



# Haymatic Digital



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## User Manual for Haymatic SW 2.01

## Info

This manual describes the use of the Haymatic Digital

### General

The HAYMATIC DIGITAL moisture tester is a high-technology, microprocessor controlled instrument with storing and average calculation facilities for up to 100 samples designed to test moisture in hay and straw over a range from 10-80%. By using these advanced facilities better accuracy is obtained than with other meters. Reading over 30% should be used only as a qualitative indication of high moisture content. The probe is made of stainless steel and electrically insulated except at the contact point near the tip where the moisture of the hay is registered. The instrument measures variation in the conductivity of the hay, as this increases with increasing moisture-content. In order to avoid faulty measurements at different points of probing, it is important that the probe is insulated up to the upper tip. It is a known fact that wide variations in moisture content exist especially in harvested or newly baled hay, and these variations are immediately detected by meter reading taken in different parts of the bale. The higher the moisture range the wider the variations.

## Operation

The switch in the handle has 4 functions:

1. Switch the instrument on (ON)  
Make sure that the spear is clean and dry, then press the switch briefly. The instrument will then switch on and perform a display test also showing the software version. Then the instrument will show LO. Please note if the Low bat indicator is showing after the power on test. If so the battery must be renewed.

#### ***Moisture measuring:***

*Hold the instrument firmly in you hand and push the probe into the bale. The probe should be entered across slices of the bale rather than between them. On pushing it in, take care that the pressure is spread evenly to avoid bending or breaking the spear. The instrument show the moisture percentage continuously over the range from 10-80%. If the moisture content is below 10 %, the display shows LO, if its higher than 80% the display shows HI. At least 5 readings of the bale should be taken to improve accuracy. The validity of the meter readings is closely related to the care spent in sampling the hay to be tested. Please follow closely the operating instructions. The number of test conducted should be increased whenever the initial readings show considerable variations*

2. Store reading in memory  
In order to store the reading in the internal memory press the switch briefly while the spear is in the bale. The instrument will respond by showing P1 for first storage P2 for second, etc. Store at least 5 different readings (insert the spear a different place each time). As the material in bales do have a tendency to have moisture-variations an improved accuracy is obtained by increasing the number of readings / storing of readings.

3. Average calculations  
Remove the spear from the bale. Check that the reading is LO. If it doesn't show LO please wipe the tip of the spear with a clean cloth until it reads LO.  
Now pressing the switch briefly the instrument will show the average of the stored readings. The reading is preceded by a "+" to indicate that it is a average based on the stored readings. The average reading is displayed for 3 seconds. Then it will return to LO. If you want to see the average again, just press the switch once more.
4. Turn off the instrument (OFF)  
To switch of the instrument keep the switch depressed for 6 seconds. The display will start to show EEE, then EE, then E and finally OFF. When the instrument shows OFF release the switch and the instrument will turn off. There is also an autooff function which will switch the instrument off if the switch hasn't been activated for 5 minuts.

## **Battery**

The Haymatic Digital is powered by one 9V Battery. To insure that the instrument is working properly we recommend that the type of battery is ALKALINE. As soon as the instrument starts to show LO BAT in the display during normal operation, please change the battery. A battery with too low voltage will influence the readings.

## **Maintenance**

Keep the instrument in a dry place . Do not expose the instrument to mechanical chock (dropping it). Clean the instrument with a dry cloth. Take care of the display, if pressed hard it will crack. After each measurement - especial in wet material - clean the tip of the spear with a clean cloth.

## **Accuracy**

The density of the bale has no significant influence on the reading. If the hay has been washed out from rain this can influence the reading, a too low reading can occur. The highest precision on the reading is accomplished by taken the temperature into account. The instrument is adjusted at 22 C. For each 10 C above this temperature 1 % can be deducted from the reading. For each 10 C below this temperature 1 % can be added.

## **Option equipment**

As optional equipment the following is available

- Windrow-probe – for measuring unbaled hay and straw
- Separate Handle with cable
- Extra spear
- Test probe
- Traceable calibration (for professionals)

Contact your dealer for info.

## Errors

<u>Haymatic</u>	<u>Cause</u>	<u>Solution</u>
Low Bat	Battery is running low	Change to a new battery

## EU-Declaration

Manufacture : Farmer Tronic Industries A/S  
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DK- 6580 Vamdrup  
Tel: +45 76-920200

Product : Productno. :  
Name : Haymatic Digital  
Type : Moisture-meter for Hay & Straw  
Serial no. :

- COUNCIL DIRECTIVE of 3th. May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility (89/336/EØF and changed 92/31/EØF and 93/68/EØF)

EN 50081-1 Electromagnetic compatibility - Generic emission standard. Part 1. Residential, commercial and light industry

EN 50082-2 Electromagnetic compatibility - Generic immunity standard. Part 2. Industrial environment

Distributed through:

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Company : Farmer Tronic Industries A/S.

Date

Signature