KERN & Sohn GmbH
Ziegelei 1
D-72336 Balingen
E-Mail: info@kern-sohn.com
Phone: +49-[0]7433- 9933-0
Fax: +49-[0]7433-9933-149
Internet: www.kern-sohn.com

Installation Instructions USB Interface Cable

KERN DBS-A02

Version 1.0
12/2011
GB

DBS-A02-IA-e-1110

GB

KERN DBS-A02

Version 1.0 12/2011

Installation Instructions

USB Interface Cable

Contents

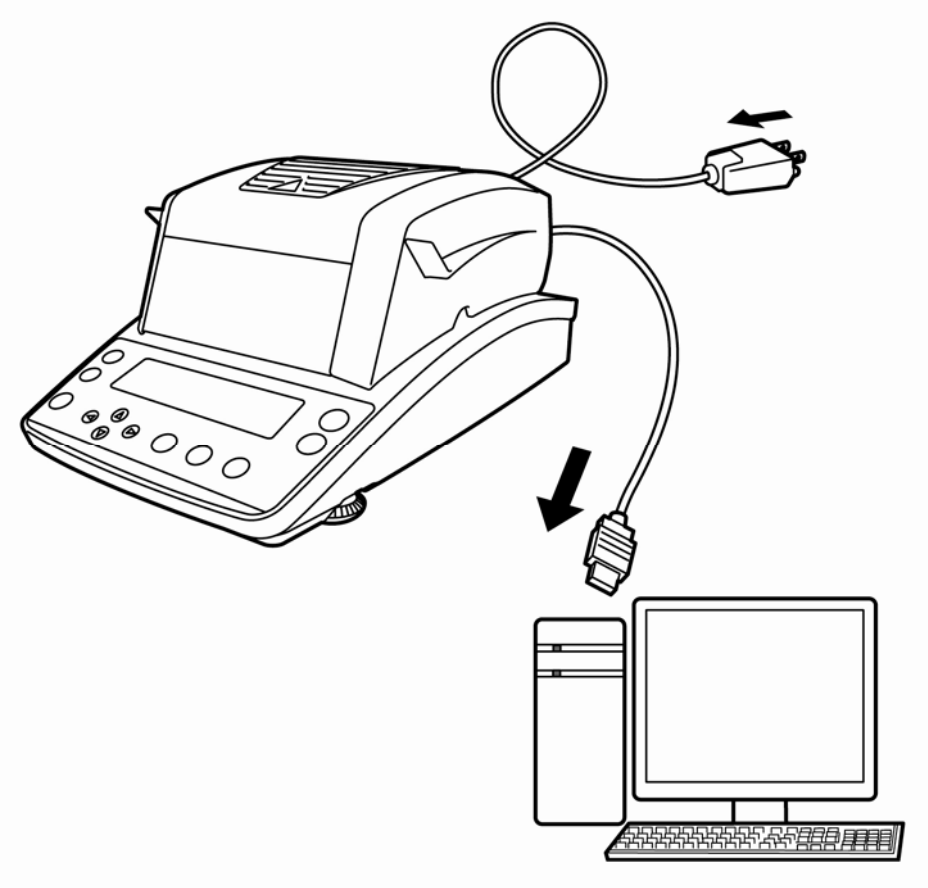
English

1 Introduction

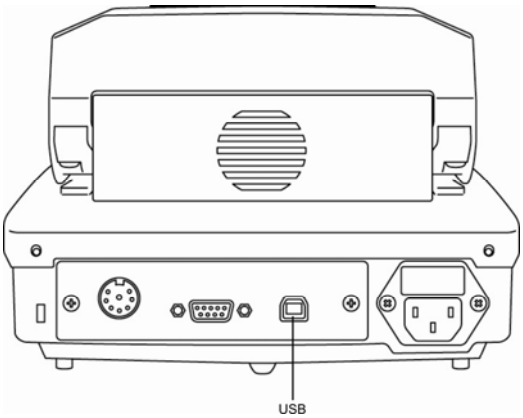
The UBS interface supports bidirectional data transfer from a moisture meter to a computer. This data exchange is asynchronous using ASCII - Code.
UBS data is conducted to a virtual port.
The scope of delivery for the USB interface cable includes a CD containing software drivers for creating the required 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.



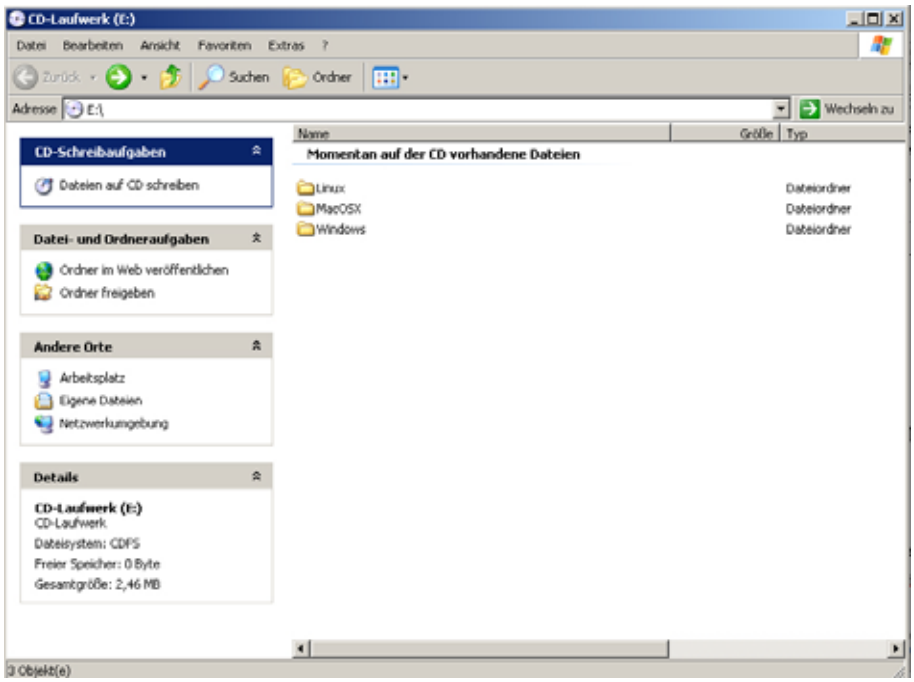
4. Plug the USB connector into the USB port on the computer.
5. Turn on moisture meter.
6. For establishing the COM Port see chpt. 3.1.

3 How to install a driver

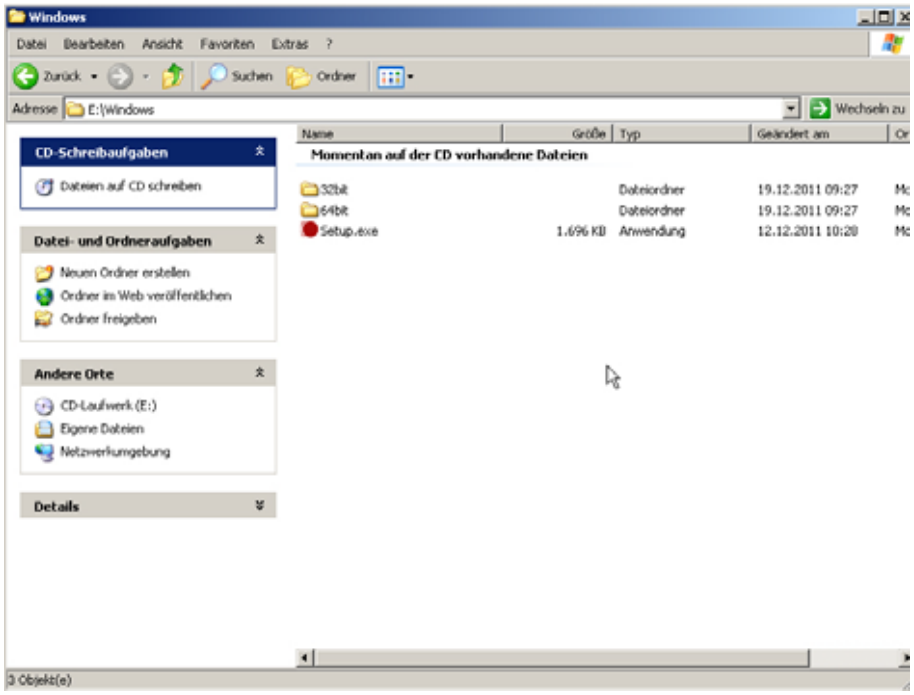
- **Ensure that the moisture meter and the PC are <u>not</u> connected to the USB cable.**
- **Administrator rights are required.**

⇨ Insert the supplied driver CD into your CD drive.

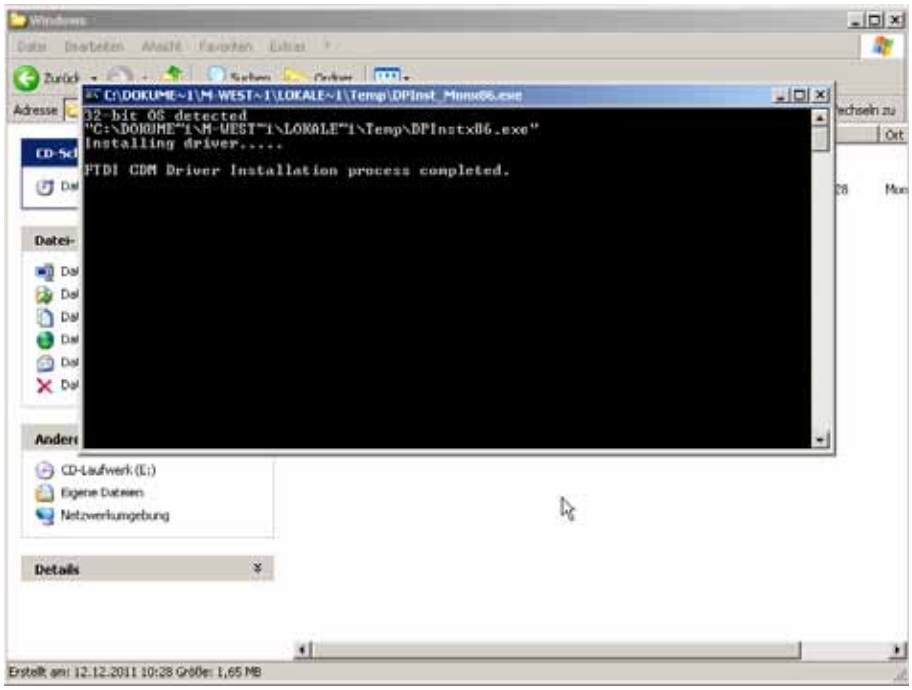
⇨ Select the driver version compatible with your system.



Example Windows:



⇨ To start driver installation, run the ‘setup.exe‘ file.



English

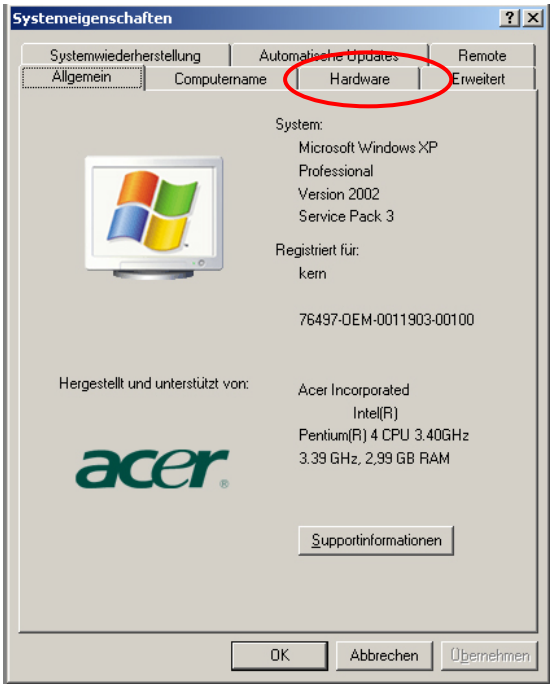
For more information about driver installation see
http://www.ftdichip.com/index.html

3.1 Define allocation of virtual port

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

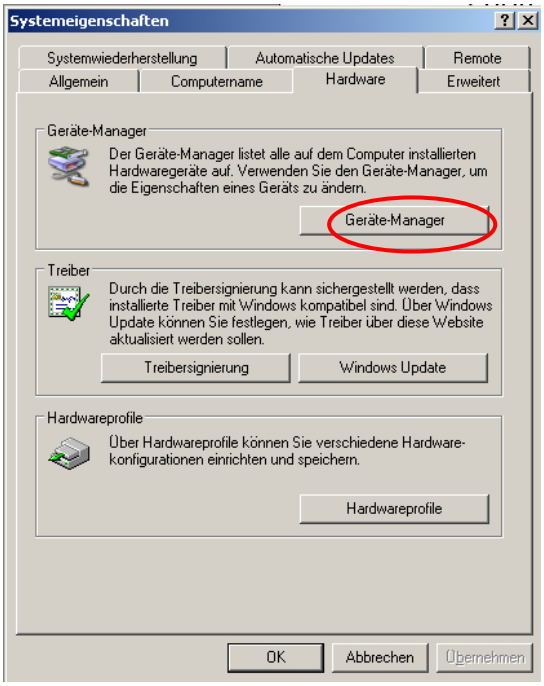
⇨ Wait until the message “Hardware has been successfully installed and is ready for use” appears on the screen.

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



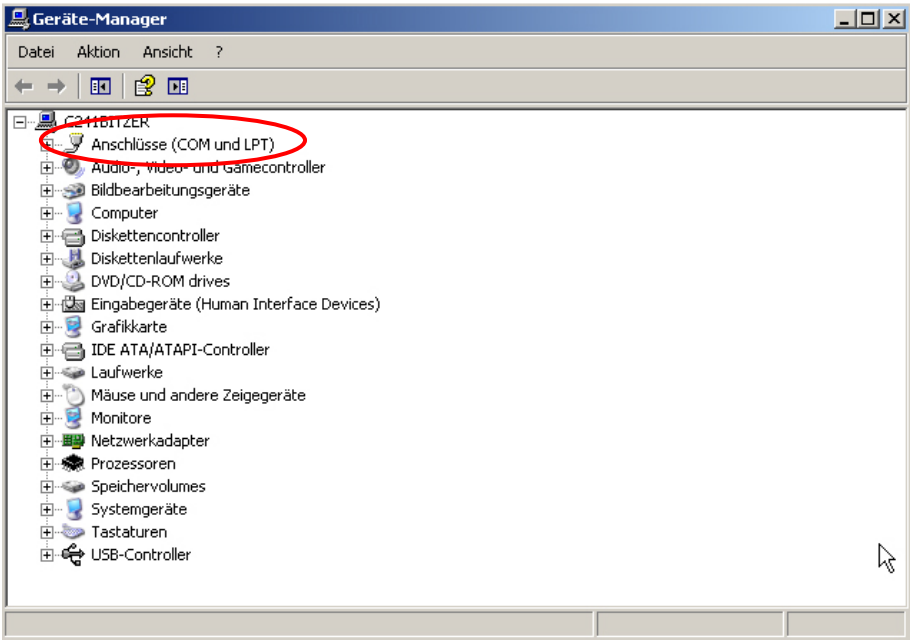
⇨ Select “Hardware” folder

English

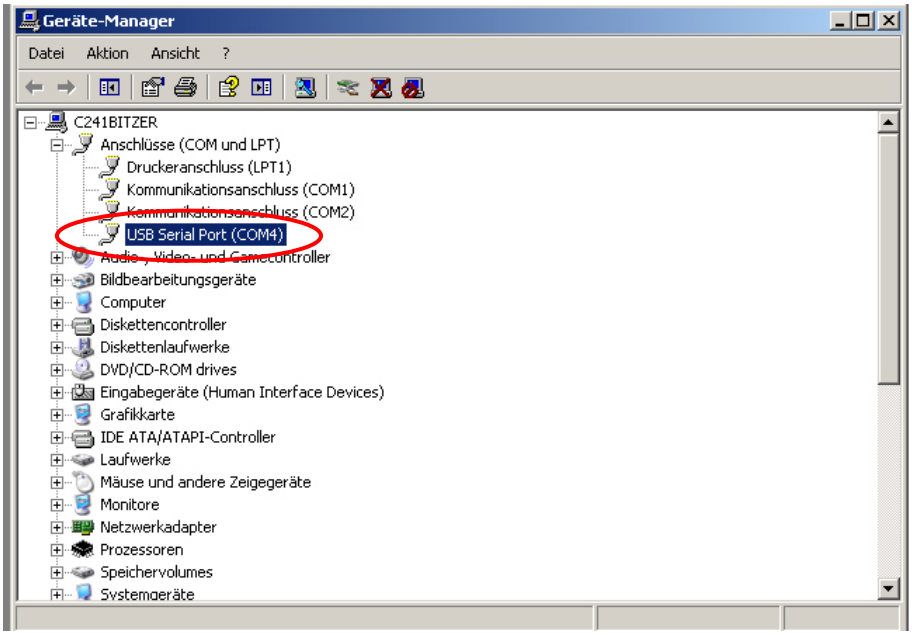


⇨ Click on Device Manager

English



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

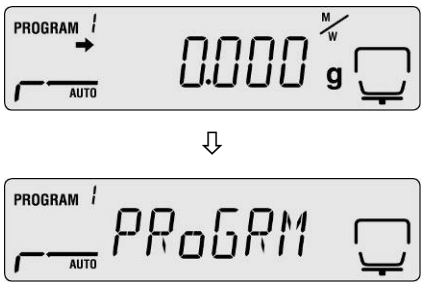


4 Moisture meter settings

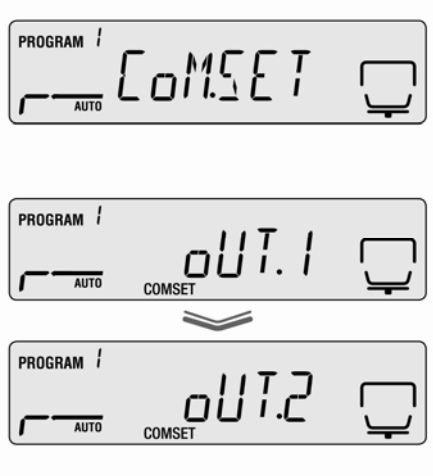
The communication parameters (such as baud rate, bits and parity) of the moisture meter and the transfer software must be concordant for data transfer to take place.

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.I = 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

English

- **Stop bit**

Selectable settings:

Display	STоP. 1*	STоP. 2
Stop bit	1 bit	2 bit

- **Handshake**

Selectable settings:

Display	HS.HW*	HS.SW	HS.TiM	HS.oFF
Hand-shake	Hardware handshake	Software handshake	Timer handshake	No handshake

- **Delimiter (terminator)**

Selectable settings:

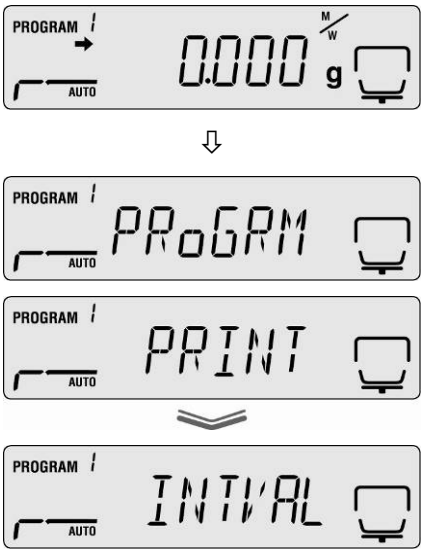
Display	CR*	LF	CR+LF
Terminator	CR	LF	CR+LF

⇨ 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.

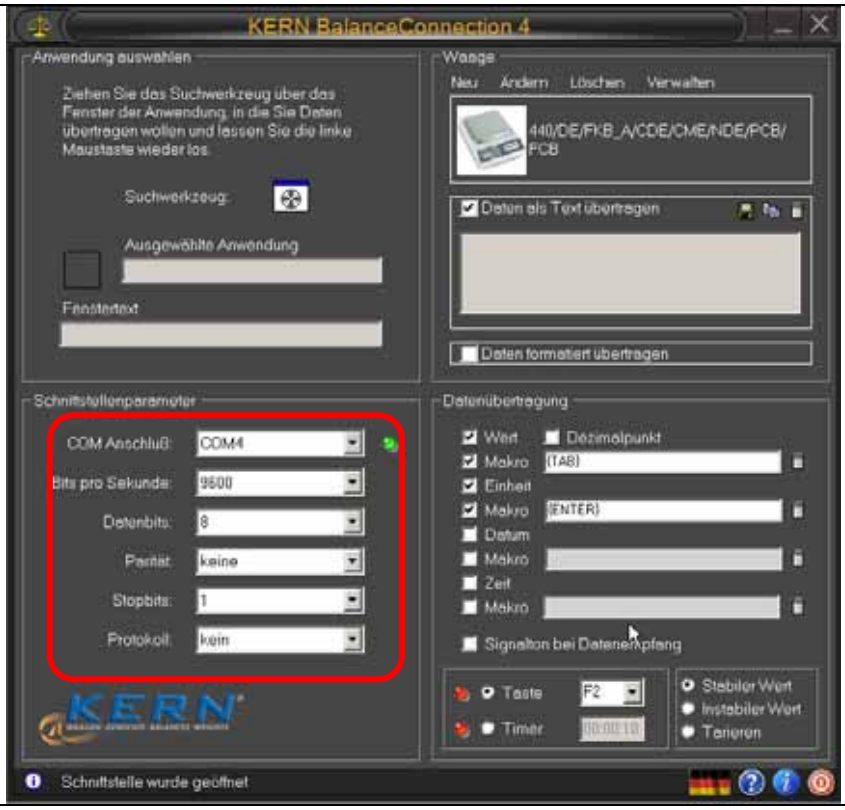
English

5 USB output

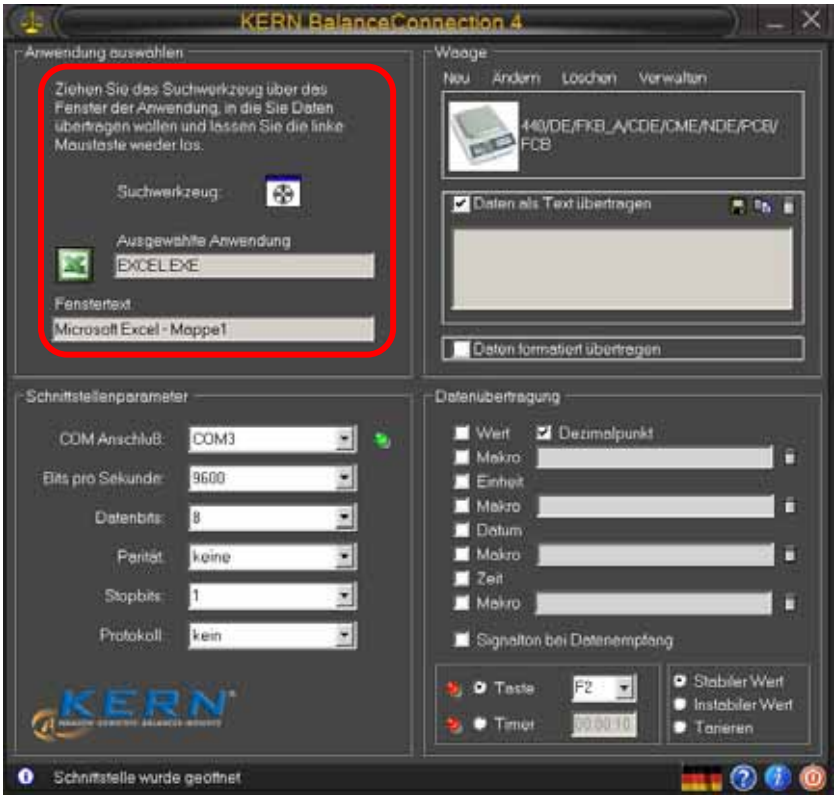
Example using transfer software “**Balance Connection KERN SCD 4.0”**:

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.

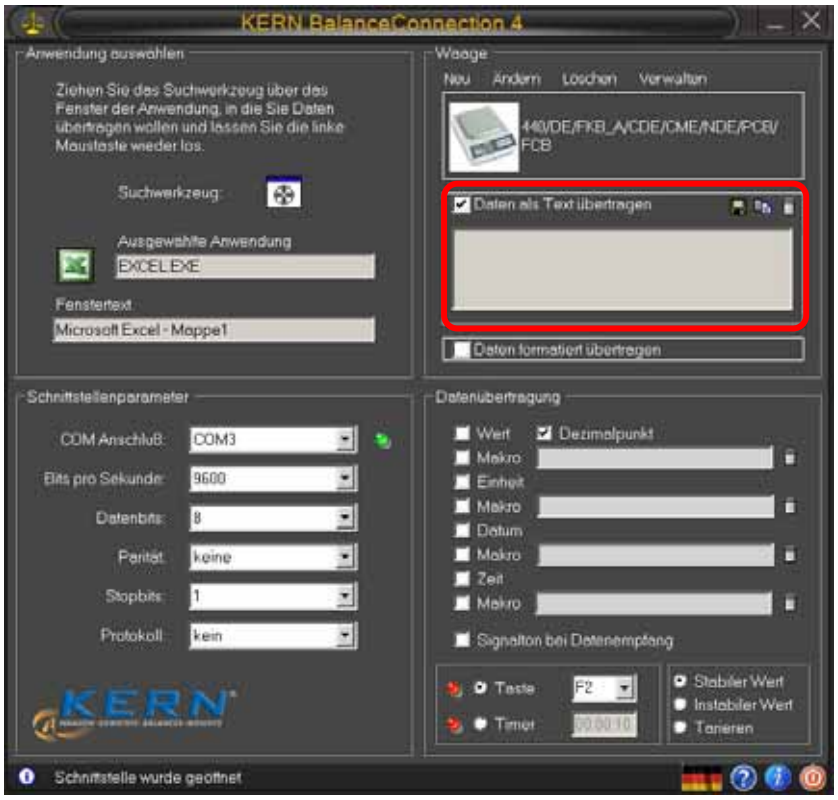
For moisture meter settings see chap. 4.1	PC / Balance Connection KERN SCD 4.0
COM 4, see chap. 3.1 Baud rate 9600 Bits/s Data bits: 8 Parity none Stop bits 1	

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).



English

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

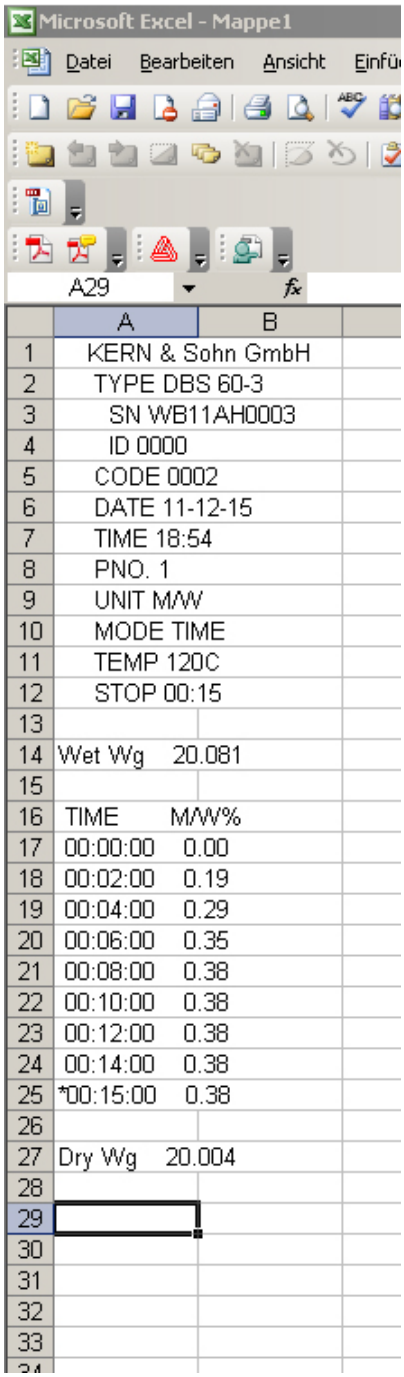


⇨ Start moisture determination for a sample

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:



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

English