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Installation Instructions USB Interface Cable

KERN DBS-A02

Version 1.0
12/2011
GB

DBS-A02-IA-e-1110



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Version 1.0 12/2011

Installation Instructions USB Interface Cable

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1 Introduction

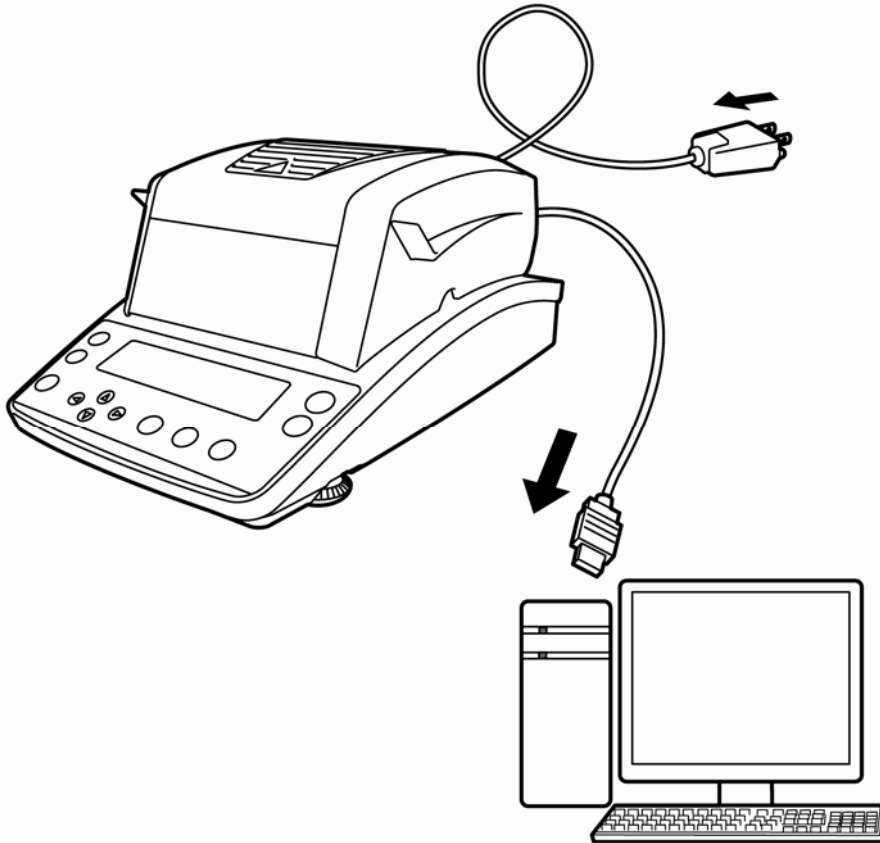
The UBS interface supports bidirectional data transfer from a moisture meter to a computer. This data exchange is asynchronous using ASCII - Code.

UBS data is conducted to a virtual port.

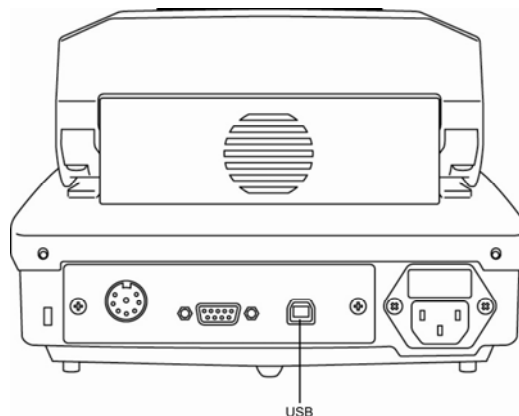
The scope of delivery for the USB interface cable includes a CD containing software drivers for creating the required virtual ports on the computer.

We recommend our transfer software 'Balance Connection KERN SCD 4.0' for the import of data to a PC program.

2 USB connection



1. Disconnect the moisture meter from the mains.
2. For installation of USB driver see chpt. 3.
3. Plug your USB cable into the USB port of your moisture meter.



4. Plug the USB connector into the USB port on the computer.
5. Turn on moisture meter.
6. For establishing the COM Port see chpt. 3.1.

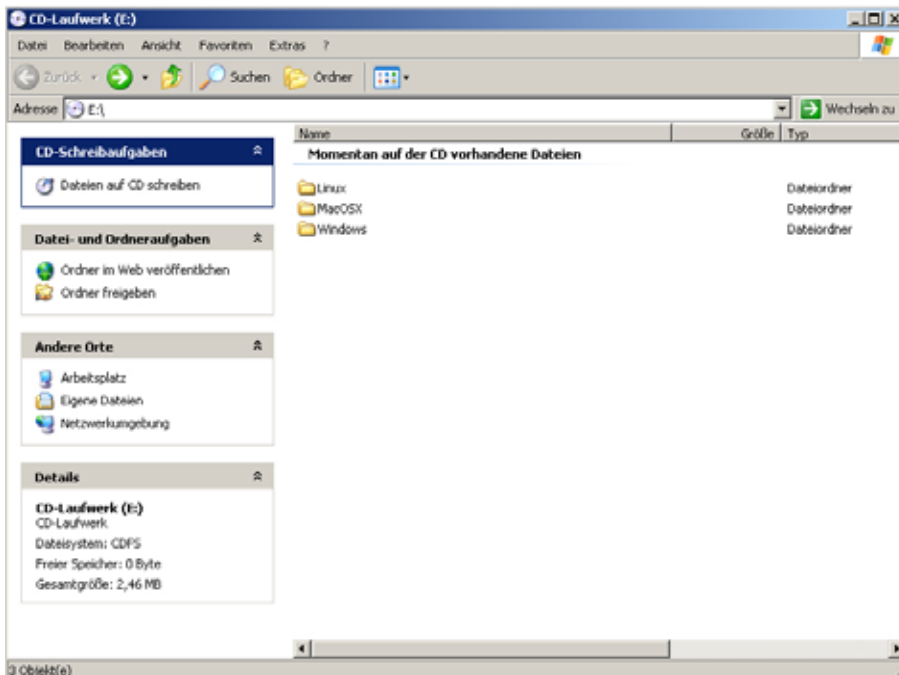
3 How to install a driver



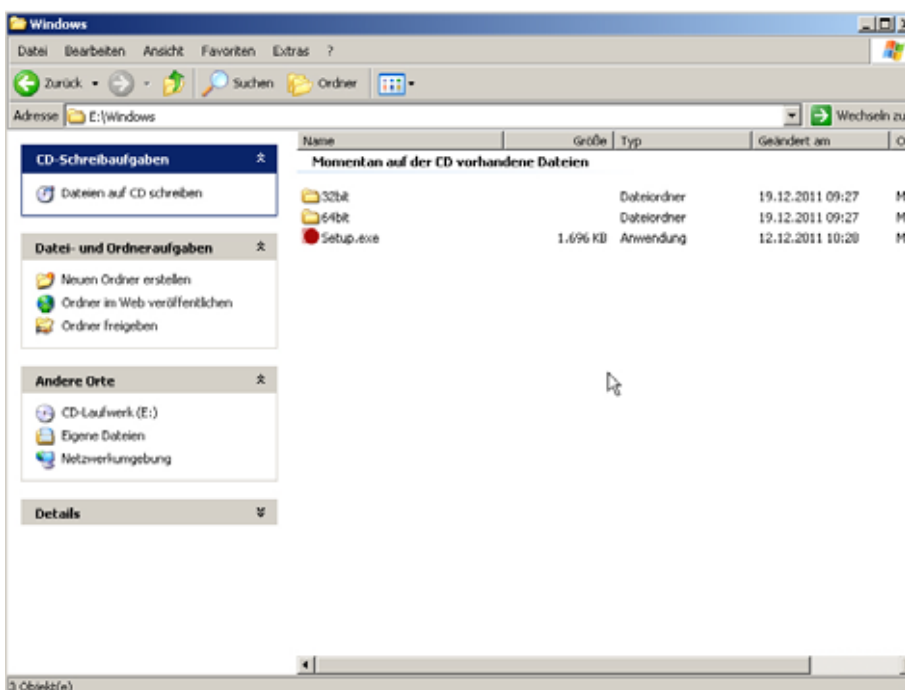
- Ensure that the moisture meter and the PC are not connected to the USB cable.
- Administrator rights are required.

⇒ Insert the supplied driver CD into your CD drive.

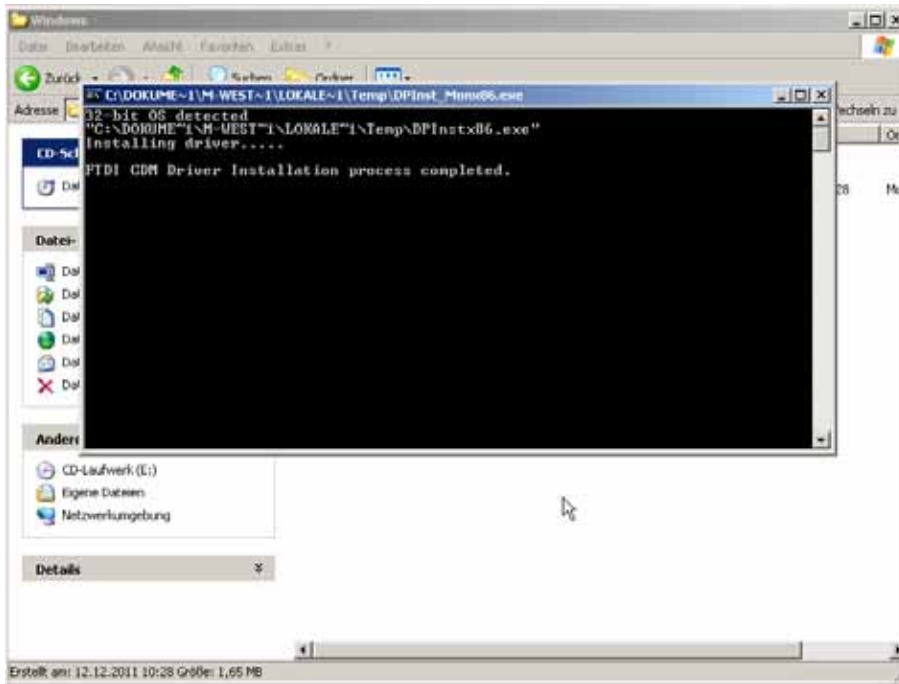
⇒ Select the driver version compatible with your system.



Example Windows:



⇒ To start driver installation, run the 'setup.exe' file.



i For more information about driver installation see <http://www.ftdichip.com/index.html>

FTDI Chip
Future Technology Devices International Ltd.
USB Device Solutions ASIC Design Product Design

Home
Products
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VCP Drivers
CDC Drivers
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Virtual COM Port Drivers
This page contains the VCP drivers currently available to FTDI devices.
For CDC Drivers please see [CDC Drivers](#).
Installation guides are available from the [Installation Guides](#) page of the [Downloads](#) section of this site for selected operating systems.

VCP Drivers
Virtual COM port (VCP) drivers cause the USB device to appear as an additional COM port available to the PC. Application software can access the USB device in the same way as it would access a standard COM port.

The software is provided by Future Technology Devices International Limited "as is" and any express or implied warranties, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose are disclaimed. In no event shall Future Technology Devices International Limited be liable for any direct, indirect, incidental, special, exemplary, or consequential damages (including but not limited to, procurement of substitute goods or services, loss of use, data, or profits, or business interruption) however caused and on any theory of liability, whether in contract, strict liability, or tort (including negligence or otherwise) arising in any way out of the use of this software, even if advised of the possibility of such damage.
FTDI drivers may be used only in conjunction with products based on FTDI parts.
FTDI drivers may be distributed in any form as long as license information is not modified.
If a custom vendor ID and/or product ID is described along we would like to be responsible of the product manufacturer to maintain any changes and subsequent WHQL certification as a result of making these changes.

Currently Supported VCP Drivers:

Operating System	Release Date	Processor Architecture								Comments
		x86 (32-bit)	x86 (64-bit)	PPC	ARM	MIPS6	MIPSv	SNA		
Windows	2011-04-12	2.06.14	2.06.14	-	-	-	-	-	2.06.14 WHQL Certified Available as self-extracting (Release Notes)	
	2011-08-26	2.06.17(beta)	2.06.17(beta)	-	-	-	-	-	2.06.17 Beta Version (Release Notes)	
Linux	2009-05-14	1.0.0	1.0.0	-	-	-	-	-	Included in 2.0.31 kernel and later (Release Notes)	

3.1 Define allocation of virtual port

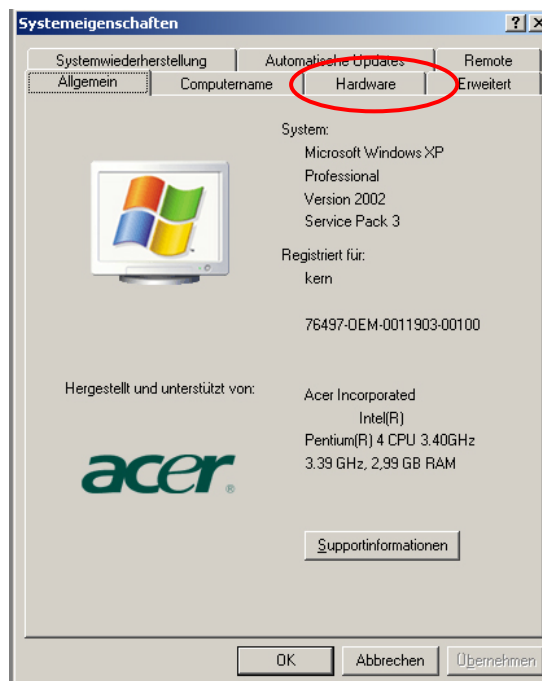


- Ensure that moisture meter and PC are connected via the USB cable.
- Turn on moisture meter

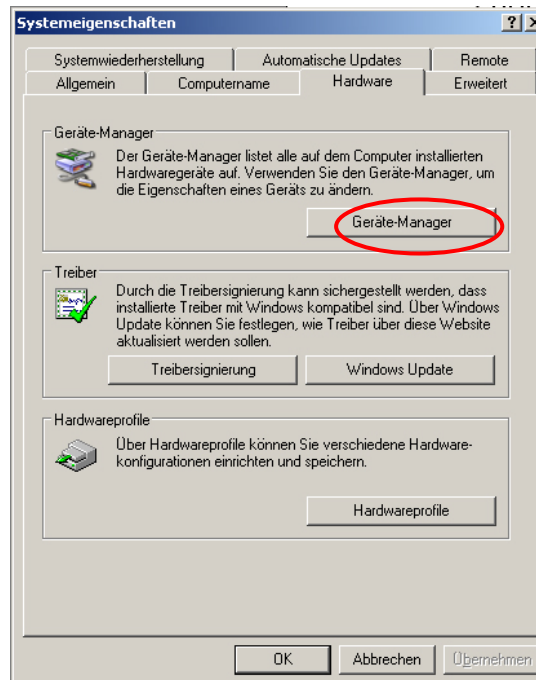
⇒ Wait until the message “Hardware has been successfully installed and is ready for use” appears on the screen.



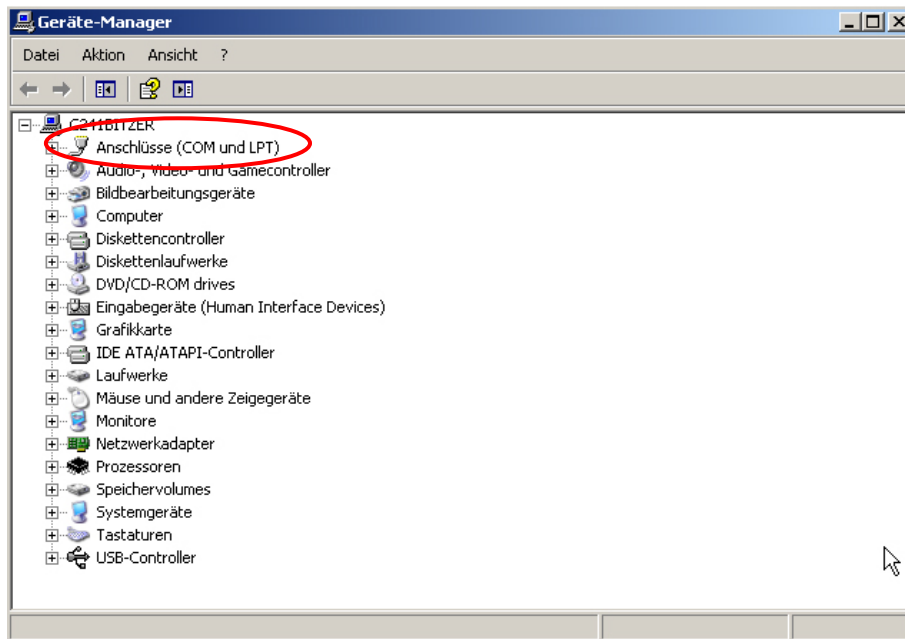
⇒ Call device manager by pressing the Windows and Pause keys.



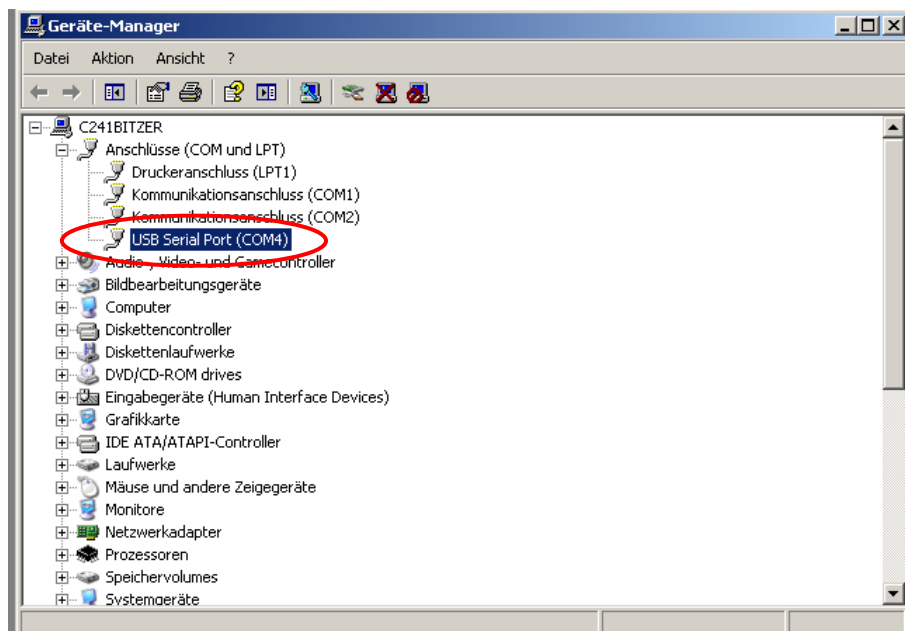
⇒ Select “Hardware” folder



⇒ Click on Device Manager



- ⇒ To display COMPort, click on “ports”.
Select the displayed COM Port, such as COM4, accordingly in the transfer software, see chap. 5.



4 Moisture meter settings

The communication parameters (such as baud rate, bits and parity) of the moisture meter and the transfer software must be concordant for data transfer to take place.

4.1 Interface parameters

1. Press the **Menu** button to access the menu and the first menu item “**PRoGRM**” will be displayed.



2. Use the navigation buttons **↓** **↑** to select menu item „**CoM.SET**“.



3. Confirm with **ENTER** key, the currently preset port will be displayed
oUT.1 = RS232
oUT.2 = USB



4. Use the navigation keys to select **↓** **↑** „**oUT.2**“.

5. Press **ENTER** to save input and the currently preset baud rate will be displayed.



6. Use the navigation buttons **↓** **↑** to select the desired setting.

7. Press **ENTER** to save input, the next interface parameter will be displayed.

Set all interface parameters in turn and then repeat steps 6 and 7 in each case.

- **Baud rate**

Selectable settings:

Display	B.1200*	B.2400	B.4800	B.9600	B.19.2k	B.38.4k
Baud rate	1200bps	2400bps	4800bps	9600bps	19.2k bps	38.4k bps

- **Parity**

Selectable settings:

Display	P.NoNE*	P.oDD	P.EVEN
Parity	Small parity, 8 bit	Odd parity, 7 bit	Straight parity, 7 bit

- **Stop bit**

Selectable settings:

Display	SToP. 1*	SToP. 2
Stop bit	1 bit	2 bit

- **Handshake**

Selectable settings:

Display	HS.HW*	HS.SW	HS.TiM	HS.oFF
Handshake	Hardware handshake	Software handshake	Timer handshake	No handshake

- **Delimiter (terminator)**

Selectable settings:

Display	CR*	LF	CR+LF
Terminator	CR	LF	CR+LF

⇒ Press **ESC** to return to Moisture analysis mode.



- Factory settings are marked by *.
- For further information on how to operate your moisture meter please refer to the operating instructions enclosed with each device.

4.2 Output interval

⇒ Press the Menu button to access the menu and the first menu item “**PRoGRM**” will be displayed.



⇒ Use the navigation keys ↓ ↑ to select the menu item „**PRINT**“ .

⇒ Acknowledge with **ENTER** key, “**INTVAL**“ will be displayed.

⇒ Press **ENTER** to save input and the currently preset output interval will be displayed.

⇒ Use the navigation buttons ↓ ↑ to select the desired setting.

Selectable settings:

oFF	No data output
1SEC	Output interval 1 sec
2SEC	Output interval 2 sec
5SEC	Output interval 5 sec
10SEC	Output interval 10 sec
30SEC	Output interval 30 sec
1MIN	Output interval 1 min
2MIN	Output interval 2 min
5MIN	Output interval 5 min
10MIN	Output interval 10 min
FINAL	Data output at end of measurement

⇒ Press **ENTER** to save input and the equipment will revert to the menu.

⇒ Press **ESC** to return to Moisture analysis mode.

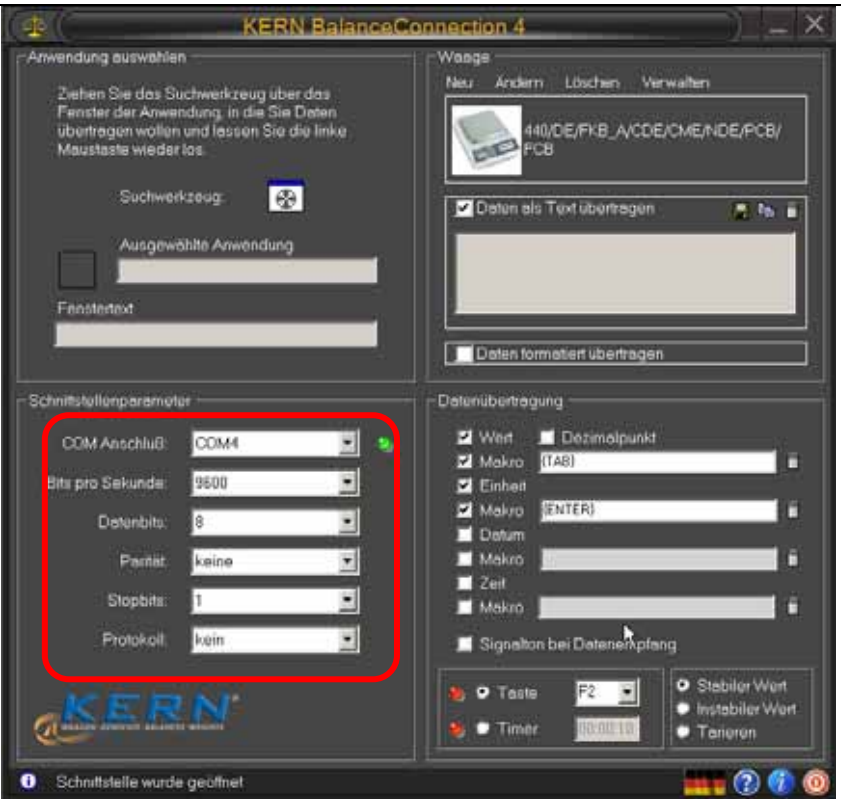


5 USB output

Example using transfer software “**Balance Connection KERN SCD 4.0**”:

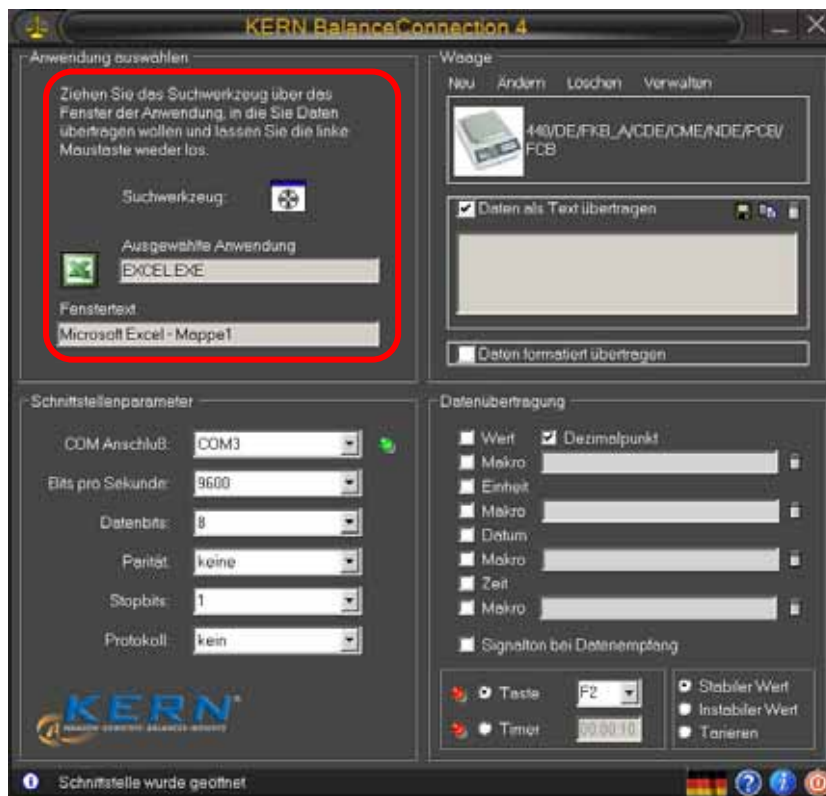
i For further information on the installation / operation of “Balance Connection KERN SCD 4.0” please refer to the operating instructions enclosed with the software.

⇒ Check whether the communication parameters of your moisture meter and the transfer software are concordant.

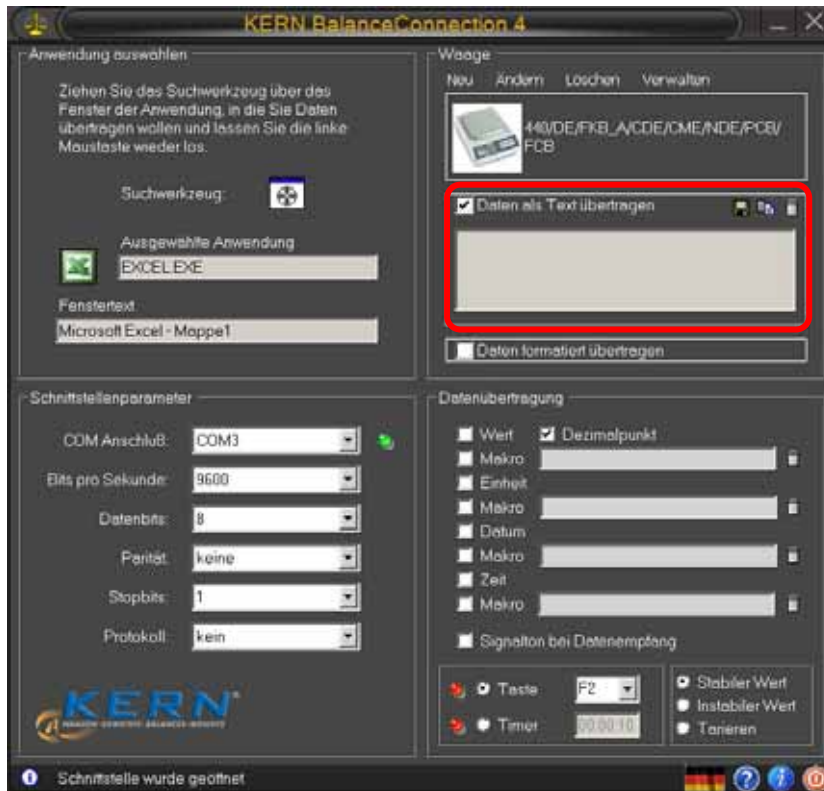
<p>For moisture meter settings see chap. 4.1</p>	<p>PC / Balance Connection KERN SCD 4.0</p>
<div style="border: 2px solid red; padding: 10px; margin: 10px;"> <p>COM 4, see chap. 3.1 Baud rate 9600 Bits/s Data bits: 8 Parity none Stop bits 1</p> </div>	

English

In the transfer software, select the application into which you want to transfer your data. Start your application program, keep it opened in the background and left-click your mouse, keeping the mouse button pressed down, so that you can drag the searching tool with your selected application to the window of your application and then release the mouse button. Afterwards the application selected by you will appear in the box under **SELECTED APPLICATION** (e.g. Microsoft Excel).



⇒ Click on “Transfer data as text”, and set the cursor in the application program (such as Microsoft Excel).



English

⇒ Start moisture determination for a sample

Data output for header will commence immediately after moisture determination was started. Depending on the setting for the output interval (See chap. 4.2), output of measured values will take place for instance every 2 minutes.

Once drying has been completed, the measured result will be displayed (footer)

Example protocol:

	A	B
1	KERN & Sohn GmbH	
2	TYPE DBS 60-3	
3	SN WB11AH0003	
4	ID 0000	
5	CODE 0002	
6	DATE 11-12-15	
7	TIME 18:54	
8	PNO. 1	
9	UNIT M/W	
10	MODE TIME	
11	TEMP 120C	
12	STOP 00:15	
13		
14	Wet Wg	20.081
15		
16	TIME	M/W%
17	00:00:00	0.00
18	00:02:00	0.19
19	00:04:00	0.29
20	00:06:00	0.35
21	00:08:00	0.38
22	00:10:00	0.38
23	00:12:00	0.38
24	00:14:00	0.38
25	*00:15:00	0.38
26		
27	Dry Wg	20.004
28		
29		
30		
31		
32		
33		
34		

Header:
 Company
 Model
 Serial no.
 ID no.
 Sample description
 Date
 Time
 Program no.
 Unit Display of results
 Drying mode
 Drying temperature such as 120 °C
 Cut off criteria such as 2 min

 Initial weight such as 20.081g

Measured value output as per set output interval such as every 2 min

Footer:
 Measured result such as remaining weight 20.004g