User manual

Software CableDataConverter 3.9.2

iret

Gesellschaft zur Entwicklung
elektronischer Steuerungen mbH

Table of contents

Table of contents

Table of contents

Revision history

Revision	Date	Description of changes	Originator
3.9.1	year 2024	Revision history added	MB

1 Preface & installation

1.1 Preface

The program CableDataConverter (CDC) described here is a data conversion utility to convert Excel-files in a file format used by Komax machines for wire production. The software supports any machine working with one of the following software solutions:

- KappaWin (Komax)
- TopWin (Komax)
- Cayman (Schleuniger)
- CableDataProducer (iret)

Note!

Chapters 1 to 6 are arranged to support you during installation and initial configuration.

1.2 Conventions

1.2.1 Technical terms

Term	Description
Conversion scheme	All the information necessary to convert a specific excel sheet into a file for the target machine.
Crimp contact	The name of a crimp contact
Encoder	The shaft encoder which is used together with the marking device (inkjet).
Font assignment	A font assignment used to reference a set of printinig options in the machine software. **Note:** • Komax TopWin term: Font
Inkjet	The marking device used for print texts
Machine	A cutting & stripping machine, e.g. Komax Kappa or Komax Alpha.
Machine settings	All settings used by this software when converting for a specific target machine. E.g.: type of machine, file path, specific attributes
Material / Material number / Material name /	The name of the raw material, e.g. FLRY 0.5 grey" **Note:** • The name may be the technical name or your internal material name • Komax TopWin term: Cable
print layout	The layout of the print texts on the wire (eg. positions and rotation).
Printing options	Some options defining the appearance of print texts (e.g. Bold).
Print text	A single marking text on a wire
Wire	A single wire including length, stripping, print text....
Wire list	A set of wires that are grouped together (e.g. as a production order)

2 Installation and customization

2.1 Installation requirements

Before you begin with the installation you should verify if your PC fulfills the following requirements:

- Operation system is Windows XP, Vista, 7, 8.1 or 10.
- Free hard-disk space of about 20 MB
- To view the online documentation you need a program PDF reader.

The following software is not required but may be useful in case of trouble:

- Microsoft Excel or LibreOffice can be used to view and modify original data.
- To view the results of the conversion process you need an installed version of your desired target software (KappaWin, TopWin oder CDP).

2.2 Installation

When you purchase the program, you will normally receive a USB memory stick containing the setup of the program and the purchased program license(s).

Figure 1: USB-Stick iret Software (symbol image)

Search for the setup.exe file on the USB flash drive and execute it with administrative permissions. The installation itself adheres to the usual conventions under Windows, therefore it is not described here.

Figure 2: Content of the memory stick

After installation you can safely remove the flash drive.

2.2.1 Data transfer during update installation

If an update is carried out from an older version, a query appears at the end of the installation with which the existing data can be transferred.
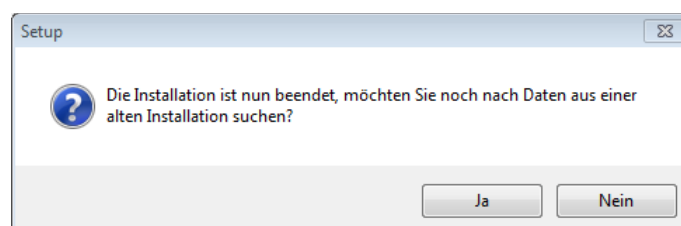
2.3 Licensing

The supplied license is automatically activated during program installation. If the program is started with a temporary demo license, the remaining test period is displayed. Furthermore, the dialog window informs about the program version, the licensee and the number of purchased licenses.
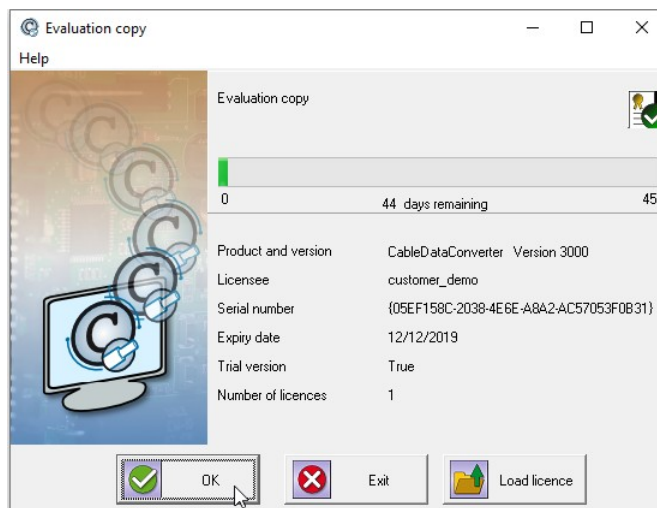
Figure 3: Reference to a time-limited license.

Function	Description
Button "OK"	Continue with loaded license.
Button "Exit"	Exit program. Note : If the licensing dialog is opened from the running program this button is deactivated in order not to end the program accidentally.
Button "Load licence"	Opens a dialog for loading a license file.

If you have purchased a full version of the program, you can activate it here: Press the "Load license" button and load the purchased license file from the file system (e.g. from the USB stick). The menu item "Help" provides further information on licensing.

Note!

If the program is started with an unlimited license, the dialog for loading a license does *not* appear. However, the dialog can be opened at any time from the menu help (see chapter 7.4.3: Load license).

If no valid license is found at program start, the dialog for importing a license is also displayed.

Figure 4: Dialog for loading a license.

If the program was delivered with a hardware license (dongle), it must be plugged into a free USB port of the PC. If the dongle is not found, an error message appears. In this case, please exit the program (button "Exit"), connect the dongle and restart the program.
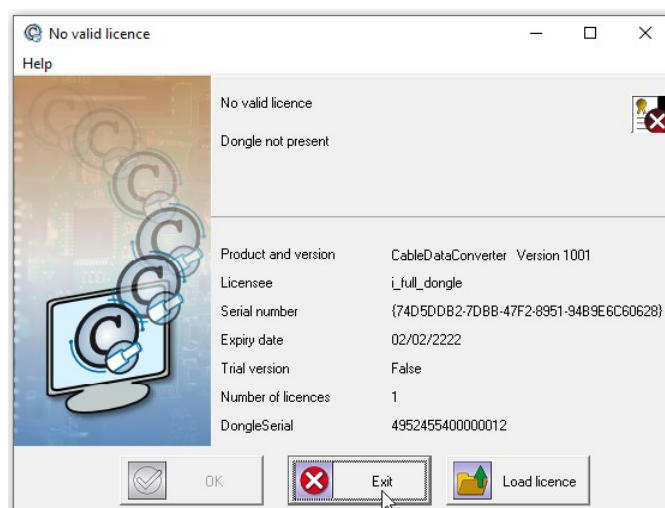
Figure 5: Note on missing dongle.

2.4 First start of the program

By first starting the program you should be presented a welcome message
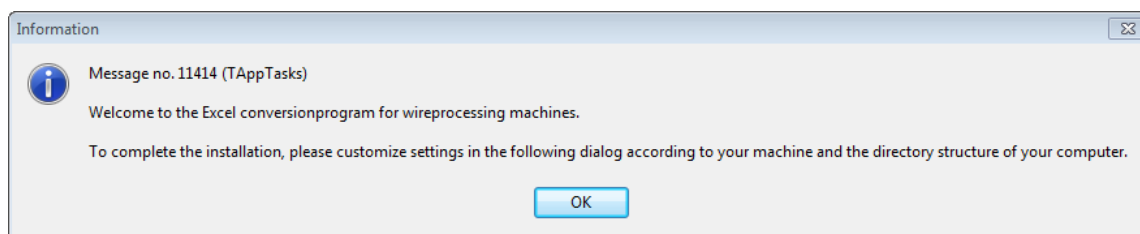
Figure 6: First program launch . Welcome

2.5 Basic setup

By first starting the program you will be presented a dialog with some general settings. CDC uses reasonable defaults but we advice you to carefully check "Output format" and "Output directory". Reasonable values:

Software	Output format	Output directory
KappaWin	Job & wire files for Kappa 225 - 240	C:\kappawin\
TopWin for Alpha	Komax WPCS files for Komax alpha machines with TopWin	D:\komax\data\wpcs-data\
TopWin for Kappa	Komax WPCS files for Kappa with TopWin	Depends on your TopWin setup

> **Note**
>
> A detailed description of all options follows in chapter 2.6.

2.6 Examples

To provide a quick overview of important CDC functions, some examples are also installed. They are designed so that they can be executed with the CDC installation settings. A description of the examples can be found in the installation directory under '\doc\ cdc_examples.pdf'

3 Machine settings

Machine settings are used to specify the interface between CableDataConverter and the software of your machine (e.g. KappaWin, TopWin...).

Note!

You can reach these settings on different ways, either by pressing F2 function key or by using the corresponding symbol in the toolbar (chapter 4).

3.1 General
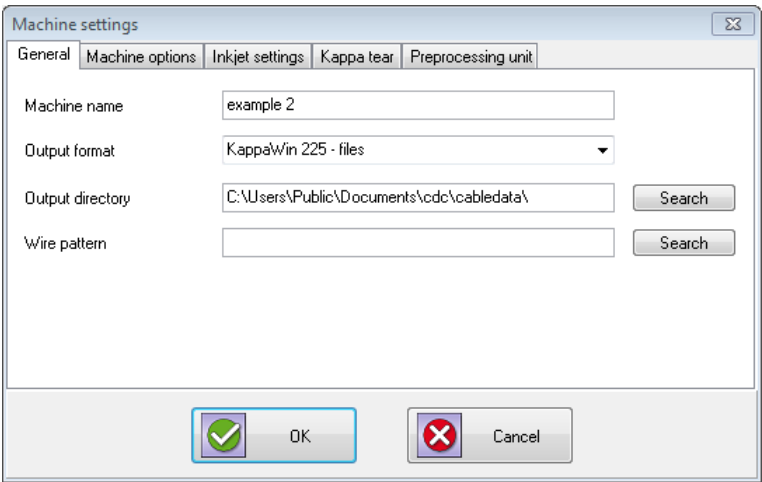
Figure 7: General machine settings

Function	Description
Machine name	Choose a reasonable name for your machine, e.g. "Kappa 330 – Machine 1".
Output format	Choose the appropriate format depending on your machine.
Output directory	The resulting files of conversion will be stored into this directory. Depending on your machine you should choose: • KappaWin: c:\kappawin\ • WPCS-files for Alpha: D:\komax\wpcs-data\ • WPCS-files for Kappa: Look up the WPCS directory in your TopWin software
Wire pattern	The path to a wire which will be used as pattern to complete all absent values during conversion. **Note: Only available for KappaWin right now.**

3.2 Machine specific options
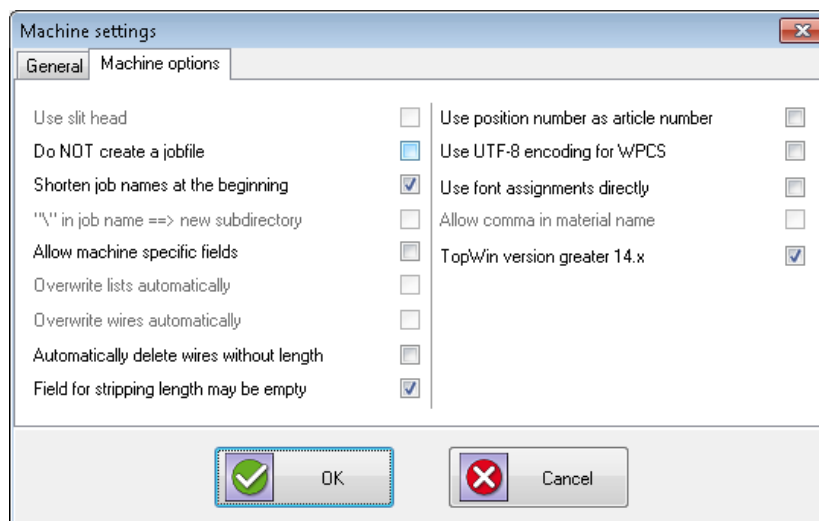
Figure 8: Machine settings . Machine options

Note!

Some of these options are only available if supported by your machine.

Function	Description
Use slit head	If you activate this option the slit head of the machine will be used under following circumstances: 1. the stripping length exceeds 50mm (either right or left side) 2. the machine has a slit head installed **Default: not activated**
Do NOT create job file	Normally the software will create an article file and an associated job file for TopWin. **Restriction:** Only available for WPCS **Default: not activated.**
Shorten job names at the beginning	If a job name is longer than allowed by the target machine it may either be truncated or shortened at the beginning or at the end of the string. **Examples:** • ON: „ORDER-45000100-001"→ „45000100-001" • OFF: „ORDER-45000100-001"→ „ORDER-450001" **Default: activated.**
"\" in job-name ==> New subdirectory	A new directory will be created if the job name contains a "\" character. **Restriction:** Only available for KappaWin **Default: not activated.**
Allow machine specific fields	This option will enable field assignments that are not common for all kinds of machines. **Example:** Print texts 4..7 for TopWin **Default: not activated.**
Overwrite lists automatically	Don't ask before overwriting existing lists with same name. **Default: not activated.**
Overwrite wires automatically	Don't ask to overwrite existing wires anymore. **Default: not activated.**
Automatically delete wires without length	Delete wires with zero-length or invalid length without any warning. **Default: not activated.**
Field for stripping length may be	Delete wires with zero-length or invalid length without any warning.

Function	Description
empty	**Default: activated.**
Use position number as article number	If no assignment for article number is made, the software will normally use the label name. Using this option you can force using the position number inside the wire list instead. **Restriction:** Currently only supported for WPCS files **Default: not activated.**
Use UTF8-encoding for WPCS	Activate this option if you need special characters (e.g. German umlaut) in your printing texts. **Default: not activated.**
Use font assignment directly	Use this option if your Excel files already contain the exact font name used in your TopWin setup. **Default: not activated.**
TopWin version greater 14.x	Allows to differentiate the production mode between harness and list mode (WPCS export only) See 5.6

3.3 Inkjet settings
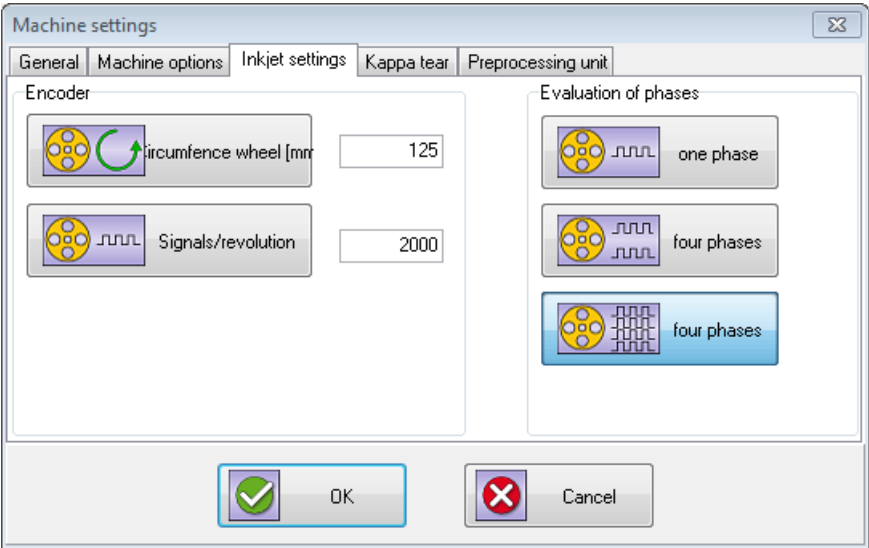
Figure 9: Machine settings - Inkjet adjustment

Only necessary for KappaWin target.

Function	Description
Circumference	
Signals / revol	...ed on the type
Evaluation of	...n setup of your

3.4 Kappa tear off

iret

Figure 10: Machine settings - Kappa tear

Kappa 2xx series machines can use a special operation mode for very long stripping lengths which is called PS-mode. The fields on this tab give you the possibility to define some values to be used in this mode.
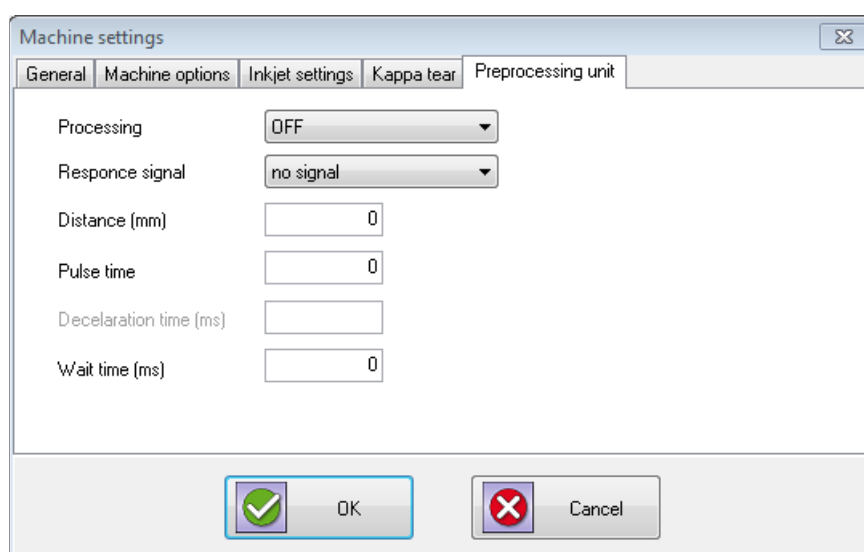
Note!
PS-Mode is only supported for KappaWin software.

3.5   Preprocessing unit

Figure 11: Machine settings - Preprocessing unit

Note!
Only available for KappaWin software, please refer to Kappa / KappaWin manuals for the meaning of these values.
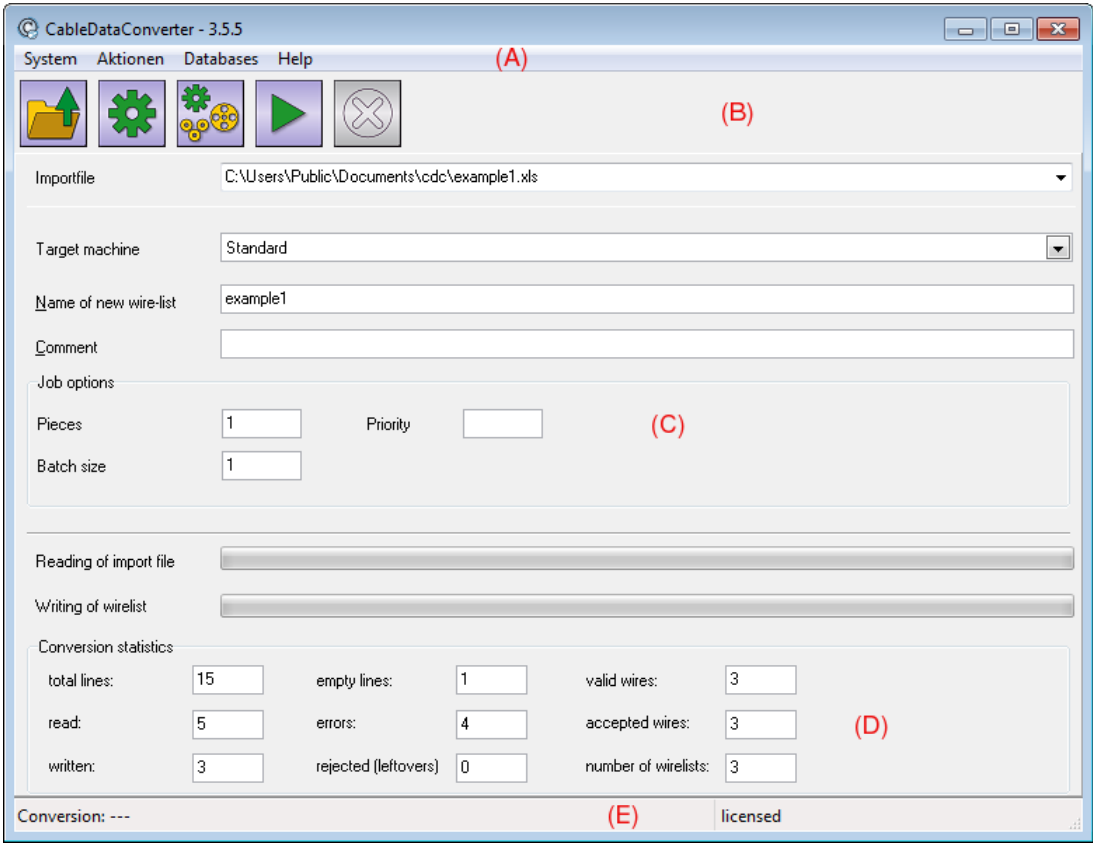
4 Main window

Figure 12: Overview - CableDataConverter Main window

Area	Description
(A)	Main menu (chapter 4.1).
(B)	Toolbar (chapter 4.1).
(C)	Working area (chapter 4.2).
(D)	Statistics (chapter 4.3).
(E)	Status bar (chapter 4.4).

4.1 Area (A) and (B): main menu and toolbar

Most common functions can be reached via the toolbar or function keys, all others are integrated into the main menu (refer to chapter 7).

Function	Description
	Shows the Windows "File open" dialog to choose the excel file you want to convert. Function key: F4
	Will open the dialog with general setup parameters (chapter 7.1.1). Function key: Shift+F2

Function	Description
	Will open the dialog for machine settings (chapter 2.6). Function key: F2
	Used to start the conversion process (chapter 5). Function key: F5
	Stop running conversion. Function key: F6

4.2   Area (C): Working area

Short description of the steps necessary to get your first excel file converted.

1. By pressing function key F4 the "file open" dialog opens to select your excel file.
2. Select the "target machine" to which you want to send the resulting files.
3. Give a "name of new wire list" which will be used either as a filename (KappaWin) or job name (WPCS / TopWin).
4. "Comment" gives you the opportunity to give some more information to the machine operator.
5. Function key F5 will now start the process of conversion. Normally this will open a new dialog window on the screen (chapter 5.1) where you create your conversion scheme.
6. During conversion you will see some progress in area D, which is reserved for information only.
7. In some cases you will be asked to confirm some actions or correct invalid values. The specific dialogs that may appear are discussed in chapter 6.

4.2.1   Input fields

Function	Description
Import-file	Select the file by pressing function key F4 or using the corresponding toolbar button.
Target-machine	Choose the desired machine here.
Name of new wire list	Enter the desired name for the wire harness or job. CDC will use the name of your excel file by default. **Note:** • You must not specify a file extension here • TopWin will limit the name to 25 characters, longer names will be truncated
Comment	Short comment to be included in resulting files. **Note:** KappaWin software will only show 22 characters.
Number of pieces	WPCS only: Number of wire harnesses to be produced
Batch size	WPCS only!
Priority	WPCS only: Priority of the job

Note!

(WPCS export only) If the input of field "Name of new wire list" contains one or more commas, then all up to the last comma will be interpreted as the name of the article group and all

Table of contents

following the last comma as the name of the article.

4.3 Area (D): Statistics

Shows some statistics about the running conversion.

4.4 Area (E): Status bar

Short information concerning current state of conversion or helping information about input fields.

5 Schemes for conversion

A conversion scheme is a set of rules which defines how to convert a specific Excel file into the target format. Such a scheme contains:

- A list of assignments between Excel columns and the properties of the wire
- A set of options concerning inkjet printing on the wire
- Sort order
- Job options
- Miscellaneous settings

CableDataConverter can store many different conversion schemes, each of which may be used for one or more Excel files with the same layout. The wizard for creation of conversion schemes will be explained in the next sections of this manual.

Note!

It is best practice to prepare all your excel sheets from one common template, specially the column headers should always be the same and should be placed on the same row of the sheet.

5.1 Overview
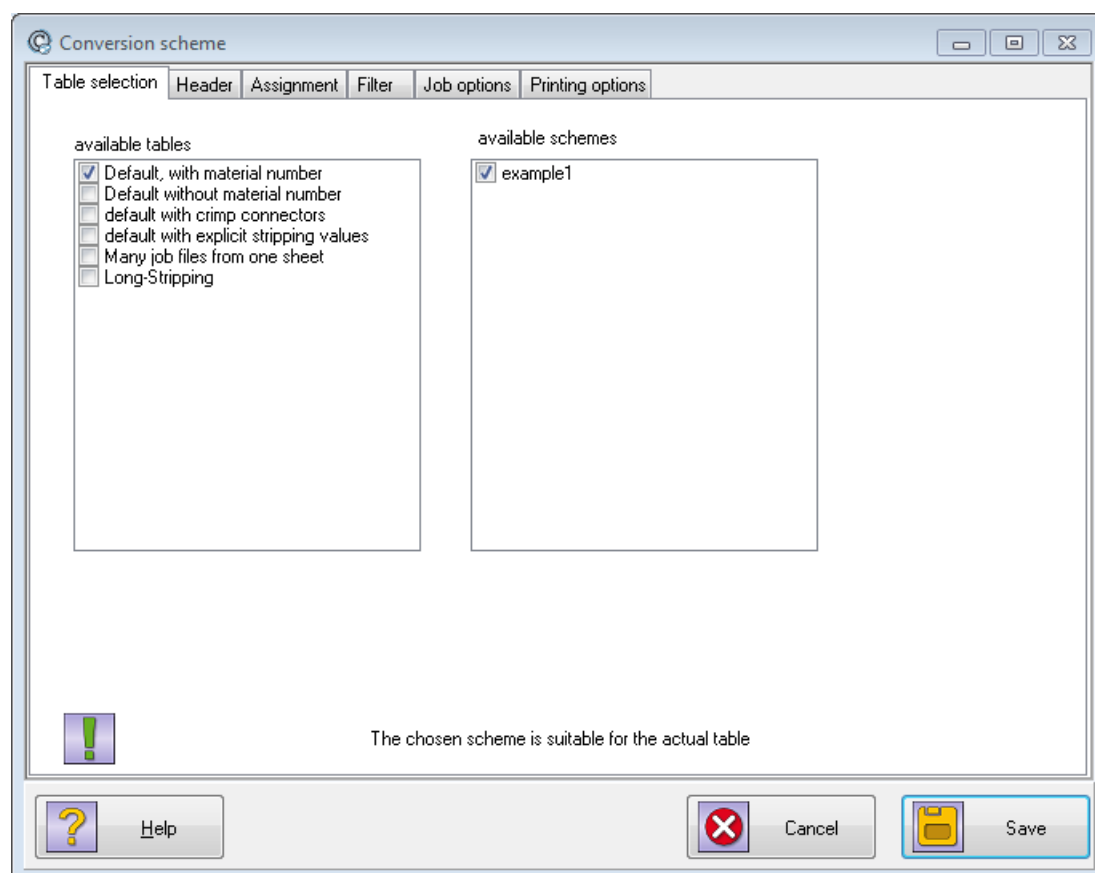
Figure 13: Overview - Conversion scheme

Function	Description
Table selection	List of all worksheets and conversion schemes (chapter 5.2).

Table of contents

Function	Description
Header	List of all conversion schemes (chapter 5.3).
Assignment	Assignment between Excel columns and cable data (chapter 5.4).
Filter	Filters for different purposes (chapter 5.5).
Job options	Options concerning job generation (chapter 5.6).
Printing options	Options concerning inkjet marking (chapter 5.7).

5.2 Table selection
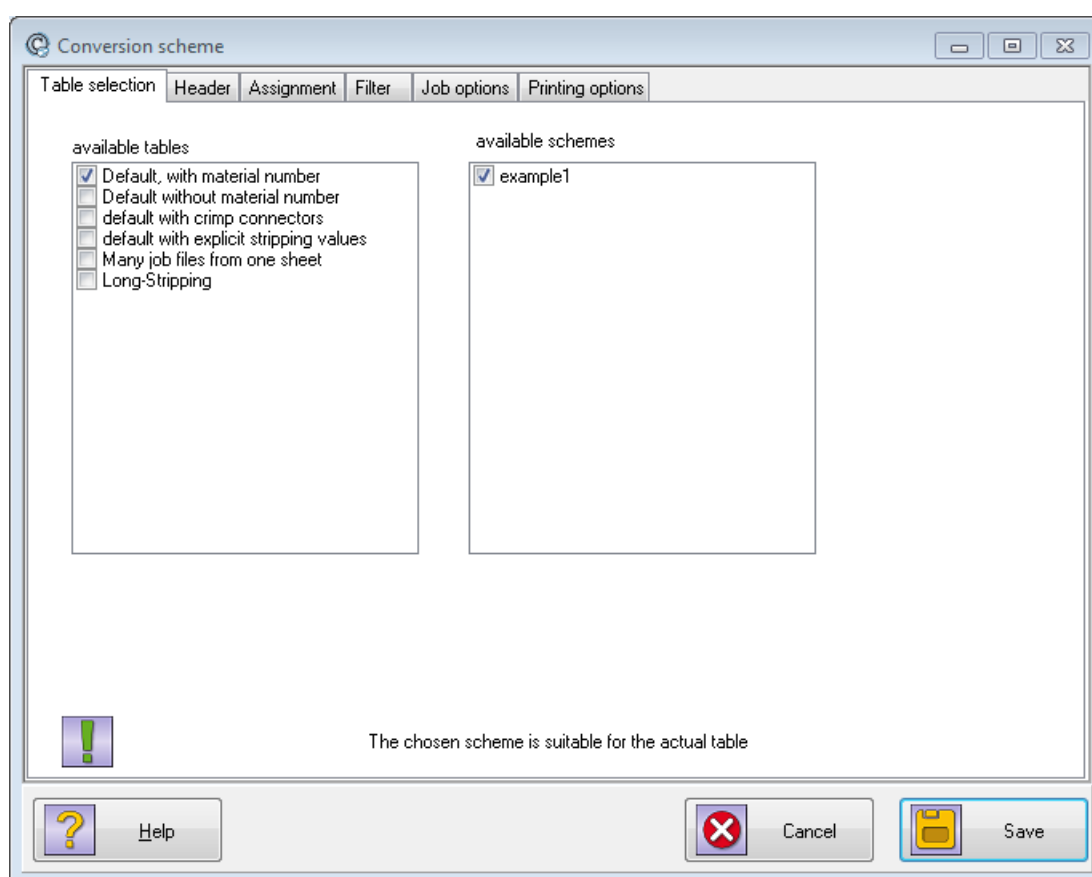
Figure 14: Conversion scheme - Table selection

5.2.1 Available tables

A list of all worksheets in your Excel file. The active worksheet has to be marked, multiple selections are not yet supported.

5.2.2 Available schemes

A list of all conversions schemes available yet. Only one scheme can be selected at a time and whenever a worksheet is selected, the software tries to find an appropriate conversion scheme for that worksheet. The first matching scheme will be selected and it is the users responsibility to verify if headers, assignment ff. are correct.

> **Note!**
> When pressing "Save" button the software will ask for a scheme name. By choosing a unique
> name a new scheme will be created.

5.3   Header

This ...row
con...

5.4   Ass...

Figure 16: Conversion scheme - Assignment Excel- / cable data

On this tab you define the mappings between Excel-columns and the properties of a wire. To create or change an assignment move the cursor to the line with the „Fieldname Wire-processing" you want to assign and click into the field "Fieldname Import File" in the same row. Thereupon a drop down box appears where you can select one of the columns of your Excel-file.

Note: The list-box contains the column headings selected in the last dialog. An Excel-like notation (e.g. A, B,...) is used if the column heading is empty.

Function	Description
Fieldname Wireprocessing	The denotation of the static field-name in the wire-processing software. This field is only used for display purposes and you can't change it's content.
Fieldname Import-File	The denotation of the field-name which has to be selected from the import-file. (chapter 5.3).
Column	Excel-like notation of the column **Note:** For information only
Substitution list	You may choose a substitution list to normalize your data. E.g.: Translate German color names into English. **Note:** chapter 7.3.7 has more information about substitution lists

i

Note!
The yellow fields are mandatory for conversion.

5.4.1   Reserved field names (Clipboard)

In addition to the field names available in the wire processing software there are reserved field names for special use(Clipboard-1 .. Clipboard-5). These fields can be assigned a column and later on it is possible to combine the content of this fields into a new one. More details on this functionality is available in chapter 5.5.3
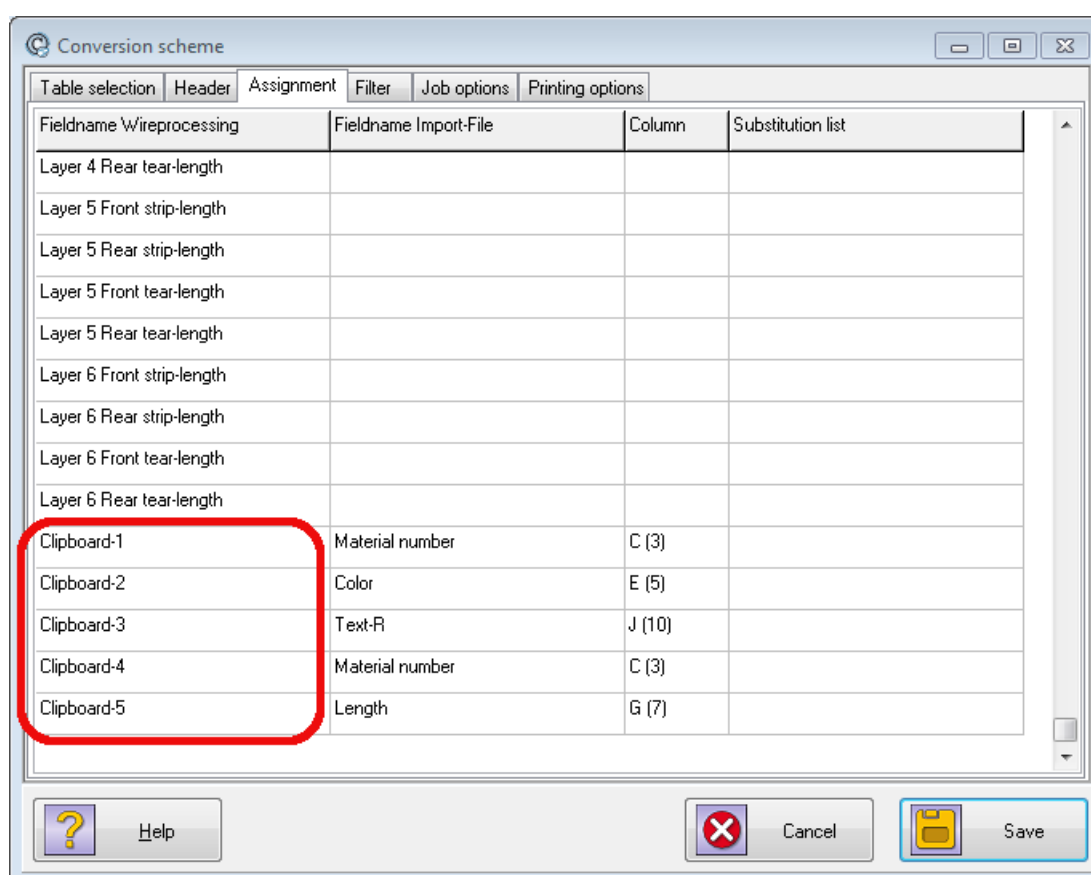
Figure 17: Reserved field names (clipboard for fields)

5.5 Filter
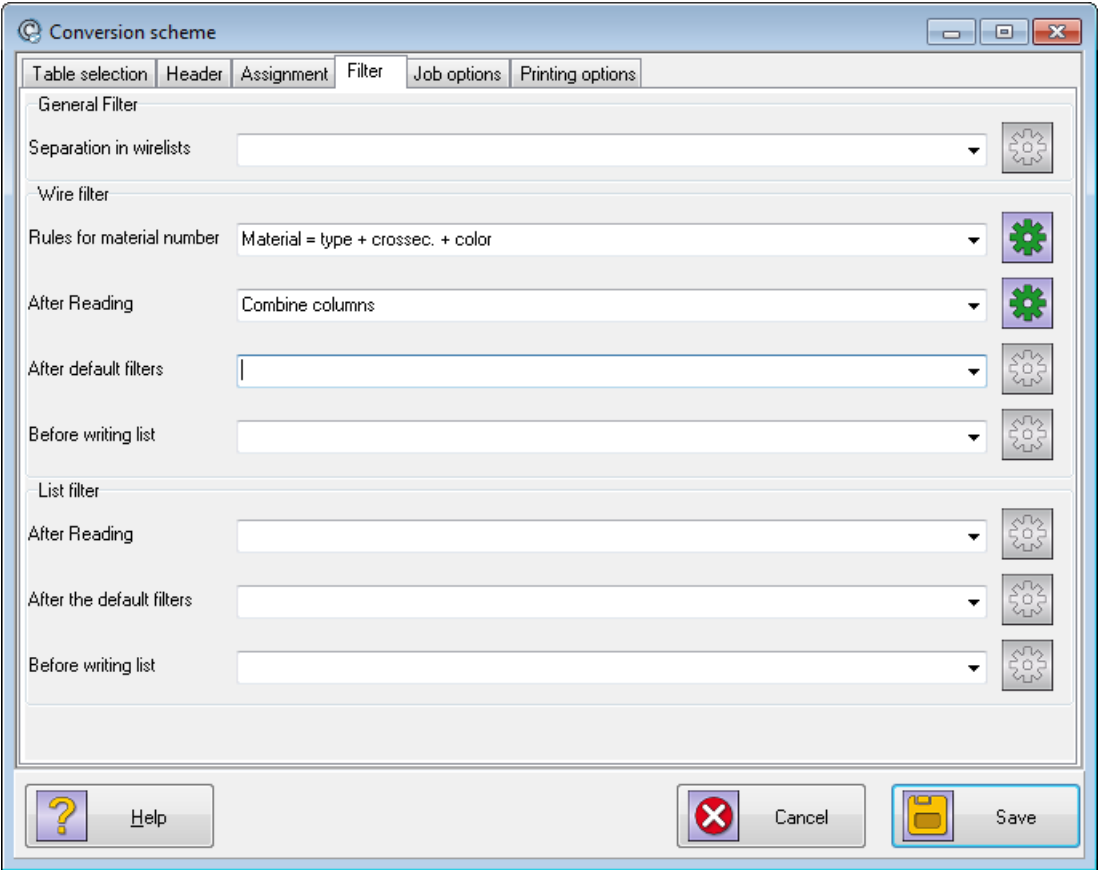
Figure 18: Conversion scheme - Selection of filters

In this tab you can specify different filters which will be executed during conversion. Please don't use these filters without prior examination of your Excel files because they may have serious impact on the resulting job-files. Specially in case of apparently wrong conversions we strongly recommend you to disable all filters to help identify possible errors in the original file.

Function	Description
	Some filters have a setup dialog associated.

Note!
Not all filters are available for every target machine.

Table of contents

5.5.1 General filter

Filter	Description
Separation into wire lists	The filters in this category are used to split one worksheet into multiple jobs: • by change of article number • or by change of material number For example this may be used to optimize setting up time for your machine.

Note!

The filter "On change of material number" will be automatically selected if your machine is of type "Komax WPCS files for Alpha with TopWin" and no other filter is selected.

5.5.2 Wire and list filters

This kind of filter is meant to change either properties of a single wire or even all wires. Both kinds of filters can be applied at different places in the conversion process. The wire filter will be executed whenever one wire has run through the associated part of the conversion, the list filter will be executed when all wires have passed that part.

Filter	Description
Rules for material number	If your excel file does not contain a column that may be used as the material number you can choose a filter to build the material number from a combination of other columns.
After reading	The wire filter will be executed directly after one line has been read from the Excel-file. The list filter will be run when all lines in the Excel-file have been read.
After default filters	These filters will be run after some internal manipulations have been run (e.g. Looking up crimp connectors).
Before writing	These filters will be run after some internal manipulations have been run (e.g. Looking up crimp connectors). **Note:** Filters for sorting the wire list should be used here

5.5.3 Available wire filters

Filter	Description
Stripping in PS-mode	Only available for KappaWin target, see chapter 3.4 for details
Material = type + cross section + color	If the excel sheet does not contain a column with the material name to be used it is possible to create such a name from the afore mentioned columns. (chapter 5.5.4).
Determine connector name (universal)	Searches in field "Text side 1" for the last occurrence of a colon. All characters behind will be used as the pin-number of a connector, all previous characters become the connector name. As a further rule there has to be a hyphen at any position before the colon. **Example:** Text: "Hallo-A13:1x" - Connector: A13 - Pin: 1x.
Determine connector name (-X1: 1)	Works similar to the previous filter but introduces further rules: 1. The connector name has to begin with "-X" 2. The pin number contains only digits
Post processing	Only available for KappaWin target
Post processing depending on length	Only available for KappaWin target
Combine columns	This filter can be used if the information you need (eg: marking text) is spread over more than one column. Chapter 5.5.5 contains details.

5.5.4 Wire filter: Material = type + cross section + color

This filter can be used to prepare a (normalized) material name from the fields "wire type", "cross section" and "color". You can specify a default wire type in case the corresponding field is (sometimes) empty or not available at all.

Example of wire filter dialog
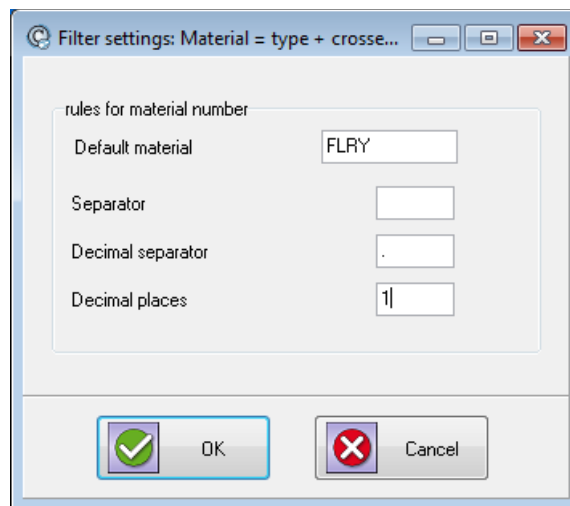
Figure 19: Filter settings: Compilation of material name

5.5.5 Wire filter: Combine columns

This is a complex filter used to create a combination of column-data and fixed text that can be used in the wire processing software later on.
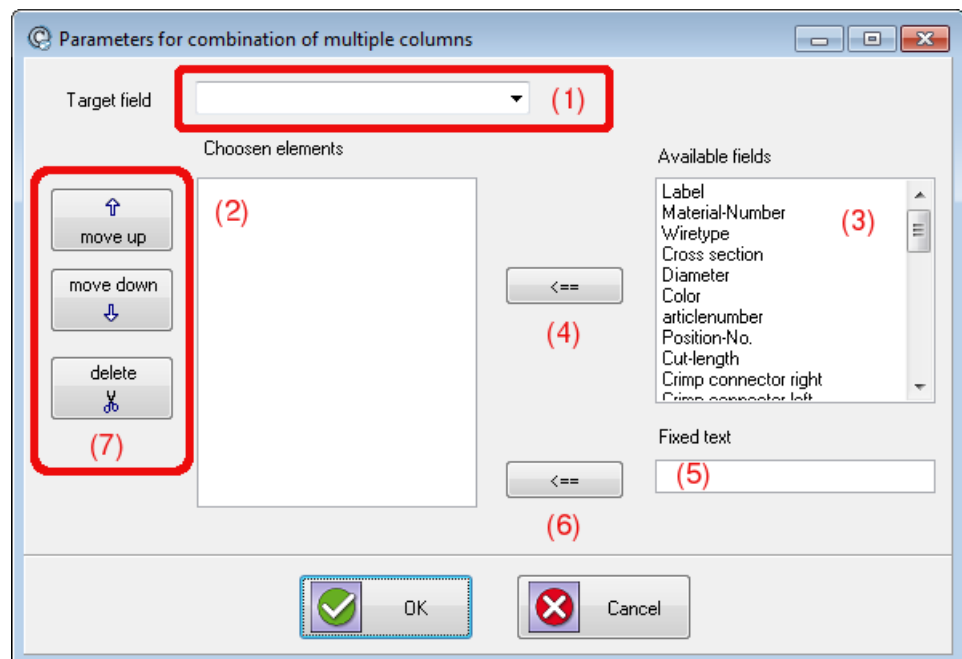
Figure 20: Filter settings: Copilation of several columns

- First choose a target name in the drop-down-box (1). The target name must not already be assigned a column on tab "assignment" (chapter 5.4)
- List-box (3) shows all available fields, button "<==" (4) is used to append the field to the list of chosen elements.
- The input field "fixed text" (5) can be used to enter some static text and append it to the list of chosen elements with button "<==" (6).
- The list of chosen elements can be rearranged with the buttons from (7).
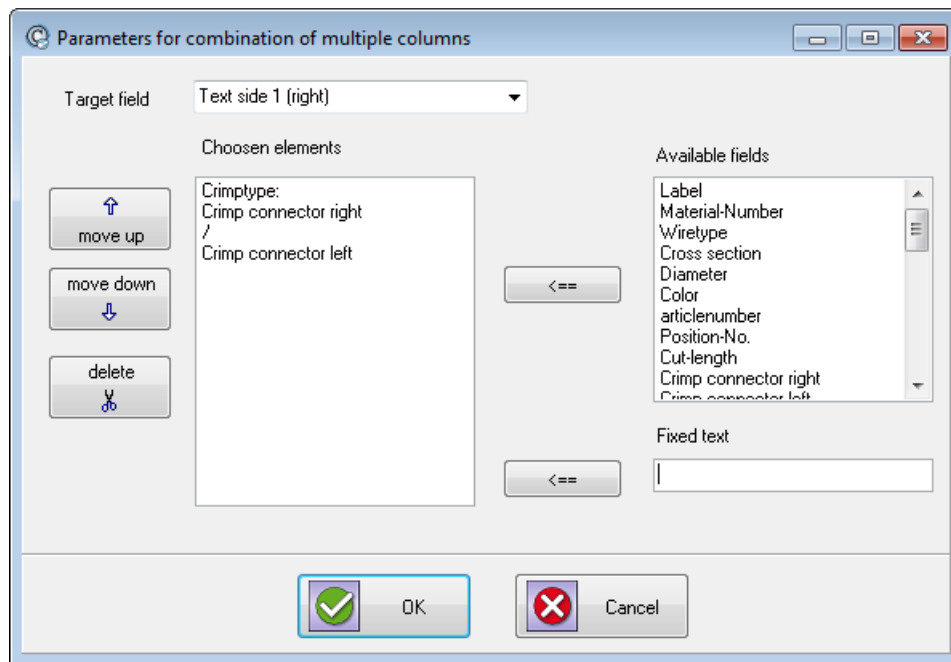
Figure 21: Example: Combining columns

Example for combining a marking text "text side 1" from different columns.

- "Crimp type:" is fixed text
- "Crimp connector right" is a column form excel file
- "/" is fixed text again
- "Crimp connector left" is a column form excel file again

Result may look like: "Crimp type: 121a/17"

The following screen shot shows the use of reserved field names "Clipboard-1"…"Clipboard-5" (chapter 5.4.1)

The lines between the selected field names „Clipboard-1"to „Clipboard-5"contain fixed text elements.
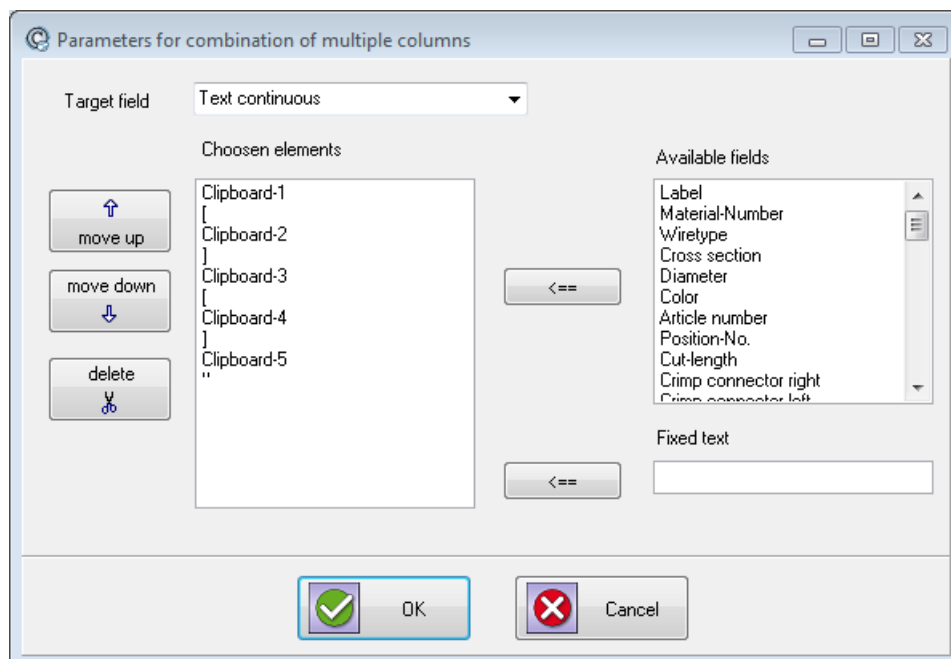
Figure 22: Example: Combining columns with clipboard

5.5.6   Available list filters for post processing

These filters all scan the wire list and activate the post processing device of the Kappa-machine at one or more places in the list. This makes it possible to interrupt the production process at defined places. To set some parameters for the post processing device you can use the button "settings".

Note!
These filters are only available for KappaWin software.

Filter	Description
at first wire / **at last wire**	Used for sequential processing to allow the operator to file a complete sequence of wires.
at first wire / **at last wire**	Production can be interrupted by inserting an empty line in the Excel-file.

5.5.7   Available list filters for sorting

The following filters will sort the wire lists by different criteria.

Filter	Description
(universal)	Sort by material
By connector name	Sort by connector name which has to be extracted before with wire filter "Determine connector name" (chapter 5.5.3).
By crimp contact side A	Sorts by wire material and name of right crimp connector.
By crimp contact side B	Sorts by wire material and name of left crimp connector.
By material qualities	Uses fields "wire type", "cross-section" and "color"

By material number	Uses field "material number"
(crimp contact, optimize for production)	**Reserved**
Sort by batch	**Reserved**
Use label as description for wire list	The name of the resulting wire list will be derived from the field "label" which of course has to be assigned to do so.

Note!

When sorting is used in combination with splitting there are at least to possibilities:
- if all wires should be sorted before splitting, sorting should be done "After reading"
- if you want to sort every list for itself after splitting, sorting should be done "Before writing"

5.6 Job options

Figure 23: Conversion scheme - Job options

Note!

Some of the settings correspond to those of the program KappaWin. Please refer to KappaWin manual for further reading.

Function	Description
Production kind	Sets production kind and production order

Function	Description
	• Single wire: Every wire will be produced according to the total quantity of the job. For Komax WPCS this means every wire is imported as a single wire. • Harness: Every wire will be produced exactly once, after that the next wire of the list will be processed. At the end of the list production will switch to the first wire again. • Multilead: Every wire will be produced according to the total quantity of the job. For Komax WPCS this means the wires are imported as a list of wires.
Sequence-Stop after article	**Note: KappaWin only**
Maximum number per sequence	This value specifies how many wires can be placed in one job-file. The program will automatically create more job-files if your Excel-file contains more than the specified number of wires. A value of 0 means "unlimited". **Example:** Assuming you want no more than 50 wires per job and convert an Excel-file "test.xls" containing 120 wires. The program will generate the following jobs • test.job contains wires 1..50 • test001.job contains wires 51..100 • test002.job contains the remaining wires 101..120 **Komax WPCS: A maximum of 100 is allowed, higher values will be ignored and a value of 50 is used instead.**
Multiplier	See KappaWin manual. **Komax WPCS / TopWin: This selection will be ignored**

5.7   Printing options
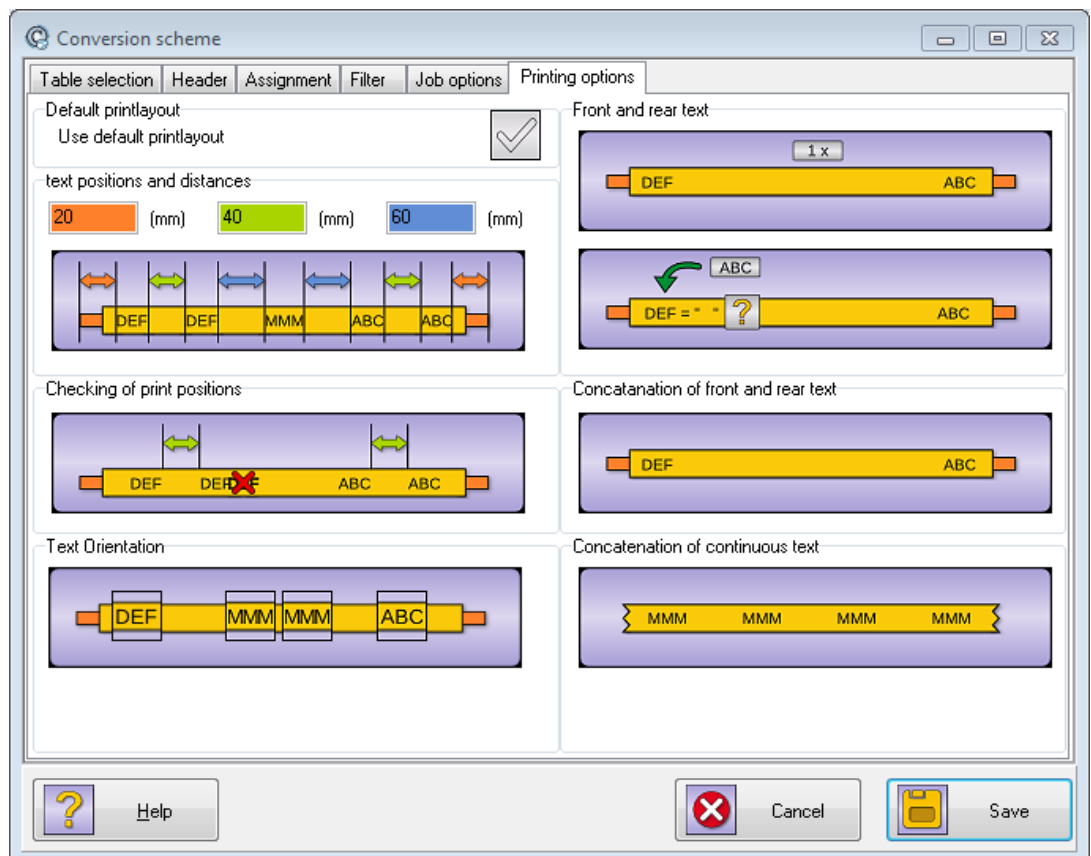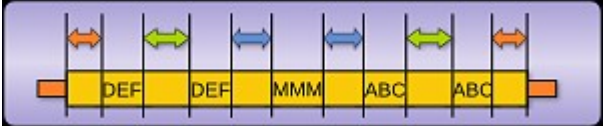
Figure 24: Conversion scheme . Printing options

Table of contents

In this dialog you can to make some specifications of how printing texts for inkjet marking will be created.

5.7.1 Left area: Print text positions and distances

Function	Description
Calculate positions relative to stripping position	(WPCS-Export only) Just click on the picture to switch between modes.
Distance to beginning	(mm) Desired distance between first print and the end of the wire. A minimum of 20 mm is required.
Gap between repeated printings at the end of the wire	(mm) Sets the width of gap between first and second, as well as second and third text on wire beginning respectively end.
Gap for continuous text	(mm) Sets the width of gap between continuous texts.
Check if marking positions are valid	If active, the software will test every marking position if the minimum distance to the previous marking is large enough. Invalid values will be replaced by the minimal value automatically. Picture: Do not check marking positions Click on the picture to toggle this option.

5.7.2 Left area: orientation of print texts

Figure 25: Printing options - Text alignment

Function	Description
"ABC" **Inverted text on wire start**	The first 1-3 texts on the wire will be printed inverted.
"MMM" / "MMM" **Continuous text inverted or alternating**	Options: • One „MMM" button active: Alternating • Both "MMM" buttons active: Continuous print text always inverted
"DEF" **Inverted text on wire end**	The last 1-3 texts on the wire will be printed inverted.

5.7.3 Left area: Default printing layout

Function	Description
Use default layout for marking positions	This option controls how print texts are placed on the wire: • inactive: the marking positions are taken directly from the imported Excel-file or from your desired values (section 5.7.1). • active: Software will try to use default layout described in chapter 11.2

Note: Using default printing layout you will notice some disabled options (locked symbol).
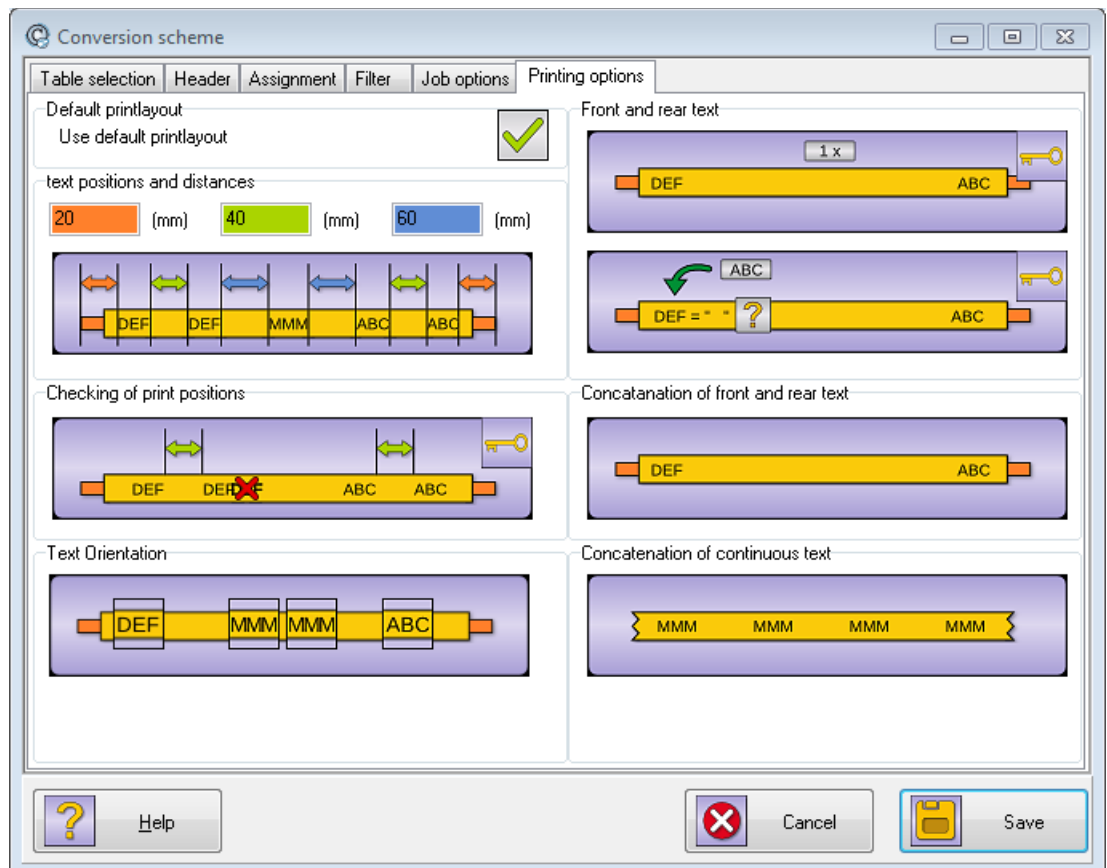
Figure 26: Conversion scheme - Print layout
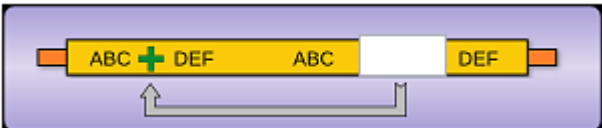
Note!

The locked options do not always show the value used by the default printing layout.

5.7.4 Right area: Front and rear text

Function	Description
Repeat text at start and end n-times	This value regulates the count of print text iterations made on both wire ends. Click on the picture to select between 1x, 2x, 3x.
Allow empty text side 2 or replace it with text from side 1	Activate this option if you want to use text 1 if text 2 is empty.

Function	Description
Replace Start- and End-text with Text1 + Text2	Start and end text are identical and will be a combination of both texts (Text1 and Text2) concatenated with a separator. **Note**: Print text can also contain an increasing number for each wire. Simply use "%i" as part of your separator text.
Continuous Text=Text1+Text2	The continuous text will be a combination of both texts (Text1 and Text2) concatenated with a separator.

5.8   Buttons

Function	Description
Help	Open the manual
Cancel	Closes the dialog and discards all changes.
Save	Will ask for a name, save the conversion scheme and finally start the process of conversion.

5.8.1   Saving the scheme / creating a new scheme
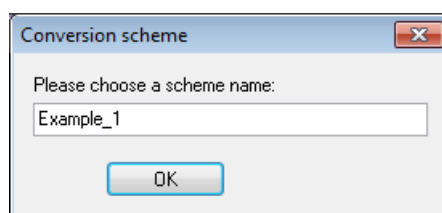
Figure 27: Enter scheme name

In this dialog you must choose a suitable name for the assignment scheme. Acknowledge your inputs with button "OK".

Note!

Choosing a new name will save the scheme under this name and the old scheme will still be available.

6 Input dialogs during conversion

As already mentioned, manual corrections may be necessary during conversion. In such a case one of the following dialogs appears.

6.1 Wire preview
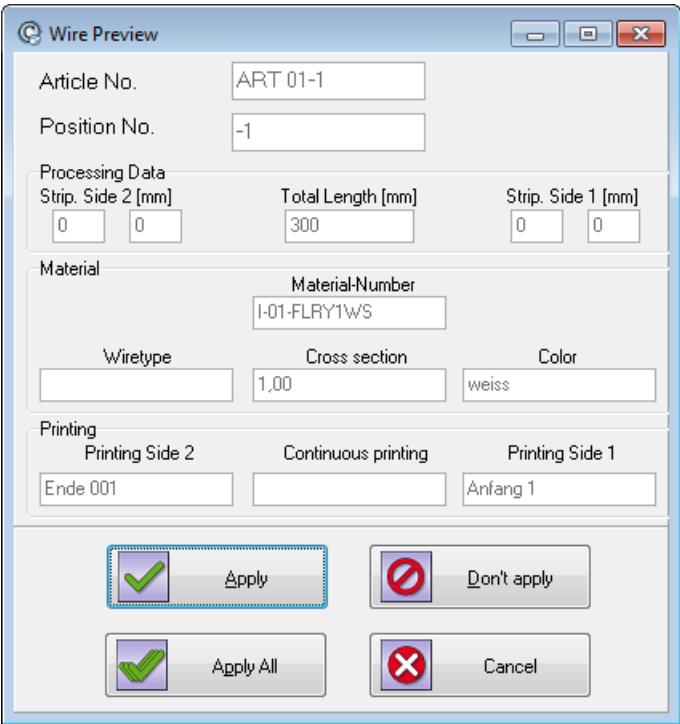
Figure 28: Wire preview

If activated (chapter 7.1) the preview dialog shows up for every wire converted. It's primary use is for error hunting when the results of conversion are undesirable.

Function	Description
Apply	Imports actual previewed wire.
Don't apply	Rejects actual previewed wire.
Apply All	Imports all further wires without any further questions.
Cancel	Cancels the whole conversion process

No

It i

6.2 Co
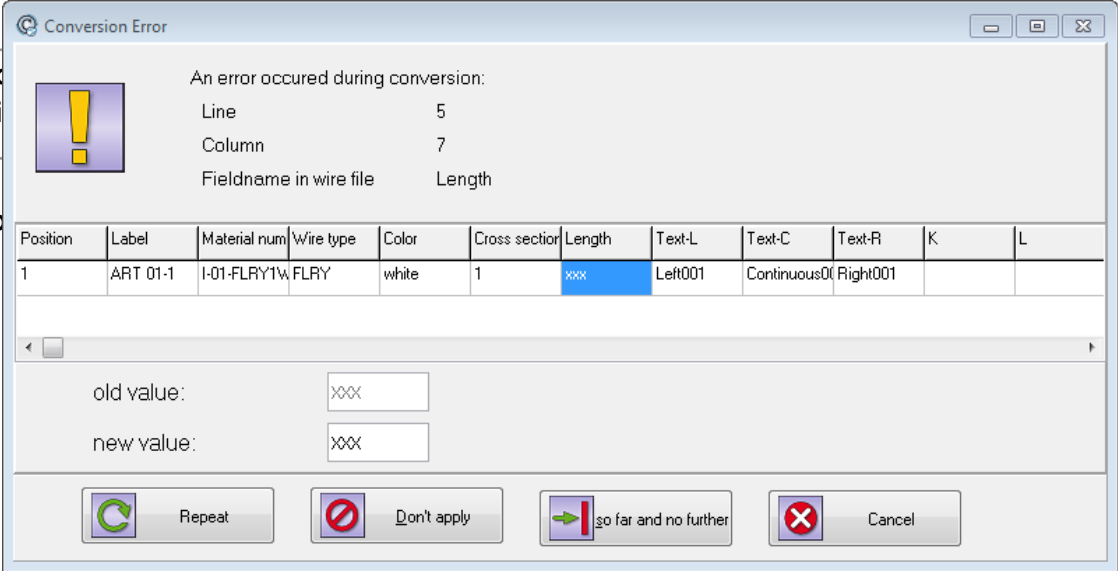
Figure 29: Correction of faulty values

This dialog is shown if the program is unable to interpret input as meaningful value. A common reason are numerical values, which are bound to a unit which may result in numerical values that have a textual unit behind.

Example: If your excel file contains "100mm" as the value for wire length this cannot be used directly because a numerical field must not contain letters.

Function	Description
Old value	This read only field shows the original value from the Excel table.
New value	Here you have to type in the corrected value. With actuation of the "repeat" button, conversion continues.

Buttons

Function	Description
Repeat	The program tries to continue conversion using the new value.
Don't apply	The actual row will be ignored and conversion skips to the next row.
So far and no further	Conversion will be stopped at this point, saving all rows so far converted. **Tip:** Useful if additional data are appended at the end of your reference data (e.g. any statistics or job instructions).
Cancel	Cancels the whole conversion process

6.3 Input of stripping data for crimp connectors

Figure 30: Enter - Stripping data

This dialog will only appear if crimp contacts are used in the assignment and a formerly unknown crimp contact is found.

Input fields

Function	Description
Contact name	The designator of the contact. Will be automatically generated and is read only.
Stripping length	The later on needed strip length for this contact.
Tear length	The desired tear length.
Text distance	Distance between first print and cut position. A minimum of 20mm is required.
Use on this machine	If deactivated, stripping length and tear length are ignored. **Notes:** • For Kappa machines: Activate this option • For Komax alpha: Deactivate this option if you want the machine to handle this crimp contact
Crimp (if possible)	reserved

Buttons

Function	Description
Save	Closes this dialog and saves data into database.
Don't save	Closes this dialog without saving data. The wire will not be stripped.
Cancel	Close dialog and abort conversion completely.

6.4 Confirm overwrites
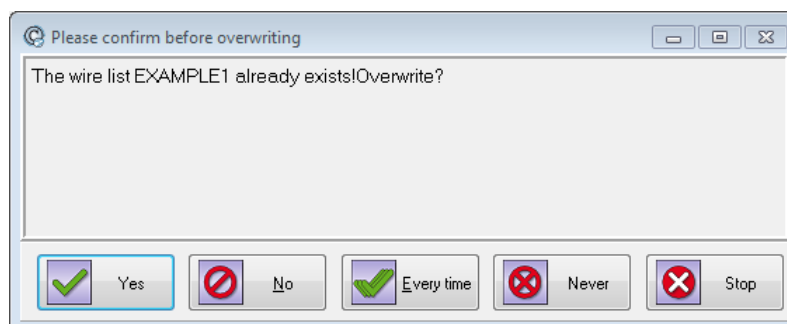
Figure 31: Confirmation for existing cable list

If a wire-list with the same name exists, this dialog asks how to proceed. If you confirm with "YES", the existing wire-list will be overwritten and all it's data is lost.

Buttons

Function	Description
Yes	The existing wire list will be overwritten.
No	The existing wire list will not be overwritten, conversion process will continue.
Every time	The existing list will be overwritten. If more than one file is to be generated during this conversion, all following wire lists will be overwritten without warning.
Never	This is the counterpart to „Every time": no existing list will be overwritten.

Table of contents

Function	Description
Stop	This will immediately terminate the conversion.

Notes!

- Converting for Komax TopWin it is not possible to check assistance of a wire list, thus this dialog will never appear.
- It is possible to completely suppress this dialog for the machines, see chapter 3.2.

7 Main menu

7.1 Menu System

7.1.1 General program settings – Base settings
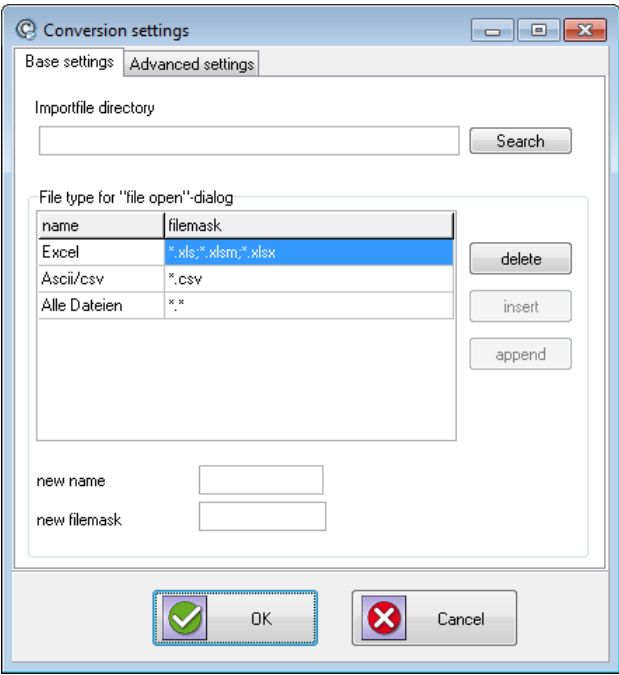
Figure 32: Base settings

Function	Description
Import file directory	Starting directory when File open dialog is shown
File type for "file open" dialog	

Input fields

Function	Description
New name	
New file mask	

Buttons

Function	Description
Search	Choose the directory for import files
Delete	
Insert	
Append	

7.1.2 General program settings – Advanced settings
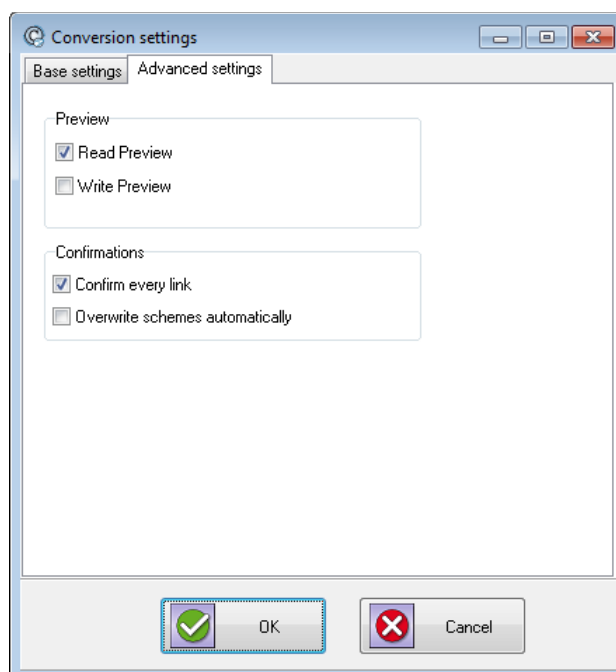
Figure 33: Advanced settings

Function	Description
Group preview	
Read preview	Allows preview of data during conversion. Each wire is shown directly after the original values from the Excel-file have been read. No further processing took place so far. Especially useful if you encounter import problems. **Note: Normally disabled**
Write preview	Activates preview of wires directly before they will be written to the KappaWin file. All processing and filtering has already been finished. **Note: Normally disabled**
Group confirmations	
Confirm every link	By selecting this option the connection designer is always launched, even if you already converted the Excel file and only start a second conversion with a different job filename.
Overwrite schemes automatically	Don't warn when assignment scheme already exists.

7.1.3 Language

Switch between different localizations.

7.1.4 Exit

Terminate CableDataConverter

7.2 Menu Actions

This menu repeats some of the actions you can also select from the toolbar (chapter 4.1).

Function	Description
Open file	Shows a Windows "File open" dialog to choose the excel file you want to convert. Function key: F4
Edit machine settings	Will open the dialog with general setup parameters (chapter 7.1.1). Function key: Shift+F2
Start conversion	Used to start the conversion process (chapter 5). Function key: F5

7.3 Menu databases

7.3.1 Overview of crimp contacts
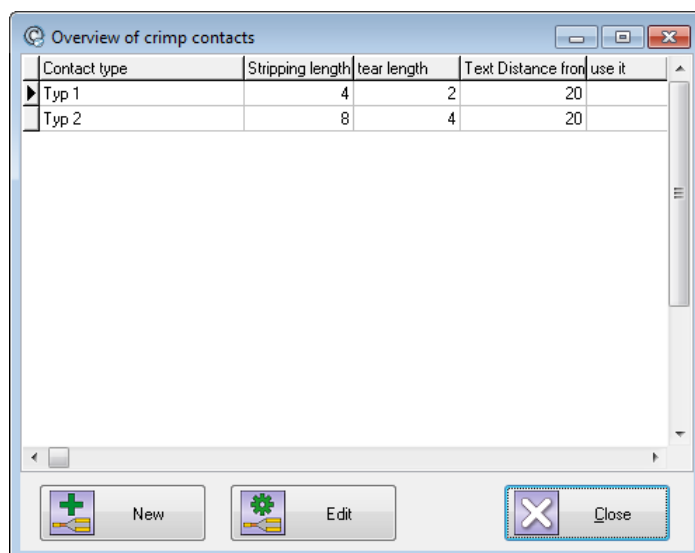
Figure 34: Overview : Crimp contacts

This table shows all connectors created during conversion. To post process these contacts following functions are available:

- "New" will create a new crimp contact mapping
- "Edit" will allow you to change one or more values of the selected mapping

In both cases you make your change in the dialog described in chapter 6.3.

7.3.2 Overview of conversion schemes
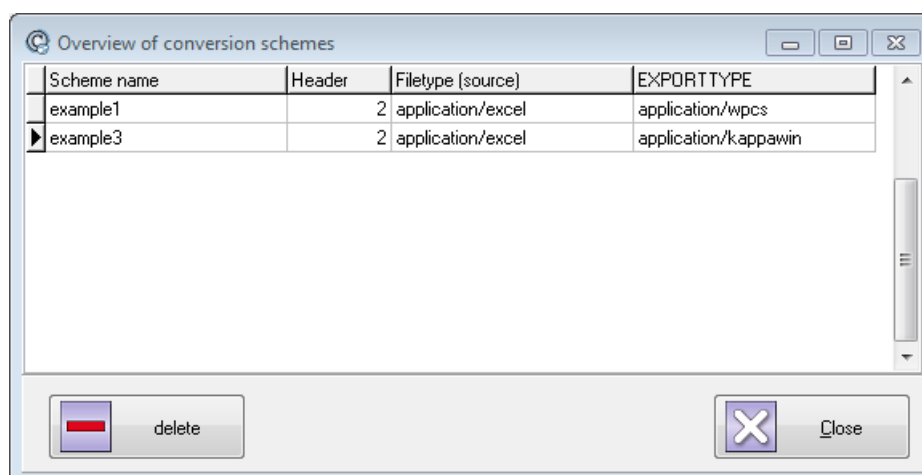
Figure 35: Overview: Conversion schemes

7.3.3 Overview of machines
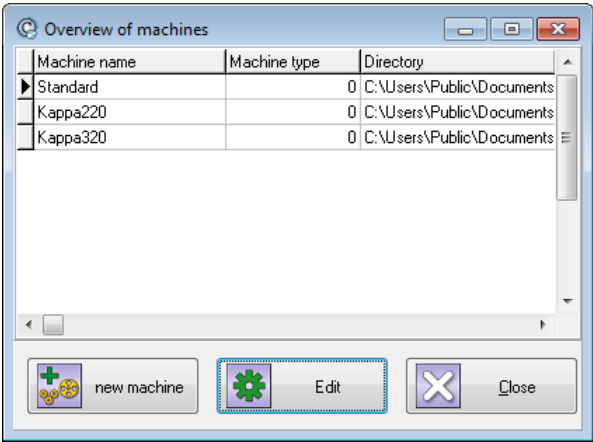
Figure 36: Overview machines

Shows a list with all machine definitions available.

Function	Description
New Machine	Create a new machine and open dialog with machine settings (chapter 2.6).
Edit	Open dialog with machine settings (chapter 2.6).
Close	Close this dialog

7.3.4   Overview of font assignments
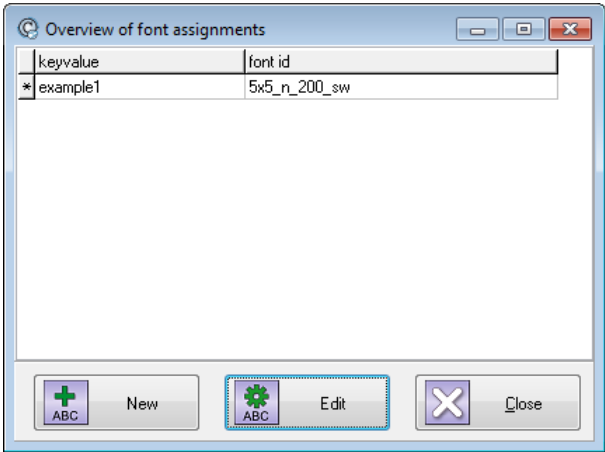
Figure 37: Overview - Font assignments

This dialog window shows a list of all active font assignments. It is possible to edit an existing assignment or to create a new one. To delete a font assignment press "Ctrl" + "Del".

Note!
Key value "*" is the default assignment and can not be deleted

Buttons

Function	Description
New	Creates a new font assignment and opens the editor window (chapter 7.3.5)
Edit	Opens the editor window (chapter 7.3.5)
Close	Close this dialog

7.3.5   Edit font assignment
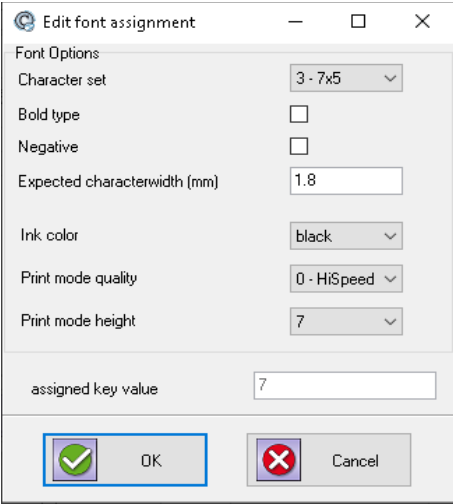
Figure 38: Edit font assignment

Function	Description
Font	Choose a font from the drop down. Be aware that your inkjet may not support all the fonts available here
Bold	Use **bold** characters
Expected character width	During data conversion this value is used to calculate the gap between different marking positions on the wire. Since the software has no detailed knowledge about your production environment it may be necessary to adjust this value manually when you encounter problems with marking positions. **Default: 2.00**
Ink color	This selection is used to distinguish between black and white inkjets.
Print mode quality	Choose the quality of the print mode. • 0 – HiSpeed (The fastest mode with the lowest quality) • 1 – Low • 2 – Medium

Function	Description
	• 3 – High (This mode is the slowest but has the best quality)
Print mode height	Choose the height of the print mode
Assigned key value	This is the value used in your Excel file if you want the machine to use this font assignment.

7.3.6   Overview of substitution lists

The assignment editor for conversion schemes (chapter 5.4) allows you to choose a substitution list for every column assigned. This is useful to normalize values from your excel files. Here are some use cases:

- Replace abbreviations with normal text
- Translate color names from German to English or vice versa
- Replace outdated material numbers with their recent equivalent

The number of substitutions in the list is not limited.
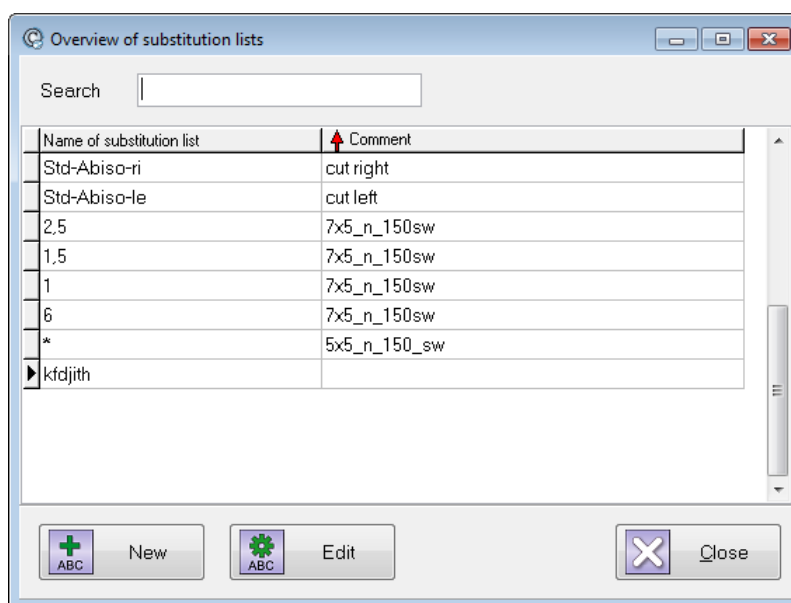
Figure 39: Overview of substitution lists

Buttons

Function	Description
New	You will be prompted for a new name and a new list with the given name will be created. **Note:** The given name can not be changed afterwards
Edit	Opens an editor window where you can enter / edit substitutions (Chapter 7.3.7)

7.3.7   Edit substitution list
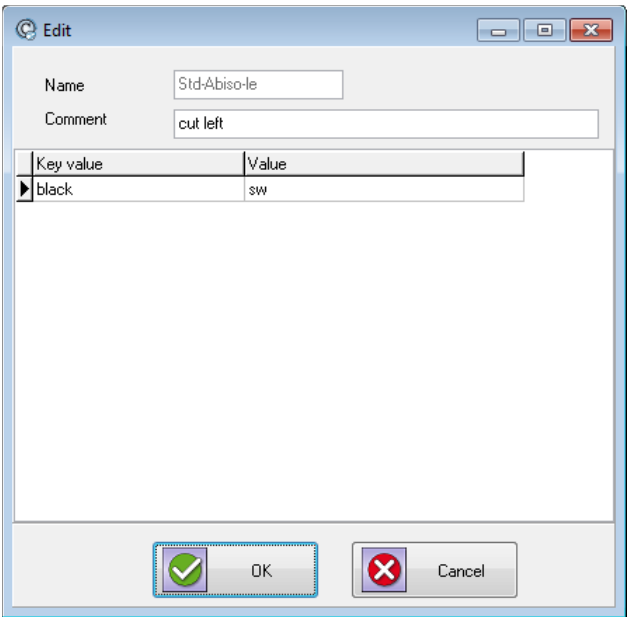
Figure 40: Edit substitution list

To add a new value click into the last row of the table and use the arrow down button to append a new row. After that enter the key value and your substitution value.

7.4   Menu Help

7.4.1   Contents

Open this manual with a PDF viewer.

7.4.2   Start teamviewer remote maintenance

Use this function after calling the support team to enable online access to your computer.

Note!
Some companies have restricted use of teamviewer, please contact your local IT before calling support.

7.4.3   Load licence

Opens the dialog window for loading a license (see chapter 2.3: Licensing).

7.4.4   About

Shows information about the software version and your current license.

7.4.5   Copy logfile to desktop

Used for diagnostics: If you have problems with the software you can use this function to copy a logfile to your computers desktop. The logfile will be helpful when requesting support.

7.4.6   Copy convert schemes to desktop

Used for diagnostics & backup: If you have problems with the software you can use this function to copy the database with conversion schemes to your computers desktop. The database is stored in a zip file which can be archived or send to your support partner.

8 Specifics concerning different machine software

8.1 KappaWin

8.1.1 Naming conventions

The KappaWin program generally works on the basis of individual files. This means that a separate job file is created for each cable list and a separate wre file for each cable material.

Due to the Windows operating system used, the file names of these files may not contain certain characters. The invalid characters are automatically replaced by the program with a "_", these are the following characters: '\', '/', ':', '*', '?', '"', '<', '>', '|', '.'

8.1.2 job-files

Several cables with all properties (length, stripping, printing, etc.) are saved in a job file.

Please note!
DieThe files are normally saved under c:\kappawin\job\.

8.1.3 Wre-files

All production-relevant settings for a cable material are saved in a wre file. The conversion program generates the wre files automatically during the conversion, with the file name corresponding to the material number.

Hint!
- In the KappaWin program, you can manage wre files via the "Cable type (wire)" menu item.
- The files are normally saved under c:\kappawin\wire\.

8.2 Komax WPCS-files for Kappa & Alpha with TopWin

8.2.1 Restrictions & useful information

- The TopWin program for Komax Kappa machines is available in two versions, with and without a WPCS license. When working without a WPCS license, you must import each converted file individually and jobs are not created automatically.

- The names for material numbers, cable lists etc. may only be 25 characters long and cannot contain lower case letters. There are also some restrictions on the use of special characters, which are automatically replaced by the CDC if necessary.

- If you convert several cable lists with the same name, TopWin will always import the last converted cable list.

- Unfortunately, the settings for the height and width of the font cannot be generated automatically.

- The matrix setting (5x5, 7x5 etc.) currently only works for the Metronic alphaJET C printer. If you use a different printer, you must create suitable font assignments with the names of the TopWin process parameters.

- It is currently not possible to create texts with bold print, as far as we know this is a limitation of the WPCS format.

8.2.2 Files for data exchange CDC -> TopWin

Data is exchanged between the two programs in accordance with the Komax specification. At present, however, the CDC only generates data; there is no evaluation of the production data that can be provided by TopWin.

The following files are generated by CDC:

File name	Only with WPCS license	Function / Content
article.dds	--	All converted cable lists are saved in this file. The file continues to grow until the TopWin program reads and deletes the file.
font.dds	Yes	An entry is created in this file for each font assignment.
job.dds	Yes	A job is created in this file for each converted cable list.
seal.dds	Yes, only fully automatic wire processing machine	Contains a list of all seals used (individual wire seals).
terminal.dds	Yes, only fully automatic wire processing machine	Contains a list of all contacts used.
Wire.dds	Yes	An entry is created in this file for each material number.

8.3 Cayman-Export

A separate document exists to describe the data export to a Schleuniger cable processing machine: "cdc_export_cayman_eng.pdf", which can be found in the cdc subfolder "\doc\".

8.4 Excel export

The CableDataConverter can import WPCS files and export them in Excel format. To do this, create a new machine, select a machine name (here 'Excel file'), 'Simple excel files' as the output format and the output directory.
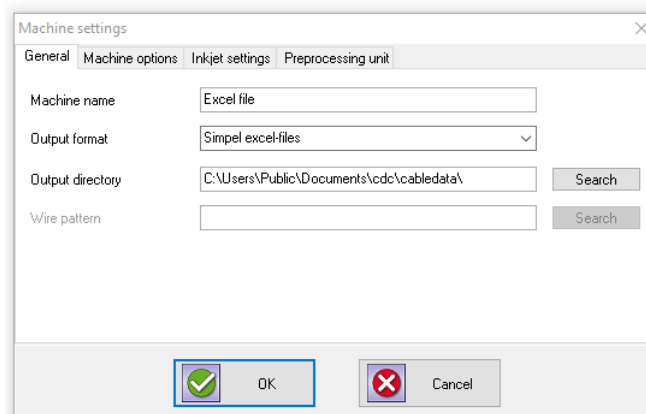
Figure 41: Excel export

Conversion scheme:

The following data can be exported; to do this, the following assignments must be made and saved under a new scheme name:

WPCS entry	Field name in CDC	Column name in Excel
Pieces = <>	MULTIPLIER	Quantity
Name = <>	LABEL	Label

Table of contents

WPCS entry	Field name in CDC	Column name in Excel
WireKey = <>	MATERIALARTIKELNO	Material
WireLength = <>	CUTLENGTH	Length
FontKey = <>	PRTFONTSETS	Font
MarkingTextBegin = <Length>,<Text>	TEXTSIDE1, DISTSIDE1	Text side 1 (right), text dist side 1
MarkingTextEnd = <Length>,<Text>	TEXTSIDE2, DISTSIDE2	Text side 2 (left) text dist side 2
MarkingTextEndless = <Length>,<Text>	TEXTCONTINUOUS, DISTCONTINUOUS,	Text continuous, text dist continuous
StrippingBegin (only layer 2) = <StrippingLength>,<PulloffLength>	<FRONTSTRIP>, <FRONTHALFSTRIP>	Front strip-length, Front pulloff-length
StrippingEnd (only layer 2) = <StrippingLength>,<PulloffLength>	<REARSTRIP>, <REARHALFSTRIP>	Rear strip-length, Rear pulloff-length

8.5   Examples

An additional document 'cdc_examples.pdf' explains the examples provided. Some examples can be converted for any machine, for other examples a specific machine type must be selected, as certain export options are machine-dependent.

9   Migration – Differences to elder versions of CDC

9.1   Change in data management

Version 3.5.0 introduced a significant change in data storage. The data is now no longer stored in various XML files, but in an SQLite database. When switching from an XML-based version to the new SQLite-based version, the data is automatically converted to the new database format during setup.

9.2   Other changes from version 3.5.0

- The user interface has been modernized with version 3.5.0. All essential program functions can now be easily accessed via the newly introduced button bar.

- The option to combine material numbers from cable + cross-section + color was a global option in the previous version which, once set, applied to all conversion schemes. This option can now be specified separately for each conversion scheme (see).

9.3   Change from version 3.5.5

From version 14.3, the Komax TopWin software requires the presence of the "NewStrippingWire1-2" section in the WPCS data if a stripping or stripping length is defined for layer 3 or higher.

The previously valid parameter "SheathPulloffLength" will be rejected as incorrect from version 14.3.

10 Error handling

The handling of errors is a very complex topic and even for software manufacturers it is impossible nowadays to know all possible sources of errors in advance. In the following sections we therefore only present a few typical errors, for other errors you must contact the service department.

Hint!

In many cases, problems can only be solved by reducing the complexity of the conversion. Therefore, if you encounter unexplained errors, first try to answer the following questions:

- Does the error occur with all tables?
- Does the error also occur if the table is reduced to the bare minimum?
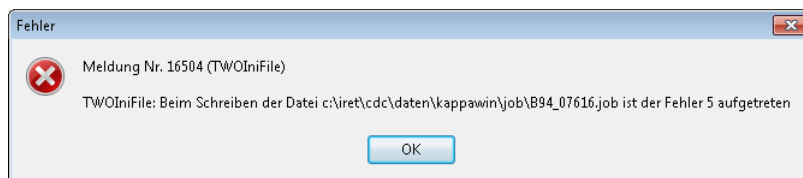
10.1 Error message: Error while writing file...

Figure 42: Error while writing file ...

The program could not create the job file, the directory for the KappaWin program is probably set incorrectly or you do not have write permission in this directory.

Hint!

Check the folder settings (see ch. 3.1).

10.2 Error message: Folder cannot be created
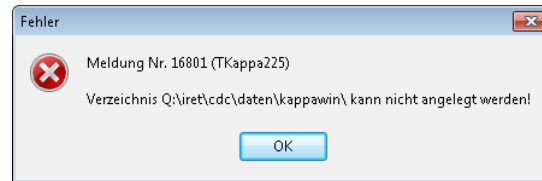
Figure 43: Folder cannot be created

You do not have the necessary permissions for the folder or drive to create a subdirectory or the specified drive does not exist.

![i] **Hint!**
Check the folder settings (see ch. 3.1) and ask the administrator to give you the necessary authorizations.

10.3   Error message: Conversion cannot be started
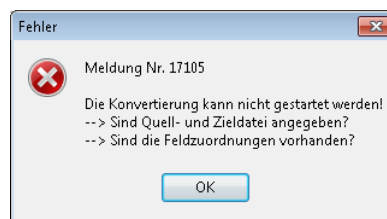
Figure 44: Conversion cannot start

Appears after saving the conversion scheme.

![i] **Hint!**
You have probably not stored any assignments in the schema. You must assign at least one field so that the conversion can start (see ch. 5).

10.4   How to work with Excel files

The file format in which Excel files are saved has undergone a number of extensions by Microsoft over the years and is now extremely complex. For this reason, some files may not be processed properly by the conversion program. To identify the cause of such problems, you should try the following tips:

- Check whether the conversion program works without problems with a simpler Excel file. It is advisable to use small files with 1-3 worksheets and few rows (1 to 40).
- Try saving the file in a different format. For example, in Excel-97 format.
- Copy the relevant rows of your worksheet into a new file with only one worksheet.
- Try to identify rows or columns with special formatting and temporarily remove them from the worksheet.
- Save the worksheet in a different format (e.g. as a "csv" file) and then import this file into a new Excel file (see chapter).

Table of contents

11 Technical details

11.1 Data fields available for assignments

11.1.1 Tabular overview

The following (default) fields are available for assignment:

Field name	Field type	Unit	Default value
Label	Zeichen		
Materialnummer	Zeichen		
Kabeltyp	Zeichen		
Querschnitt	Fließkommazahl	mm²	0.0
Durchmesser	Fließkommazahl		
Farbe	Zeichen		
Artikelnummer	Zeichen		
Positionsnummer	ganze Zahl		1 bis N
Länge	ganze Zahl	mm	100
Kontakt rechts	Zeichen		
Kontakt links	Zeichen		
Abisolierlänge rechts	Fließkommazahl	mm	0.0
Abzugslänge rechts	Fließkommazahl	mm	0.0
Abisolierlänge links	Fließkommazahl	mm	0.0
Abzugslänge links	Fließkommazahl	mm	0.0
Stückzahl Multiplikator	ganze Zahl		1
Text Seite 1 (rechts)	Zeichen		
Text Seite 2 (links)	Zeichen		
Text fortlaufend	Zeichen		
Textabstand Seite 1	ganze Zahl	mm	gemäß Bedruckungseinstellungen
Textabstand Seite 2	ganze Zahl	mm	gemäß Bedruckungseinstellungen
Textabstand fortlaufend	ganze Zahl	mm	gemäß Bedruckungseinstellungen
Text invers Seite 1	Logisch		falsch
Text invers Seite 2	Logisch		falsch
Text invers fortlaufend	Logisch		falsch
Schriftzuweisung	Referenz		
Schicht 3 Abisolierlänge rechts	Fließkommazahl	mm	0.0
Schicht 3 Abisolierlänge links	Fließkommazahl	mm	0.0
Schicht 3 Abzugslänge rechts	Fließkommazahl	mm	0.0
Schicht 3 Abzugslänge links	Fließkommazahl	mm	0.0
Schicht 4 Abisolierlänge rechts	Fließkommazahl	mm	0.0
Schicht 4 Abisolierlänge links	Fließkommazahl	mm	0.0
Schicht 4 Abzugslänge rechts	Fließkommazahl	mm	0.0

Software CableDataConverter 3.9.2 - 2024/11 V 1.0.4-DE

iret

Field name	Field type	Unit	Default value
Schicht 4 Abzugslänge links	Fließkommazahl	mm	0.0
Schicht 5 Abisolierlänge rechts	Fließkommazahl	mm	0.0
Schicht 5 Abisolierlänge links	Fließkommazahl	mm	0.0
Schicht 5 Abzugslänge rechts	Fließkommazahl	mm	0.0
Schicht 5 Abzugslänge links	Fließkommazahl	mm	0.0
Schicht 6 Abisolierlänge rechts	Fließkommazahl	mm	0.0
Schicht 6 Abisolierlänge links	Fließkommazahl	mm	0.0
Schicht 6 Abzugslänge rechts	Fließkommazahl	mm	0.0
Schicht 6 Abzugslänge links	Fließkommazahl	mm	0.0
Zwischenablage-1	Zeichen		
Zwischenablage-2	Zeichen		
Zwischenablage-3	Zeichen		
Zwischenablage-4	Zeichen		
Zwischenablage-5	Zeichen		

Hint!

Logical fields are imported as "True" if the column content in the Excel table is either "TRUE", "WAHR", "Y", "YES", "J" or "JA". Upper and lower case as well as leading and trailing spaces are ignored.

The following fields are only visible if the "Use extended fields for Kappa" switch (see ch. 3.2) is activated. The fields are copied 1:1 into the fields "Input second/third print position" or "Input second/third print text" of the KappaWin program. Assignments only apply for conversion to KappaWin files.

Hint!

If you use these fields and have also activated the "Use standard print layout" option, you should definitely set the "Print start and end text N times" field to the value 2 or 3 (see ch. 5.7.4).

Feldname	Feldtyp	Einheit	Standardwert
Kappa: Text 2 Seite 1	Zeichen		gemäß Vorlage
Kappa: Textabstand 2 Seite 1	ganze Zahl	mm	gemäß Vorlage oder Bedruckungseinstellungen
Kappa: Text 2 Seite 2	Zeichen		gemäß Vorlage
Kappa: Textabstand 2 Seite 2	ganze Zahl	mm	gemäß Vorlage oder Bedruckungseinstellungen
Kappa: Text 3 Seite 1	Zeichen		gemäß Vorlage
Kappa: Textabstand 3 Seite 1	ganze Zahl	mm	gemäß Vorlage oder Bedruckungseinstellungen
Kappa: Text 3 Seite 2	Zeichen		gemäß Vorlage
Kappa: Textabstand 3 Seite 2	ganze Zahl	mm	gemäß Vorlage oder Bedruckungseinstellungen

11.1.2 Automatic detection of conversion scheme

Not yet translated.

### 11.2 Default print layout

Not yet translated.

11.3 Font assignment for Komax TopWin

For every wire CableDataConverter will export a font id to Komax TopWin software. The font id is a key value for TopWin and the machine operator can specify the attributes for wire markings that reference this font id.

CableDataConverter creates the font id on the basis of different settings:

Field "Font assignment"	Machine setting „Use font assignment directly."[1]	Description
Not used in conversion scheme	On / Off	Basic font id is always "m5-sw" but it will be enhanced with the cross section of the material if that value is available. Examples; • m5-sw • m5-sw-0.5 • m5-sw-0.75
In use	On	If present, the font id will be adopted directly from the excel file, otherwise "m5-sw" is used.
In use	Off	The value from the excel file will be used as a key value into the list of font assignments (chapter 7.3.4). Examples: • m5x5_n_200_ws • m7x5_n_200_ws

When using font assignments the software will open the following dialog boxes whenever no font assignment can be found for a given key value.
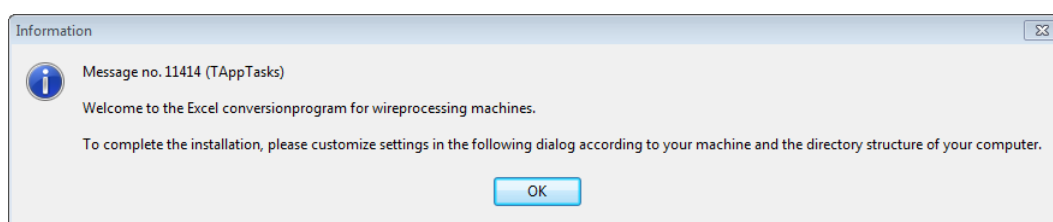
Choosing "Yes" will open the dialog window described in section 7.3.5.

11.3.1 Automatic font id's for font assignments

Not yet translated.

---

1   See also chapter machine specific options (3.2)

12 Notes for system administrators

Not yet translated.

12.1 Installed files & directories

Not yet translated.

12.1.1 Files in the program folder

Not yet translated.

12.1.2 Data directory

By default the software will store all data in the Windows document path for all users:

"c:\users\All Users\Documents\cdc\"

i **Note!**
It is possible to change the default location by setting the following key in the Windows registry:
„HKEY_LOCAL_MACHINE\Software\iret\cdc\databasepath"
CableDataConverter will need write permissions for every file in this directory.

The data directory should contain at least the following files.

File	Description
cdc.sqb	SQLite-Database containing nearly all data (conversion schemes, font assignments....)
Inkjetasciimap.ini	Windows INI-File containing a substitution list for inkjet code pages.
Importasciimap.ini	Windows INI-File containing a character substitution list for all data values read from the excel import file.
cdc.ini	Initialization files with some minor important values. In future versions the content of this file will also be stored in the database.

12.1.3 Logfile

Not yet translated.

12.2 Firewalls

Not yet translated

12.3 Batch-Mode (command line arguments)

CDC can also be used in batch mode without graphical user interface (GUI). Prerequisites:

1. All machine specific settings and conversion schemes have to be present already.
2. The parameter „-nogui'" has to be the first parameter on the command line

Command line argument	Description
-nogui	Disable GUI, switch to batch mode
/import=<FILENAME>	Full file- and pathname of the import file
/machine=XXXXX	To select the target machine
/schema=YYYYY	Choose a specific conversion scheme

Command line argument	Description
/table=ZZZZ	Choose worksheet inside the import file

CDC will terminate with one of the following exit codes:

Value	Description
-1	Errors during conversion: Start in GUI mode, save the logfile to the desktop and analyze it with a text editor
0	No error, conversion was successful
1	Machine not found
2	Import file not found
3	Schema name is missing
4	Worksheet not present
5	Conversion scheme not present

12.4   Testing environment

Not yet translated.