chart fields the signal tree of *ibaAnalyzer* is available in the left column. By default the "ChartField_001" is predefined and can be manipulated.

To the right of the *Chart field* window the usual buttons for manipulation are present. The button <Rename> permits the selected chart field name to be changed. With <Undo changes> any

changes in the *Chart fields* window are discarded providing they have not been kept (this is indicated by a red exclamation mark).

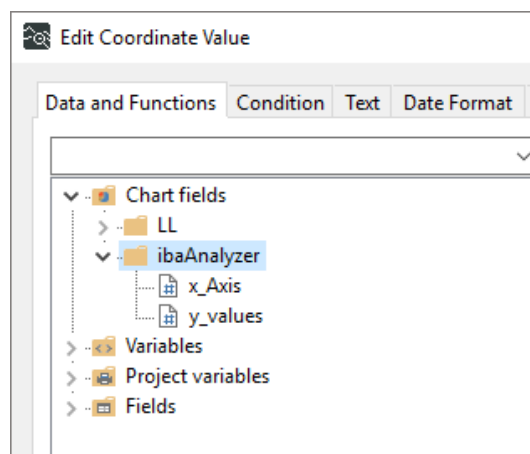
For every chart field the *Dimension* and the *Unit* can be set manually. It is possible to distinguish between time based and length based signals.

Based on the selected chart field, enter the expression for the data to be displayed. Each row corresponds to one data point. With the <Reset signal expressions> button all expressions will be deleted.

Note



The „Chart field" data can only be accessed when creating/editing a chart in the Report Designer. The data are located in the *Variables-/Field-List* of the Report Designer.



Example

To create a simple bar chart with minimum, average, and maximum values we <Rename> the initially created "ChartField_001" to e.g. "Values" and assign the values 0, 1, and 2. Of course the dimension has to be set to 3. This field is used to specify the x-axis of the resulting diagram, i.e. the number of bars.

Use **+** to open and name a second field corresponding to the y-axis (e.g. "Thickness").

This axis defines the value of the data points, i.e. the bar height. Remember to set the "Dimension" to the same number as the x-axis. In this case select the "time based" option.

Enter the values in the *Signal expressions* fields.

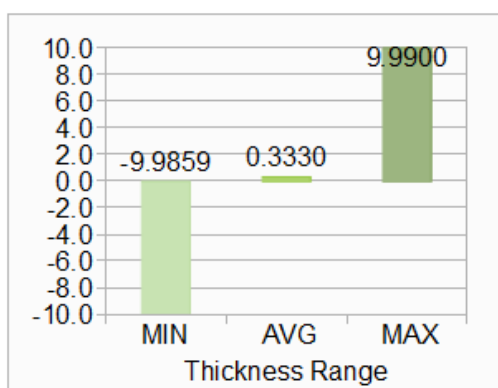
Chart Fields

f_x! Values
f_x! Thickness

Dimension: 3 Unit: mm Show ☒ Time based ☐ Length based

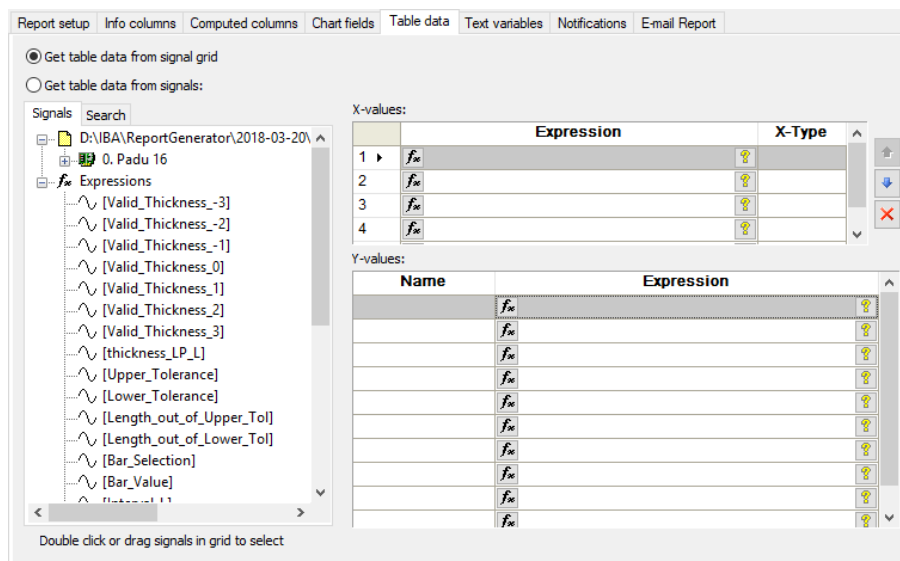
Signal expressions		
1	f_x!	[Minimum_Thickness]
2	f_x!	[Average_Thickness]
3	f_x!	[Maximum_Thickness]

The settings are kept for the report when another report window is opened. The result in the Report Designer could e.g. look like this:



3.5 The "Table data" window

This window is used only to select data for dynamic report tables. The length of these tables depends on the current quantity of data recorded.



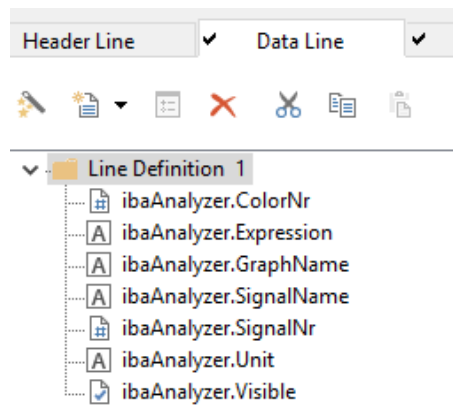
In general two options are offered to generate table data.

Get table data from signal grid

The column data is taken directly from the *Signal definitions* window.

Signal definitions						
	Show	SignalName	Expression	Unit	Color	nickn...
1	<input checked="" type="checkbox"/>	Speed	f_w [0:8]	m/mil	blue	1
2	<input type="checkbox"/>	active	f_w Debounce([0:8]>1,5)		blue	1
3	<input type="checkbox"/>	pas_n	f_w (Count ([active],0,5,0,1,0) +1)/2		blue	1
4	<input checked="" type="checkbox"/>	thickness_LP	f_w XCutValid ([0:0],[pas_n]=5)	μm	blue	1
5	<input checked="" type="checkbox"/>	speed_LP	f_w XCutValid ([0:8],[pas_n]=5)	m/mil	blue	1
6	<input checked="" type="checkbox"/>	thickness_LP_L	f_w [thickness_LP_L]	μm	blue	1
7	<input checked="" type="checkbox"/>	Lower_Tolerance	f_w [Lower_Tolerance]		red	1
8	<input checked="" type="checkbox"/>	Upper_Tolerance	f_w [Upper_Tolerance]		green	1
9	<input checked="" type="checkbox"/>	speed_LP_L	f_w TimeToLength([speed_LP],[speed_LP]/60,1)	m/mil	blue	1
10	<input checked="" type="checkbox"/>	thickness_LP_L	f_w [thickness_LP_L]	μm	blue	1
11	<input checked="" type="checkbox"/>	thickness_MaxInTime	f_w [thickness_MaxInTime]	μm	red	2
12	<input checked="" type="checkbox"/>	thickness_AvgInTime	f_w [thickness_AvgInTime]	μm	olive	2
13	<input checked="" type="checkbox"/>	thickness_MinInTime	f_w [thickness_MinInTime]	μm	green	2
14	<input checked="" type="checkbox"/>	Left gauche	f_w [0:0]	μm	blue	1

It is made available to the *Variables-/Field-List* of the Report Designer.



Get table data from signals

The column data is taken from the signals specified in the X-Axis and Y-Axis windows.

X-values

X-values:			
		Expression	X-Type
1	f_{sc}	Resample ([80.5:0],10)	? time
2	f_{sc}		?
3	f_{sc}		?
4	f_{sc}		?

The sampling period of the signal specified here determines the table data sampling period. For example, the resample function above specifies 10 seconds. See "Time" column in output report below.

Y-values

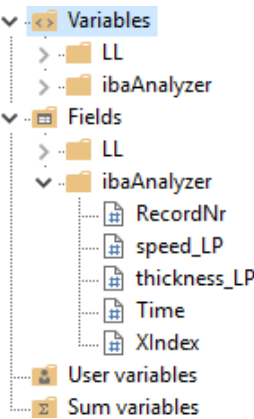
The data columns to be displayed in the table are entered here:

X-values:			
		Expression	X-Type
1	f_{sc}	Resample([thickness_LP],10)	? time
2	f_{sc}		?
3	f_{sc}		?
4	f_{sc}		?

Y-values:			
Name		Expression	
thickness_LP	f_{sc}	[thickness_LP]	?
speed_LP	f_{sc}	[speed_LP]	?
	f_{sc}		?
	f_{sc}		?

The names will appear in the Report Designer.

The data are made available to the *Variables-/Field-List* of the Report Designer.



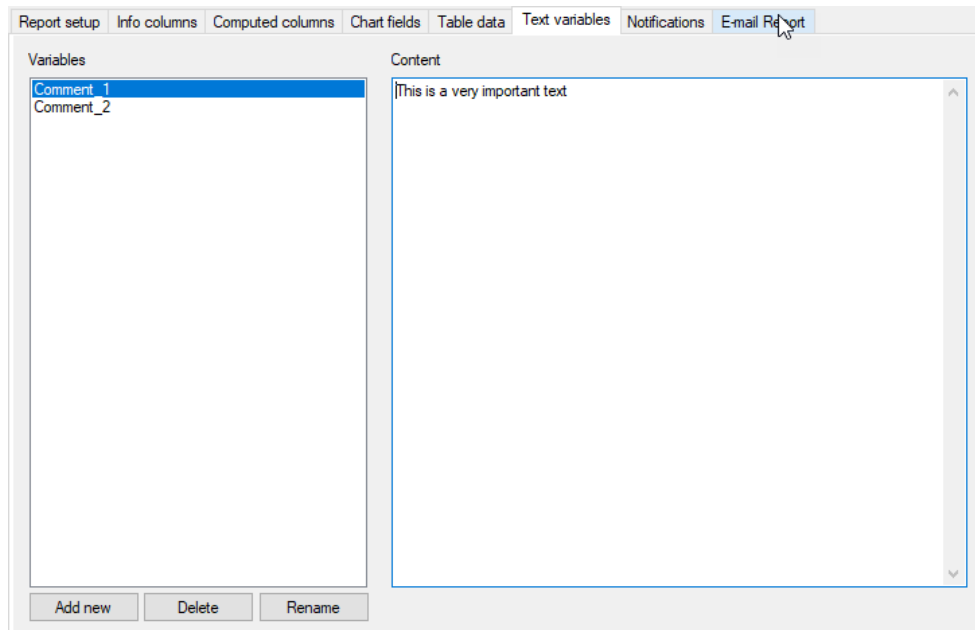
Example of corresponding output report

The chapter [Layers and dynamic tables](#), page 62 will show how variable length tables are created.

RecordNr	Time (s)	speed_LP (m/min)	thickness_LP (um)
1.00	0.00	1.07	9.98
2.00	10.00	65.81	9.98
3.00	20.00	114.70	-2.58
4.00	30.00	213.90	-2.72
5.00	40.00	301.87	1.54
6.00	50.00	445.82	1.18
7.00	60.00	501.44	-2.63
8.00	70.00	501.41	-0.30
9.00	80.00	501.36	1.06
10.00	90.00	501.42	-1.67
11.00	100.00	501.41	0.54
12.00	110.00	501.42	-1.79
13.00	120.00	501.42	0.77
14.00	130.00	501.46	1.58
15.00	140.00	501.38	-0.15
16.00	150.00	501.36	-0.83
17.00	160.00	501.38	-1.77
18.00	170.00	501.42	0.41
19.00	180.00	501.31	-1.08
20.00	190.00	501.36	1.11
21.00	200.00	501.42	0.68

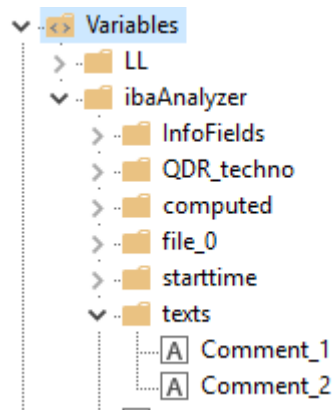
3.6 The "Text variables" window

The *Text variables* window is used to assign texts to variables which are included in the report design. The contents can be changed at any time without having to change the report design.



The variables can be manipulated with the <Add new>, <Delete>, and <Rename> buttons. The content can be specified in the right column.

The "info" data are available in the *Variables-/Field-List* of the Report Designer.



3.7 The "Notifications" window

The *Notifications* window provides several means of communication triggered by a selected status of the reporting process. Note that the report, if created, is not sent.

The possibilities for different notifications are via

E-mail address

Enter the address and select the reporting status.

Note



A standard e-mail client (e.g. MS Outlook, Outlook Express, etc.) must be installed on the computer.

Write to Windows application event log

Select the reporting status. The message is written into the Windows event log user area.

The following send conditions are available for each individual type of notification:

- On completion
Notification is made when the output procedure has been completed, success or failure is irrelevant.
- On success
Notification is made when report output is successful.
- On failure
Notification is made when any report output has failed.
- On failure (1st failure only)
Notification is made when first report output has failed.

3.8 The "E-mail Report" window

This window can be used to automatically send the constructed report via e-mail. A condition can be specified when and to whom a report shall be sent.

The screenshot shows the 'E-mail Report' window with the following details:

- Report setup** | Info columns | Computed columns | Chart fields | Table data | Text variables | Notifications | **E-mail Report**
- E-mail condition:** `IF([quality]<50,True(),False())`
- ☒ **Process expressions in Subject or Body**
- To:** support@iba-ag.com
- Cc:**
- BCC:**
- Subject:** Bad quality report for {ToText([CoilID])}
- Body:** Report sent when quality is less than 50%
- E-mail settings** button

E-mail condition

Enter the condition required for the e-mail to be sent.

Process expressions in Subject or Body

If this option is enabled, it is possible to use *ibaAnalyzer* expressions (the result should be a text signal) in the email body or the subject. To be interpreted correctly, a complete and valid *ibaAnalyzer* expression needs to be surrounded by curly brackets "{" and "}".

Example: "Report for Product { [product_id_textsignal] }"

Recipient information

The fields *To*, *Cc*, *BCC*, *Subject*, and *Body* are used to specify the recipient and the content of the e-mail to be sent apart from the attached report.

<E-Mail settings>

This opens the *Mail Settings* window. Use this dialog so specify the e-mail account which is used to send the e-mail.

The screenshot shows the 'Mail Settings' dialog box with the following details:

- Provider** tab
- Send via...** dropdown menu: Simple MAPI (system dialog)
- Choose a provider from this list.** button
- Send a Test Mail** button
- OK** and **Cancel** buttons

The following options are available in the *Mail Settings* window:

Send via

Select provider from the drop-down list.

<OK>

Save and return to the *E-mail Report* window

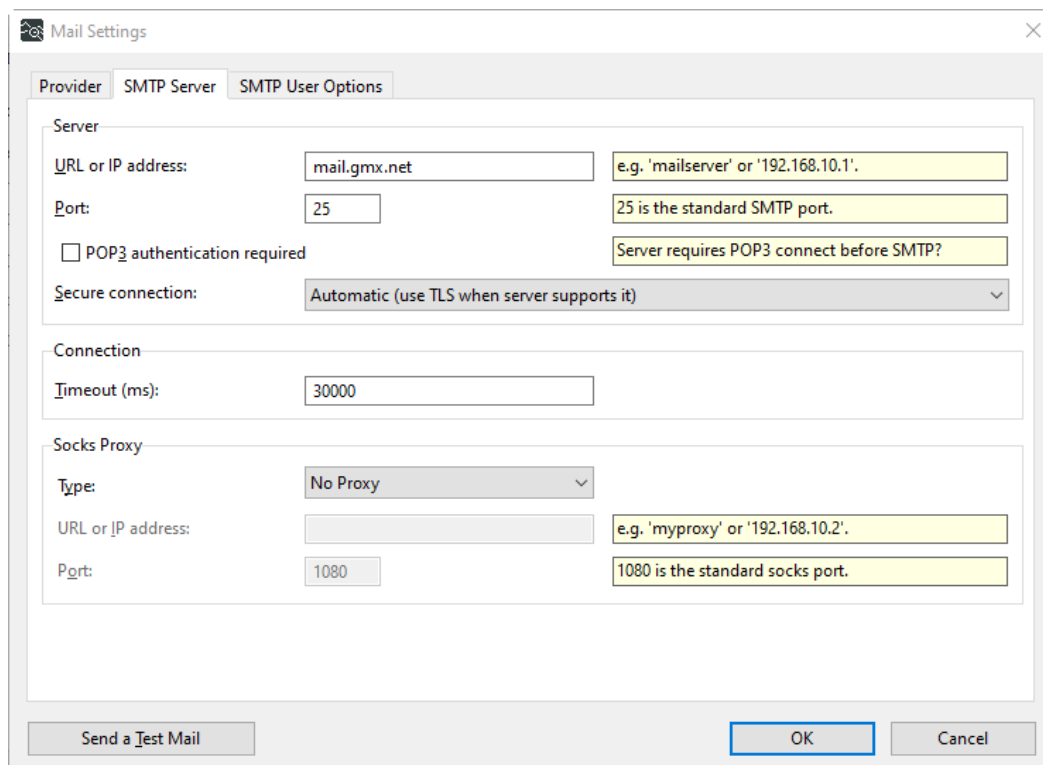
<Cancel>

Delete changes and return to the *E-mail Report* window

<Send a Test Mail>

Sends a test mail to check the functionality.

For the selected e-mail provider additional settings may be required.



The image shows a 'Mail Settings' dialog box with three tabs: 'Provider', 'SMTP Server', and 'SMTP User Options'. The 'SMTP Server' tab is active. It contains several sections: 'Server' with fields for 'URL or IP address' (mail.gmx.net), 'Port' (25), a checkbox for 'POP3 authentication required', and a 'Secure connection' dropdown (Automatic). 'Connection' section has a 'Timeout (ms)' field (30000). 'Socks Proxy' section has a 'Type' dropdown (No Proxy), 'URL or IP address' field, and 'Port' field (1080). A 'Send a Test Mail' button is at the bottom left, and 'OK' and 'Cancel' buttons are at the bottom right. Yellow callout boxes provide examples and standard values for several fields.

Field	Value	Notes
URL or IP address	mail.gmx.net	e.g. 'mailserver' or '192.168.10.1'.
Port	25	25 is the standard SMTP port.
POP3 authentication required	<input type="checkbox"/>	Server requires POP3 connect before SMTP?
Secure connection	Automatic (use TLS when server supports it)	
Timeout (ms)	30000	
Socks Proxy Type	No Proxy	
URL or IP address		e.g. 'myproxy' or '192.168.10.2'.
Port	1080	1080 is the standard socks port.

4 The Report Designer

The Report Designer is started by selecting <Edit report layout> in the *Report setup* window. Make sure that you have specified all information you want to use for the report design in the data interface of *ibaAnalyzer-Reportgenerator*.

4.1 The Project Wizard

If the *Report* field has been left blank the project wizard is started. If a previous report has been selected this is opened in the *Report Designer* window.

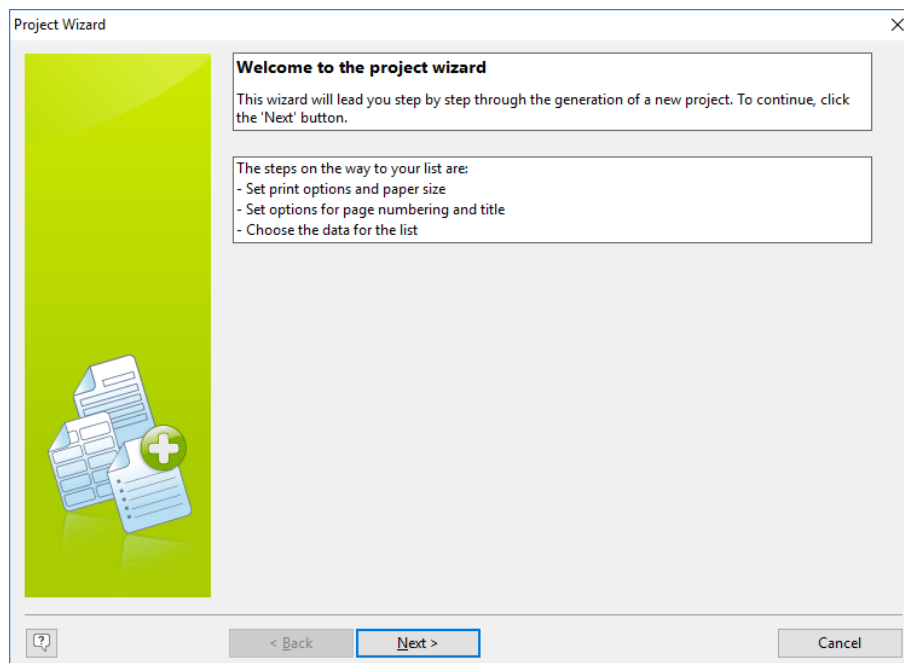
Note



The project wizard is only available in the 32 bit version of *ibaAnalyzer*.

The project wizard is used to easily

- set up print options
- define page numbering and title
- select data for dynamic tables.



The project wizard is straight forward to use and will not be discussed in detail here. All settings done by the project wizard can be done manually and are explained in the subsequent chapters.

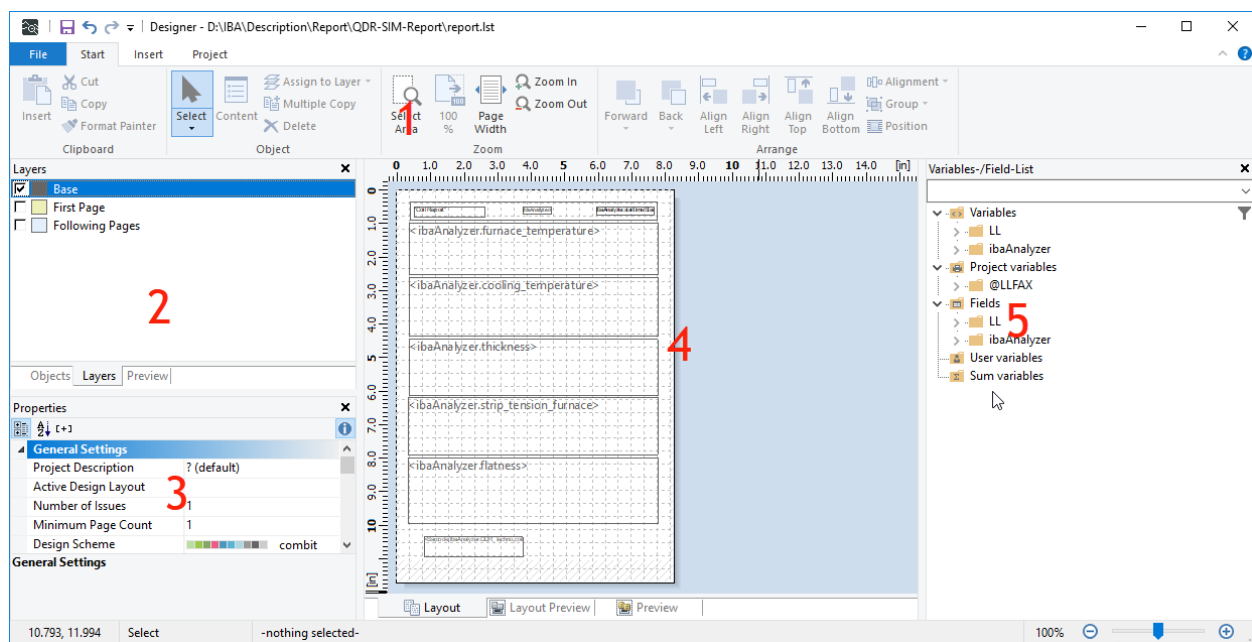
Note



The project wizard can become handy if a dynamic table is required. The iba AG offers standard training courses on *ibaAnalyzer-Reportgenerator* where this can be explained in detail.

4.2 The Report Designer window

The *Report Designer* window is the main window of the combit "List & Label Reporting Tool Report Designer".



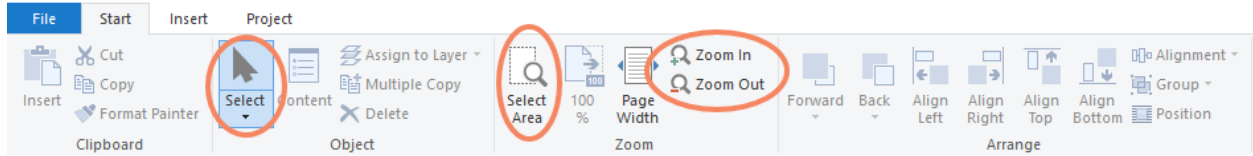
The *Report Designer* window contains the following elements:

- 1 The tool bar ribbon
- 2 The *Objects*, *Layers*, and *Preview* windows
- 3 The *Properties* window
- 4 The *Report* view window
- 5 The *Variables-/Field-List* window

4.2.1 The toolbar ribbon

The toolbar ribbon offers three different toolbars, namely the *Start*, *Insert*, and *Project* toolbar. For a detailed explanation please refer to the combit "List & Label Designer" manual.

The "Start" toolbar



Useful features include:

<Select >

Select objects in the report view for processing.

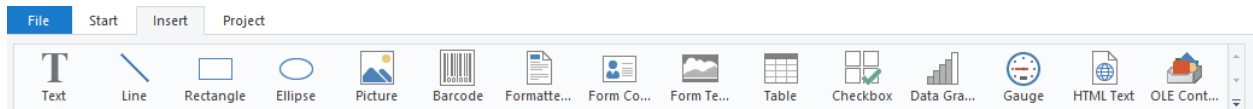
<Select Area>

Use mouse to mark and select the report view area to be zoomed.

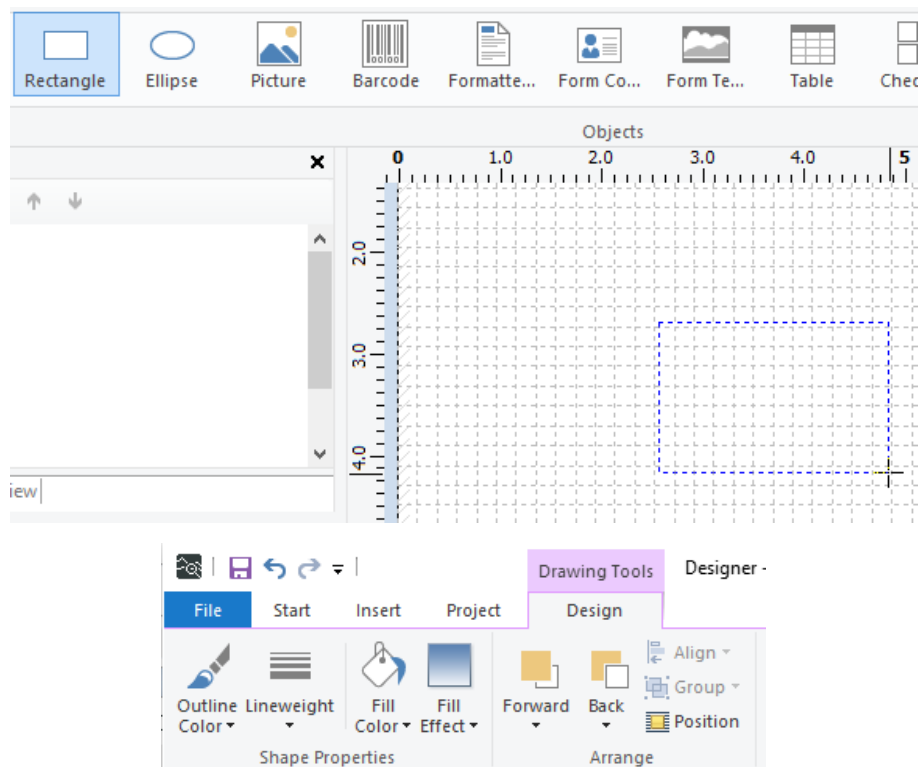
<Zoom in/out>

Zoom in or out in report view.

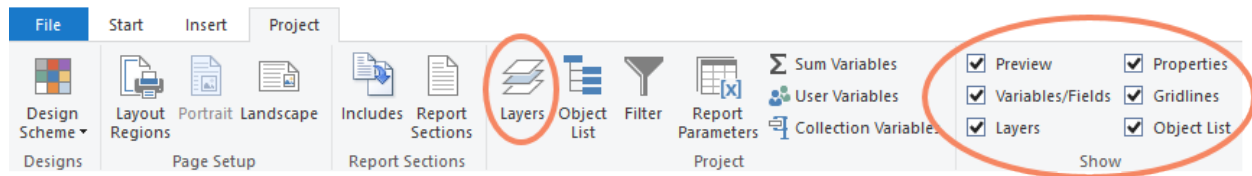
The "Insert" toolbar



This toolbar shows the objects which can be inserted into a report. Click on an icon, and then use the cursor to mark out the required area in the report view (<click, hold, drag, release>). An object-specific window will open once the object is created.



The "Project" toolbar

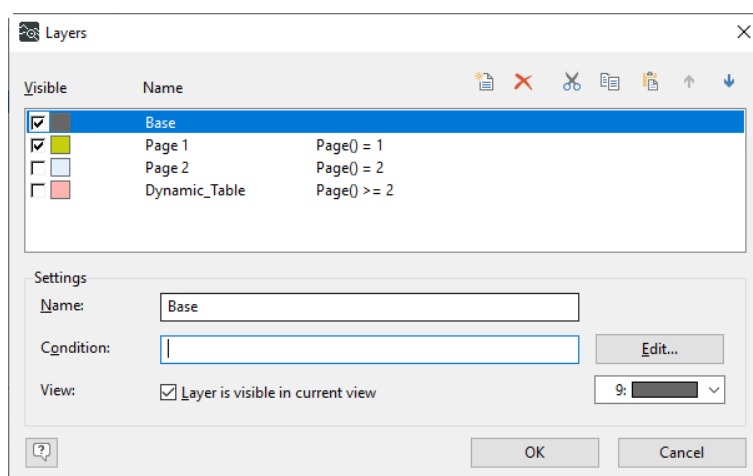


This toolbar is used for setting up the basic report parameters and windows which are to be displayed.

In the *Show* area the windows are selected which will be shown automatically when the Report Designer window is opened.

<Layers >

This opens the following window and is used to specify dissimilar report pages.



For further information see chapter [↗ The "Layers" window, page 32.](#)

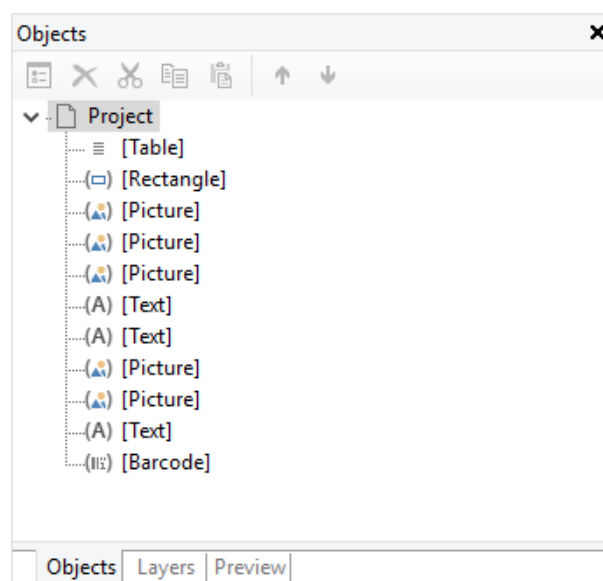
4.2.2 The Objects, Layers, and Preview windows

In this windows settings for objects, layers, and preview are present.

The "Objects" window

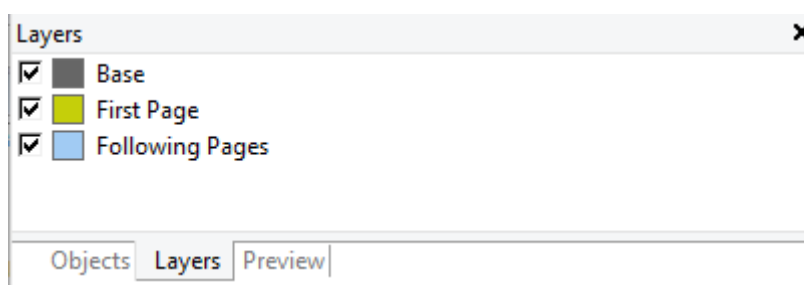
This displays the objects which currently used in the selected report.

When an object is selected, the corresponding object is also marked / surrounded by a frame in the Layout/Layout Preview windows.



The "Layers" window

This is used to display and manipulate the layers currently used in the selected report.



Information in the *Base* layer (for example headers and footers) will, unless specifically excluded in the conditions, be displayed on all the report pages.

The *First Page* layer can be used to define a title page. *Following Pages* can be used to define one or more additional report pages.

The corresponding checkbox must be ticked to view the layer in the *Report view* window. Double click on the required layer to open the *Layers editing* window.

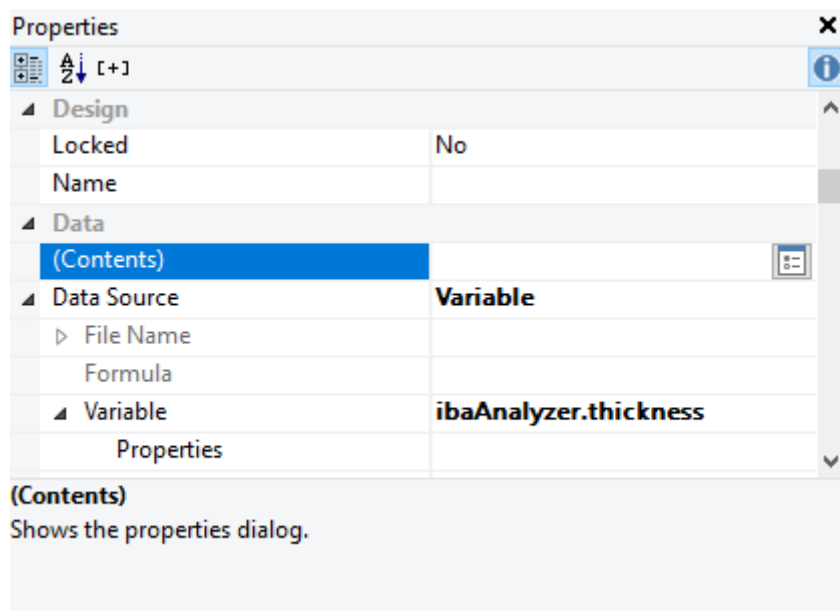
The "Condition" can also be set using the <Edit> selection to call the *Edit Layer Condition* window. For further information see the combit "List & Label Designer" manual, chapter "Working with Layers" or the chapter "Creating a Report – an Example".

The "Preview" window

This displays a preview of the report layers selected by the checkboxes in the layers window.

4.2.3 The "Properties" window

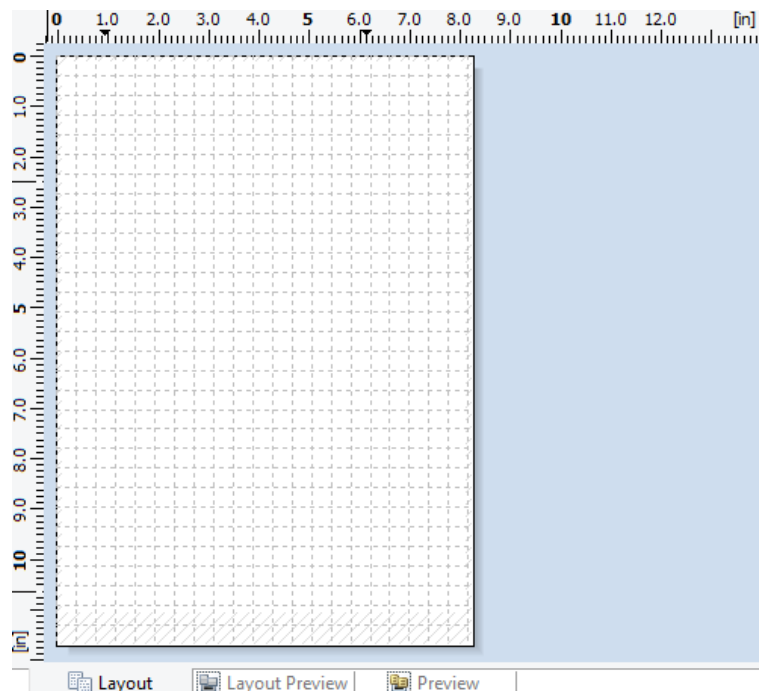
This window shows the properties of the object selected in the *Report view* window (see chapter [➤ The "Report view" window](#), page 33).



The shown properties are dependent on the selected object type. Besides position, color and size of an object, possible options include the activation of presentation and pagination conditions.

4.2.4 The "Report view" window

This is the work space used to create a report.



Layout

This window shows the object frames and the object contents as variable/field names.

This is the work area where existing objects can be edited or deleted and where new objects can be added. The shape and dimensions result from the defined layout parameters. The work area always consists of one single page only. In order to create multi-page analysis reports so-called "Layers" have to be defined.

Layout Preview window

This window displays the objects in the so called "what you see is what you get" format. In addition, the objects are transparent and are drawn in the color of the layer to which they are assigned. This is the recommended view for the report creation.

As in the Layout window existing objects can be edited or deleted and new objects can be added. The shape and dimensions result from the defined layout parameters.

Preview window

This window is similar to the Layout Preview window but the layer colors are not shown.

4.2.5 The "Variables-/Field-List" window

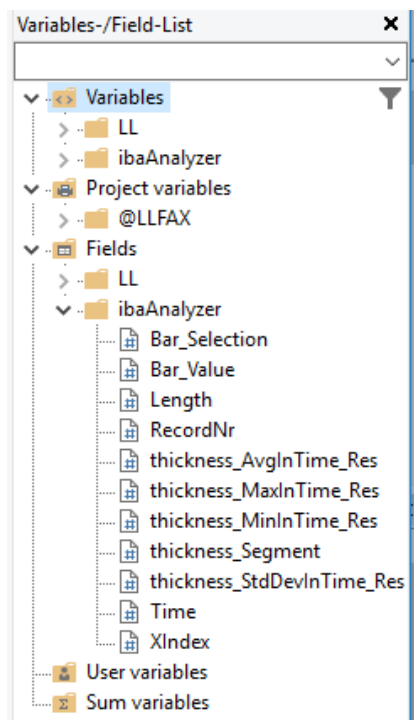
This window displays the *Variables* and *Fields* (table signals) which are available for designing a report. The data transferred from *ibaAnalyzer* are contained in the *ibaAnalyzer* directories.

These include, for example:

- Report variables (signal strips)
- Computed values
- Technostring fields

Furthermore, other types of data are made available by default:

- Information from the data file (such as sample time, start trigger, etc.)
- Fields / arrays from the data file (such as signal name, unit, etc.)
- Video recordings



Note



„Chart field" data can only be seen when creating/editing a chart (see chapter [↗ The "Chart fields" window, page 18](#)).

4.3 The report output

A report can be generated manually via the data interface or automatically via a command line (post-processing) from *ibaPDA* or by *ibaDatCoordinator*.

Other document



Note that separate documentation is available for *ibaPDA* and *ibaDatCoordinator*.

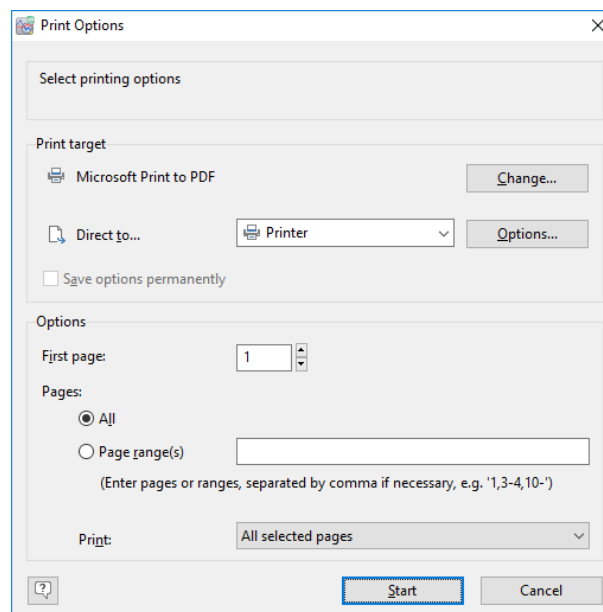
Tip



The report output dialog can be started directly in *ibaAnalyzer*. For this use the toolbar customization to add a "Print Report" icon.

4.3.1 Generating a report manually

Clicking on the print report icon in *ibaAnalyzer* or the <Print> button in the data interface of *ibaAnalyzer-Reportgenerator* opens the print options window.



The dialog is used to specify the designated printer and the pages to be printed. The output is created with the <Start> button or canceled with <Cancel>.

In the *Print target* window the printer can be selected via the <Change...> button and the file format needs to be specified via the "Direct to..." dialog. For every format different <Options...> are available.

The *Save options permanently* checkbox can be used to set the current print target settings as default values.

Note

By pressing the <Preview> button a similar dialog is opened. However, the output is not sent to the printer but rather a preview is opened.

In the lower part of the dialog only parts of the complete report can be selected to be sent to the printer or the specified file format.

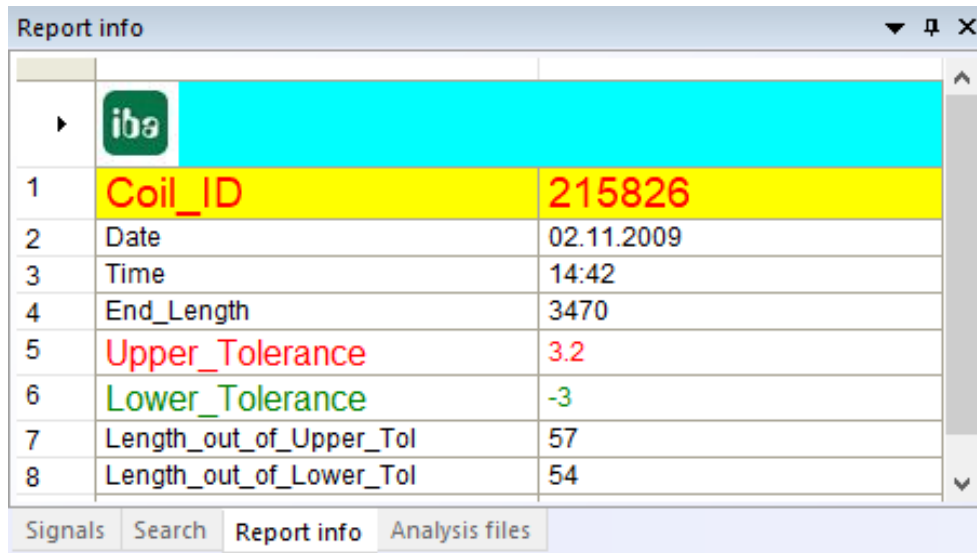
Available file types

File extension	File type	Remarks	All pages in one file
.pdf	(Acrobat) Portable Document Format		Yes
.htm	H yper t ext M arkup language file	html v3.2-compatible No overlapping objects permitted Turned RTF not supported	Can be selected (pictures are stored in separate .jpg files)
.mht .mhtml	Multi Mime HTML	html v3.2-compatible No overlapping objects permitted Turned RTF not supported	Yes
.txt	Text file	Table export only	Yes
.xls	Microsoft Excel	Excel version- independent (native export) RTF text embedded as picture Overlapping objects are not fully supported	Yes (pictures are stored in separate .jpg files)
.rtf	Rich Text Format file	Turned RTF and pictures are not supported	Yes
.tif .tiff	T agged I nformation F ile F ormat graphics		No
.emf	E nhanced M eta F ile graphics		No
.jpg .jpeg	J oint P ictures E xpert G roup graphics		No
.bmp	Standard Windows Bitmap graphics		No
.xml	E xtensible M arkup L anguage		Can be selected (pictures are stored in separate .jpg files or in xml files embedded as MIME-encoded files)

4.3.2 The "Report info" window

All values in the *Info Columns* or *Computed Columns* window can be shown directly in *ibaAnalyzer* by selecting the associated *Show* checkbox.

The *Report info* window is a useful feature for displaying computed values or technostoring information. These values are displayed in numerical form on the screen as opposed to a curve in the signal graph.

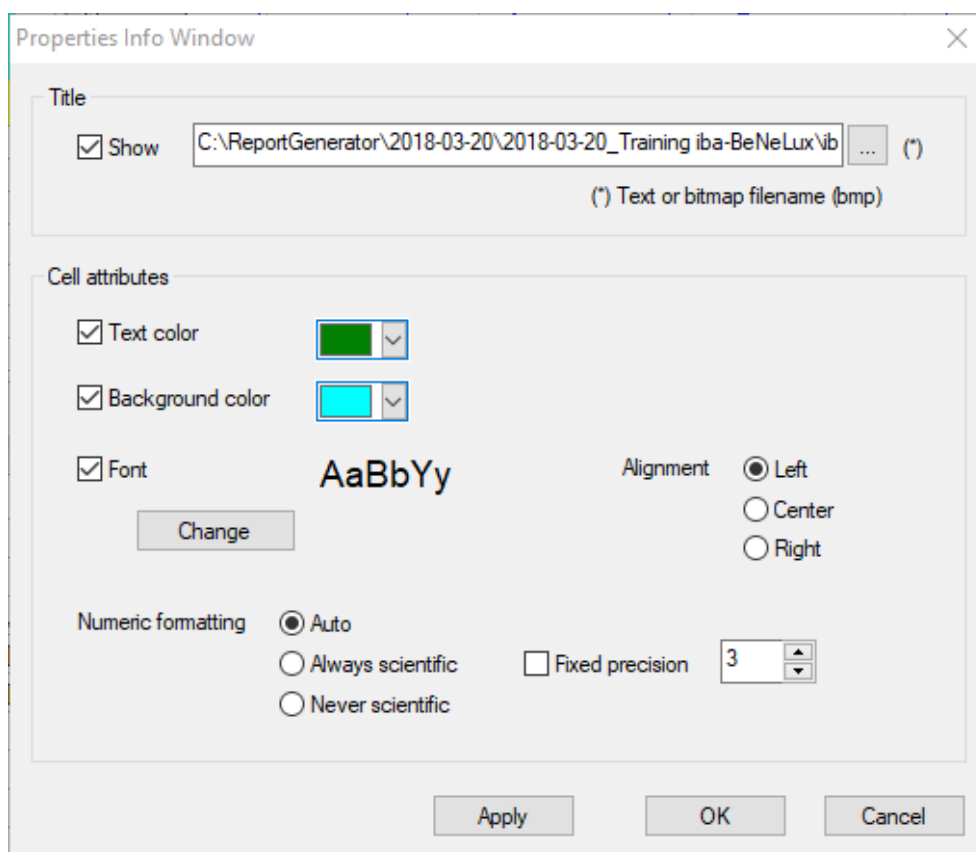


1	Coil_ID	215826
2	Date	02.11.2009
3	Time	14:42
4	End_Length	3470
5	Upper_Tolerance	3.2
6	Lower_Tolerance	-3
7	Length_out_of_Upper_Tol	57
8	Length_out_of_Lower_Tol	54

The contents of each table cell in the *Report info* window can be edited and/or formatted by right clicking in the selected cell.

Edit report items...
Properties...

The *Edit report items* option opens the report window for editing. By clicking *Properties* the individual appearance of each cell can be manipulated.



A logo or text can be selected as *Title*. For each cell individual attributes can be set, including the *Text color*, *Background color*, and *Font*.

The numerical formatting can also be altered to enable e.g. scientific formatting. The <Apply>, <OK>, and <Cancel> buttons have the usual functionality.

4.4 Command line options

Command line syntax

```
ibaAnalyzer.exe datfilename1 [datfilename2] ...[datfilenamen] [pdofilename] [/switch]
```

One or more data files (datfilename), an analysis (pdofilename) and a switch parameter (switch) can be included in the call of the program. The complete path and file names must be entered for data files and analyses.

Instead of data files one can also enter HD query file names (.hdq).

Examples

(Program path for ibaAnalyzer: `c:\programs\iba\ibaAnalyzer\...`)

1. Start ibaAnalyzer with three data files which are loaded at the same time:

```
...\ibaanalyzer.exe demo00.dat demo01.dat demo02.dat
```

2. Start with three data files and one analysis in order to have the data displayed immediately in the required form:

```
...\ibaanalyzer.exe demo00.dat demo01.dat demo02.dat analyse1.pdo
```

4.4.1 Using the post-processing command

Since post-processing is an automatic function which is controlled by a data acquisition program, such as *ibaPDA*, a placeholder must be used here instead of the data file name in order to access the most recent data file:

```
ibaAnalyzer.exe %f [pdofilename] [/switch]
```

%f: Last data file, complete path and file name (e.g. `d:\dat\pda001.dat`)

%g: Last data file, only data file name (e.g. `pda001.dat`)

%h: Last data file, file name without suffix (e.g. `pda001`)

Tip



For regular and automated calls of *ibaAnalyzer* depending on the data file generation, we recommend using *ibaDatCoordinator*. Compared to the post-processing, the application free of charge offers higher ease of use as well as higher flexibility and functional reliability.

Using the switches in the command line

The switches are particularly important in conjunction with post-processing because they can be used to automate complete analysis processes. It is, however, also possible to use the switches in conjunction with a manual program start.

Switch `/report[:filename]`

With this switch, *ibaAnalyzer* starts, loads a specified data file and performs an analysis in accordance with the specified analysis rule. Thereafter, the integrated *ibaAnalyzer-Reportgenerator* is started and the data is printed on the Windows default printer using a report layout specified in the analysis rule if the `[:filename]` option was not used with the switch.

If the `[:filename]` switch option is used, the report can be written into a file rather than being printed. The desired file type is determined by the file name extension. Many custom formats are supported, including, for example, `.pdf`, `.htm`, `.rtf`, `.tiff`, `.jpg`, `.xls`, etc.

Program call syntax

```
...\ibaanalyzer.exe Datafile.dat Analyse.pdo /report[:File]
```

The data file(s) Datafile.dat must be available.

The analysis Analyse.pdo must be available. The configuration of the data interface as well as the link to a valid report layout file are saved in the analysis.

(Program path for *ibaAnalyzer*: `c:\programs\iba\ibaAnalyzer\...`)

1. Start with one data file and one analysis with report output on the printer

```
...\ibaanalyzer.exe c:\samples\reportsample.dat c:\samples\reportsample.pdo /report
```

2. Start with one data file and one analysis with report output as a pdf file:

```
...\ibaanalyzer.exe c:\samples\reportsample.dat c:\samples\reportsample.pdo /report:c:\report\pdf\test.pdf
```

5 An exhaustive example

The following chapters describe a comprehensive example for the generation of a report using the Report Designer. The following topics will be covered:

- Header and footer definition, see chapter [Basic report definition](#), page 44
- Picture, text, and barcode objects, see chapter [Basic report definition](#), page 44
- Graphs, video stills, and static tables, see chapter [Adding data to the report](#), page 50
- Charts, data graphics, and gauge objects, see chapter [Adding data to the report](#), page 50
- Layers and dynamic tables, see chapter [Layers and dynamic tables](#), page 62

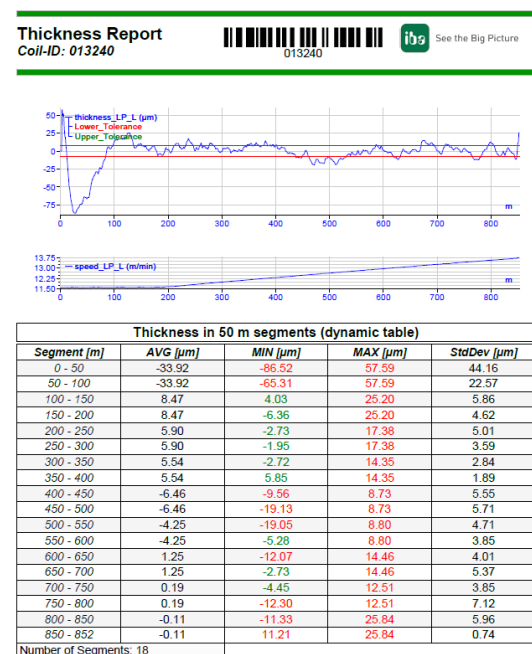
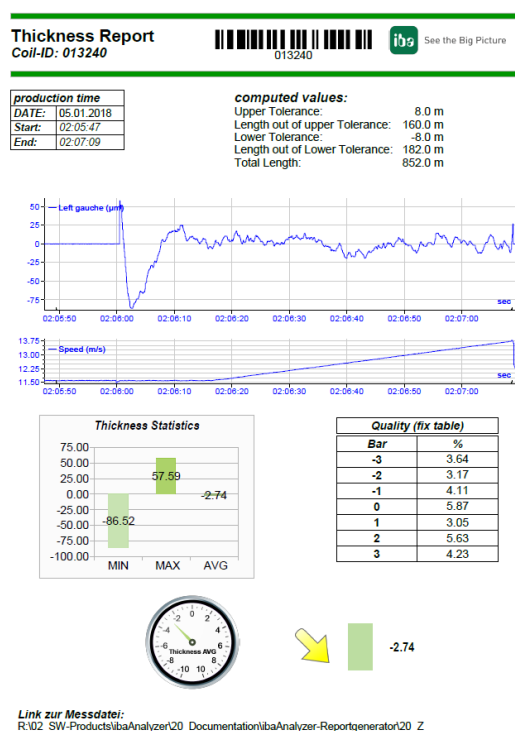
Note



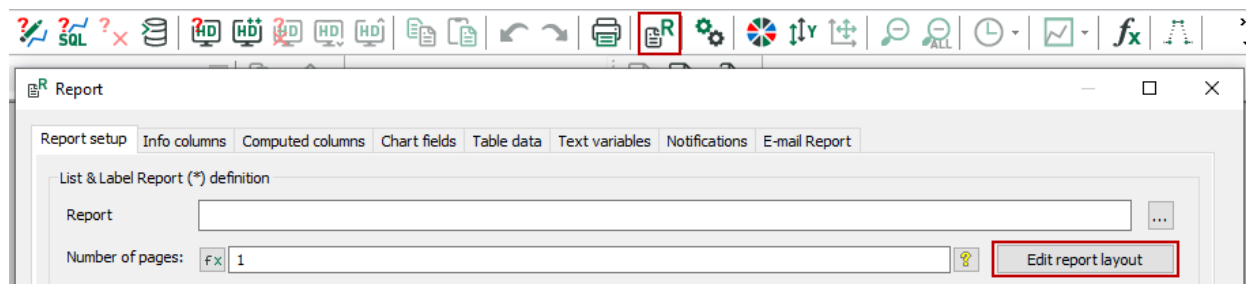
This chapter describes the design of the report layout only. The underlying data and defined variables are provided as additional material in form of an analysis (.pdo) and several dat-files. For comparison, the final report design is also provided in form of a lst-file.

The material can be found on the data medium "iba Software & Manuals" in the directory 03_Manuals_and_Flyers\01_Manuals\02_Software\ibaAnalyzer\02_Additional_Manuals\ibaAnalyzer-Reportgenerator\Example_Report.

The main goal will be the creation of a report of the following form.



To create a report layout, open the Report Designer by clicking on the <Edit report layout> button.

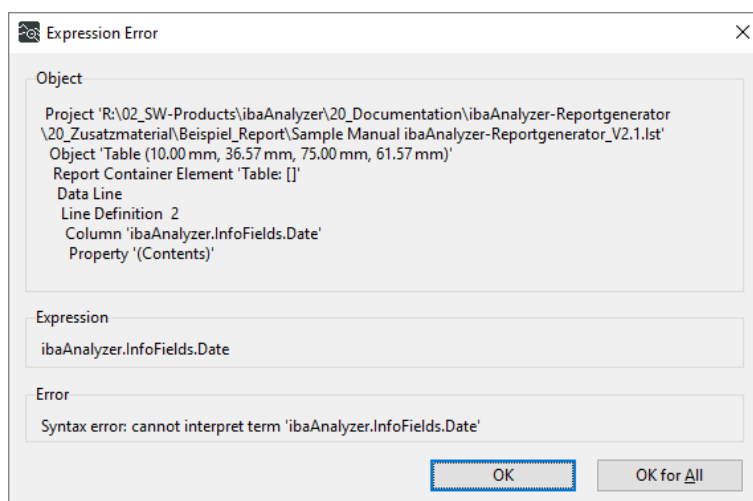


It is assumed that all necessary data have been specified in the *ibaAnalyzer-Reportgenerator* window. Changes made here will be passed on automatically to the Report Designer. Note that the project wizard is not used in this example and it can be skipped with <Cancel>.

Note



If variables which are already in use for the report design are not available or renamed in the *ibaAnalyzer-Reportgenerator* dialog an error message will be shown.



5.1 Basic report definition

Start the design of the report with some basic elements. Those will serve as a general layout and are shown on every page of the report. Elements like page numbering can, however, also depend on the page number.

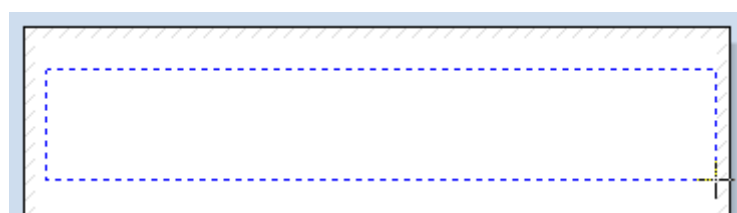
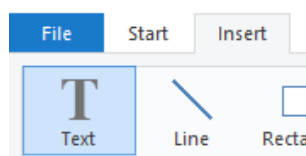
Note



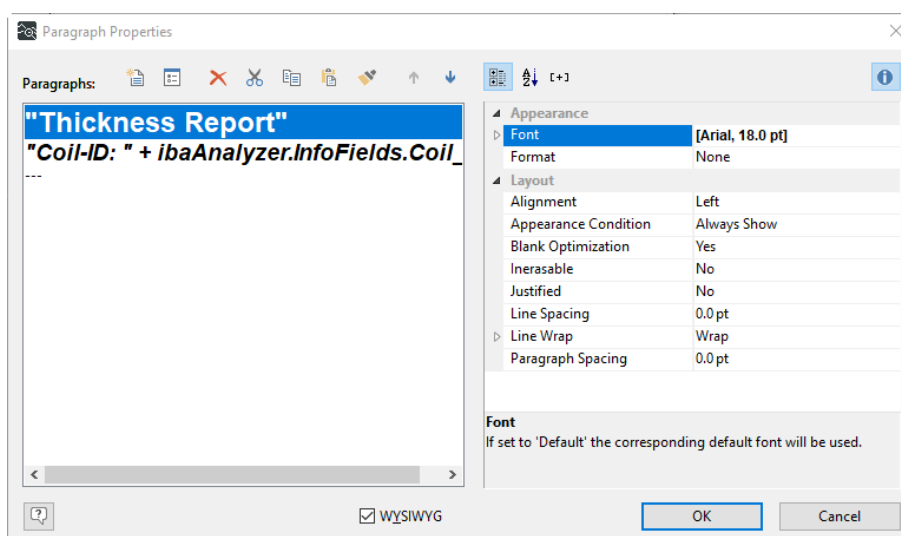
Make sure to have the *Base* layer activated for the elements added in this section. For more detailed information on layers, refer to chapter [Layers and dynamic tables](#), page 62

Creating a text field

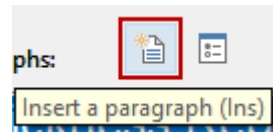
The first step is to create a headline for the report, i.e. a text field. Click on the *Text* icon in the *Insert* ribbon of the Report Designer and use the cursor to mark the text area with a rectangle in the report view window. This opens the *Text edit* dialog.



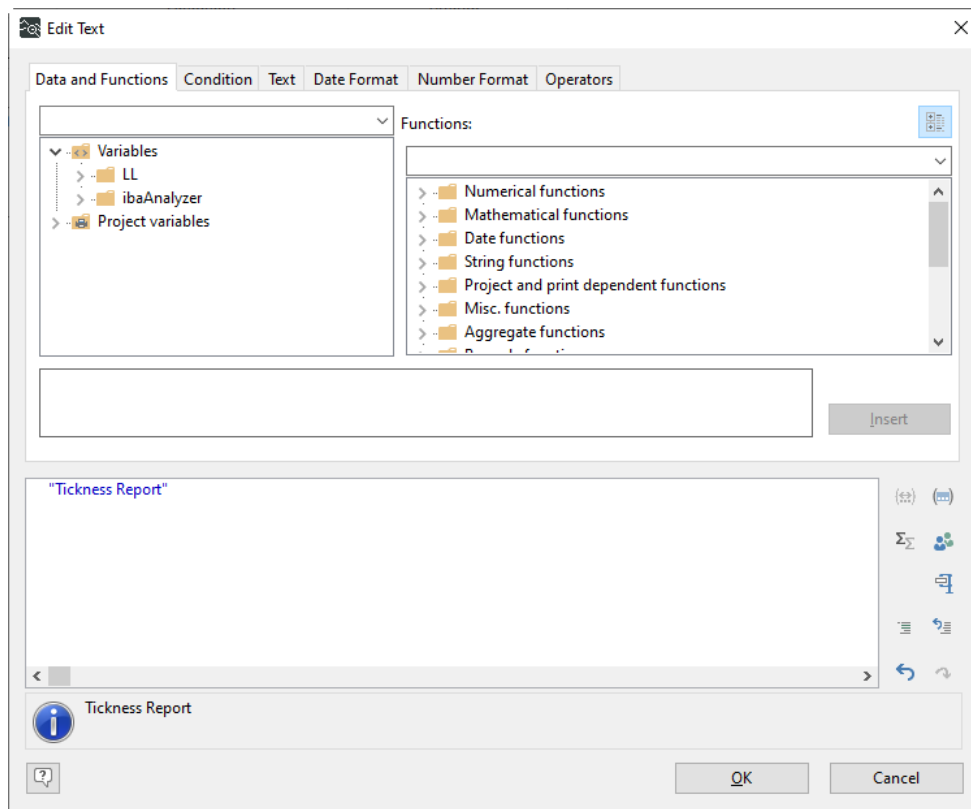
Any object placed on the report layout can be moved and resized by using drag and drop. Double clicking on the object itself always opens the properties dialog of the object.



For text objects different paragraphs can be present. On the right-hand side the text can be formatted accordingly. For the headline add a second paragraph using the <Insert> button or by double clicking on the empty paragraph (---).



Double clicking on the individual paragraphs in the left column opens another settings window. This is used to specify the content which is visible in the lower part of the window. In the upper part different settings are available. The default dialog is *Data and Functions* where a list of variables and a list of functions are available.



The first paragraph in the example simply contains the text *Thickness Report*, which you enter. After pressing <OK> you are back at the settings dialog of the text object and use the right column to adjust the size of the text.

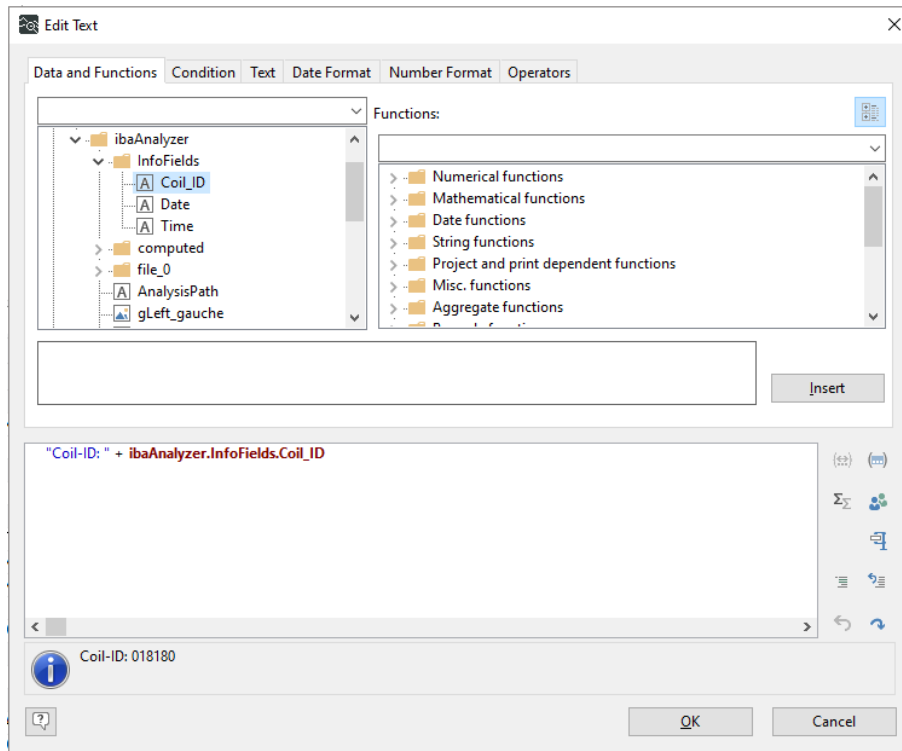
Note



Text has always to be specified within apostrophes, like e.g. "Thickness Report".


For the second paragraph use one of the variables made available by *ibaAnalyzer*. In general, all variables are available on the right hand side in the Report Designer. It is recommended, however, using the *Data and Functions* window in the edit dialog which is available for most objects.

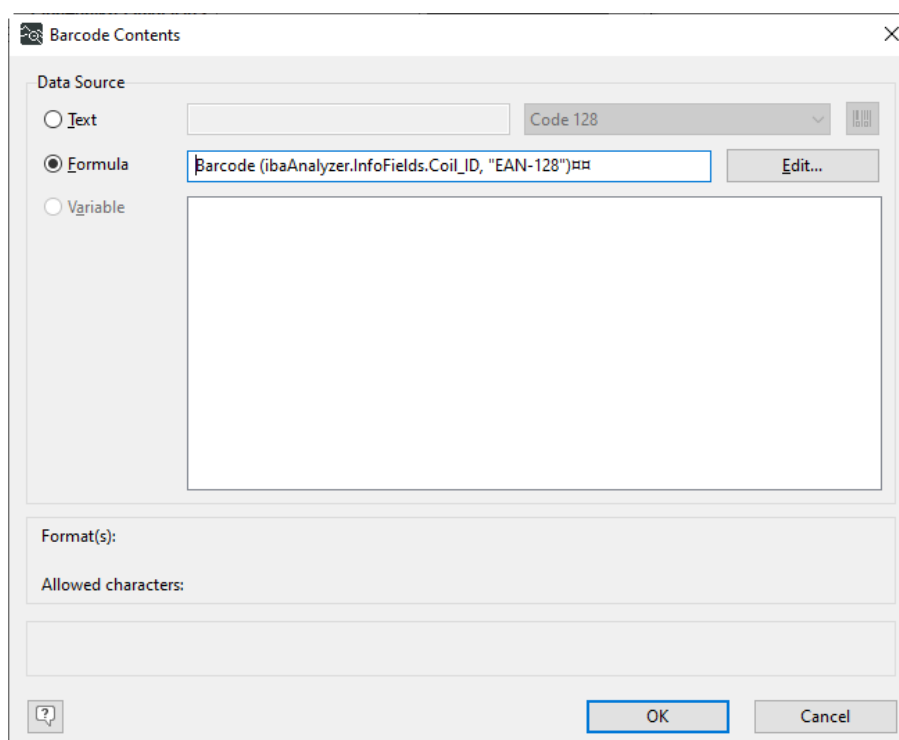
Double clicking on the desired variable automatically inserts it to the content window. The conversion to string is done automatically, if necessary.



Barcode objects

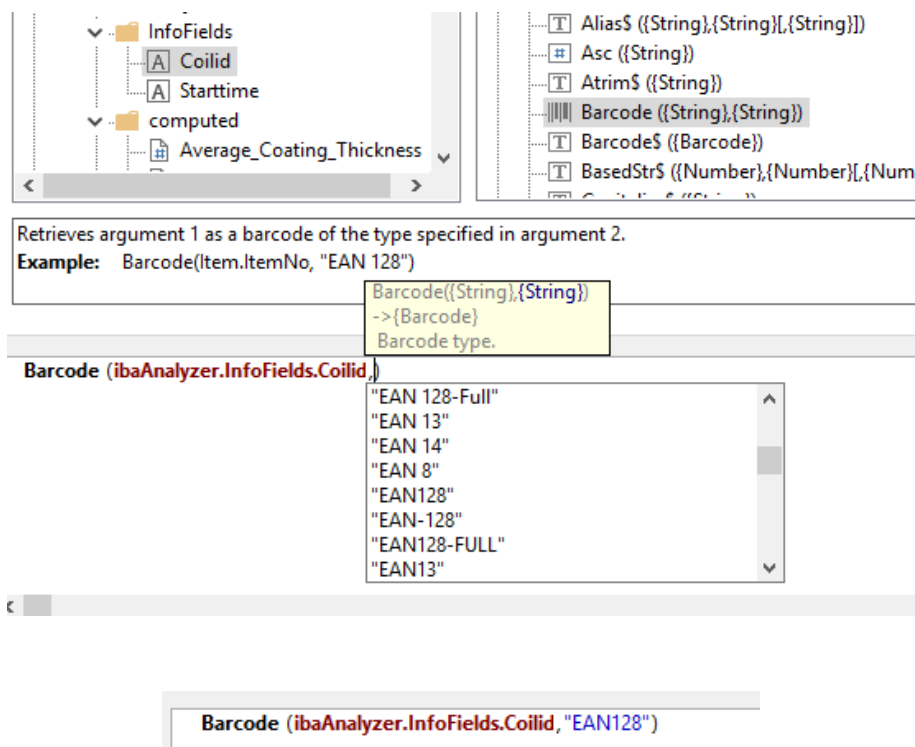
The next step is to make the Coil ID, which was used as text before, also available as a barcode such that it can be read by e.g. a scanner.

By clicking on the  icon in the *Insert* ribbon of the Report Designer a barcode object is added by drag and drop as usual. The *Barcode Contents* window is opened automatically.



Since the barcode shall depend on the current Coil ID select *Formula* and by pressing the <Edit> button you will be automatically navigated to the usual *Edit* dialog.

Select the *Barcode* function in the *String functions* dialog (double click) and the Coil ID from the *Info Fields* variables (double click). The barcode function expects a second argument specifying the barcode type.

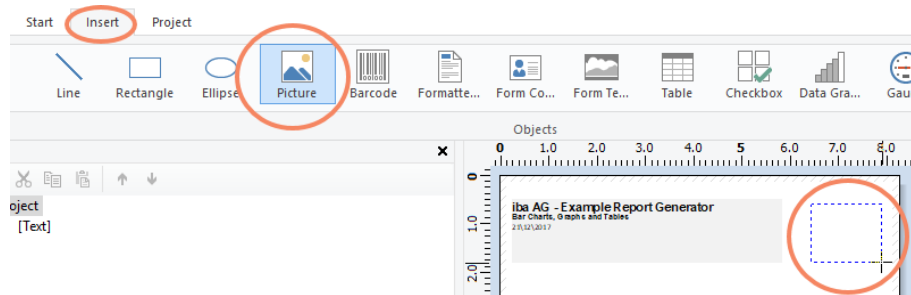


With the <OK> button you return to the report view window which displays the barcode.

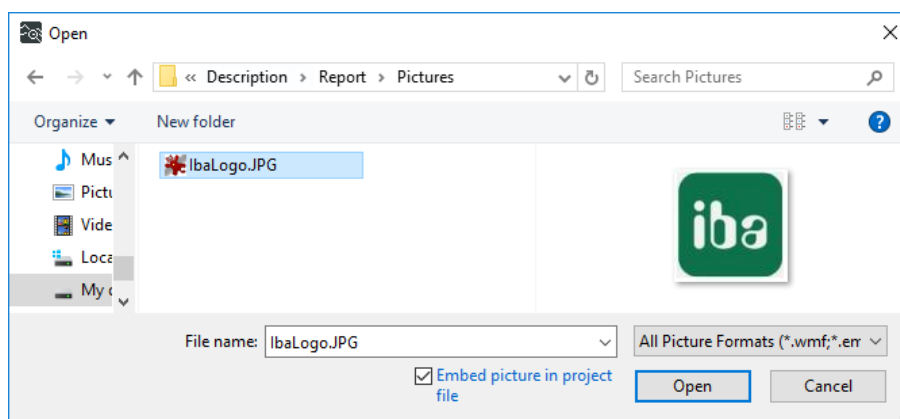


Picture objects

The next step will be to add a logo to the report. Click on the *Picture* icon in the *Insert* ribbon of the Report Designer and use the cursor to mark the picture area in the report view window. This opens the *Picture source selection* window.

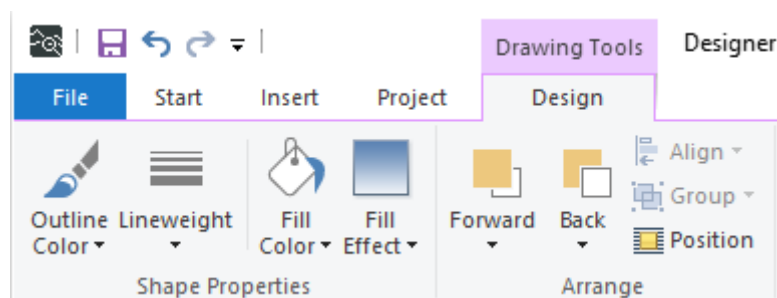


Select a logo stored on the computer. Additionally, you can save the picture together with the project file by ticking off *Embed picture in project file*.



Geometric forms

For the proper design of the header and footer lines you have various geometric forms available in the *Insert* ribbon. For the headline draw two rectangles by selecting the corresponding button. An additional ribbon is displayed where the appearance of the rectangle can be manipulated.



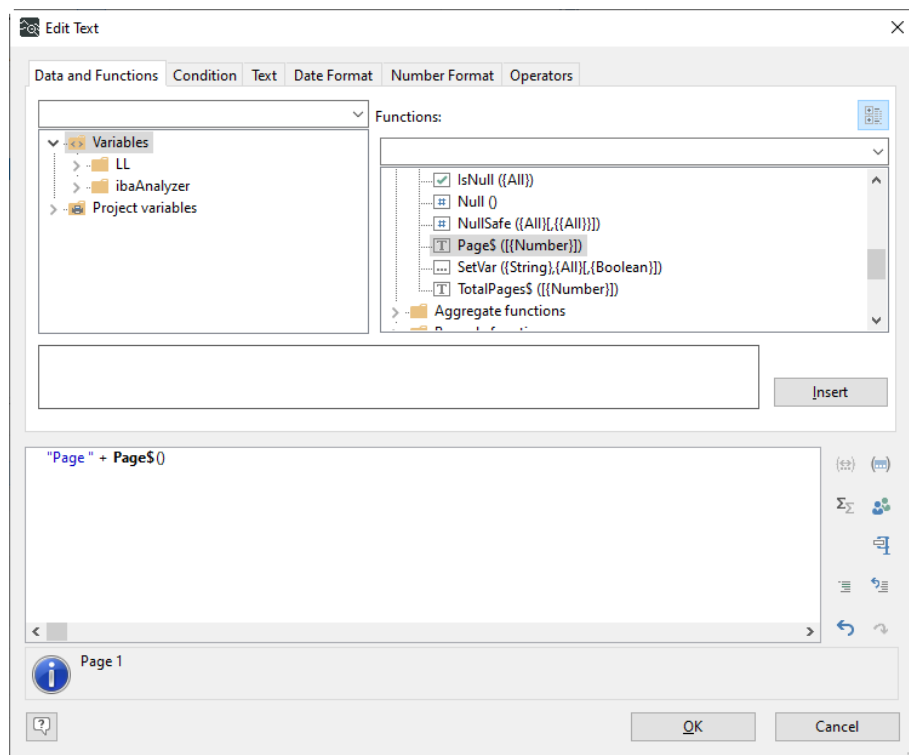
Select a green fill color to generate two bars surrounding the headline. The next step will be to create a footer which you separate by a simple line object.

Note

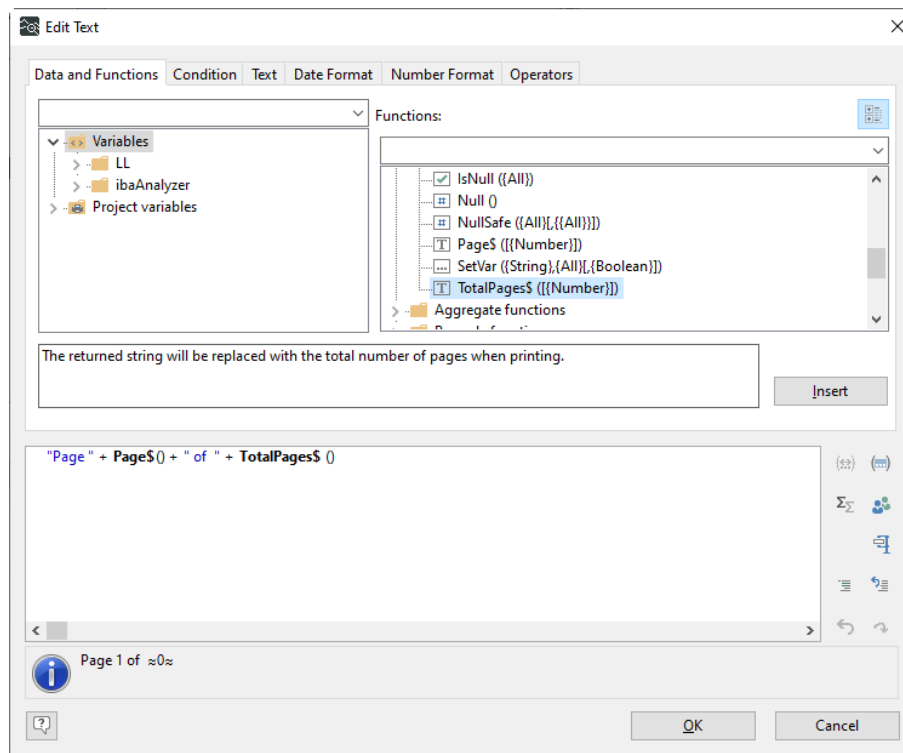
Other types of geometric objects can be manipulated in the same fashion.

Page numbering

A dynamic page number shall be used for the footer. This is again a text field and you use the mouse to position the field and drag it to the required size. Enter the static part *Page* first and select the page function in the *Data and Functions* window by double clicking on *Page\$* under *Misc. Functions*.



You can also use the total number of pages to create a footer of the form "Page 2 of 4".



5.2 Adding data to the report

The next step is to add the content of the report. Here the data provided by *ibaAnalyzer* will be used extensively.

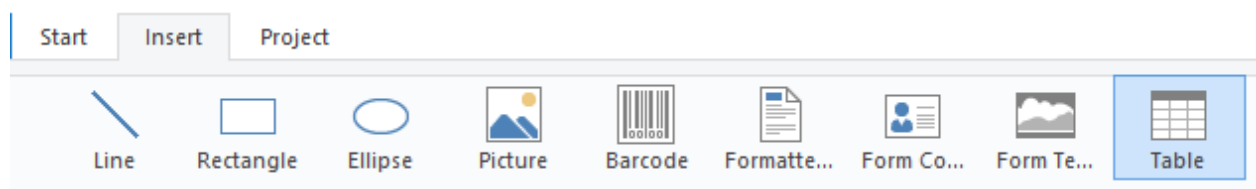
Note



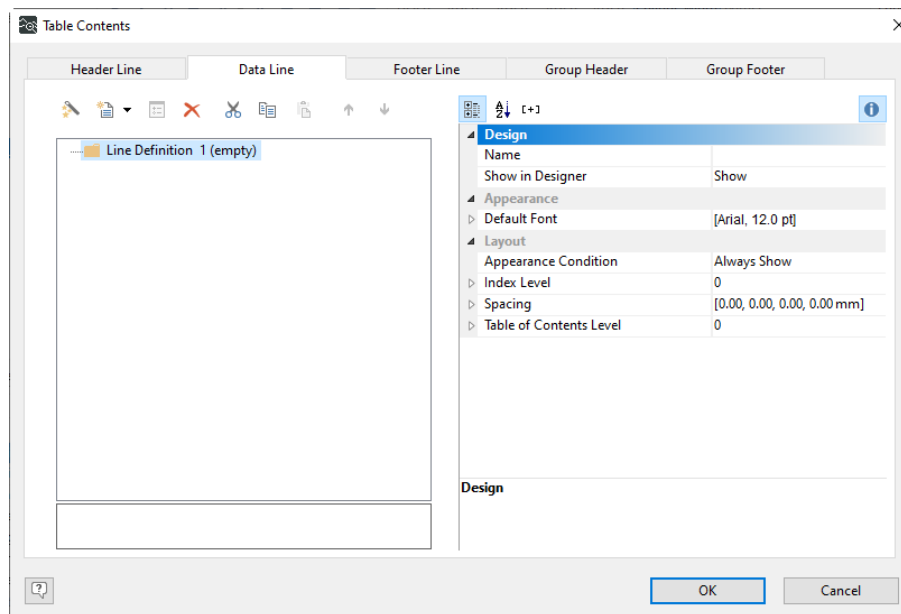
Make sure to have the "First Page" layer activated for the elements added in this section. In chapter ↗ *Layers and dynamic tables*, page 62 the layer functionality will be explained in more detail. This is especially important if the report shall have more than one page.


Static tables

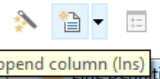
A simple possibility to display various information in a structured manner are static tables. To add a table click on the *Table* icon in the "Insert" ribbon of the Report Designer and use the cursor to mark the table area in the report view window.



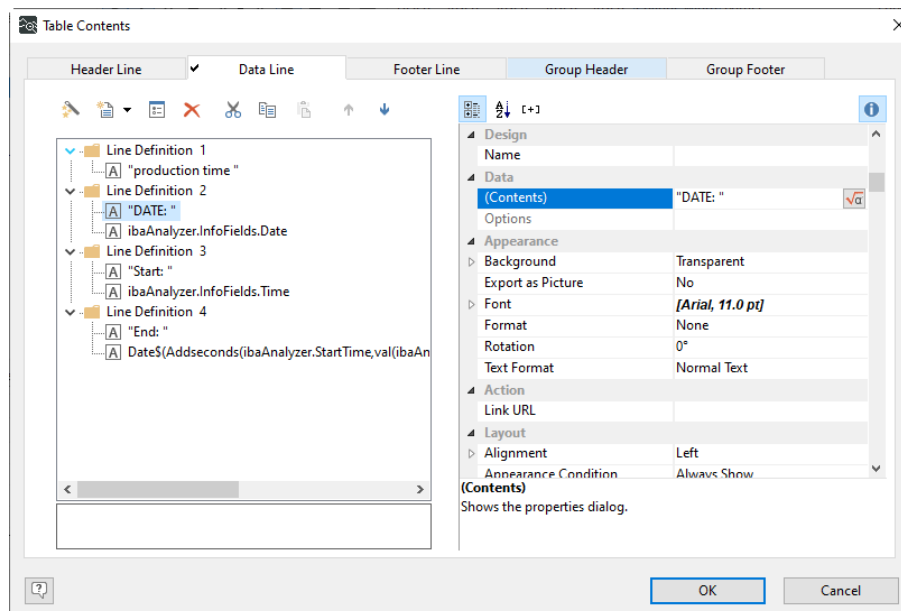
The *Table Contents* window is opened automatically and by clicking „append line definition" you open the dialog for adding a new line to the table.



You can directly start the data selection wizard. The wizard can be accessed for every line by clicking on the symbol  directly. Using this, you can select all data to be displayed in this line.

Columns can also be added manually by clicking on . **Append column (ins)**

You choose only one text column for the first line and two text columns for the second to fourth line of the table. By double clicking on the corresponding column the usual text edit window opens and the variables provided by *ibaAnalyzer* can be used here as usual.



Note

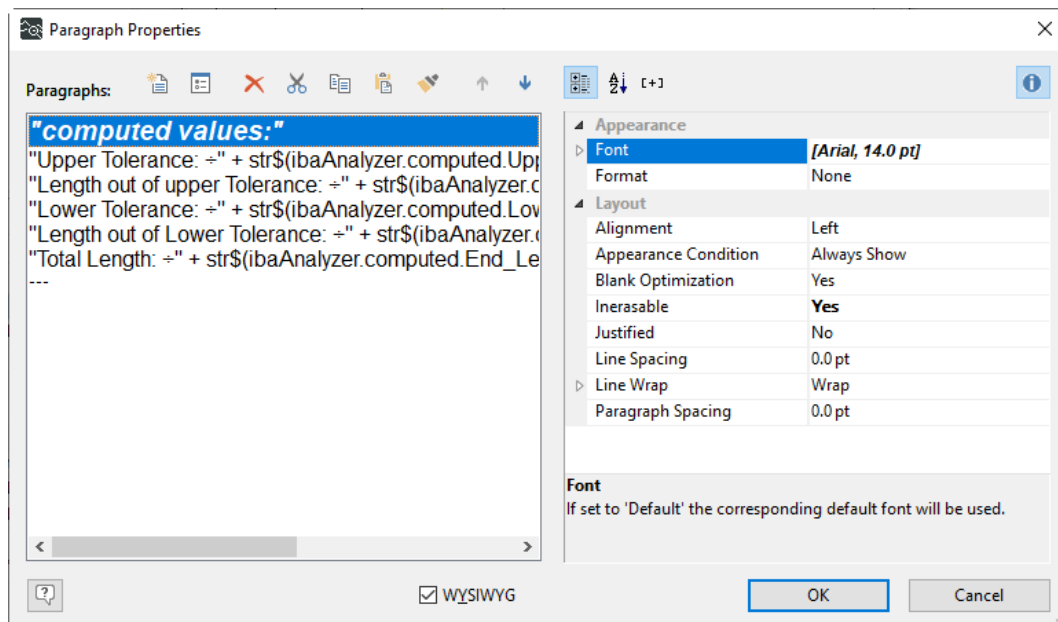
Using the same steps also a separate header and footer line as well as a group header and footer can be specified. This is explained in more detail for dynamic tables in chapter ↗ *Layers and dynamic tables*, page 62

Tip

Text or variable name alterations can be made directly in the expression window.

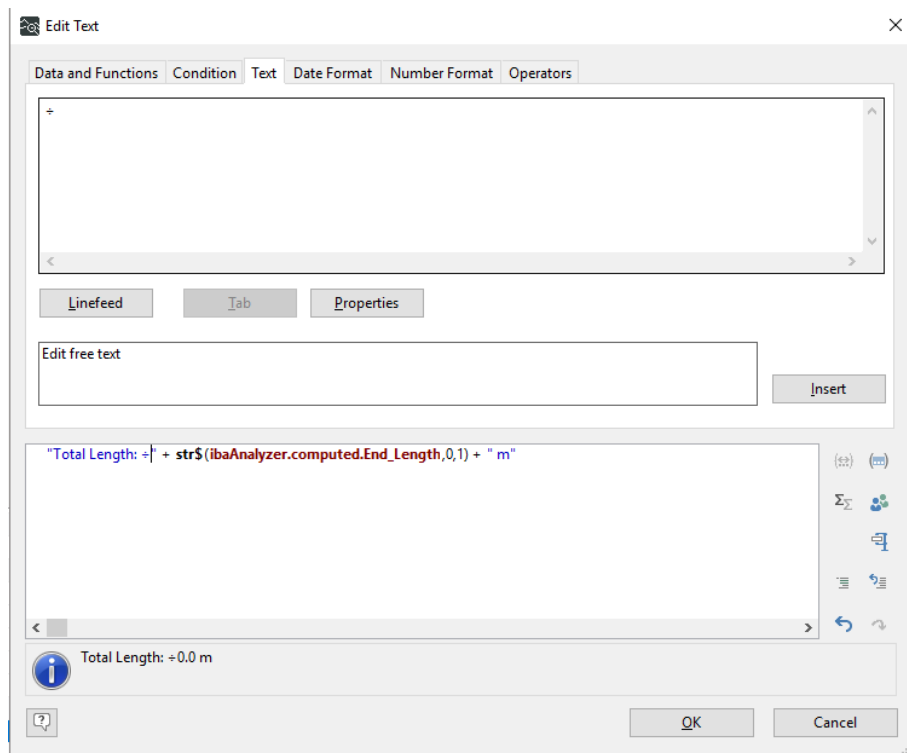
Formatted text fields

In some cases, a table is not necessary to display the desired information. Instead you may also use a simple text field with various paragraphs.



In order to have a more structured presentation you may use tabulators here to align along the decimal separator of the displayed values. To add a tabulator to a text line which contains numbers, switch to the "Text" window, press <Tab>, use the option "decimal tab", and set the position.

Now the tabulator is defined and is displayed in the upper part of the window. Selecting the position in the lower part and by pressing <Insert> the tabulator is added to the text field. Tabulators are indicated by the symbol ÷.



In order to guarantee an alignment along the same imaginary vertical line, you need to set the same tabulator in every paragraph which shall be aligned.

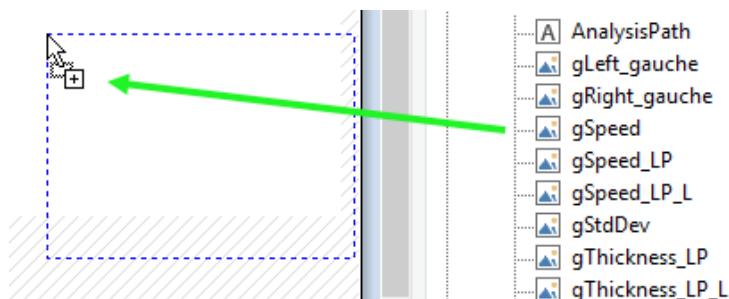
Note



Only one tabulator can be used per paragraph.

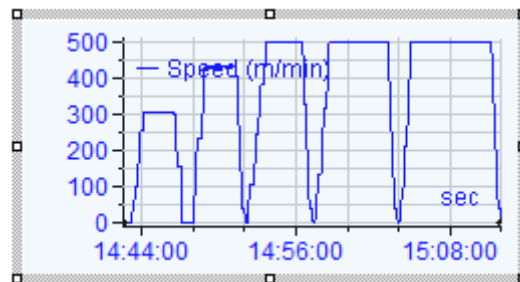
Graph variables

The variables/fields list shows all the graph variables available in the current report file. These are indicated by the symbol . Drag the chosen variable from the variables/fields list to the required location in the report view.



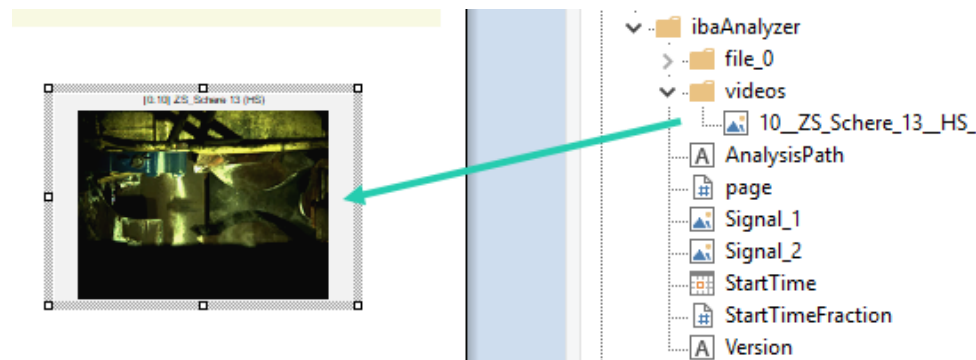
Note

The "Layout" window shows the variable name assigned to the object and the "Layout Preview" window shows the variable graph directly.

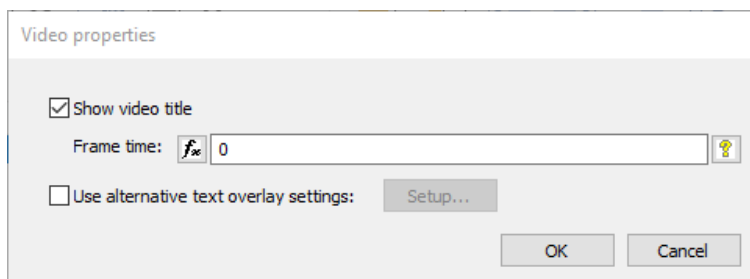


Example

Note that beside graph objects also video objects (single frames from ibaCapture) can be placed in a report design. Video objects are also found in the variables list and can be dragged into the design.



The picture, corresponding to a particular moment in the video recording, is displayed together with the signal name. Double click on the object to open the *Video properties* window.



The following settings are available:

Frame time

The functions of the expression builder can be used in order to compute the required moment for the display of the matching picture, e.g.

`XLast([digital signal])` to show the frame at the time of the last falling edge of the signal [digital signal].

Show video title

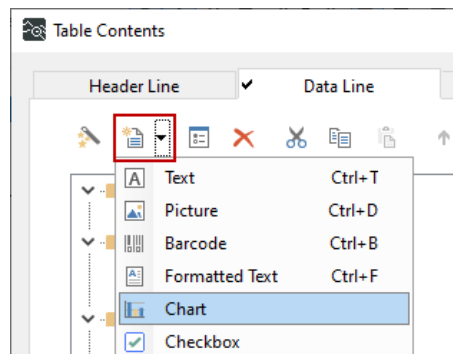
The source signal name is displayed in the report

Use alternative text overlay settings

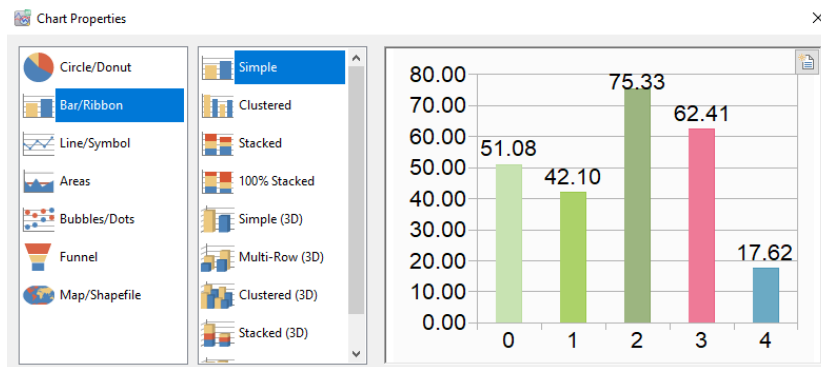
<Setup> opens the *CAM overlay text properties* window

Bar Chart objects

In general, lines in tables are not limited to contain text. Other objects can be selected, which are partially also available in the *Insert* ribbon. A *Chart* object is, however, only available as part of a table. Create a new table and select the <Append column> symbol in the *Table Contents* window. Add a new column and select the type *Chart*. You automatically navigate to the *Chart properties* window.



Different types of charts are available in the upper part of the window. The corresponding settings are available in the lower part. Use a simple bar chart here.



Note



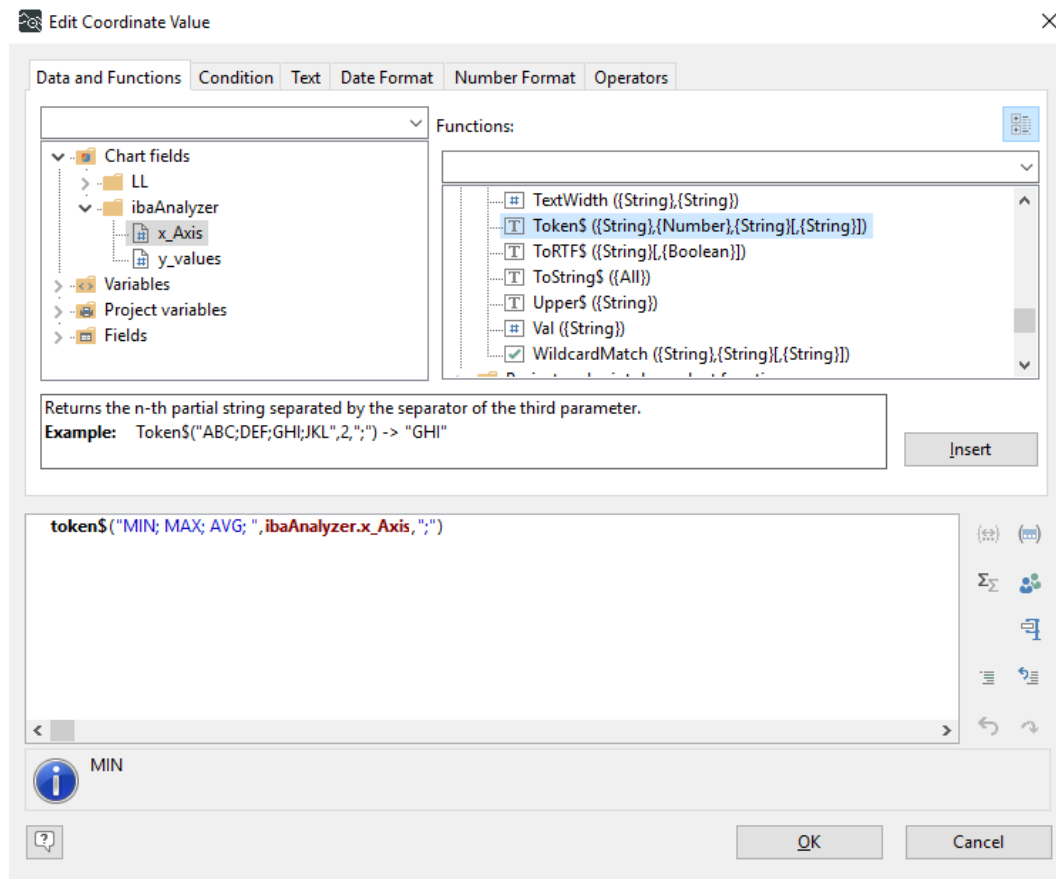
The chart preview shows artificial values which are not related to the data provided by *ibaAnalyzer*.

In the *Category Axis(x)* window for the bar chart settings you need to set the *Coordinate Values*. Use the data provided by *ibaAnalyzer* from the chart fields. In order to rename the bars, you use the "Token" function which converts the numbers to the specified strings. To keep the original sorting, you have to set *Sort Coordinates* to "NO".

Note



For the x-axis you always have to provide values starting from 0 and counting up to the number of desired bars in *ibaAnalyzer*. Relabeling is always done by using the "Token" function.



In the *Category Axis(y)* window, you simply specify the values to be shown as the "Coordinate Value". Note that the data need to be specified here as "no simple aggregate function".

Other documentation



Many more settings are available for the individual design of the bar chart. Please refer to the combit "List & Label Designer" manual.

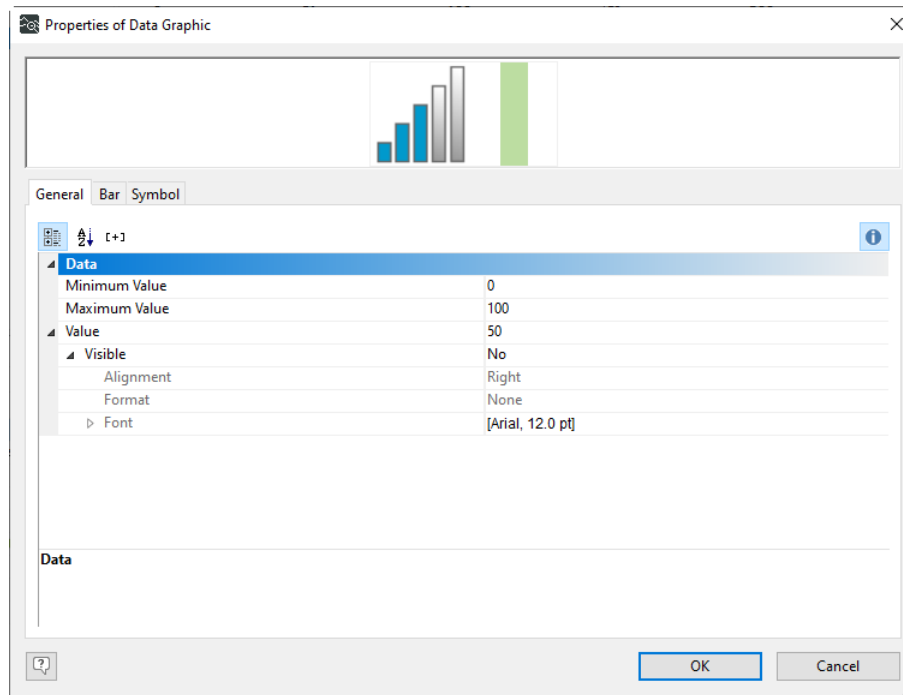
Note



Make sure that the chart field on the report does not show a scroll bar. If this is the case, its size has to be increased. Otherwise the chart will not be printed regularly.

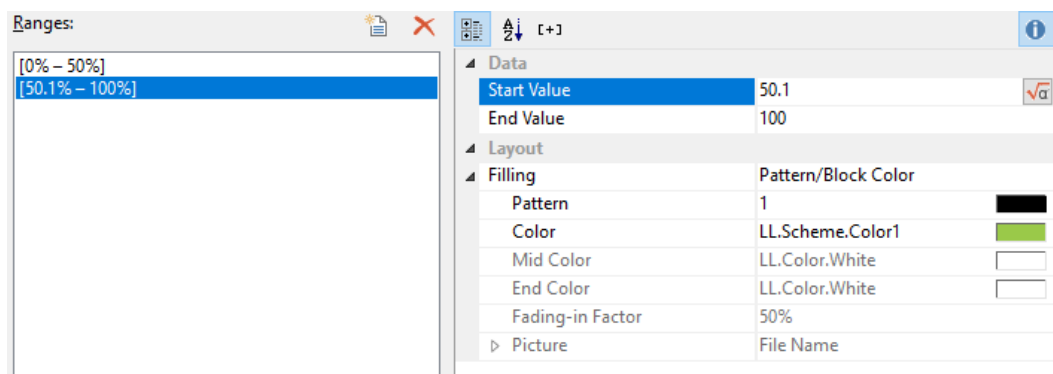
The Data Graphic object

In order to create a simple data graphic, click on the *Data Graphic* icon in the *Insert* ribbon of the Report Designer and use the cursor to mark the object area in the report view window. Such objects can e.g. be used to graphically display a calculated value defined in the *Computed columns* window. As usual, the properties window opens directly, once the object is created.



It is possible to set the minimum and maximum value to be displayed in the *General* window. By double clicking on the *Value* field an *Edit Value* dialog opens and the variable to be displayed can be selected.

In the bar window, several settings can be made including so called *Ranges*. By selecting *User defined ranges* the bar filling assignment window opens, and ranges can be added where individual fillings can be selected. This means, depending on the current value e.g. the color can be altered. For more details please refer to the combit "List & Label Designer" manual.

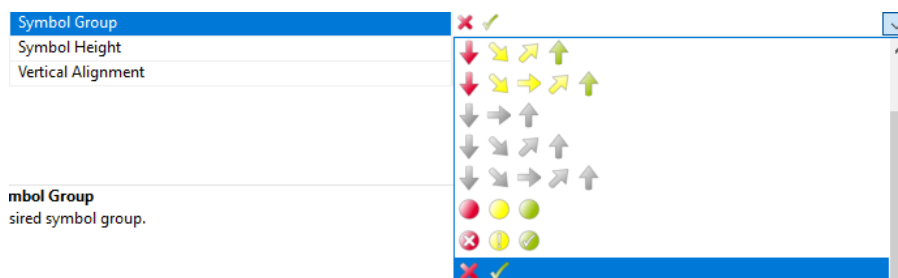


Tip

Double click on *List* to edit existing ranges.

Alignment	Left
Base Value	0
Base Line	No
Appearance Condition	Always Show
Bar Height	Maximum Height
Ranges	User Defined Ranges
Filling	Pattern/Block Color
List	2 Ranges
Rounding	0%
Vertical Alignment	Centered

In the *Symbols* window, several symbols can be selected which are shown together with the quantitative information.

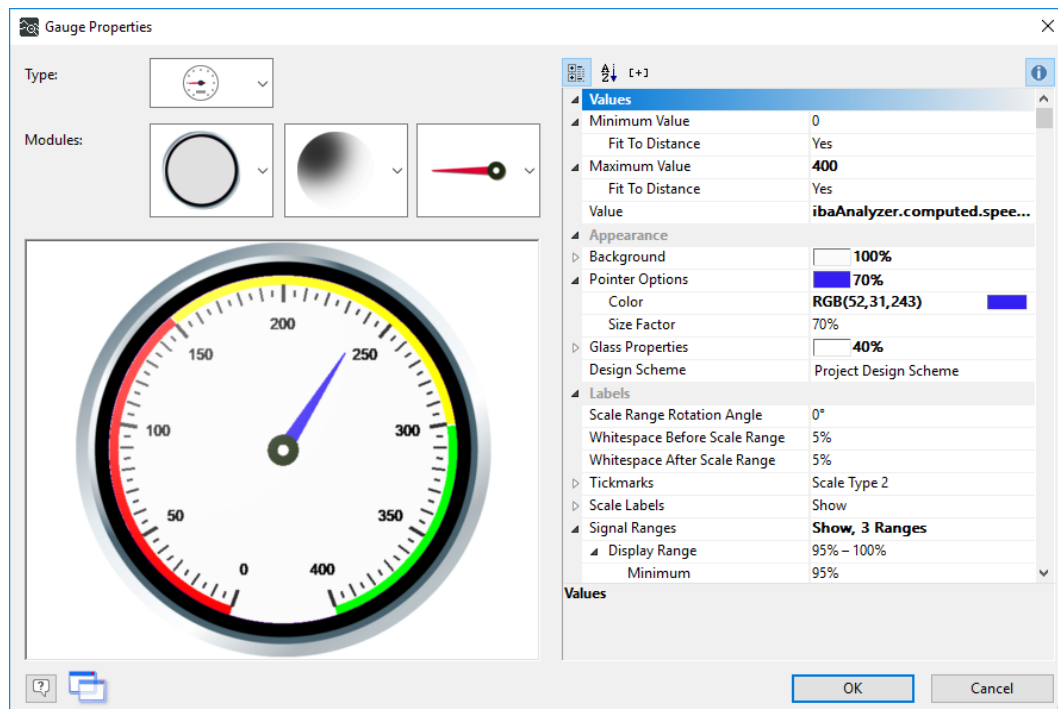
**Note**

The *Ranges* functionality is also available for the symbols shown in the graphic object. Set *Ranges* to "Automatic" in order to take over the ranges set for the bar.

The Gauge object

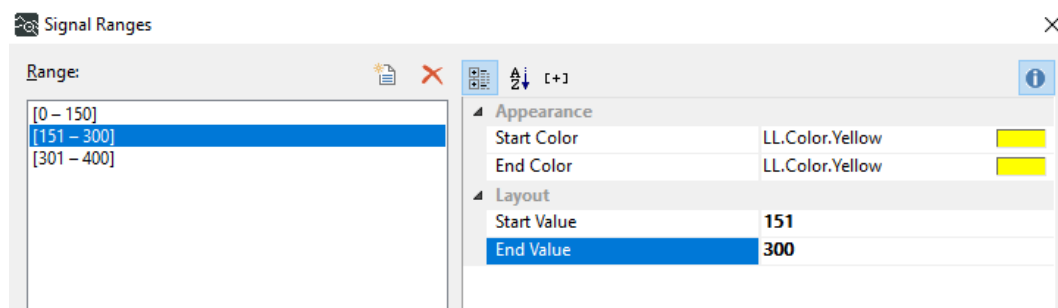
The last possibility for graphical representation of data presented here is the so called *Gauge* object. By clicking on the *Gauge* icon in the "Insert" ribbon you can select the object area as usual and are directed to the corresponding settings dialog.

Such objects can be used, for example, to display graphically the performance of a calculated value defined in the *Computed columns* window.



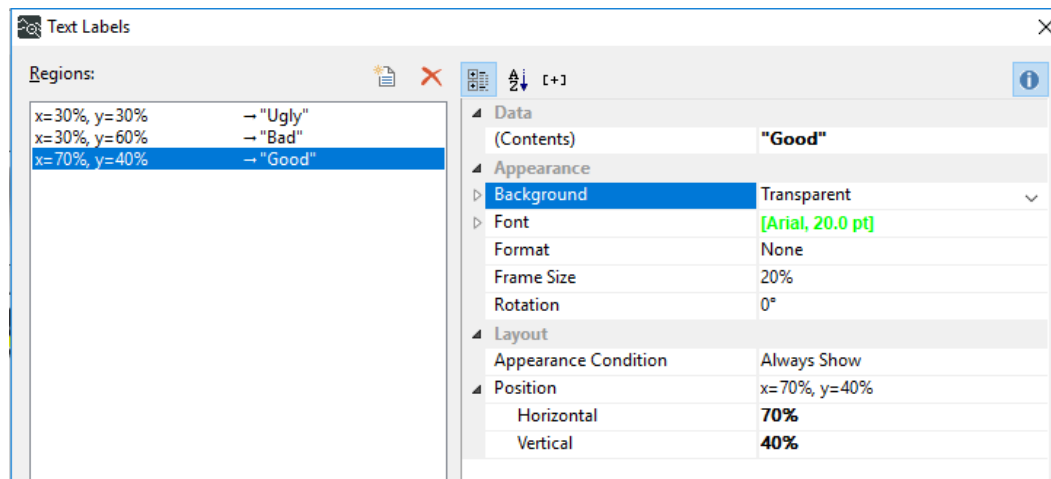
Different types of gauges are available and for every type the display properties can be altered by setting the modules. On the right side in the properties window different settings can be made, including minimum and maximum of the display range. By double clicking on the *Value* field, the usual *Edit value* window opens and different sources can be selected.

Similar as for the data graphics object *Ranges* are available, where the appearance can be made dependent on the current value.



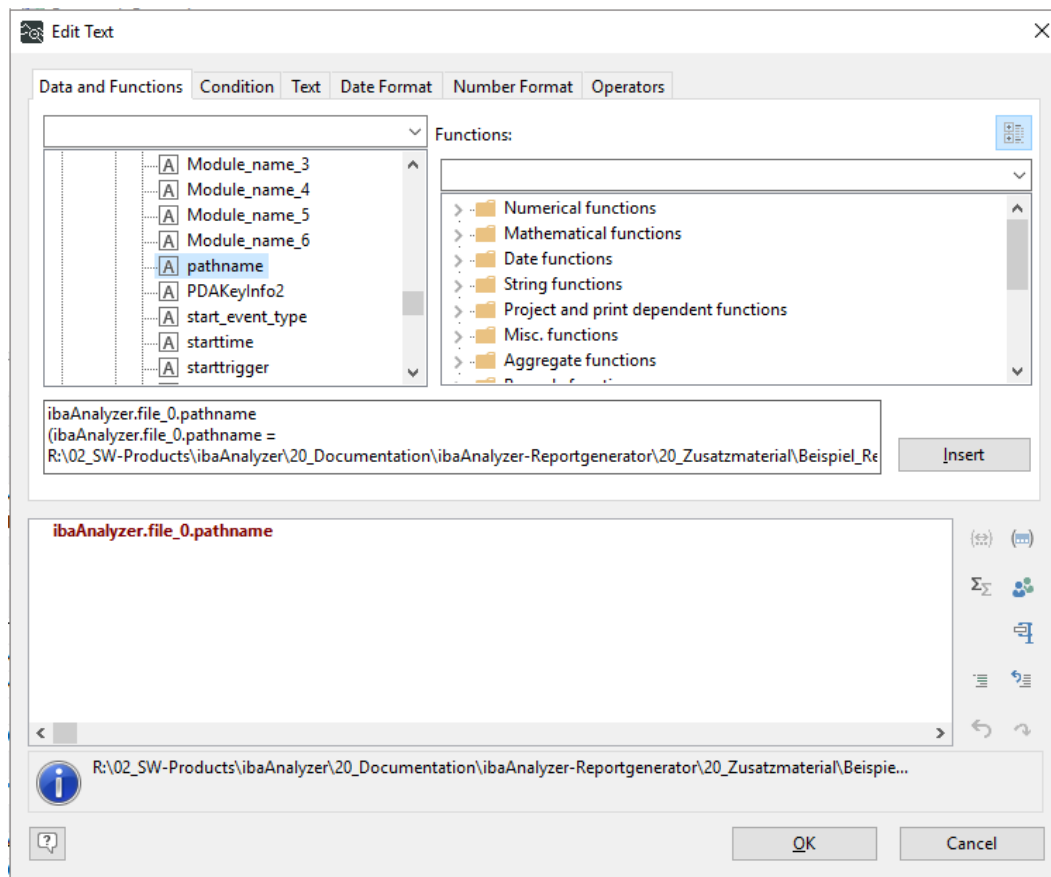
Use the *Insert range* icon to specify a new range or else select an existing range. Use *Start Color*, *End Color*, *Start Value* and *End Value* to set the range parameters. Multiple ranges are possible.

Not only the appearance of the gauge object can be made dependent on the current value, but also the label. By double clicking on *Labels* different labels can be added. The "Content" is edited in the *Text labels* dialog.



Add link to the corresponding data file

Finally, you add a link to the measurement file which was used to create the report. This is again a text field where you use the variable "pathname" which is made available by default by *ibaAnalyzer*.



The Link URL properties of the text object:

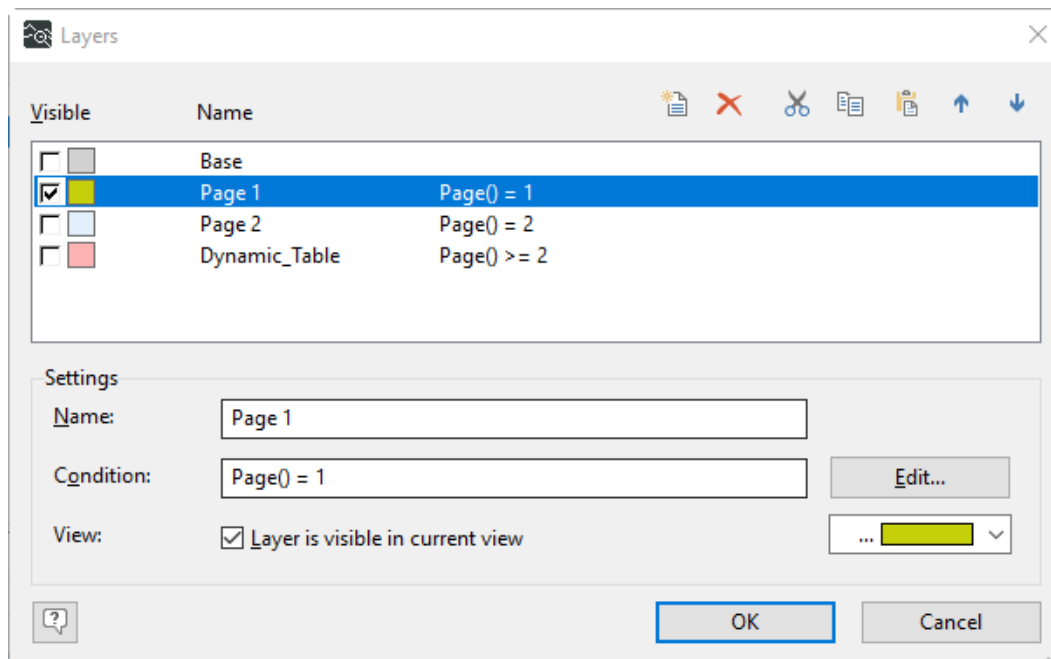
Properties	
<div> <div> <div></div> <div>2</div> <div>↓</div> <div>[+]</div> </div> <div></div> </div>	
<div> <div>Design</div> <div> <div>Locked</div> <div>No</div> </div> <div> <div>Name</div> <div>ibaAnalyzer.file_0.pathname</div> </div> </div>	
<div> <div>Data</div> <div> <div>(Contents)</div> <div></div> </div> </div>	
<div> <div>Appearance</div> <div> <div> <div>Background</div> <div>Transparent</div> </div> <div> <div>Bottom Aligned</div> <div>No</div> </div> <div> <div>Export as Picture</div> <div>No</div> </div> <div> <div>Frame</div> <div></div> </div> <div> <div>Rotation</div> <div>0°</div> </div> </div> </div>	
<div> <div>Action</div> <div> <div>Link URL</div> <div>"file://" + ibaAnalyzer.file_0.pathname</div> </div> </div>	
<div> <div>Layout</div> <div> <div> <div>Appearance Condition</div> <div>Always Show</div> </div> <div> <div>Index Level</div> <div>0</div> </div> <div> <div>Pagebreak</div> <div>No</div> </div> <div> <div>Pagebreak Before</div> <div>No</div> </div> <div> <div>Position</div> <div>[12.57, 266.78, 164.64, 278.00mm]</div> </div> <div> <div>Table of Contents Level</div> <div>0</div> </div> </div> </div>	

5.3 Layers and dynamic tables

You finished the first page of the report and want to add further pages. Further, a dynamic table shall be placed on the following pages. For that you need a short introduction into the layer concept first.

Layers

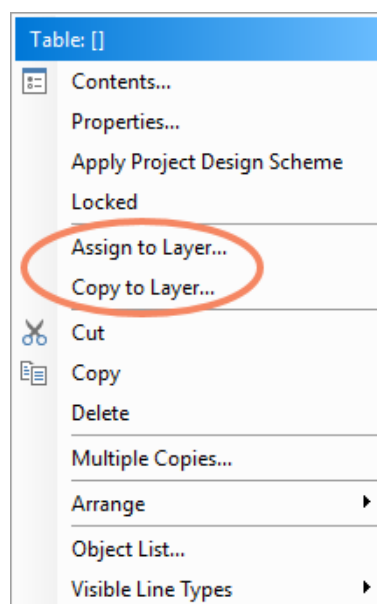
As mentioned before, some layers are available by default in a new report which can be accessed in the left column of the combit interface. You enter the layer settings dialog either by double clicking on one of the layers, or by using the *Layers* button in the *Project* ribbon.



In this dialog you can add, remove, or edit the different layers available. Each layer can be assigned a condition. The "Base" layer has no condition and therefore its content is displayed on every page of the report. If you followed the steps above all the header and footer information in your report should be assigned to that layer.

Since a report shall be created with two pages rename the "First Page" layer to "Page 1" and add another layer named "Page 2". The "Dynamic_Table" layer will be important for the second part of this chapter. Further, you need to add the corresponding condition, e.g. `Page()=2`, to the layers created. Since you renamed the "First Page" layer, most of the objects created so far are assigned to the "Page 1" layer.

To check which objects are located on which layer, you can simply select and deselect the layers you want to see in the *Layers* window. If any object in the report is not assigned to the desired layer, this can be changed by right clicking on the object and choosing *Assign to layer...*. Objects can also be present on several layers.



Dynamic Tables

The final step in the design of the report will be a dynamic table. As indicated by the name the size of the table varies depending on the input. Therefore, it is advisable to add such tables at the end of the report, or otherwise to reserve enough space for it.

Note



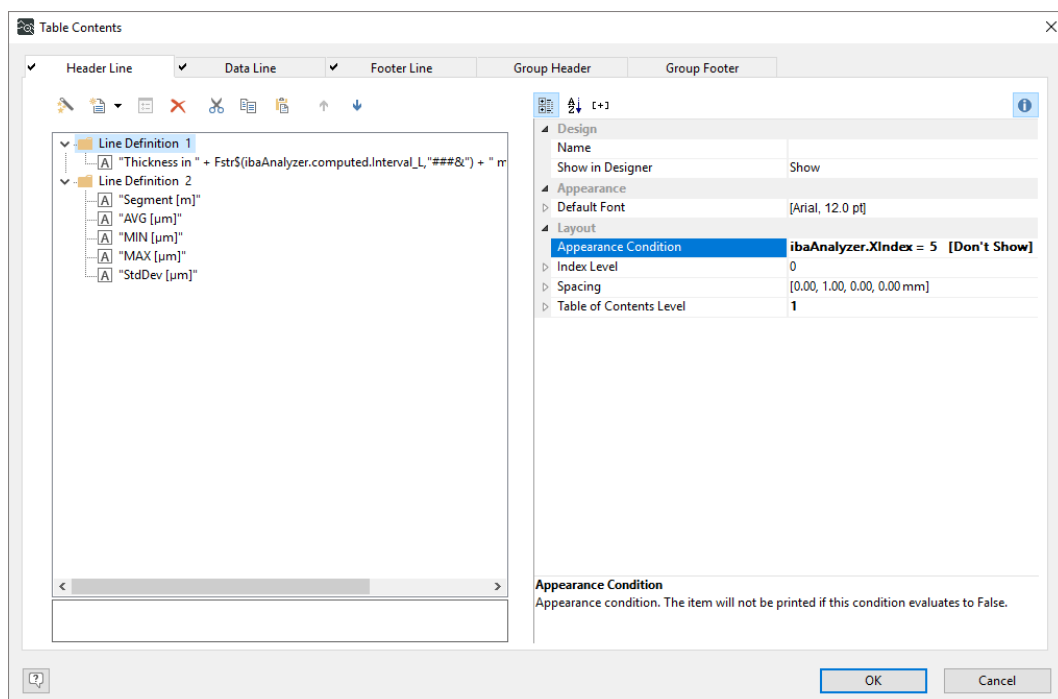
To create a dynamic table suitable input data need to be specified in the *Table Data* window of the Reportgenerator interface of *ibaAnalyzer*. See chapter [↗ The "Table data" window, page 21](#) for details.

Add a *Dynamic_Table* layer in the *Layers* dialog with condition "Page() >= 2". To create the table, select *Table* in the *Insert* ribbon as usual. For labelling the different columns use the *Header* window. Note that the *Group Header* can be used in the same fashion. However, additional functionality is available here, which are not described in detail here.

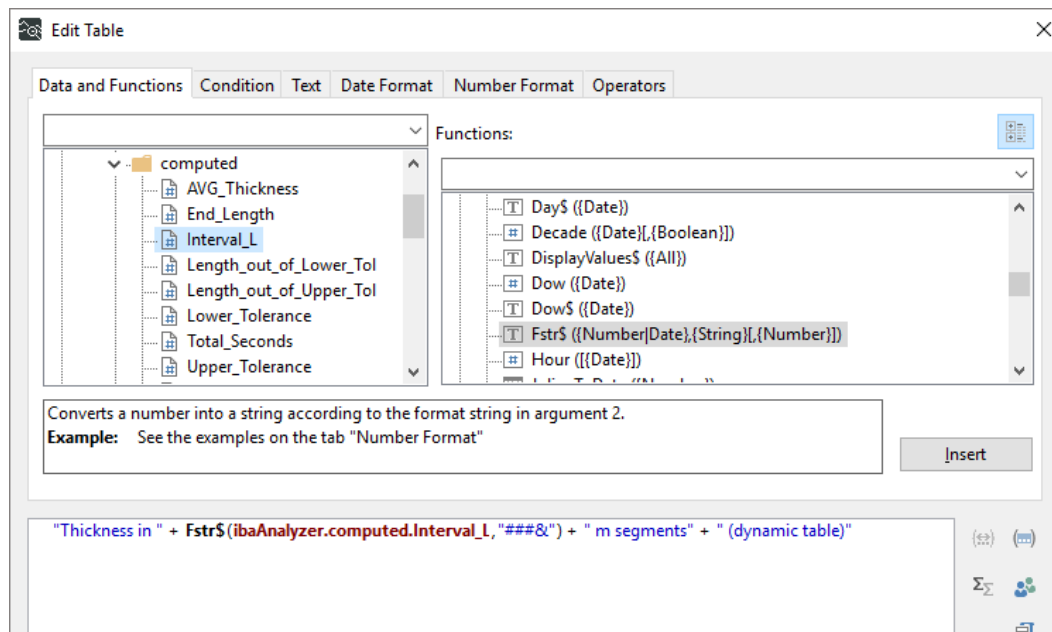
Note



The greater or equal sign (\geq) in the page condition is important in case the dynamic table becomes too large to fit on one page.

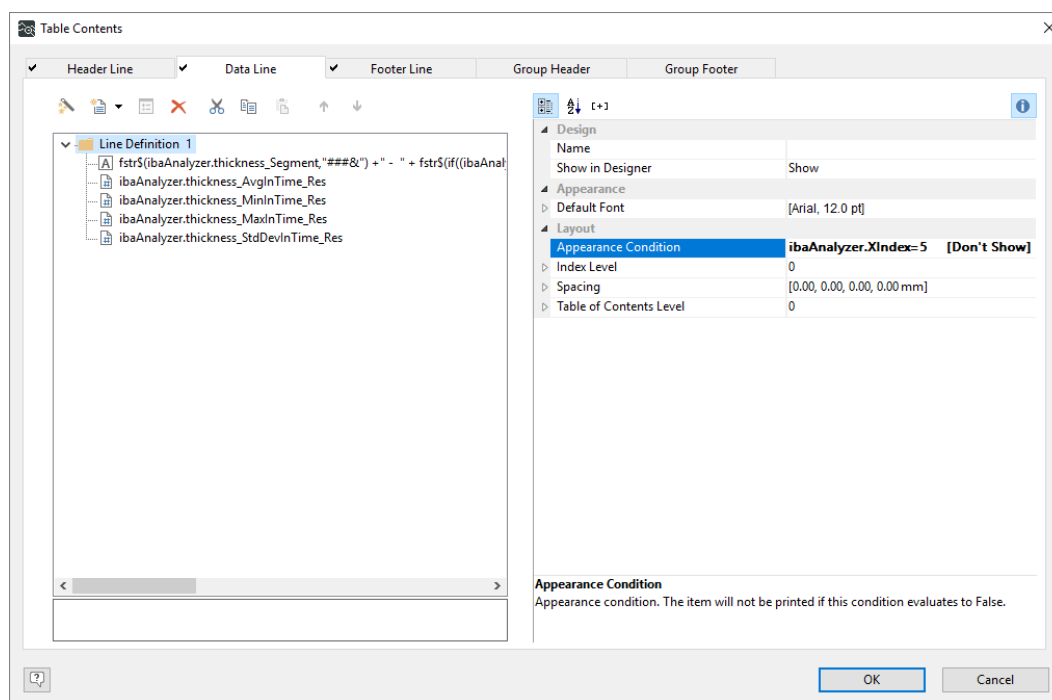


Using the predefined *Line Definition 1* you create a table heading with only one column. Here, you use the interval size of the data to be displayed, which is available as *Interval_L* variable and needs to be converted to string.



Further, add a second data line and insert the names of the desired columns as separate "Text" columns. In the *Edit Text* dialog pick a name corresponding to the field variables made available by *ibaAnalyzer*, see the figure above.

The next step is to add the corresponding data in the *Data Line* window. Use again the pre-defined *Line Definition 1* and add the desired columns. However, in this case you have to actually select the field variables in the *Edit Text* dialog by double clicking.



The final step to make the table indeed dynamic is to add an *Appearance Condition* for both, *Header* and *Data Line*. Here you select the available field variable *XIndex* with condition "*=5*", since the data were provided in line 5 of the *X-Values* window in the Reportgenerator *Table Data* interface.

Design	
Name	
Show in Designer	Show
Appearance	
Default Font	[Arial, 12.0 pt]
Layout	
Appearance Condition	ibaAnalyzer.XIndex= 5 [Don't Show]
Index Level	0
Spacing	[0.00, 0.00, 0.00, 0.00 mm]
Table of Contents Level	0

An additional "Footer Line" can also be added, where you display the total number of segments. Note, however, that the *Appearance Condition* has to be changed here to "LastPage()" in order to display the footer line only at the end of the table (which should be on the last page).

Table Contents

Header Line Data Line Footer Line Group Header Group Footer

Line Definition 1

"Number of Segments: " + str\$(Maximum (ibaAnalyzer.RecordNr),0,0)

Design	
Name	
Show in Designer	Show
Appearance	
Default Font	[Arial, 12.0 pt]
Layout	
Appearance Condition	LastPage() [Last Page Only]
Index Level	0
Spacing	[0.00, 0.00, 0.00, 0.00 mm]
Table of Contents Level	0

Appearance Condition
Appearance condition. The item will not be printed if this condition evaluates to False.

OK Cancel

Tip



The number of records on each page can be altered by changing the size of the table in the *Report view* which can be done by drag and drop.

Using the Project Wizard for the creation of a dynamic table

Dynamic tables are easily created using the project wizard, which is, however, only available in the 32bit version of *ibaAnalyzer*. The usage is straight-forward and will not be explained in detail here.

6 Support and contact

Support

Phone: +49 911 97282-14
Fax: +49 911 97282-33
Email: support@iba-ag.com

Note



If you need support for software products, please state the number of the license container. For hardware products, please have the serial number of the device ready.

Contact

Headquarters

iba AG
Koenigswarterstrasse 44
90762 Fuerth
Germany

Phone: +49 911 97282-0
Fax: +49 911 97282-33
Email: iba@iba-ag.com

Mailing address

iba AG
Postbox 1828
D-90708 Fuerth, Germany

Delivery address

iba AG
Gebhardtstrasse 10
90762 Fuerth, Germany

Regional and Worldwide

For contact data of your regional iba office or representative please refer to our web site

www.iba-ag.com.