TMT-425 Digital Textile Moisture Meter

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1.0   POWERING ON

Turn the gauge on: keep the ⏻ key pressed for three seconds. If a menu item will be shown, press 🔁 exit or the ⬆ rolling menu until the measuring window is displayed.

2.0   CALIBRATION CURVES

Textile	Measuring range
Wool	13% - 26%
Cotton	1,5% - 13%
Rayon	4% - 26%
Flax yarn	5,5% - 15%
Jute yarn	8% - 24%
Hemp Garn	5% - 17%
Acetate	3,5% - 13%
Nylon	1,5% - 6,5%
Polyacrylic	0,2% - 3%
Polyester	0,5% - 4%
Digit	0 - 100

The list of calibration curves is displayed if one of the two arrow buttons is pressed for about three seconds in the measuring mode. Select the desired calibration curve and confirm with ↵.

Note: The humimeter TMT-425 shows the water content directly on the display. A conversion to the moisture value is not necessary anymore. A factory-set conversion to the moisture content is possible. Please contact the manufacturer about this.

Definition water content: The water content is declared as the amount of water in a material, which stands in relationship to the whole weight of the material. For example: You have 1kg material with 40% water content; the material consists of 0,4kg water and 0,6kg material.

Definition material moisture: The material moisture is declared as the amount of water in a material, which stands in relationship to the weight of the dried material. The same example: You have 0,6kg material with 0,4kg water; the 0,6kg material represents 100%, so the 0,4kg water will be 66,7% material moisture.

12.0   TECHNICAL DATA

Resolution	0,1% material moisture
	0,5℃ temperature
Measuring range	0,3 to 26% water content
Operating temperature range	0℃ to 40℃
Temperature measuring range	-20℃ to 60℃
Storage temperature range	-20℃ to 60℃
Temperature compensation	Automatic
Power supply	4 pieces 1,5Volt AA Alkaline Batteries
	(ca. 1000 measuring cycles)
Power off time	after approx. 6 minutes
Power consumption	55 mA (with light)
Display	128 x 64 Matrixdisp., with LED Backlight
Dimensions	740 x 65 x 40 mm
Weight	approx. 450g (with batteries)
Protection class	IP 40
Scope of delivery	Gauge TMT-425
	4x1,5Volt AA Alkaline Batteries
	Plastic case, electrodes
Optional	Humimeter USB data plug for PC connection
Option 2 (only with opt.1)	Thermal printer

10.0 IMPORTANT INFORMATION

Common reasons for incorrect measurements:

- **Product temperature out of application range**

  Material below 0℃ resp. above +40℃ (32 to 104 ℉) may cause faulty measurements. The storage of cold material in a warm storage area usually creates condensed water which may lead to major measuring errors.
- **Not adjusted temperature of the device**
  Make sure that your measuring gauge and the test material are stored under the same temperature conditions. Protect your gauge from direct sunlight. A too high temperature difference can affect the accuracy of your gauge negatively
- *Wrong calibration curve*
  Before you measure the sample, check the correct selection of the calibration curve.
- *Wet or moldy test material*
- *Moisture/Water on the measuring head*
  After a measurement of wet material, a water film can be left on the measuring head. This can result in higher moisture values at the next measurement. Therefore, clean all plastic parts of the measurement head with a dry towel.

<p style="text-align:center;color:red;font-weight:bold;">Warning: Tip of electrodes can lead to injury!
Keep away from children under 16 years.</p>

11.0 EXEMPTION OF LIABILITY

The manufacturer is not liable for any incorrect measurements and resulting damages. As this rapid measurement procedure is influenced by product specific conditions, we recommend to carry out a plausibility check on the measurement results. Each instrument has a serial number and warranty seal. If this is broken, we cannot provide warranty. If the instrument is defective, contact us via www.checkline.com.

3.0 OPERATION OF THE INSTRUMENT

Switch on the device: Press the ⏻ key for 3 seconds
Power off: Press the ⏻ key 5 Seconds in the measuring window; the device will be switched of when you leave the key. The device also switched off automatically, when no key is pressed for 4 minutes.

Set the clock: press 3 times the ✛ key - Options – Date / Time   Here you set the date and the time by pressing 0..9 (YY.MM.DD). When you entered the Year push the ➤ key to get to the month and to the day. Press the ➤ key again to get to the time. If you entered date and time confirm it by pressing OK.

Hold the measure value: Press the ⊞ key in the save mode (Function must be activated in the Datalog Time menu)

Display background lighting: Press the ⏻ key; Backlight will turn off automatically after 20 seconds. Backlight will be activated by pressing any key. Furthermore the Power off time is reset to 4 minutes.

Activation of superuser function:

2 times ✛ - *Options* – Unlock
Enter the 4-digit code using the ▲ button (standard are the last 4 digits of the serial number). Confirm by pressing ↵.
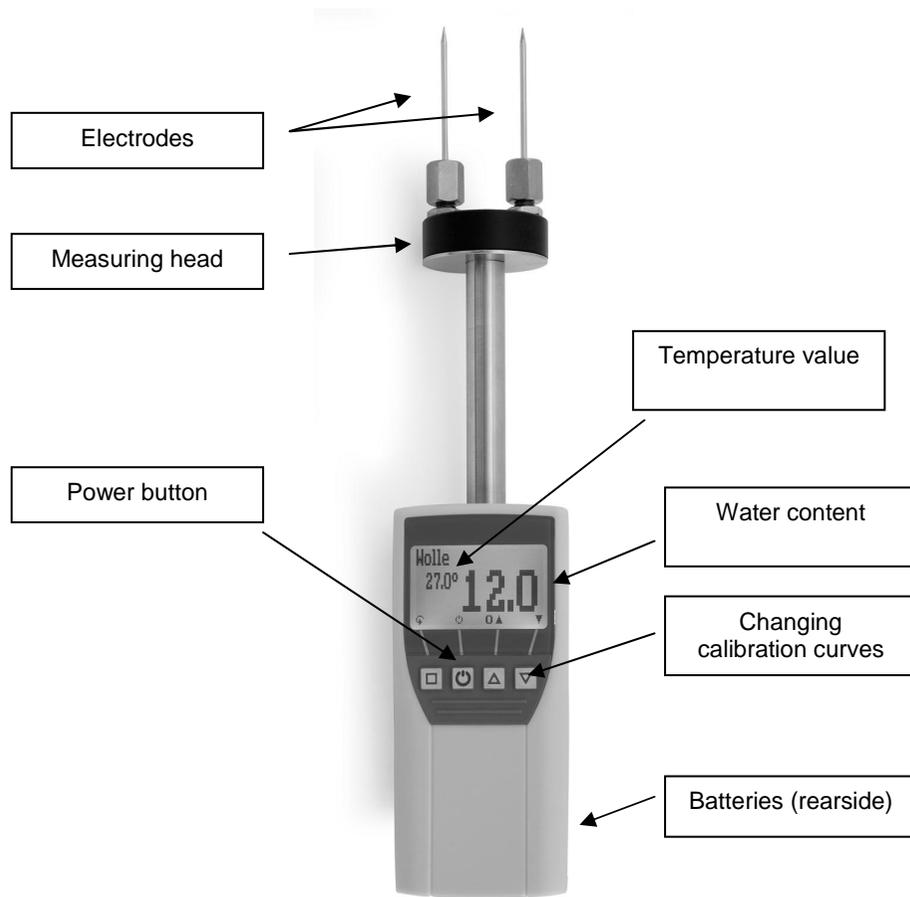
Changing the user level::
From advanced user to simple user:
2 times ✛ – *Options* – O userlevel.

From simple user to advanced user:
Keep both the buttons ▲ and ▼ pressed immediately after switching on the device as long as the logo is shown on the display. The device automatically starts the main menu. Navigate to *options* – o *userlevel* and confirm by pressing ↵.

4.0   VIEW OF THE INSTRUMENT

Electrodes

Measuring head

Temperature value

Power button

Water content

Changing
calibration curves

Batteries (rearside)

8.0   DEVICE MAINTENANCE INSTRUCTION

Do not drop the instrument or expose it to excessive temperatures. Clean it only with fuzz-free, dry cloth. **The device is not waterproof**.

For more information concerning the treatment of the device, see www.checkline.com

The frequency for technical check of the instrument depends on the use and required level of accuracy.

For a fee, we can also carry out a calibration at the factory. In this case you will receive a calibration certificate.
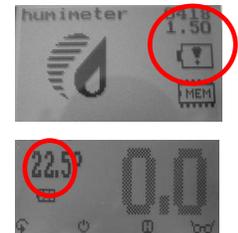
9.0   CHANGING THE BATTERIES

Please follow following steps to change the batteries:

1. Use a finger to press the arrow on the battery cover and pull it back.
2. Remove the empty batteries and replace them with four new 1,5 Volt AA Alkaline Batteries. Take care of the correct polarization when you put in the batteries.
3. Press down the batteries so you can close the cover.

If the battery symbol appears in the measuring window resp. if a critical charge of battery is shown in the status, the batteries have to be changed IMMEDIATELY. If you do not use your humimeter device for a longer period, remove the batteries. For eventual resulting damages we cannot provide any warranty.
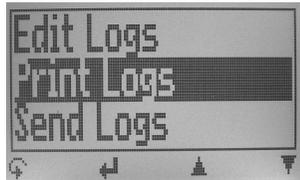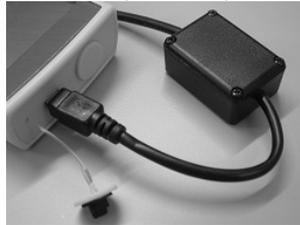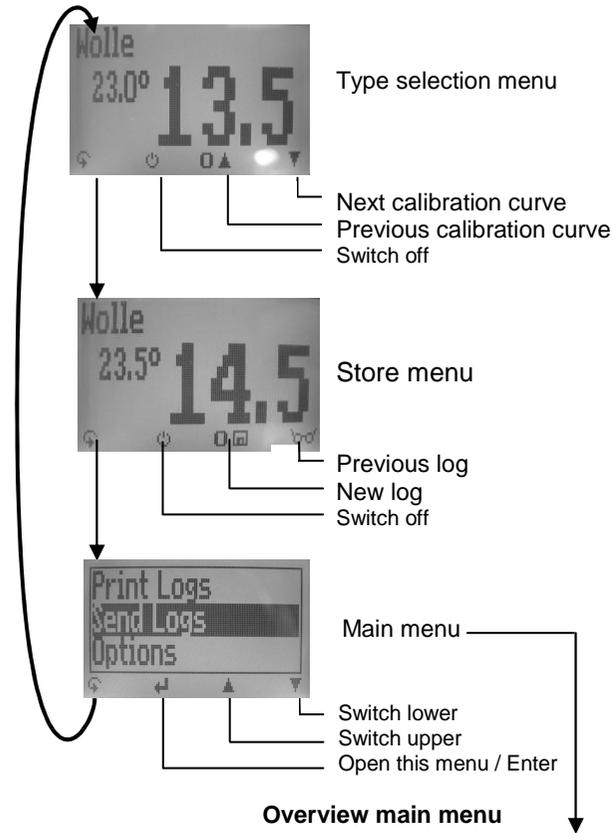
Print data (logs):

To print the stored logs, connect the supplied printer cable with the printer. Open the protective cover at the TMT-425 carefully. First insert the plug, which is closer to the plastic housing, into the gauge. Then turn the gauge on.

Only then insert the other plug of the cable into the printer and turn him on by the ⏻ button. The green light should blink. If this is not the case, change the batteries and try again.

Press the 🔄 button until the main menu is opened. Select the item "Print logs" and confirm with ↵. Now you can choose whether all stored values or only the last values (logs) should be printed.

5.0   MENU LEVEL OVERVIEW

Type selection menu

Next calibration curve
Previous calibration curve
Switch off

Store menu

Previous log
New log
Switch off

Print Logs
Send Logs
Options

Main menu

Switch lower
Switch upper
Open this menu / Enter

Overview main menu

Keypad symbols

Measuring window:

Symbol	Description
🔄	Rolling Menu
⏻	Power ON / OFF
🔺	Switch upper
▼	Switch lower
🔲	Save
🔳	Hold
👓	Watch saved data
✎	Add supplier's data

Menu:

Symbol	Description
↵	Enter
🔺	Switch upper
▼	Switch lower
⤒	Back
0..9	Enter numbers
A..Z	Enter letters
>	Next or right
<	Left
✓	Yes
✗	No
⇧	Shift
OK	OK

Data Memory	*Options*
Manual logs	Date/Time
Delete logs	Datealog Time
Print logs	Language
Last row	Unlock
All logs	° C / ℉
Delete logs	Userlevel
Send logs	Lighting time
Manual logs	Auto off time
Delete logs	Setting
	Materialcalib.
	Password
	Reset
	Status

6.0 MEASURING PROCEDURE

Important: For a correct measurement please ensure that the device has the same temperature (+/-3°) as the material under test. For that reason, let your humimeter adjust to the surrounding temperature of the material for at least half an hour before measuring (protect from direct sunlight!).

1. Switch on the device by pressing the power button (⏻) for 3 sec..

2. If desired, the calibration curves can be changed by using the arrow keys.

3. Insert the electrodes of the TMT-425 in the material. The measuring values will be displayed directly.

4. Save the displayed value in the store menu (1x↴) by pressing 🔲 (⛰ button). Saving the value succeeded if the number in front of the 🔲 symbol increased.

5. To get into the store menu, press the left button (↴) until the 🔲 symbol appears.

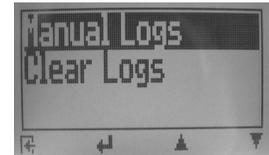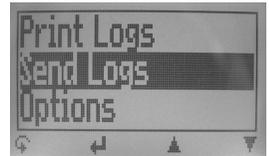6. Name the saved value by selecting ✎ .

7.0 PC CONNECTION AND DATA PRINT

The TMT-425 provides the possibility to transfer your saved data to a computer. Use the supplied connection cable to connect your gauge. Open the protective cover of the TMT-425 carefully and insert the USB mini port B. The bigger port has to be inserted in the USB output of your PC.
Start the LogMemorizer Software and turn on the TMT-425. The data transfer can be started either by the software or by measuring gauge.

Data transfer by the humimeter TMT-425:
Press the ↴ button until the main menu is opened (see right picture). Select the menu item "Send logs" and confirm with ↵. Then select "Manual logs" and confirm again with ↵. All stored values on your humimeter will be transferred to your pc then.

Data transfer by your computer:
Open the LogMemorizer Software. Click on the button "remote access" and a drop down menu will open. For the data transfer, select the option "Import last manual log" (last stored log will be transferred) or "Import all manual logs" (all stored values will be transferred). Click on one option and the data will be imported on the pc. It is recommended to read the manual on the LogMemorizer CD about further settings.