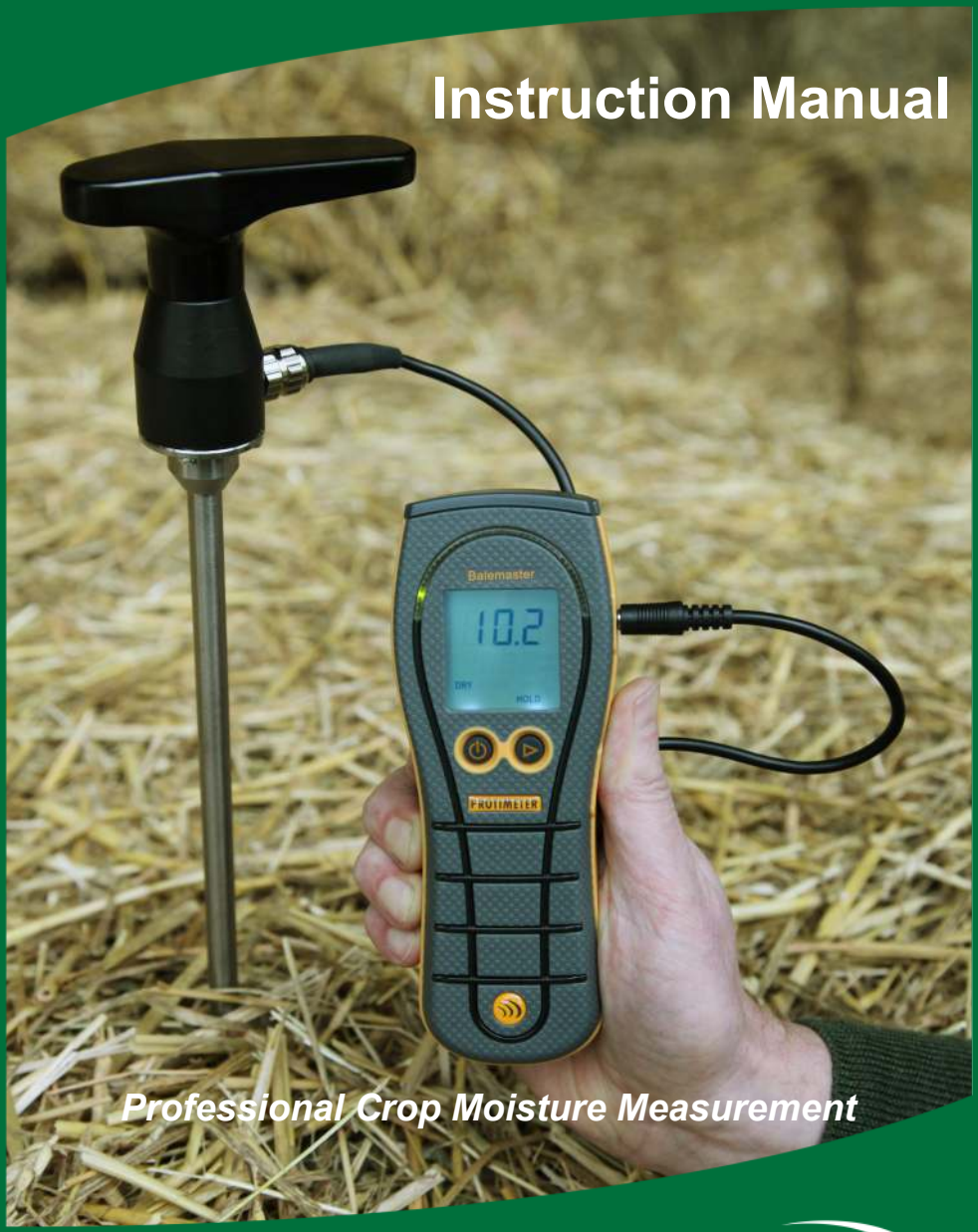
Martin Lishman

Balemaster

GRN6165

Instruction Manual



Professional Crop Moisture Measurement

Distributed by
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PROTIMETER

Care and Maintenance

Daily Care

Keep the meter in its protective case. Clean and dry the probe after every reading. The point of the Bale Moisture and Bale Temperature Probes is very sharp and should be handled with due care. Keep covered when not in use. When removing the probe from the bale, avoid twisting the handle.

Battery

The battery will last for more than 20 hours of use. When battery power is low **[!]** displays. The meter will continue to read with normal accuracy and turns off when the battery is empty. To change the battery, remove the screw in the battery lid on the back of the meter. Slide the lid downwards to open the battery compartment. Remove the battery if the instrument is not used for long periods.

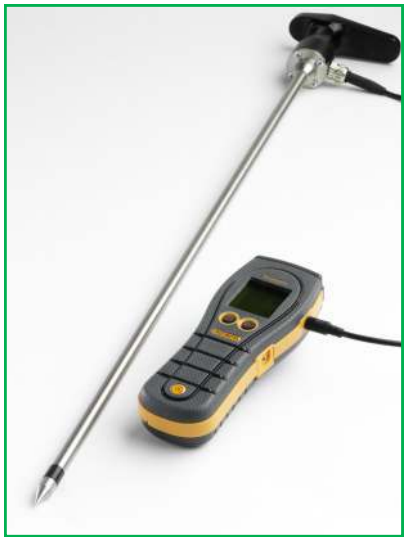
Calibration Check

The meter calibration can be checked by the user with the Protimeter Calcheck Device (Part No. BLD5086) and a 2-pin moisture probe (Part No. BLD5079), connected via the bale probe socket on the side of the meter. If correctly calibrated, the meter will display a value in the range 14.0 to 14.4 at 20°C.

Regular Servicing and Checks

According to most crop quality assurance schemes, your bale moisture meter and probe should be checked annually against reference values. The Martin Lishman service centre is fully equipped to service your meter throughout its working life. We also conduct testing clinics where you can check your meter and obtain a test certificate to satisfy your crop assurance scheme. See our website for the latest clinic details and to download a service return form.

Product Overview



Introduction

- The Protimeter Balemaster measures the moisture level of baled products such as straw and hay. It is calibrated for wheat straw and can be used to take relative measurements of other baled products.

- When assessing the moisture of bales it is recommended to use an average of several readings taken from different sides and at different depths in the bale.

- Balemaster readings can help a professional make an informed judgement as to the moisture condition of the bale. Readings are not definitive and can be affected by external factors such as bale density and consistency.

- When testing a large number of bales, the meter can be set to show the difference in moisture level from a reference reading. This makes the job much quicker.

- Optional stainless steel fast response bale temperature probes are available - 1.5m long (GRN 6153) or 600mm long (GRN 6154).

- All of the moisture and temperature probes take their readings form the tip of the probe.

Taking a Moisture Reading

Before every reading

Ensure the probe is clean and dry.

Taking a reading

Connect the moisture probe to the meter. Press and release . The meter will show standby mode:

Push the moisture probe into the bale. A precise numeric reading, as well as colour LED and moisture range description will show as follows:

DRY
8.5 to 15%
Green LED
- bales are in a safe condition for storage

AT RISK
15.1 to 19.5%
Yellow LED
- bales are **not** in a safe condition for storage

WET
19.6 to 36.8%
Red LED
- additional drying is recommended

Switch the meter off by pressing and holding or leave and it will switch off automatically after the set time (see Page 6).

Taking a Moisture Reading

Other functions

HOLD - this is available if readings need to be frozen during measurement. Activate as follows:

Press ⏻ during measurement. HOLD will be displayed. Withdraw the probe from the bale and the reading will remain on the display.

Reference Measurement - this is ideal for when testing a large number of bales. The meter can be set to show the difference in moisture level from a reference reading. This makes it much quicker to give an indication of the moisture variability when doing a lot of tests.

Take the first reading which is to be used as the reference. While the reading is displayed, press and hold ▷ for 2 seconds to enter Reference Mode. Take the second reading. The display will be as shown. The top number is the second moisture reading and the lower value is the difference between the reading and the reference reading. To return to normal measurement mode, press ▷ again.

Interpreting Readings

Balemaster readings can help a professional make an informed judgement as to the moisture condition of the bale. Readings are not definitive and can be affected by external factors such as bale density and consistency.

Meter Settings

Default Settings

The Balemaster is supplied ready-to-use with moisture descriptions, buzzer tone and backlight on, auto-off time set at 2 minutes and temperature in °C.

To alter default settings enter Settings Mode:

With the meter switched off, press and hold ▷ and then press ⏻. Hold both buttons until the Settings Mode display shows and then release both buttons.

The screen will then scroll through the existing settings, showing each one for 2 seconds. If there is no key press within the 2 seconds it moves to the next setting:

Moisture range descriptions ON

Buzzer Tone ON

Backlight ON

To change the settings above to OFF, press ▷ and then press ⏻

Auto Off time delay 2 mins

To set turn off time between 1-6 mins press ▷ and then press ⏻. If set at 0, turn off is manual by pressing and holding ⏻ for 5 secs.

Temperature readings in °C

To change to °F, press ▷ and then press ⏻

Temperature Probes

Optional Grain and Bale Temperature Probes

Bale Temperature Probe 600mm *(pictured right)*
(Part No. GRN6154)
T-Bar stainless steel fast response bale temperature probe used with the Balemaster to check the temperature of bales of hay and straw. Suitable for other baled products.

Grain Temperature Probe 1.5m *(not pictured)*
(Part No. GRN6153)
Stainless steel fast response probe used with the Balemaster to check the temperature of stored grain.

Taking a temperature probe reading

Push the probe into the grain or bale and allow the temperature to stabilise. Connect the probe to the meter. Press ⏻ . The display will show — — — .
Press ▷ to display the temperature reading.
If the probe remains connected, the next time the meter is switched on, the temperature will display immediately.

Specifications

Moisture Measurement Range: with Bale Moisture Probe in wheat straw: 8.5 to 36.8%
Weight with Bale Moisture Probe: 228g
Dimensions: Meter - 19 x 6.5 x 3.5cm; Probe - 600mm long
Power: 9V battery (alkaline 550 mAh)
Resolution: 0.1
Operating humidity range: 0 - 90% RH (non-condensing)
Operating temperature range: Meter - 0 °C to 50 °C
Temperature probe - 0 °C to c.80 °C
Regulatory compliance: CE, RoHS, ETL

Warranty

The Balemaster *(the unit) is guaranteed for 12 months from the date of purchase against any defect or malfunction caused by faulty parts or workmanship. To claim under warranty, the complete unit or part should be returned, at the claimant's expense, to Martin Lishman Ltd with a written explanation of the problem. Should there prove to be a defect or malfunction caused by faulty parts or workmanship, it will be repaired or replaced and returned to the claimant without charge. If a warranty claim is rejected, the cost of replacement or repair will be notified to the claimant before any work is carried out.*

Any warranty claim will automatically be invalidated if the unit has been modified or internally tampered with in any way. The manufacturers will not cover under warranty damage or faults occurring to the unit which have been caused by inappropriate use or by use not in accordance with the operating instructions for the unit.

Under no circumstances will Martin Lishman Ltd re-imburse any costs associated with a warranty claim if these costs have been incurred without agreement in advance.

Under the terms of warranty for the unit under no circumstances will liability exceed the cost of replacement or repair. The manufacturers and Martin Lishman Ltd will not be liable for any consequential or indirect loss suffered by purchasers or users of the unit, whether this loss arises from correct or incorrect use, defect or malfunction caused by faulty parts or workmanship or in any other way. Non-exhaustive illustrations of consequential or indirect loss are loss of profits, loss of contracts and damage to property.

The information contained in this manual is given in good faith. As the method of use of the instrument (and its accessories) and the interpretation of the readings are beyond the control of the manufacturers and selling agents, they cannot accept responsibility for any loss, consequential or otherwise, resulting from its use.

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