brookhuis
APPLIED TECHNOLOGIES

FMD6 Moisture Meter

Operating Instructions
Version 6.05

MOISTURE METERS
FEUCHTEMESSGERÄTE
HUMIDIMÈTRES
MEDIDORES DE HUMEDAD
MEDIDORES DE HUMIDADE
ALAT MENGUKUR KADAR AIR
PENGUKUR KADAR AIR
FUKTKVOTSMÄTARE
KOSTEUSMITTARIT
VOCHTMETERS

Introduction

Congratulations on your purchase of the FMD6 microprocessor-controlled moisture meter. This meter is a Dutch quality product that will allow you to measure the moisture content of wood and construction materials.

These operating instructions contain a number of important directions on how to use and handle the FMD6 moisture meter. Please keep them in a safe place for future reference.

Enschede, the Netherlands, 22 May 2015

Notification

The information in these operating instructions may be altered without prior notification.

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Index

1 Introduction

These operating instructions explain how to operate and use the FMD6 moisture meter.

Various symbols are used in these instructions:

This symbol indicates safety measures to be taken or instructions to be followed that make this meter easier to use.

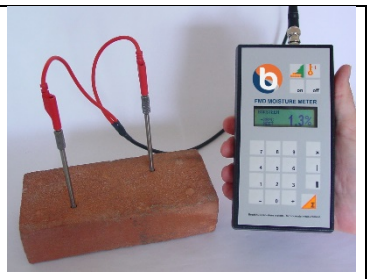
☞ This symbol indicates an operation to be performed.

2 Intended use

- ⚠ The meter may only be used for measuring the moisture content of non-movable materials.
- ⚠ The purpose of the meter is to determine the moisture content of solid materials.
- ⚠ When using the moisture meter in combination with a Ram electrode:
  - Exercise caution during and after use as the electrode's measuring pins are sharp.
  - After use, always store the electrode in the instrument case to avoid accidents.
- ⚠ Avoid using the instrument near highly magnetic, electromagnetic and electrostatic fields.
- ⚠ The instrument should be cleaned with a dry cloth only.
- ⚠ After use, the moisture meter should be stored in a dry place.
- ⚠ Use only Brookhuis spare components.

3 Examples of use

The FMD6 can be used in various applications. The table below shows some of these applications.

	FMD6
Measuring moisture in wood	
Measuring moisture in construction materials	
Measuring moisture in paper, veneer, sawdust, etc.	

4 Overview of the moisture set

This chapter describes the various components of the FMD6, as well as optionally available components.

4.1 Picture of the moisture meter

The components of the FMD6 are shown in **Figure 4-1**.

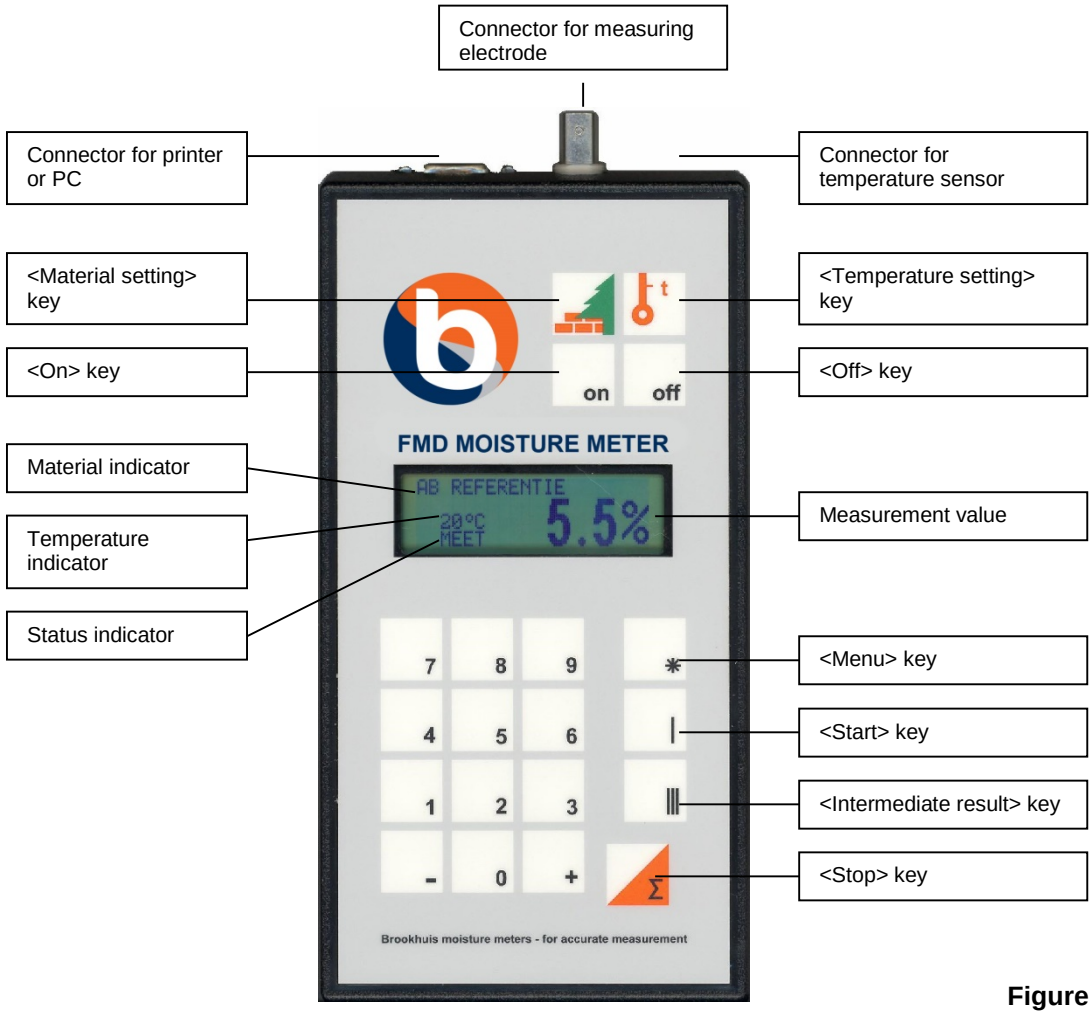


Figure 4-1

* When the moisture content shines in the display it is outside its measuring range

4.2 Moisture meter set components

The FMD6 set consists of the following components:

- An FMD6 moisture meter
- An ABS instrument case
- An electrode
- A measuring cable
- 'FMD Print' on CD-ROM, including cable
- A spanner (for the Ram electrode and handle electrode)
- Four 1.5 V (AA) Alkaline batteries
- A booklet about moisture measurement with the settings for the material being measured
- Operating instructions

4.3 Optionally available accessories

Reference resistance With the help of the reference resistance, it is easy to find out whether the FMD6 moisture meter carries out measurements in accordance with the factory settings (see section 9.2).

Temperature sensor The FMD6 can be used as a temperature meter with the aid of the temperature sensor. The temperature measured is used for the automatic temperature correction (see section 9.1).

Concrete measuring set The concrete measuring set enables the user to measure the moisture content of various construction materials to a high level of accuracy.

MC selector In combination with the FMD6, the MC selector enables the user to measure the moisture content of wood at various locations in the drying room without having to enter the room.

Special electrodes Using the special electrodes, the FMD6 is able to measure the moisture content of materials such as paper, cardboard, cotton, sawdust, coffee beans and veneer.

FMD6 USB cable The FMD6 can be connected to a PC using this special USB cable.

Thermo-Hygrometer The optional thermo-hygrometer measures relative air humidity and temperature in order to establish the equilibrium moisture content or the dew point, for example.

5 Starting up the FMD6

This chapter describes the operations required to start up the FMD6.

5.1 Installing the batteries

The battery compartment is at the back of the FMD6, as shown in Figure 5-1.

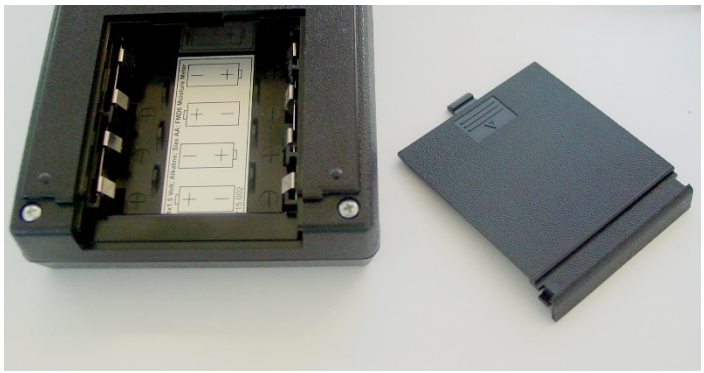


Figure 5-1

☞ To open the battery compartment, gently press down on the groove in the lid and slide the lid off.

☞ Install the batteries supplied and close the compartment by replacing the lid. The FMD6 is now ready to be set up.

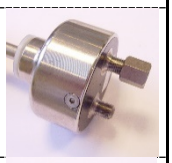
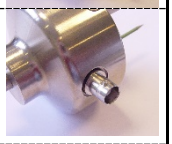
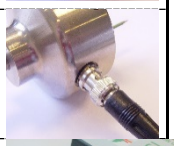
⚠ Use Alkaline batteries only.

⚠ Make certain the batteries are installed in the proper position (i.e. that the positive and negative terminals match up).

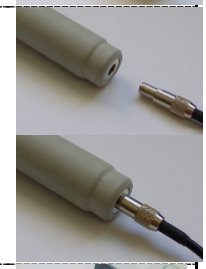
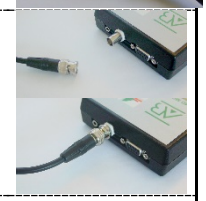
5.2 Setting up

Before measuring can start, the measuring electrode has to be connected and the meter set for the material and temperature in question. Depending on the type of electrode, sections 5.2.1 to 5.2.4 contain instructions for connecting the electrode.

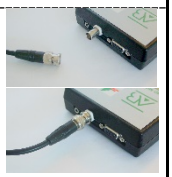
5.2.1 *Connecting the Ram electrode / handle electrode*

☞ Install the batteries as described in section 5.1.	
☞ Unscrew the swivel nut from the electrode with the spanner supplied with the meter.	
☞ Insert the measuring pin into the swivel.	
☞ Slide the swivel nut over the measuring pin and screw it tight using the spanner supplied.	
☞ Repeat the above for the second measuring pin.	
☞ Attach the plug for the measuring cable to the electrode connector. Make sure the groove in the plug slides over the tips of the connector.	
☞ Turn the plug's metal housing clockwise until it locks into the connector.	
☞ Attach the other end of the measuring cable to the FMD6 in the same way.	
☞ Insert the electrode measuring pins into the material being measured by hitting them into the material. Hold the electrode at the top and straight over the wood. ⚠ Make certain that the measuring pins are at approximately the same depth and, if possible, hit into a depth of 1/3 of the wood thickness.	
⚠ The meter is now ready for setting (see chapter 7).	

5.2.2 Connecting the universal electrode

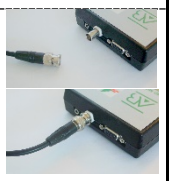
☞ Install the battery as described in section 5.1.	
☞ Unscrew the plastic ring from the holder.	
☞ Place the electrode in the holder and push it until it locks in position.	
☞ Tighten the plastic ring on the holder.	
☞ Insert the measuring cable connector into the back of the holder.	
☞ Attach the measuring cable plug to the FMD6 connector. Make sure the groove in the plug slides over the tips of the connector. Turn the plug's metal housing clockwise until it locks into the connector.	
☞ Place the electrode measuring pins in or on (depending on the type) the material being measured.	
⚠ The meter is now ready to be set (see chapter 7)	

5.2.3 Connecting the cup electrode

☞ Install the batteries as described in section 5.1.	
☞ Attach the measuring cable plug to the FMD6 connector. Make sure the groove in the plug slides over the tips of the connector. Turn the plug's metal housing clockwise until it locks into the connector.	

☞ Attach the measuring cable plug to the electrode connector. The plug is locked once it clicks over the connector.	
☞ Turn the wheel of the cup electrode anticlockwise until it comes away from the cup.	
☞ Fill the cup electrode with the material being measured and close it. ⚠ Make certain that the pressure in the cup electrode remains constant.	
⚠ The meter is now ready for setting (see chapter 7).	

5.2.4 Connecting the concrete measuring set

☞ Install the batteries as described in section 5.1.	
☞ Attach the measuring cable plug to the FMD6 connector. Make sure the groove in the plug slides over the tips of the connector. Turn the plug's metal housing clockwise until it locks into the connector.	
☞ Screw the contact sockets onto the measuring pins.	
☞ Connect the measuring pins to the red plugs.	
☞ Drill two holes in the material being measured using the concrete drill supplied. The holes should be approximately 25 cm apart. ⚠ While drilling, be careful not to hit pipes and wiring.	
☞ Sprinkle graphite powder on the measuring pin contact sockets.	
☞ Insert the measuring pins and contact sockets into the holes. Turn the measuring pins clockwise until they are secured in the material being measured. ⚠ Make certain that the measuring pins are at approximately the same depth in the material to be measured.	
⚠ The meter is now ready for setting (see chapter 7).	

⚠ Once a measurement has been taken, the measuring pins can be removed from the holes by turning them anticlockwise.

6 Menu Settings

This chapter presents an overview of the various functions of the FMD6.

☞ Set the FMD6 as described in chapter 7.

☞ Press the <Menu> key.

The display will show (example)

☞ The following menus are available:

1. Menu 0: Basic settings
2. Menu 1: Preferences
3. Menu 2: Memory erasing
4. Menu 3: FMD6 reporting
5. Menu 4: Display settings
6. Menu 5: Software update
7. Menu 6: Adjusting display contrast

☞ Press the <0>, <1>, <2>, <3>, <4>, <5> or <6> key to select the desired menu. For additional information, see sections 6.1 to 6.7.

6.1 Menu 0: Basic settings

Via Menu 0, the user can consecutively review the following information:

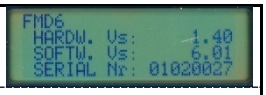
- Hardware revision number
- Software revision number
- Serial number
- Type
- Text revision number
- Calibration line revision number

The meter's clock can be set using Menu 0. The correct time and date are required for accurate registration and reporting.

- Date
- Time

The display will now show

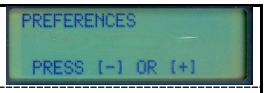
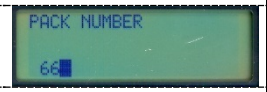
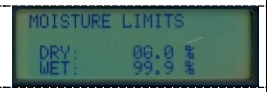
☞ Press the <+> key.

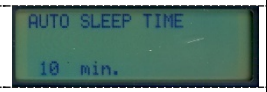
The display will now show (example)	
☞ Press the <+> key.	
The display will now show (example)	
☞ Press the <+> key.	
The display will now show (example)	
☞ Enter the date.	
⚠ Entering an invalid date will cause the FMD6 to report an error.	
☞ Press the <+> key.	
The display will now show (example)	
☞ Enter the time.	
⚠ Entering an invalid time will cause the FMD6 to report an error.	
☞ Press the <+> key.	
The display will now show (example)	
☞ Press the <Start> key.	
⚠ The FMD6 is now ready to start measuring.	
⚠ The <Start> key can be pressed at any time to exit the menu.	

6.2 Menu 1: Preferences

Via Menu 1, the user can consecutively review and adjust the following settings:

- Memory (on / off)
- Memory status
- Package number
- Internal Quality Control (abbreviated to IKB in Dutch) protocol (on / off)
- Limit values
- Automatic switch-off timer

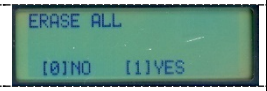
The display will now show	
☞ Press the <+> key.	
The display will now show (example)	
☞ Press the <1> key to activate the memory (on) and the <0> key to deactivate it (off).	
☞ Press the <+> key.	
The display will now show (example)	
⚠ The first number represents the remaining number of measurement sessions (i.e. single measurement or measurement series) that can be stored. The second number represents the remaining number of measurement values that can be stored.	
☞ Press the <+> key.	
The display will now show (example)	
☞ If applicable, enter the package number for the next measurement.	
☞ Press the <+> key.	
The display will now show (example)	
☞ Press the <1> key to activate the IKB report and the <0> key to deactivate it.	
⚠ The IKB report differs from the standard report in that it contains additional information. The user should enter this information on the print-out. This can also be directly transferred to a computer using the 'FMD Print' program.	
☞ Press the <+> key.	
The display will now show (example)	
☞ Enter the limit values.	
⚠ The FMD6 displays a message if the moisture measurement value falls outside a predetermined interval. This interval is set by entering the maximum and minimum values.	

☞ Press the <+> key.	
The display will now show (example)	
☞ Enter the amount of time in which the FMD6 will be automatically switched-off.	
☞ Press the <Start> key.	
⚠ The FMD6 is now ready to start measuring.	
⚠ The <Start> key can be pressed at any time to exit the menu.	

6.3 Menu 2: Memory erasing

Via Menu 2, the user can consecutively review and erase the following settings:

- Erase the last measurement session
- Erase all measurement sessions

The display will now show	
☞ Press the <+> key.	
The display will now show	
☞ Press the <1> key to erase the last measurement session from the memory or the <0> key to maintain it.	
☞ Press the <+> key.	
The display will now show	
☞ Press the <1> key to erase all measurement sessions from the memory or the <0> key to maintain them.	
☞ Press the <Start> key.	
⚠ The FMD6 is now ready to start measuring.	
⚠ The <Start> key can be pressed at any time to exit the menu.	

6.4 Menu 3: FMD6 reporting

Via Menu 3, the user can transfer information to a PC or a printer.

The display will now show	
⚠ The report can either be printed or transferred to a PC (using the 'FMD Print' program). To this end, the user must connect the FMD6 to either a printer or a PC.	
⚠ A special cable is needed to connect the FMD6 to a PC's USB port. This cable is optional.	
☞ Press the <1> key to initiate data transfer.	
The display will now show	
The following message will be displayed when all the data has been transferred to the printer or PC (after several seconds)	
⚠ The FMD6 has now completed the data transfer.	
☞ Press the <Start> key.	
⚠ The FMD6 is now ready to start measuring.	
⚠ The <Start> key can be pressed at any time to exit the menu.	

6.5 Menu 4: Display settings

Via Menu 4, the user can consecutively review and adjust the following settings:

- Language
- Temperature scale
- Date format

The display will now show (example)	
☞ Press the <+> key.	
The display will now show (example)	
☞ Press the <1> key to change the language used.	
The display will now show (example)	
☞ Use the <-> and <+> keys to select the preferred language and confirm the choice by pressing the <Stop> key.	

The display will now show (example)	
☞ Press the <0> key to choose Celsius or the <1> key for Fahrenheit and then press the <+> key.	
The display will now show (example)	
☞ Press either the <0> or <1> key to select the preferred date format and then press the <+> key.	
☞ Press the <Start> key.	
⚠ The FMD6 is now ready to start measuring.	
⚠ The <Start> key can be pressed at any time to exit the menu.	

6.6 Menu 5: Update

Via Menu 5, the user can initiate communication between the FMD6 and a PC using a special software program to add new calibration lines and texts.

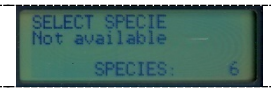
The display will now show	
☞ Press the <Start> key.	
⚠ The <Start> key can be pressed at any time to exit the menu.	

6.7 Menu 6: Adjusting display contrast

Via Menu 6, the user can adjust the display's contrast.

The display will now show	
☞ Use the <-> and <+> keys to adjust the display's contrast.	
☞ Press the <Start> key.	
⚠ The FMD6 is now ready to start measuring.	
⚠ The <Start> key can be pressed at any time to exit the menu.	

7 Setting the FMD6

☞ Set-up the FMD6 as described in section 8.	
☞ Turn on the FMD6 by pressing the <On> key.	
The display will now show	
☞ Use the <-> and <+> keys within 1 second to adjust the display's contrast, or continue by pressing the <Start> key.	
⚠ If the <Start> key is not pressed within 1 second, the meter will continue automatically.	
The display will now show (example)	
⚠ If the electrode is not in the material or not connected, the value in the meter display will flash.	
☞ Press the <Material setting> key.	
The display will now show (example)	
⚠ The value displayed is the material setting last used.	
☞ Find the appropriate material setting in the booklet entitled 'Brookhuis moisture meters for wood, construction materials and paper' supplied with the FMD6.	
☞ Enter the number corresponding to the material to be measured.	
⚠ The material setting selected is then displayed.	
⚠ If the material setting selected is not available, this will be indicated in the display and the FMD6 will sound a warning signal.	
The display will now show (example)	
☞ Press the <Temperature setting> key to enter the temperature of the material being measured.	
The display will now show (example)	

⚠ If the temperature setting selected exceeds the range of the temperature correction function, this will be indicated in the display and the FMD6 will sound a warning signal.	
⚠ If the temperature sensor is connected to the FMD6, the temperature is measured and corrected automatically (see section 9.1 for how to connect the temperature sensor to the FMD6).	
The display will now show (example)	
⚠ The meter is now ready to perform a single measurement or measurement series.	

8 Performing measurements with the FMD6

The composition of most materials varies. The same can be said of individual material samples. Consequently, the actual moisture content will most likely vary, even after the material's moisture content is allowed a long period of time to distribute evenly.

To reduce the effect of this variation, the FMD6 moisture meter enables you to perform a series of measurements (measurement series), the results of which are then averaged. This function is also useful when you want to determine the average moisture content of a batch of wood. Performing a single measurement will suffice if you want to quickly determine the moisture content of a single piece of wood.

8.1 Single measurement

☞ Set-up the FMD6 as described in chapter 7.	
☞ Press the <Start> key.	
	The display will now show (example) 
⚠ When the memory is activated, an '**M**' will be displayed. Pushing the <Stop> key will automatically store the measurement value. See section 6.2 for how to activate and deactivate the memory.	
	The display will now show (example) 
☞ Place the electrode in or on the surface of the material to be measured (see sections 5.2.1 to 5.2.4).	
	The display will now show (example) 
☞ Press the <Stop> key.	
	The display will now show (example) 
☞ The electrode can be removed from the material. The display will continue to show the measurement results.	
⚠ The FMD6 is ready to perform a new measurement.	
☞ To perform a new measurement, press the <Start> key.	
	The display will now show (example) 

8.2 Measurement series

☞ Set-up the FMD6 as described in chapter 7.	
☞ Press the <Start> key.	
The display will now show (example)	
⚠ When the memory is activated, an '**M**' will be displayed. Pushing the <Stop> key will automatically store the measurement value. See section 6.2 for how to activate and deactivate the memory.	
☞ Place the electrode in or on the surface of the material to be measured (see sections 5.2.1 to 5.2.4).	
The display will now show (example)	
☞ Press the <Intermediate result> key.	
The display will now show (example)	
⚠ 'M1' indicates that one measurement value of the measurement series has been stored.	
☞ Place the electrode elsewhere in or on the surface of the material to be measured.	
☞ Press the <Intermediate result> key again.	
The display will now show (example)	
⚠ 'M2' indicates that the measurement series comprises two measurement values. ⚠ Each time you press the <Intermediate result> key, a new measurement value is stored. ⚠ A maximum of 99 measurements for each measurement series can be stored. ⚠ The material type and temperature cannot be adjusted while performing a measurement series.	
☞ Press the <Stop> key when you have performed enough measurements for a measurement series.	
The display will now show (example)	
⚠ 'Σ7' indicates that the measurement series comprises ten measurement values. The measurement value indicated is the average of the measurement series.	

☞ The electrode can be removed from the material. The display will continue to show the measurement results.	
⚠ The FMD6 is ready to perform a new series of measurements.	
☞ To perform a new measurement, press the <Start> key.	
The display will now show (example)	

8.3 Statistical calculations

Given the lack of homogeneity in the composition of the material to be measured, there will always be a chance that the actual moisture content varies slightly from the measurement obtained with the FMD6.

To gain a better view of this variation, the FMD6 can calculate the bandwidth, confidence interval and standard deviation.

Bandwidth (S-value)
The bandwidth indicates the range within which, with a 68.2% certainty, the actual moisture content will fall if determined according to the oven dry method. The bandwidth only applies to random single measurements for which the S-value is known.

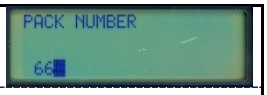
Confidence interval (REL)
The confidence interval indicates the range within which 84% of the material measured will fall given a random sampling (measurement series).

Standard deviation (STD)
The standard deviation indicates the amount of variation (expressed as a percentage) of the calculated average moisture content of a measurement series.

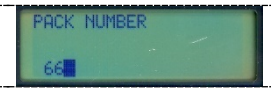
⚠ At least 10 measurement values must be performed for optimal confidence interval and standard deviation results.

8.3.1 S-value

☞ Perform a measurement using the FMD6 as described in the 'Single measurement' section.
☞ If the FMD6 is in the STOP mode, press the <Stop> key.
⚠ The FMD6 displays the S-value.
☞ Press the <Intermediate result> key to enter the package number.

The display will now show (example)	
⚠ The package number can only be entered when the memory has been activated.	
☞ Press the <Stop> key twice.	
⚠ The FMD6 presents an overview of the measurement results from M01 to M10.	

8.3.2 Confidence interval and standard deviation

☞ Perform a measurement using the FMD6 as described in section 8.2.	
☞ If the FMD6 is in the STOP mode, press the <Stop> key.	
The display will now show (example)	
⚠ The FMD6 displays the confidence interval and standard deviation.	
☞ Press the <Intermediate result> key to enter the package number.	
The display will now show (example)	
⚠ The package number can only be entered when the memory has been activated.	
☞ Press the <Stop> key twice.	
The display will now show (example)	
⚠ The FMD6 presents an overview of the measurement results M01 to M10. ⚠ If there are more than 10 measurements, press the <Stop> again.	

8.4 Precautions and instructions

⚠ In certain weather conditions, condensation may occur on the measuring electrode, the FMD6 will then display a higher measurement value. The measurement electrode should be dry and placed in the measuring area for a few minutes to allow it to acclimatise to the ambient temperature.

⚠ If the material to be measured is extremely dry and the relative air humidity is low, static electricity may cause problems. In that case, the meter should be laid on the material being measured and not held.

⚠ In some cases, the measurement value in the meter display may fall. The measurement should then be taken at another location or in a different piece of the same material.

9 Special functions of the FMD6

9.1 Automatic temperature correction

The temperature is automatically corrected while the FMD6 is being set. The temperature sensor must be connected before the meter is readied for use.

☞ Insert the temperature sensor plug into the connection on the FMD6 until it clicks into place.	
The display will now show	
☞ Ready the FMD6 for use as described in section 5.2	

9.2 Calibration check

The calibration of the FMD6 can be checked using the reference resistance (optional, see section 4.3).

☞ Ready the FMD6 for use as described in section 5.2.	
☞ Press the <On> key to activate the FMD6.	
The display will now show (example)	
☞ Use the <-> and <+> keys to adjust the display's contrast.	
☞ Press the <Start> key within 5 seconds.	
⚠ If the <Start> key is not pressed within 5 seconds, the meter will continue automatically.	
The display will now show (example)	
⚠ If the electrode is not in the material or not connected, the value in the meter display will flash.	
☞ Press the <Material setting> key.	
The display will now show (example)	
⚠ The value displayed is the material setting last used.	

☞ Select the material setting '0' (AB reference).	
⚠ The material setting selected is displayed.	
The display will now show	
☞ Press the <Temperature setting> key.	
The display will now show (example)	
⚠ The temperature sensor should not be connected.	
☞ Adjust the temperature setting to 20˚C.	
☞ Press the <Start> key.	
☞ Insert the measuring pins into the two sockets on the reference resistance.	
The display will now show (example)	
⚠ When the value shown by the meter corresponds to the value indicated on the reference resistance, the meter is calibrated correctly.	

9.3 Battery check

⚠ When the batteries are almost empty, a battery icon will appear in the display. The batteries should then be replaced.	
⚠ Remove all four batteries at the same time.	

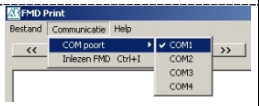
10 FMD6 Reporting

The 'FMD Print' software program is provided on CD-ROM and is Windows compatible.

System requirements

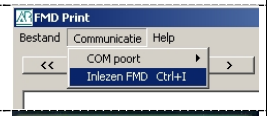
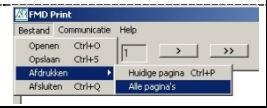
- Microsoft Windows 98 or higher, NT 4.0 (SP5) or higher
- VGA with a minimum resolution of 640x480
- CD-ROM drive
- One free COM port (RS232)

Software installation

☞ Place the CD-ROM in the CD-ROM drive.
☞ Activate 'Windows Explorer'.
☞ Double-click the folder indicating the user's preferred language.
☞ Double-click the "setup.exe" file. 
⚠ It is possible that the set-up program initially installs a number of drivers only, after which the PC must be rebooted. If this occurs, repeat the previous steps.
⚠ A program shortcut is installed in the 'Programs' folder of the 'Start Menu' under the heading 'FMD Print'.
☞ Start the 'FMD Print' program and configure the COM port by clicking 'COM port' (located under 'Communication' in the menu bar. 
☞ Exit the program.
⚠ The COM port settings are automatically saved.

Instructions for using the program

☞ Ready the FMD6 for use as described in section 8 ☞ Press the <On> key to activate the FMD6.
The display will show 

☞ Use the <-> and <+> keys to adjust the display's contrast.	
☞ Press the <Start> key within 5 seconds.	
☞ Press the <Menu> key.	
☞ Press the <3> key.	
The display will show	
☞ Connect the PC and the FMD6 using the cable supplied with the meter.	
⚠ The FMD6 can be connected to a USB port on the PC using a special USB cable (optional).	
☞ Start the 'FMD Print' program and select the 'Import FMD' option (located under 'Communication' in the menu bar).	
☞ Press the <+> key to begin the data transfer.	
The display will show	
⚠ During data transfer, the 'FMD Print' program indicates the transfer's progress. If this is not the case, check to see that the cable is properly connected and that the correct COM port setting is being used.	
The display will show (after several seconds)	
⚠ The FMD6 has now completed the data transfer.	
☞ Press the <Start> key.	
⚠ The FMD6 is now ready to start measuring.	
☞ Using the PC, the user may process, save or print out the data transferred.	

10.1 Example reports

The following sections present several examples of reports that can be generated using the FMD6.

10.2 Standard report: Single measurement

```
                FMD6 moisture meter measurement data

Date:                     24 July 2003
Time:                     13:38:58

Package number:           2003-07-07-1338

Material type:            Fir wood
Material setting no.:     196
Temperature:              +27°C

Measurement value:        11.9%
S-value:                  11.2% - 12.6%

-------------------------------------------------------

Date:                     24 July 2003
Time:                     13:57:43

Package number:           2003-07-07-1340

Material type:            Pinewood
Material setting no.:     210
Temperature:              +24°C

Measurement value:        10.4%
S-value:                  9.7% - 11.1%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```

A maximum of four single measurements can be printed on a single page, provided that they were taken one after another.

10.3 Standard report: Measurement series

FMD6 moisture meter measurement data

Date:	24 July 2003
Time:	13:38:58
Package number:	2003-07-07-1338
Material type:	Fir wood
Material setting no.:	196
Temperature:	+27°C
Highest measurement value:	10.8%
Lowest measurement value:	10.3%
Average measurement value:	10.4%
Standard deviation:	0.1%
Reliability interval:	10.2% - 10.6%
No. of measurements:	20

Measurement 1: 10.4%	Measurement 2: 10.3% lowest
Measurement 3: 10.5%	Measurement 4: 10.3% lowest
Measurement 5: 10.4%	Measurement 6: 10.8% highest
Measurement 7: 10.4%	Measurement 8: 10.3% lowest
Measurement 9: 10.3% lowest	Measurement 10: 10.4%
Measurement 11: 10.3% lowest	Measurement 12: 10.3% lowest
Measurement 13: 10.4%	Measurement 14: 10.3% lowest
Measurement 15: 10.3% lowest	Measurement 16: 10.4%
Measurement 17: 10.3% lowest	Measurement 18: 10.5%
Measurement 19: 10.5%	Measurement 20: 10.8% highest

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10.4 IKB report: Single measurement

IKB registration upon supply of wood, FMD6 moisture meter

Measurement conducted by:
Date: 24 July 2003
Time: 13:38:58
Supplier:
Total cubic metres:
Dimensions:
Package number: 2003-07-07-1338
Batch number:

Material type: Pinewood
Material setting no.: 210
Temperature: +27°C

Highest measurement value: 10.4%
Lowest measurement value: 10.4%
Average measurement value: 10.4%
Standard deviation: 0.0%
S-value: 9.7% - 11.1%
Specific gravity 1:
Specific gravity 2:

Number of measurements: 1

Measurement 1: 10.4 %

Conclusion: [ ] Approved
[ ] Rejected
[ ] Dimensions
[ ] Imperfections
[ ] Specific gravity

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10.5 IKB report: Measurement series

IKB registration upon supply of wood, FMD6 moisture meter

Date:	24 July 2003
Time:	13:38:58
Package number:	2003-07-07-1338
Material type:	Fir wood
Material setting number:	196
Temperature:	+27°C
Highest measurement value:	10.8%
Lowest measurement value:	10.3%
Average measurement value:	10.4%
Standard deviation:	0.1%
Reliability interval:	10.2% - 10.6%
Number of measurements:	20

Measurement 1: 10.4%	Measurement 2: 10.3% lowest
Measurement 3: 10.5%	Measurement 4: 10.3% lowest
Measurement 5: 10.4%	Measurement 6: 10.8% highest
Measurement 7: 10.4%	Measurement 8: 10.3% lowest
Measurement 9: 10.3% lowest	Measurement 10: 10.4%
Measurement 11: 10.3% lowest	Measurement 12: 10.3% lowest
Measurement 13: 10.4%	Measurement 14: 10.3% lowest
Measurement 15: 10.3% lowest	Measurement 16: 10.4%
Measurement 17: 10.3% lowest	Measurement 18: 10.5%
Measurement 19: 10.5%	Measurement 20: 10.8% highest

Conclusion: [ ] Approved
[ ] Rejected

[ ] Dimensions
[ ] Imperfections
[ ] Specific gravity

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11 Specifications

- Resistance moisture measuring
- Measuring range 5~99% (for wood)
- Measuring range 0~99% (for construction materials)
- Measuring accuracy 0.2% (on reference material)
- Resolution 0.1%
- Clear GUI display
- Ten language options
- Memory function for up to 75 reports / 1,000 measurement values
- Statistical calculations for each measurement session
- Report selection by package number
- RS232 serial interface (USB optional)
- Temperature correction -40~90˚C (-40~194˚F)
- Connection for temperature sensor
- Instrument temperature range 0~50˚C (32~122˚F)
- Limit values indicating the minimum and maximum moisture content
- Adjustable automatic switch-off function
- Battery check function
- Four 1.5 Volt Alkaline (AA) batteries
- Calibration check using the reference resistance (optional)
- Dimensions 190 x 100 x 34mm
- Weight 340 gram (including batteries)

Index

12 Declaration of conformity

We,

Brookhuis Applied Technologies BV
Institutenweg 15
7521 PH Enschede
The Netherlands

declare under our sole responsibility that the product

Brookhuis FMD6 moisture meter

completed with:

Brookhuis Measuring probe
Brookhuis Measuring cable
Brookhuis Measuring pins
Brookhuis Temperature probe (option)

to which this declaration relates is in conformity with the following standards:

EN 50081-1 : 1993

EN 50082-1 : 1995

The product herewith complies with the requirements of the:

EMC Directive 89/336/EEC

Enschede, May 22th, 2015

Brookhuis Applied Technologies BV

M.C.M. Elbers