BALLUFF

BALLUFF Easy Tool-ID
BSG TID-05-T30-00-005
BSG TID-05-T30-01-005

Installation and Operation

System

BALLUFF

Table of Contents

1 User Instructions

1.1. About this Manual

This manual contains all the information you need for installing and operating the Balluff Easy Tool-ID system.

1.2. Structure

This manual is organized so that the sections build on one another.
Example:
Chapter 1: User Instructions
Chapter 2: Version Overview
Chapter 3: Introduction
…

1.3. Typographical Conventions

The following typographical conventions are used in this manual.

Syntax

Numbers:
- Decimal numbers are shown without additional indicators (e.g. 123)
- Hexadecimal numbers are shown with the additional indicator hex | h (e.g. 00hex | 00h)

Cross-references

Cross-references indicate where additional information on the topic can be found (e.g. see Section 5 "Technical data").

1.4. Symbols

Note
This symbol indicates a special note in your text.

Caution
This symbol is always used when hazardous intervention is required, for example into a Windows system by the requirement of an administrator.

1.5. Reference to Other Manuals

For connecting and configuring the RFID technology use the corresponding manuals and software tools which are included with every Reader.

1.6. Reference to Third-Party Software

Microsoft .NET Version 4.0 and higher components are needed for the Balluff Easy Tool-ID configuration software.
To view the manual as a PDF you need a PDF reader from a third-party.

1.7. Abbreviations

RFID = Radio Frequency Identification
HMI = Human Machine Interface

2 Version Overview

2.1. Manual Version Log

Date	Version	Description
2016-08-07	0.1	Initial version
2016-12-06	1.0	Final version
2017-02-07	1.1	Addition of the function "Convert radius to diameter"
2018-03-21	1.2	Addition of the functions "Convert to inch", "Cancel function", "Copy and paste" and "Firmware update". Update of the revised functions of the new firmware version
2018-08-27	1.3	Addition of the "Decimal Places" function

3 Introduction

RFID-based tool identification is an ever more important topic today when it comes to optimizing production processes and reducing costs.
Easy Tool-ID represents a cost-effective and simple solution for covering the basic functions of tool identification.

Principle of tool identification using RFID

All tool-relevant data is stored without contact on a data carrier embedded in the tool holder. Automatic loading into the system memory means all of the data is always correct. Valuable information can no longer be lost. On the contrary: electronic data transmission means the data is always available.

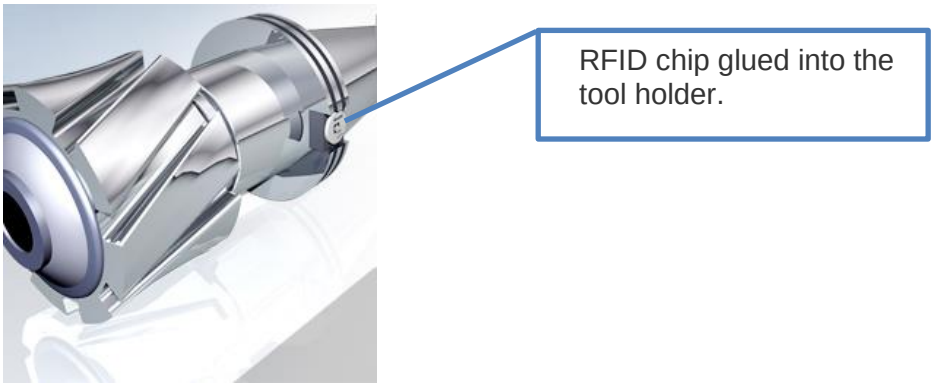

Figure 1: RFID chip in tool holder

3 Introduction

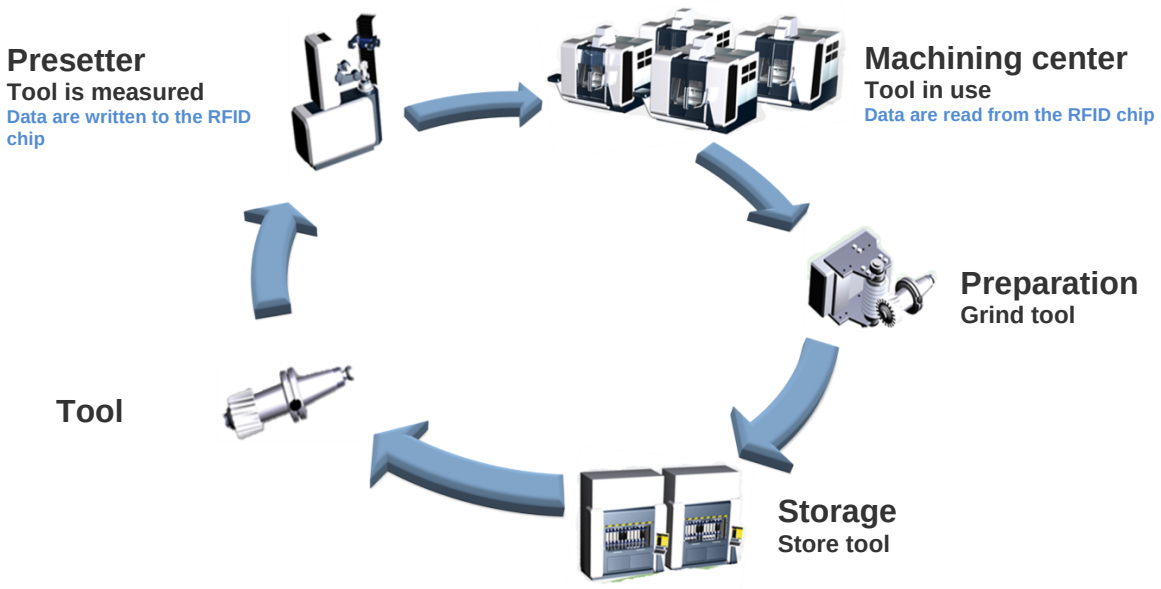

Figure 2: Basic path of a tool in production

Incorporating RFID directly into the machines is complicated and requires technical expertise depending on the controller. Such integration is also cost-intensive and time-consuming. A simple but highly effective alternative is to enter the tool data into the screen at the machine automatically.
Balluff has developed a solution called "Easy Tool-ID", enabling you to read tool data from the RFID chip and enter the data machine-specific into the screen at the push of a button.

This provides the user with a powerful product which prevents input errors and speeds up the setup process.

4 The Easy Tool-ID System

4.1. System Overview

The Easy Tool-ID system is a special tool stand with RFID function. An integrated microcontroller can be used to read out data that is stored on an RFID data carrier, and then the data can be forwarded to an HMI via USB. It is used primarily for identifying tools and is connected to the respective machine tools.

The microcontroller can be configured using configuration software (see Section 5) and adapted to the input mask of the HMI. The system is therefore independent of the machine controller and can be used on nearly all machine tools.

The Easy Tool-ID system simulates an external keyboard and handles data entry which would otherwise need to be entered manually by the operator.

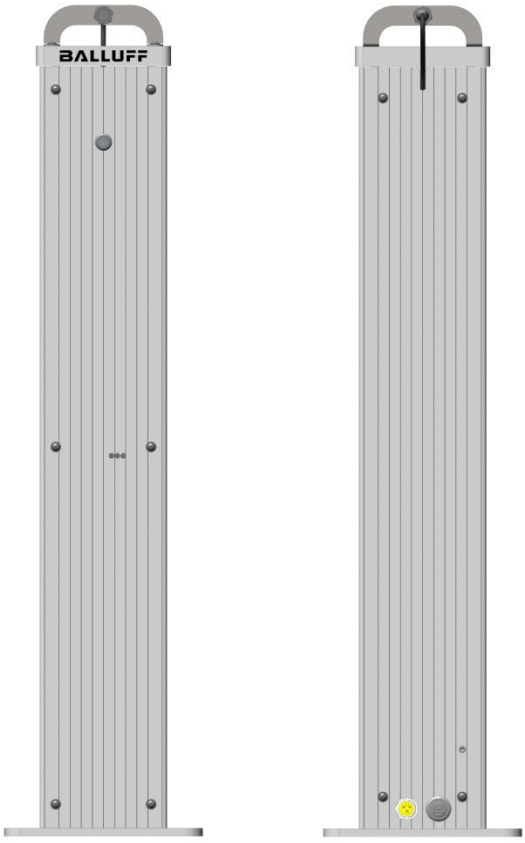

Figure 3: Front- and rear view of Easy Tool-ID stand

4 The Easy Tool-ID System

4.2. Technical Data and Components

The Easy Tool-ID system is a special tool stand with the following integrated components:

- Microcontroller (BSG TID-05-H01-04-005)
- Read/write head (BIS C-306-PU1-01 or BIS M-302-001-S115)
- Processor unit (TM-BIS C-600 Easy Tool or TM-BIS M-6000 Easy Tool)
- Power supply (BAE PS-XA-1W-24-038-601)
- Various connection cables

The stand can be secured to the ground via the mounting holes.

The power is supplied via the power supply unit integrated into the stand. For information needed to make the connection, please refer to the corresponding user's guide located at http://www.balluff.com/.

⚠ **Caution**
Proper connection of the power supply must be carried out by specialist personnel. Balluff shall assume no liability for improper use. It must be ensured that the system is connected to ground.

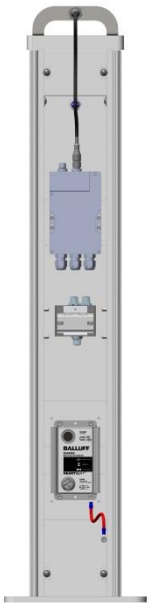

Figure 4: Components

4 The Easy Tool-ID System

4.3. System Requirements

The following prerequisites must be met for use on the machine tool:

- Balluff configuration software (see Section 5.1 for prerequisites)
- USB port on the machine tool (expansion for external keyboard)
- Power supply (100...240 V AC)
- RFID data carriers attached to the tools (e.g. BIS C-122-04/L or BIS M-122-02/A)
- Presetter with integrated RFID functionality (BIS C or BIS M)
- Balluff standard data mapping (see Section 4.5 Balluff standard data mapping)

Note
The Easy Tool-ID system is a BIS C or BIS M system. For more details on this, refer to http://www.balluff.com/

4 The Easy Tool-ID System

4.4. Installation and Startup

Once the configuration plans are created and have been uploaded to the microcontroller (see Section 5), the system is ready for use.

The system has to be installed next to the machine tool near the HMI. The stand has to be firmly anchored to the floor to prevent the possibility of tipping.

As soon as power has been provided, the system can be connected to the HMI via the USB port.

Caution
The USB cable must not exceed 3 meters in length.

The system is now ready. After selecting and installing the correct tool adapter, you can begin processing data. The following adapters are available for selecting:

Adapter	Article name
Tool holder SK30	BSG TID-05-T31
Tool holder SK40	BSG TID-05-T32
Tool holder SK50	BSG TID-05-T33
Tool holder HSK32	BSG TID-05-T34
Tool holder HSK40	BSG TID-05-T35
Tool holder HSK50	BSG TID-05-T36
Tool holder HSK63	BSG TID-05-T37
Tool holder HSK80	BSG TID-05-T38
Tool holder HSK100	BSG TID-05-T39
Tool holder Capto CC6	BSG TID-05-T40

Figure 5: Tool adapters

Note
The adapters are not included and must be ordered separately.

4 The Easy Tool-ID System

4.5. Safety Notes

Installation and operation

Installation and operation may only be performed by trained technical personnel. Unauthorized intervention and improper use shall void warranty and liability claims.

Use and testing

When using the Easy Tool-ID system, you must follow the applicable safety regulations. In particular, measures must be taken so that no person or object is put in danger if the identification system has a defect. This includes adhering to the permitted ambient conditions and regularly checking the identification system with all associated components to ensure proper function.

Malfunctions

If you find indications that the identification system is not functioning properly, put it out of operation and secure it to prevent unauthorized use.

This device fulfills the requirements of the EMC Directive ETSI EN301489-1 (v1.9.2); EN 301489-3 (V1.6.1); EN 300 330-2 V1.6.1; EN 50364:2010.

Warning: This is a Class A product. In a home environment, radio interference can occur, which can lead to the user needing to take appropriate measures to eliminate it. Its use is therefore only permitted in the industrial area.

4 The Easy Tool-ID System

4.6. Balluff Standard Data Mapping

To transfer the correct data, you need to have the Balluff standard data mapping on the presetter. This mapping determines the location at which the RFID data carrier stores the information and in which format it is stored. Based on that, the Easy Tool-ID system can read the correct information out of the data carrier and transmit it to the machine tool.

Note
Without Balluff standard data mapping, transmission of the correct data is not possible. The data mapping can be installed on the presetter by the manufacturer of the presetter (for example, Zoller).

Zeichenkette Balluff Easy Tool ID						
nr. of	Grunddaten Werkzeug				Stored in little endian format	
Byte	Byte	Format	Bedeutung	Englische Bezeichnung	Wertebereich	Interner Feldname
50	0 - 49	ASCII	Identnummer	Identification Number	ASCII	ToolId
4	50 - 53	INT32	T-Nummer	T-Number	0 - 999999999	TNo
2	54 - 55	INT16	Code	Code	0 - 30000	Code
2	56 - 57	INT16	Werkzeugkennung	Tool Recognition	0 - 30000	Tag
2	58 - 59	INT16	Werkzeuggröße	Tool Size	0 - 30000	SizeClass
2	60 - 61	INT16	Duplonummer	Duplo Number	0 - 30000	DuploNo
2	62 - 63	INT16	Wechselgeschwindigkeit	Change Speed	0 - 30000	Speed
2	64 - 65	INT16	Reserve1	Reserve1	0 - 30000	Buffer1
50	66 - 115	ASCII	Reserve2	Reserve2	ASCII	Buffer2
	Stufendaten 1				Stored in little endian format	
2	116 - 117	INT16	Typ	Type	0 - 30000	Type
4	118 - 121	Single	Längsmaß (Z)	Length (Z)	±999.999	Z-Ist
4	122 - 125	Single	Quermaß (X)	Cross Dimension (X)	±999.999	X-Ist
4	126 - 129	Single	Spitzenwinkel	Point Angle	±999.999	PointAngle
2	130 - 131	INT16	Standzeit	Life time	0 - 300.0	Lifetime
2	132 - 133	INT16	Reststandzeit	Remaining Life Time	0 - 300.0	RemainingLifetime
2	134 - 135	INT16	Warngrenze	Warning Limit	0 - 300.0	WarningLimit
4	136 - 139	Single	Schneidenradius	Cutting Edge Radius	± 999.999	Buffer2
4	140 - 143	Single	Drehmittenversatz	Difference of Rotation Center (Y)	± 999.999	Buffer3
	Stufendaten 2				Stored in little endian format	
2	144 - 145	INT16	Typ	Type	0 - 30000	Type
4	146 - 149	Single	Längsmaß (Z)	Length (Z)	±999.999	Z-Ist
4	150 - 153	Single	Quermaß (X)	Cross Dimension (X)	±999.999	X-Ist
4	154 - 157	Single	Spitzenwinkel	Point Angle	±999.999	PointAngle
2	158 - 159	INT16	Standzeit	Life time	0 - 300.0	Lifetime
2	160 - 161	INT16	Reststandzeit	Remaining Life Time	0 - 300.0	RemainingLifetime
2	162 - 163	INT16	Warngrenze	Warning Limit	0 - 300.0	WarningLimit
4	164 - 167	Single	Schneidenradius	Cutting Edge Radius	± 999.999	Buffer2
4	168 - 171	Single	Drehmittenversatz	Difference of Rotation Center (Y)	± 999.999	Buffer3
	Stufendaten 3				Stored in little endian format	
2	172 - 173	INT16	Typ	Type	0 - 30000	Type
4	174 - 177	Single	Längsmaß (Z)	Length (Z)	±999.999	Z-Ist
4	178 - 181	Single	Quermaß (X)	Cross Dimension (X)	±999.999	X-Ist
4	182 - 185	Single	Spitzenwinkel	Point Angle	±999.999	PointAngle
2	186 - 187	INT16	Standzeit	Life time	0 - 300.0	Lifetime
2	188 - 189	INT16	Reststandzeit	Remaining Life Time	0 - 300.0	RemainingLifetime
2	190 - 191	INT16	Warngrenze	Warning Limit	0 - 300.0	WarningLimit
4	192 - 195	Single	Schneidenradius	Cutting Edge Radius	± 999.999	Buffer2
4	196 - 199	Single	Drehmittenversatz	Difference of Rotation Center (Y)	± 999.999	Buffer3

Figure 6: Balluff Standard Data Mapping

4 The Easy Tool-ID System

4.7. Usage

The Easy Tool-ID system can be used once it is provided with power and connected to the HMI via USB. To do so, place a tool with RFID data carrier into the tool holder.

Note
Make sure that the tool has been put in the holder correctly. The RFID tag should now be right in front of the read/write head. That ensures secure data transmission.

After selecting the tool's position, the user presses the button on the front side of the tool stand. Then the data on the data carrier is read out and forwarded to the HMI. After a short processing time (about 2 s), the system begins outputting the contents in the HMI.

Caution
To ensure the data is written correctly, the HMI must not be manually controlled during the write operation. In addition, the system has to be located at the correct input site. If the system is used in an environment for which it has not been configured, this will lead to incorrect input in the HMI!

Once the data has been transmitted to the HMI, you can take the tool out of the tool holder and put it in its intended location. Now you can continue with the next tool in the same way.

Canceling a process

If you want to cancel the current write operation, press and hold the button during the output until the green LED starts flashing in the rhythm "long on – short off – long on". The write operation stops immediately.

4 The Easy Tool-ID System

4.8. Status Indicators

The system's status can be indicated by the LEDs on the microcontroller. These are visible on the tool stand from the outside. There are 3 LEDs in total:

- ON (blue): Once the system is connected to the HMI or a computer via USB, the blue LED lights up and stays lit. Then the microcontroller has power and is ready for operation.
- LED1 (green): When the system is executing a plan or a new configuration is being transmitted, the LED is continuously lit. If a plan is canceled, the LED flashes in the rhythm "long on – short off – long on". In case of an error, the LED flashes as described in the table.
  When the USB cable is plugged in, the LED pulsates for a couple seconds. During this time, the system waits for the firmware to update. (See Section 6.)

LED1	Description
Rapid flashing	No data carrier detected
Long off, short on	Error in communication with the BIS processor unit
Slow flashing	Faulty configuration

Figure 7: Error codes

4 The Easy Tool-ID System

4.9. Troubleshooting

System does not respond:

- Verify that the data carrier is positioned correctly in front of the read/write head.
- Verify that the system is correctly connected to the equipment.
- Verify that a configuration is installed on the microcontroller. (See status indicator.)
- If necessary, perform a reset. (Disconnect the system from the power and the USB port from the HMI, wait a minute and then reconnect them.)

The system does not output the data in the correct sequence or outputs the wrong data:

- Check whether the configuration was prepared according to the specifications
- Verify that the data were correctly written on the RFID data carrier
- Reinstall the configuration if necessary

Note
If none of the aforementioned measures remedies the error, Balluff Service will be happy to help you. https://www.balluff.com/local/de/support/

5 The Configuration Software

5.1. System Requirements

- Microsoft Windows 7 (32- or 64-bit)
- .NET Framework 4
- Min. 128 MB available memory
- Min. 100 MB available hard drive space
- 1x USB 2.0 port
- USB data cable
- Balluff Easy Tool-ID hardware

Driver Installation of the Easy Tool-ID Hardware

⚠ **Caution**
Do not connect the hardware to the system until the driver has been successfully installed using the Easy Tool-ID setup.

If driver installation failed, you can always reinstall it in the program directory of Easy Tool-ID (usually *C:\Program Files (x86)\Balluff GmbH\Balluff Easy Tool-ID\Driver)*.

Note
The drivers and configuration software only have to be installed on the computer to be used for configuring the system. This is not absolutely necessary on the HMI.

USB Connection

When the program is started, the Easy-Tool ID software automatically connects to the connected control unit.

Note
Only one control unit may be connected to the system.

If an Easy Tool-ID device is plugged and unplugged while the program is running, the current connection status will be displayed directly in the program.
To do this use the *Upload* tab. See *5.27 Data Transmission*.

5 The Configuration Software

5.2. Installation

Open the installation wizard by double-clicking on the Setup file and follow the instructions on the screen.
Read the license agreement carefully. If you agree, continue with the installation.

5.3. Start and Function Overview

After successfully completing the installation, start the application by clicking the desktop icon or *Start → All Programs → Balluff GmbH → Balluff Easy Tool-ID → Balluff Easy Tool-ID*.

Function Overview

After starting the application you are able to make various settings.
The following pages provide a detailed description of the respective configuration options.

Note
Settings can be added/activated (+) or deleted/deactivated (✖).
You can edit existing configurations using the corresponding symbols. These are explained in this user's manual.

Configuration Plans

Here you create the configuration plans and the steps they require.
Configuration plans may contain multiple steps.

Steps mean "what is performed in which order".
Steps can thus be used to create entire process sequences.

E.g.: The first field is activated, here the tool number is entered.
Then the simulated tab key is used to switch to the next field where the tool name is entered.

5 The Configuration Software

5.4. Creating Plans

- Click the *Create* button. (1)
- Enter a unique name. (2)
- Enter a tool type number in the range from 0 to 30000. (3)
- After entering valid values, confirm them with *Add*. (4)
- The configuration plan you just created will then appear in the list.

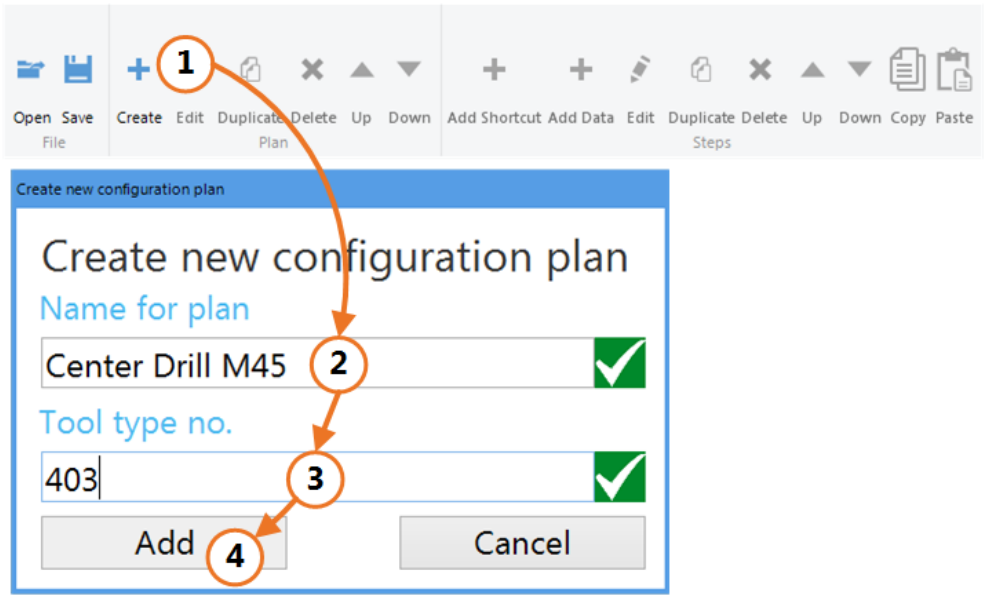

Figure 8: Creating a new configuration plan

5 The Configuration Software

5.5. Creating Multiple Plans

In some cases it may be necessary to create multiple plans. For different tool types, therefore, different entries may need to be made in the respective HMI.

For example: Tool type 1 has only one cutting edge with a radius and a length.

The plan looks as follows:

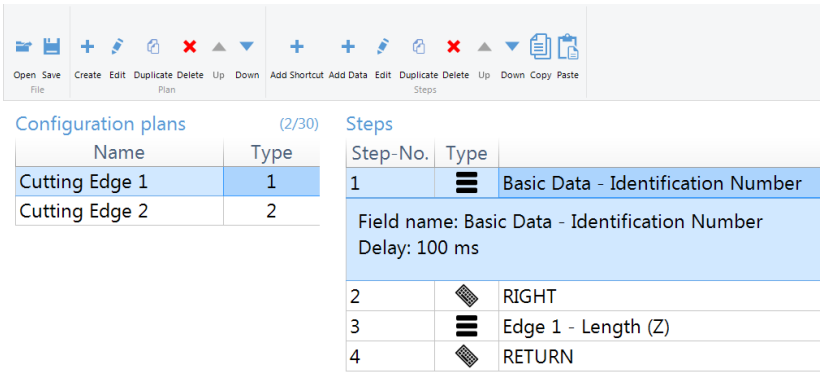

Figure 9: Creating multiple plans

Tool type 2, however, has 2 cutting edges:

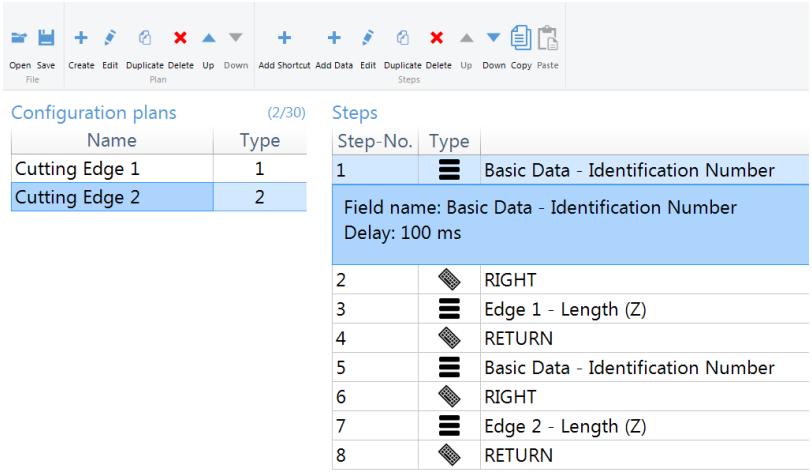

Figure 10: Creating multiple plans

5 The Configuration Software

To execute the corresponding plans for the respective tool type, the number from the "Tool Type" field has to be stored on the RFID tag at bytes 116 and 117 (step data 1 type).

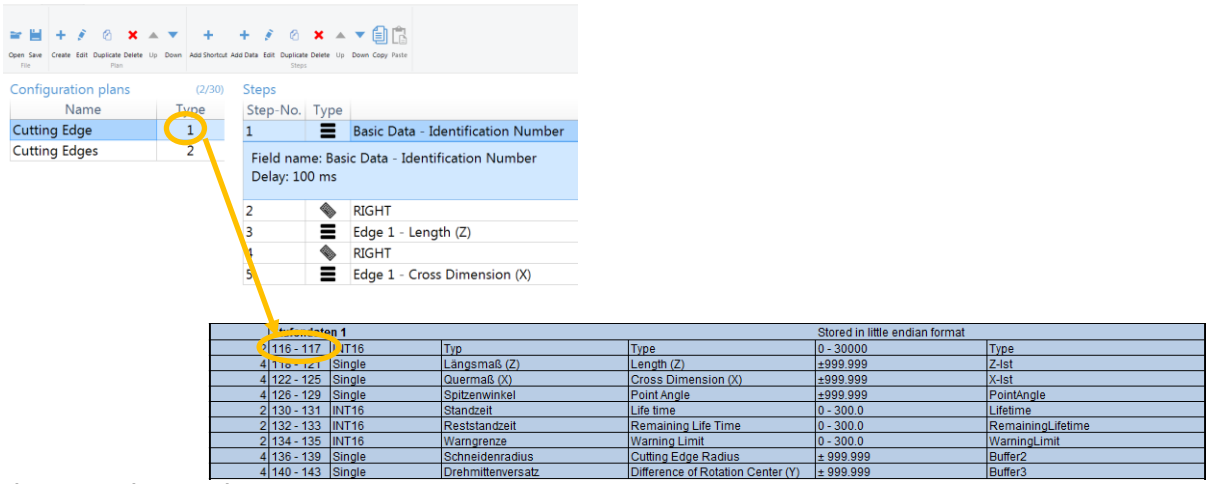

Figure 11: Tool type number

Then, based on the number, the microcontroller filters the respective plan on the RFID tag and executes it.

⚠ **Caution**
If the tool type number on the data carrier does not match any of the created plans, the first plan in the list is automatically executed.

5 The Configuration Software

5.6. Entry Instructions

When creating a configuration plan, you need to note several things:

- The name of a configuration plan must never be blank (no characters).
- The Tool Type must never be blank and must always consist of a number from 0 to 30000.
  The Tool Type number is freely selectable and must match with the value on the RFID chip.
  The value is generally written to the RFID chip by the presetter. This means the values which are used there must also be entered in the Tool Type field.
  We recommend using the Siemens tool types from the Siemens 840D Beginner's Manual (11/2006, 6FC5398-1BP10-2AA0)
- The tool type number and name has to be unique.
- A maximum of 30 plans can be created. Once 30 plans have been created the *Create* button is grayed out.

If you are making an entry and don't see the green symbol but a red symbol , you can view the exact error message by moving the mouse pointer over the corresponding symbol.

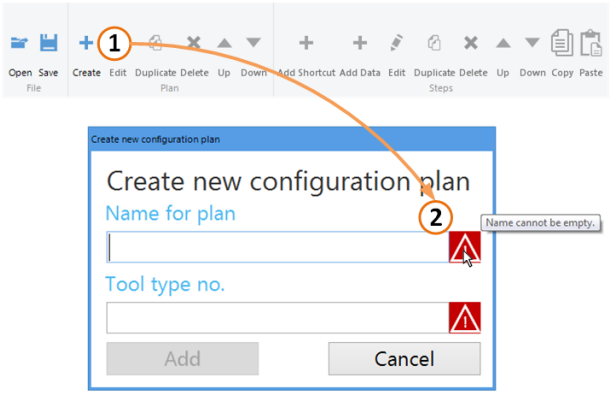

Figure 12: Incorrect entries while creating a configuration plan

5 The Configuration Software

5.7. Deleting a Configuration Plan

- Select the configuration plan you wish to delete. (1)
- Click the *Delete* button. (2)
- You are prompted whether you really want to delete the plan. Click on *OK* to delete the plan or on *Cancel* to not delete it. (3)
- The selected entry is deleted.

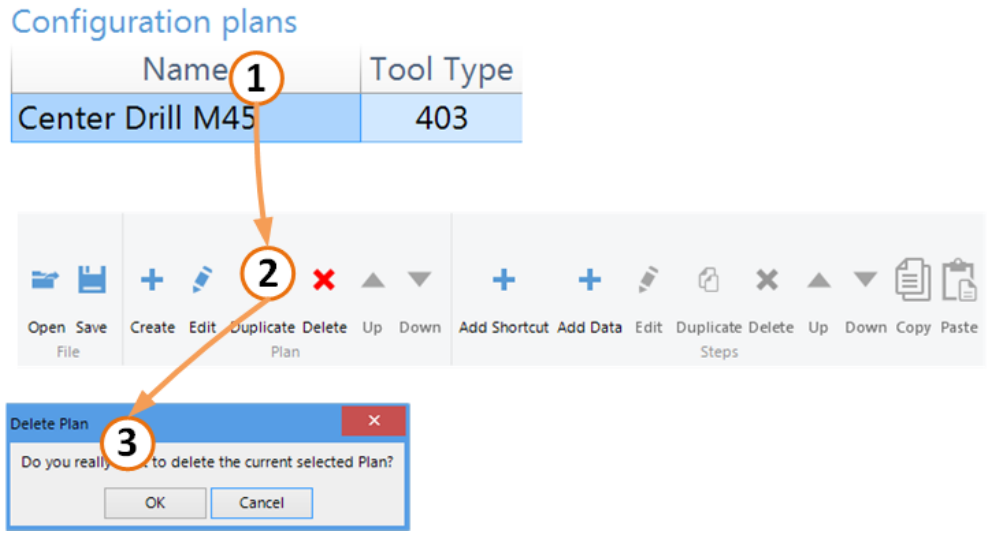

Figure 13: Deleting a configuration plan

5 The Configuration Software

5.8. Sorting Plans

- Click the plan you wish to move. (1)
- Click *Up* or *Down* to move the plan up or down in the list. (2)

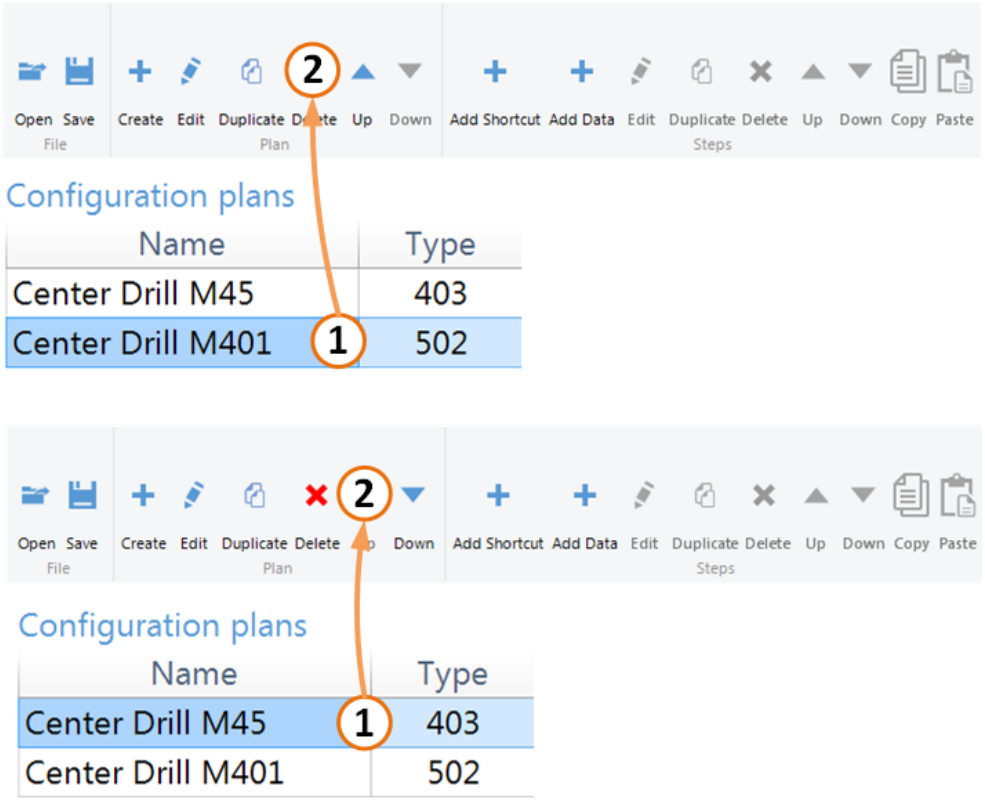

Figure 14: Sorting plans

5 The Configuration Software

5.9. Modifying a Configuration Plan

- Select an existing configuration plan.
- Click the *Edit* button or double-click the plan. (1)
- Now you can change the plan name and the tool type number in the Edit window. (2)
  The same rules apply as for creating plans. (Unique name and filter)
- Click *Edit* to apply the change. (3)

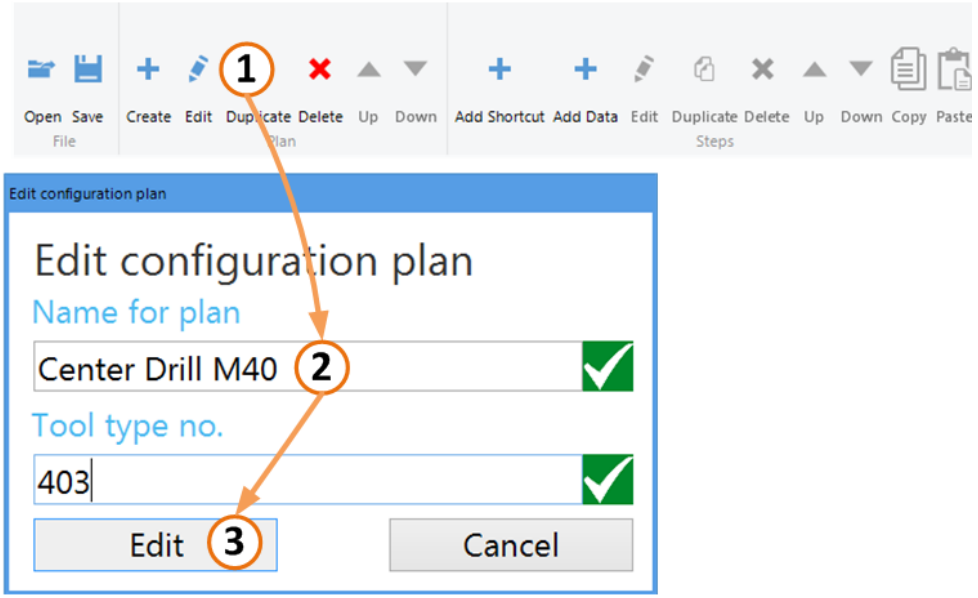

Figure 15: Modifying a configuration plan

5 The Configuration Software

5.10. Duplicating a Configuration Plan

- Select an existing configuration plan.
- Click on *Duplicate*. (1)
- Enter a new plan name and a new tool type number. (2, 3)
  The same rules apply as for creating plans. (Unique name and filter)
- Confirm your entry by clicking on *Add*. (4)
- The duplicated plan then appears in the list with the already created steps.

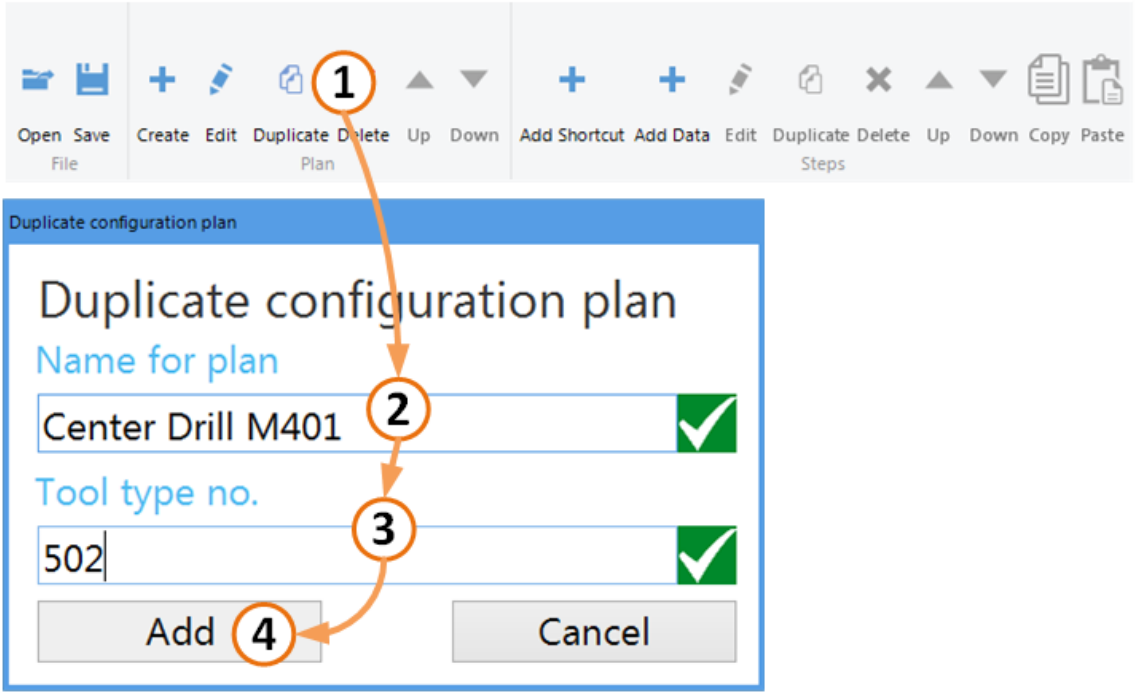

Figure 16: Duplicating a configuration plan

5 The Configuration Software

5.11. Creating a Shortcut Step

- To add a shortcut step, a plan must be selected.
- Click *Add Shortcut*. (1)
- You can optionally enter a name. (2)
- Click in the keyboard input field and enter a valid key combination (e.g. *Ctrl* + *A*). For entering press the required keys on your keyboard. (3)
- Set the delay after execution of the step in milliseconds. (4)
- Confirm your entry by clicking *OK*. (5)
- The new step is displayed in the steps list.

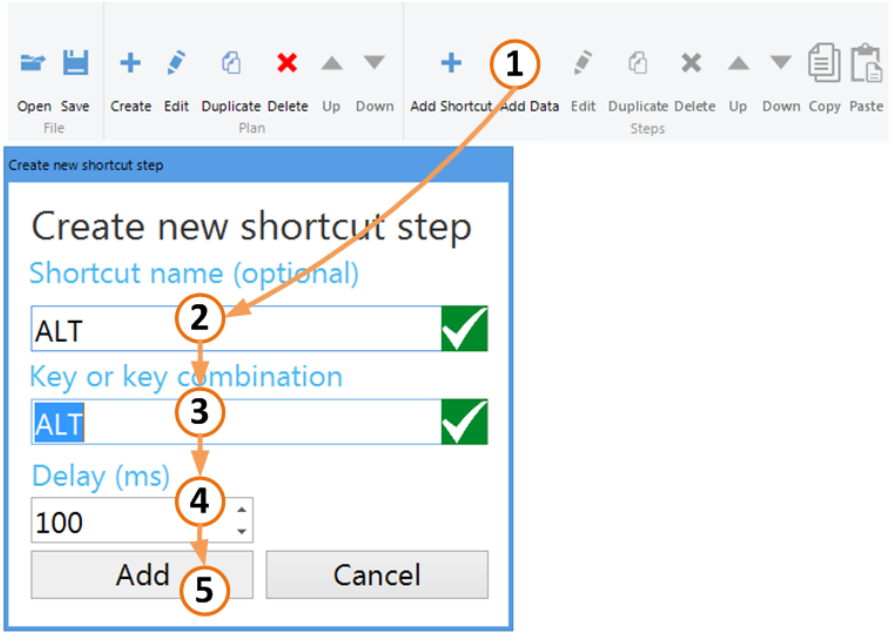

Figure 17: Creating a shortcut

Note
A maximum of 2 keys can be entered as a key combination.
Possible combinations may consist of a modifier key and a normal key, such as *Ctrl* + *A*.
The *TAB* key may also be used.

It is not possible to enter *PRINT*, *PAUSE* or other special keys, nor is it possible to use *Fn* keys on a laptop keyboard.

If you assign no name, the name is formed from the key combination.

5 The Configuration Software

5.12. Creating a Data Step

- Click *Add data*. (1)
- Select the desired data field. (2, 3)
- Enter a delay time after the step in milliseconds. (4)
- Confirm your entry by clicking on *Add*. (5)
- After the entry is saved, the data field is visible in the steps list.

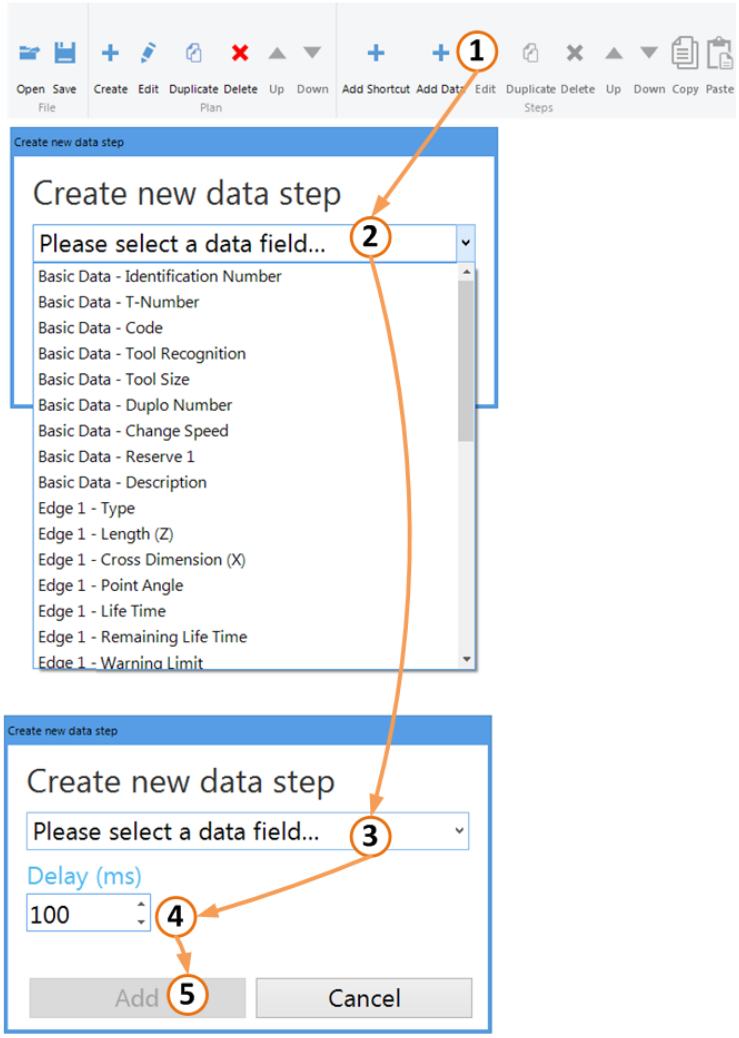

Figure 18: Creating a data field

5 The Configuration Software

5.13. Special Function "Convert to Diameter"

A presetter always outputs the cross dimension as a radius. However, sometimes the machine tool needs this value as a diameter. To enable this through the Easy Tool-ID system, you can use the additional "Convert to diameter" function in the configuration software.

- Select the "Cross Dimension (X)" data field. (1, 2, 3)
- Select the "Convert to diameter" function by checking the box. (4)
- Confirm your entry by clicking "Add". (5)

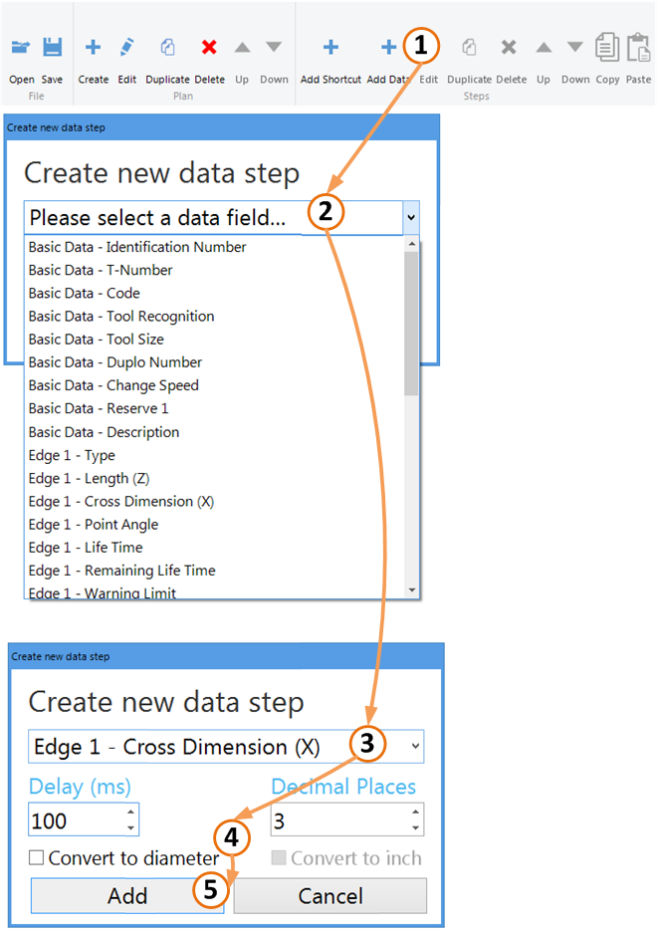

Figure 19: Selecting the "Convert to diameter" function

5 The Configuration Software

5.14. Special Function "Decimal Places"

The Easy Tool-ID System outputs three decimal places by default. Some machines only accept less than three decimal places. You can change the amount of decimal places in the software.

- Select a data field with decimal places. E.g.: the "Cross Dimension (X)" data field. (1, 2, 3)
- Select the amount of decimal places in the "Decimal Places" field. (Values from 1 to 3 are allowed). (4)
- Confirm your entry by clicking "Add". (5)

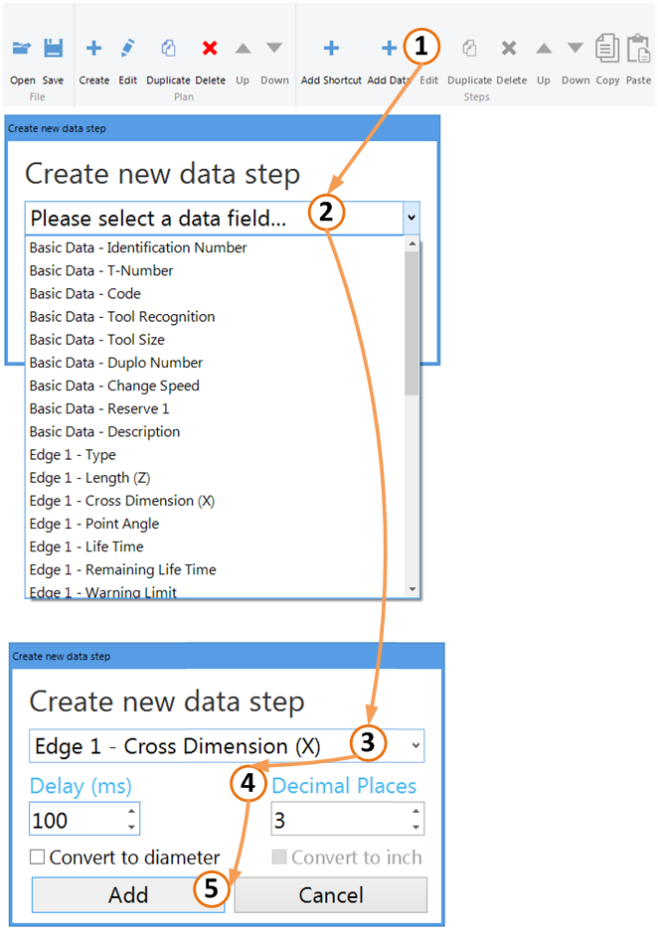

Figure 20: Selecting the "Convert to diameter" function

5 The Configuration Software

5.15. Sorting Steps

- Click on the step you wish to move. (1)
- Click on *Up* or *Down* to move the step up or down in the list. (2)

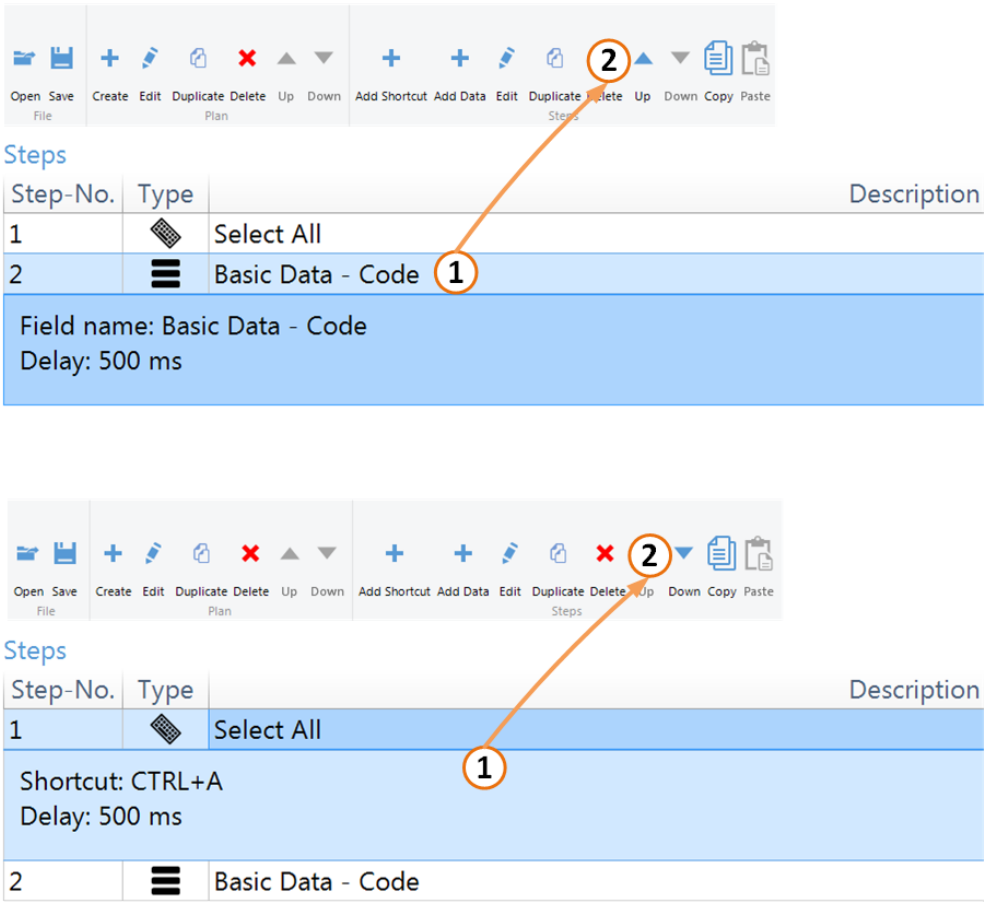

Figure 21: Sorting steps

5 The Configuration Software

5.16. Editing Steps

- Click the step you wish to edit. (1)
- Clicking "Edit" or double-clicking the step opens the "Edit" dialog. (2)
- Modify the step as desired. (3)

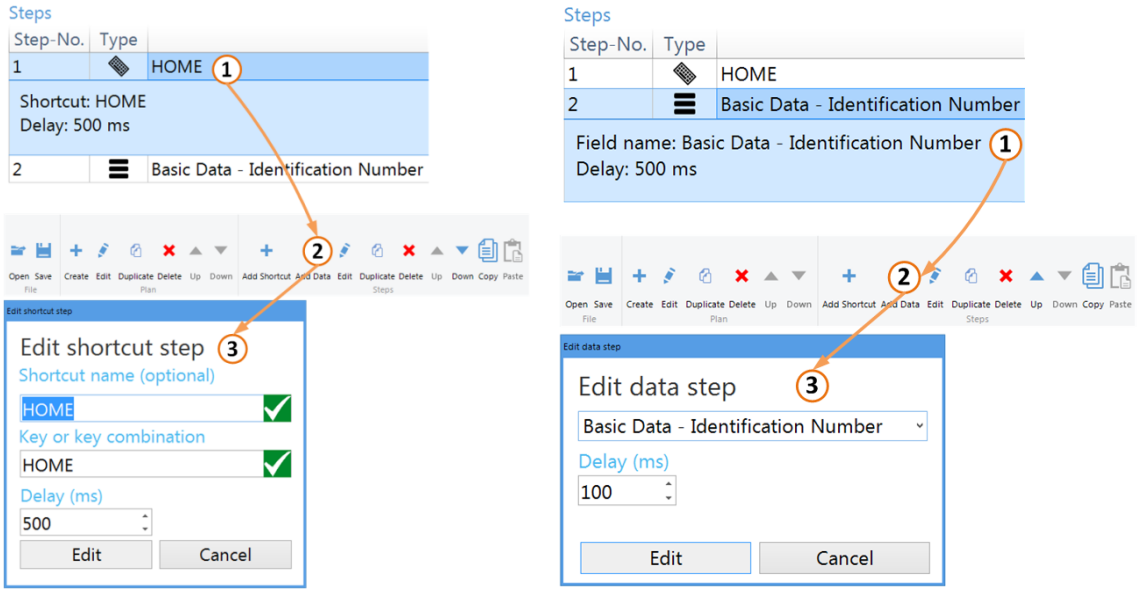

Figure 22: Editing steps

5 The Configuration Software

5.17. Deleting Steps

- Click on the step you wish to delete. (1)
- Clicking on *Delete* deletes the selected step after the following security prompt is confirmed by clicking on *OK*. (2)

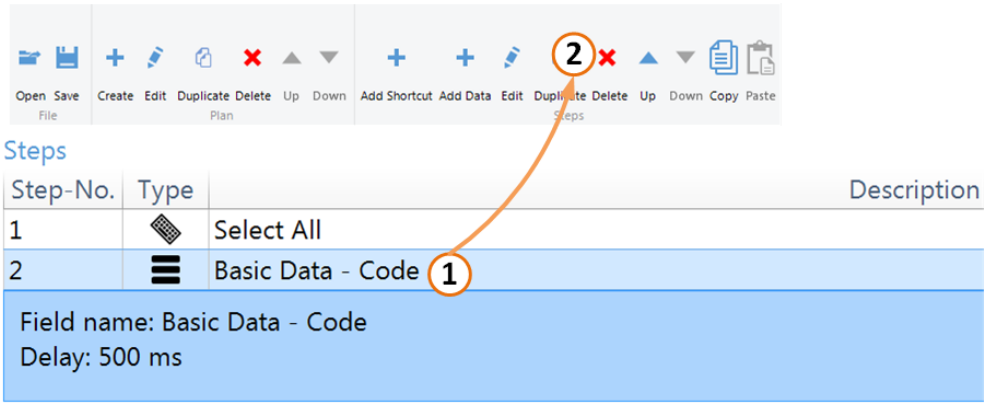

Figure 23: Deleting a step

5 The Configuration Software

5.18. Duplicating Steps

- Click the step you wish to duplicate. (1)
- Click *Duplicate*. (2)
- If desired, change the settings of the duplicated step. (3)
- Click "Duplicate" to complete the duplication.

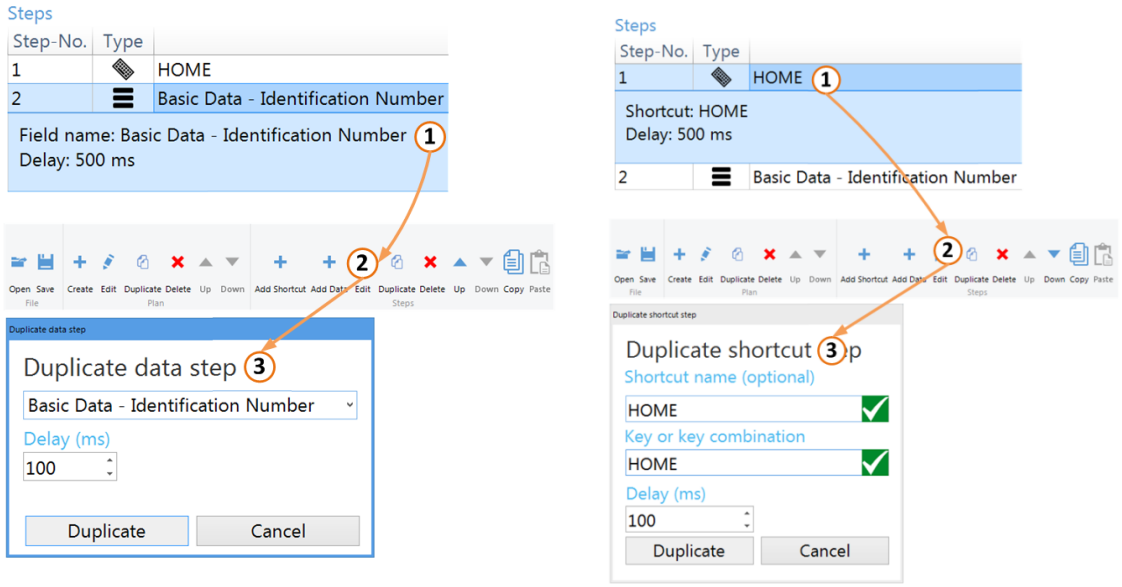

Figure 24: Duplicating steps

5 The Configuration Software

5.19. Copy and Paste Steps

The configuration software enables you to copy steps and then paste them in the same instance of the program or in another one. Thus you can copy individual steps from one plan and paste them into another.
Similar to Windows File Explorer, you can select multiple steps.

- Select the steps you wish to copy. (1)
- Clicking the "Copy" button or Ctrl + C copies the steps to the clipboard and enables the "Paste" button. (2)
- By clicking the "Paste" button or Ctrl + V, you can paste the steps into the current program instance or into another one. (3)

Note
If there are no steps in the clipboard, the "Paste" button is disabled.

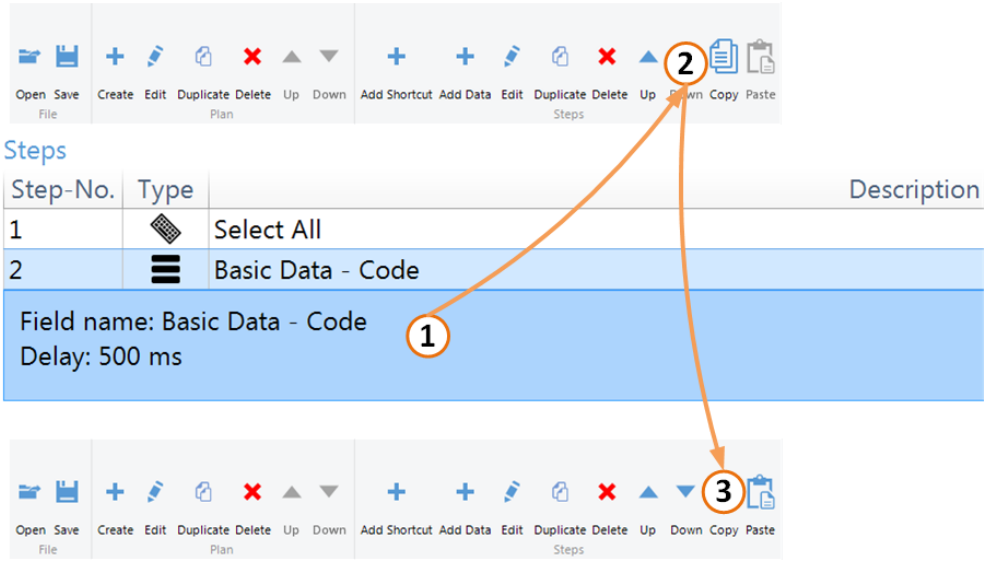

Figure 25: Copying and pasting steps

5 The Configuration Software

5.20. Loading a Configuration

- Clicking on *Open* opens the Open File dialog. (1)
- Select the configuration you wish to open and click on *Open*. (2, 3)

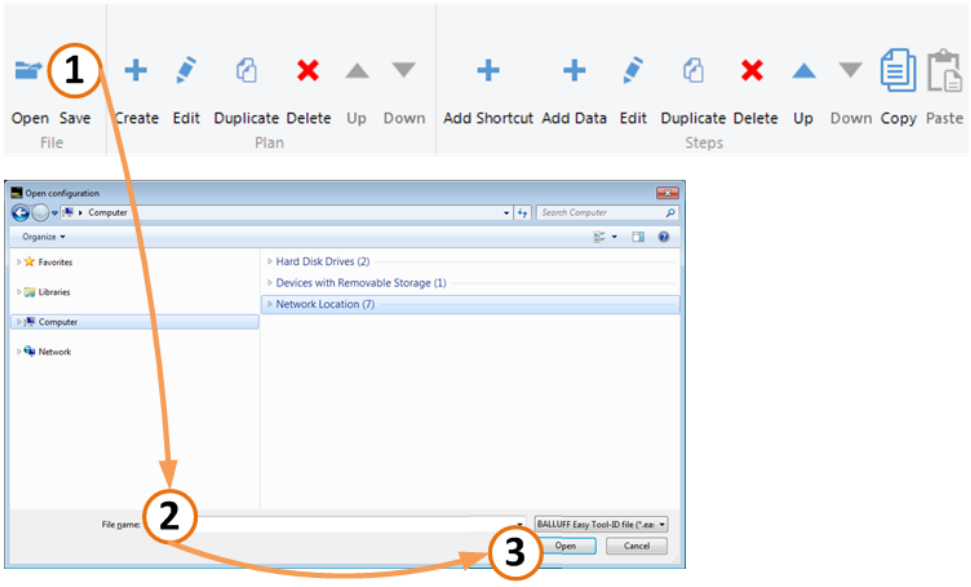

Figure 26: Loading a configuration

Note
Only files with the extension **.easy* can be opened.

5 The Configuration Software

5.21. Saving a Configuration

- Clicking on *Save* opens the Save File dialog. (1)
- Assign a location as well as a file name and lick on *Save*. (2, 3)

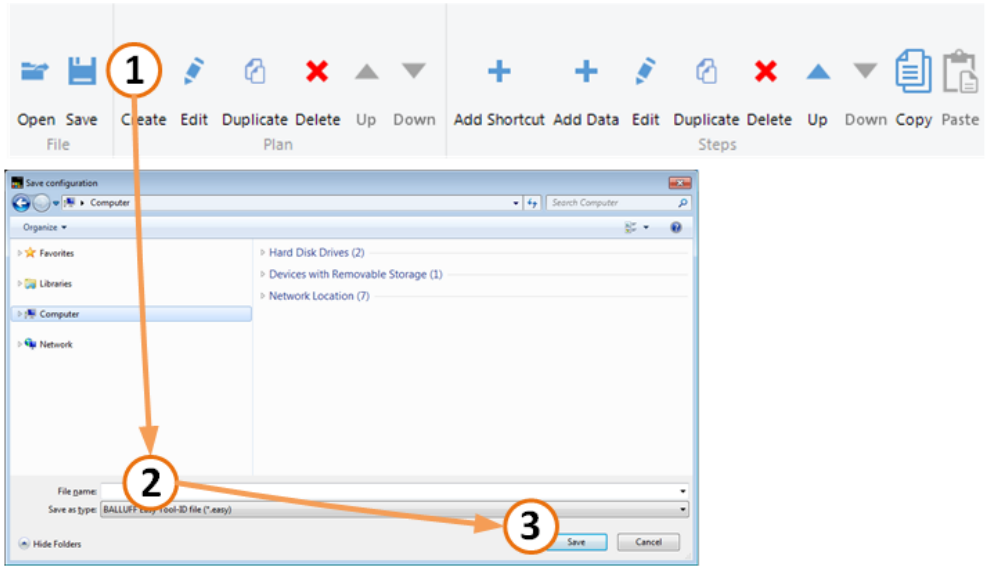

Figure 27: Saving a configuration

Note
Only files with the extension **.easy* can be saved.

5 The Configuration Software

5.22. Keyboard Input Language

The keyboard input language enables you to use a country-specific, simulated keyboard. For example with an English keyboard setting "Y" and "Z" are reversed compared to the German keyboard.
This ensures that the correct country-specific keyboard layout is always used.

Note
The keyboard layout of the operating system is always determined and automatically entered when the program is started.
When a plan is loaded the keyboard layout is set according to the setting stored in the file.

Setting the keyboard layout

- Click on the *Upload* tab. (1)
- The input language determined when the program starts will be displayed. (2)
- Clicking on the selection list displays all the available input languages. (3)
- The language can be changed by selecting a different entry from the list. (4)

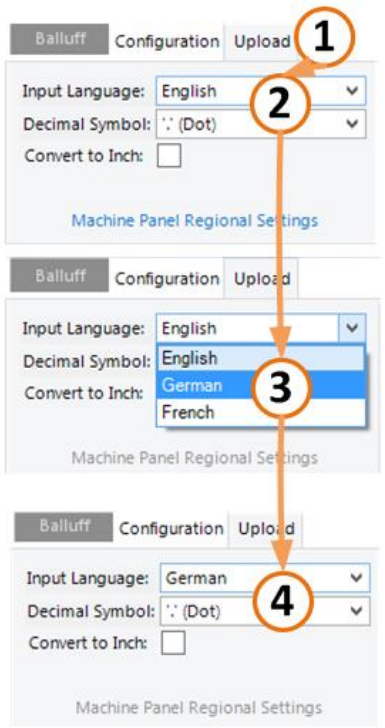

Figure 28: Changing the keyboard input language

5 The Configuration Software

5.23. Decimal Separators

The decimal separator character is a character which separates the whole number part of a decimal number from the decimal places.
If *Dot* is set, the number 100.23 will be displayed in the application, and if *Comma* is set the number will appear as 100,23 in the application.

Note
The default decimal separator is a dot.

Changing the decimal separator character

- Click on the *Upload* tab. (1)
- The current decimal separator is now displayed. (2)
- Clicking on the selection list displays all the available decimal separator characters. (3)
- Now the decimal separator character can be changed by selecting a different entry from the list. (4)

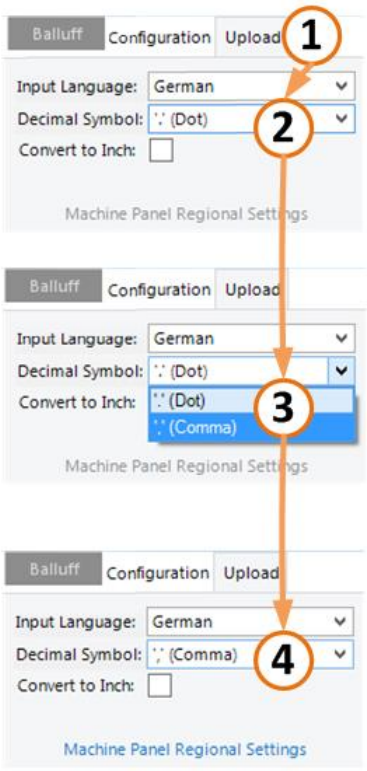

Figure 29: Changing the decimal separator

5 The Configuration Software

5.24. Converting Values to Inches

Easy Tool-ID enables you to convert certain values to inches. You can see whether a value is converted to inches when you create or edit a data step.

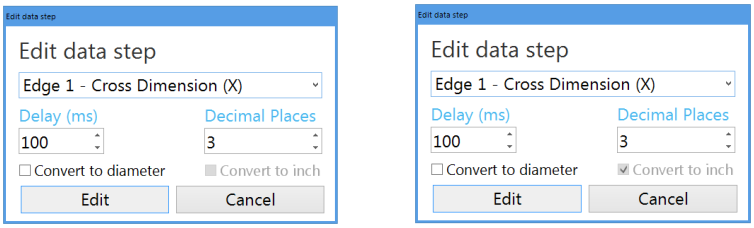

Figure 30: Converting to inches in the data step

The setting for converting to inches is implemented globally. All fields that can be converted are converted to inches after the new configuration is transferred.

- Click the *Upload* tab. (1)
- Check the box for *Convert to Inch* to convert all convertible values to inches. (2, 3)

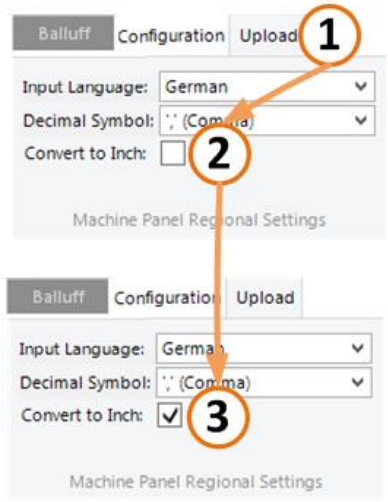

Figure 31: Converting to inches

5 The Configuration Software

5.25. Global Writing Speed

When creating steps, you can specify a delay time in milliseconds. This time value means that the keyboard program always waits the set time after the step has been executed.

The global writing speed inserts an additional time value. This value determines how long the wait will be after a character is entered.
Since not all machines can process fast entry of characters, an additional value can be set here.

The following values can be selected

- Low – 100 ms
- Middle – 50 ms
- High – 5 ms

Specifying the keyboard writing speed

- Open the *Upload* tab. (1)
- Click on *Writing Speed*. (2)
- Select the desired value. (3, 4)
- The setting is applied and sent at the next data transfer.

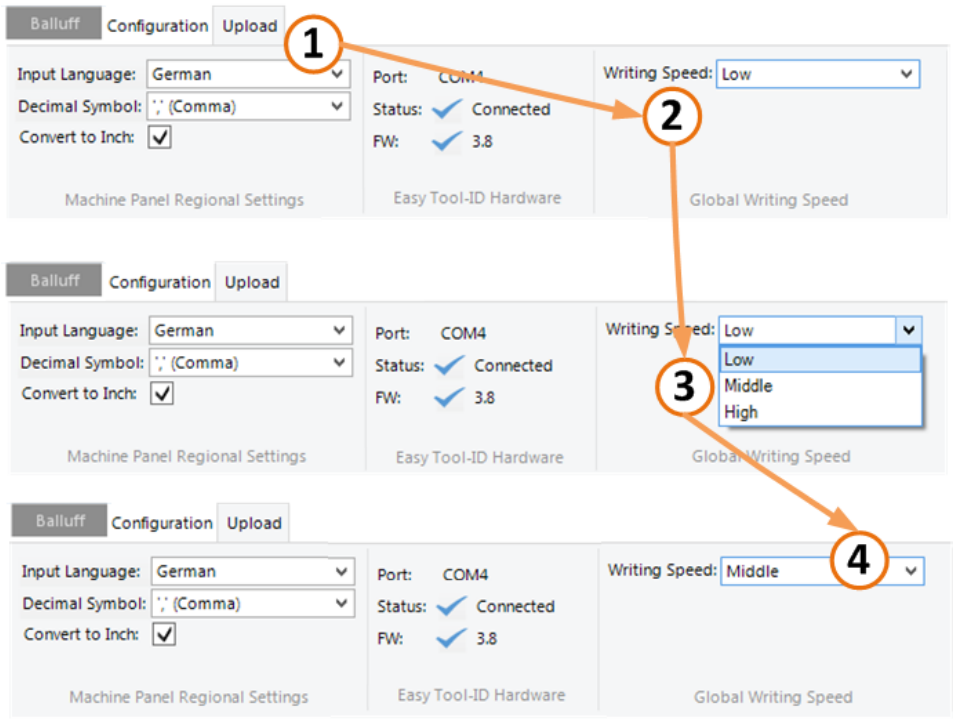

Figure 32: Setting the writing speed

5 The Configuration Software

5.26. Connection Status

The connection status of the Easy Tool-ID Hardware is displayed in the application. Whenever the hardware at an USB port is changed, the connection status and the version of the connected firmware are automatically updated in the application.

Viewing the connection status

- Click on the *Upload* tab. (1)
- The current connection status is displayed (in the example no Easy-Tool-ID hardware is connected). (2)
- A device was plugged into the USB port. (3)

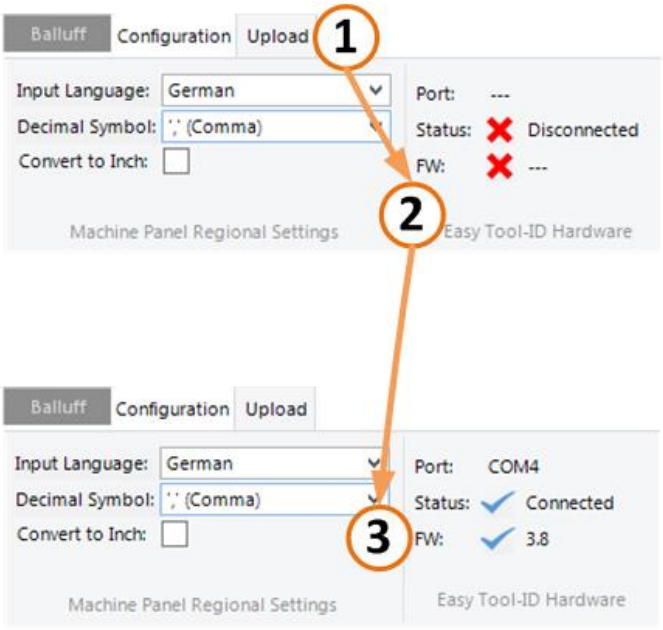

Figure 33: Connection status of the Easy Tool-ID hardware

Note
If a red X (**X**) is next to the firmware version, then the correct firmware has not been installed on your Easy Tool-ID hardware.
Please follow the steps regarding this in Chapter 6.

5 The Configuration Software

5.27. Data Transmission

Data can be sent to the hardware only if there is an active connection.

Sending data to the hardware

- Click the "Start transfer" button. (1)
- The Transfer Status window opens. (2)
- When the transfer has finished, close the window by clicking the "Finished" button (clicking "Cancel" cancels the data transmission). (3)

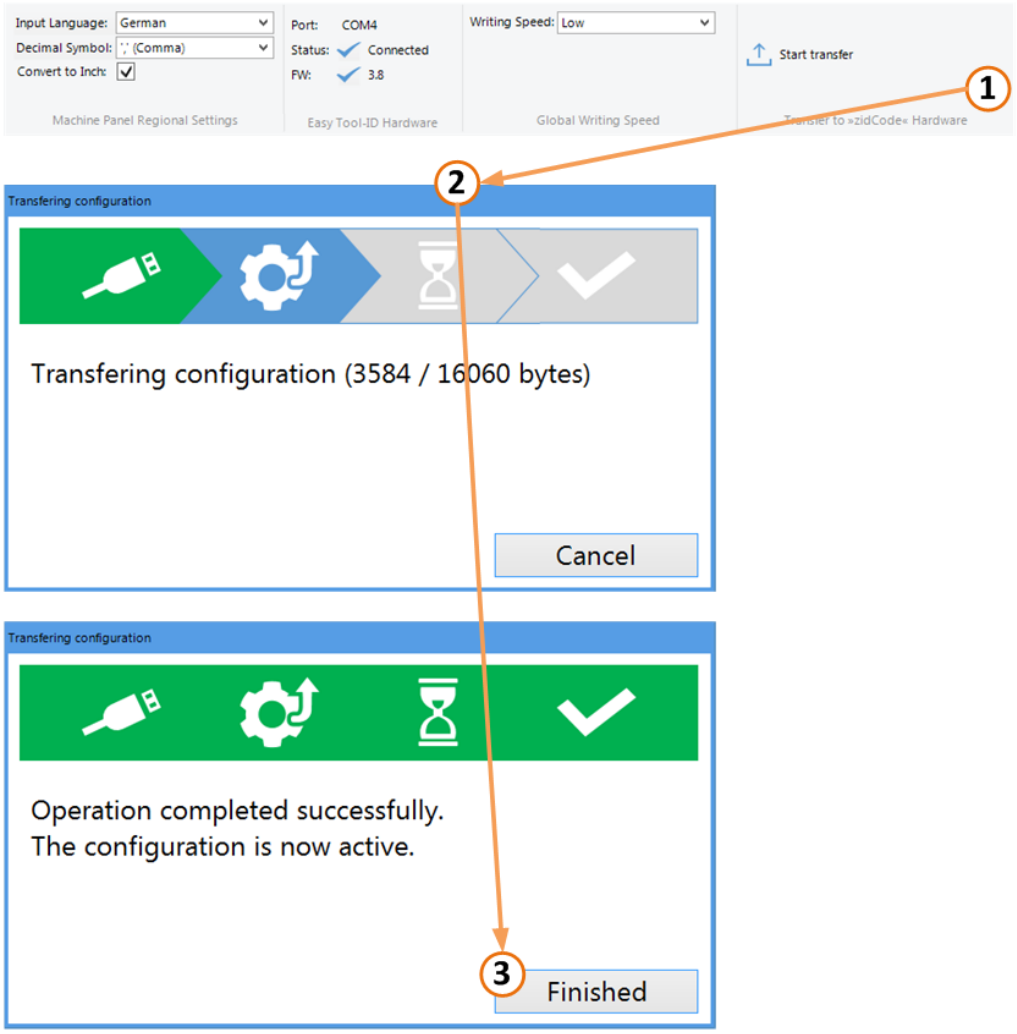

Figure 34: Sending data to the Easy Tool-ID hardware

6 Updating the Firmware

6.1. Updating the Firmware

If a red X (**X**) is displayed next to "FW" in the software, the firmware has to be updated. This is done by going to Start → All Programs → Balluff GmbH → Balluff Easy Tool-ID and selecting the "Firmware Update" software. Run this software and follow the displayed steps.

- Start the software.
- If Easy Tool-ID hardware is connected, remove it and then reconnect it. (Repeat this process if the update does not start on its own.)
- The software updates the firmware. Please do not remove the device.
- The software displays the new firmware version. Now you can continue with the next device.

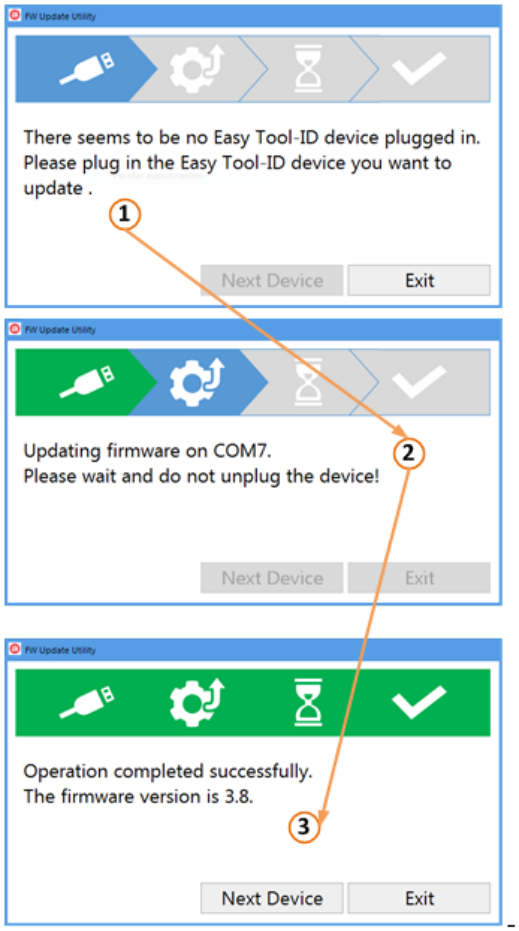

Figure 35: Updating the firmware

7 List of Illustrations

www.balluff.com

Balluff GmbH
Schurwaldstrasse 9
73765 Neuhausen a.d.F.
Germany
Tel. +49 7158 173-0
Fax +49 7158 501-0
balluff@balluff.com

No. 932881-726 EN 02.127044 H18; Subject to modification, replaces B17