

Digital Grain Moisture Analyser

Introduction

It is based on capacitance variation technique. The instrument comprises of mainly an analog section and a digital section. For controlling the complete functioning of DGMA, it uses power efficient, high speed microcontroller (MCU) chip. The sensing system is made up of capacitive transducer that converts moisture contents into an electrical signal. Presence of a very small quantity of water causes considerable change in the dielectric constant of the sensor cell. These moisture variations change capacitance and in turn are measured in terms of frequency variations. These variations are then further linearized and calibrated in terms of percentage moisture. The final result in terms of moisture percentage, temperature of sample, date and time of measurement is displayed on LCD for a given sample under measurement.



Salient Features

- » data storage capacity of 1000 records, and 100 plus crop calibrations can be customized
- » 2*16 character alphanumeric LCD with membrane keypad for user interaction
- » user friendly GUI for the convenience of calibration (for new and existing crops)
- » facility of offset correction for moisture and temperature readings against factory set calibrations

Power Saving Features

- » auto backlight off and auto power off

Technical Specifications

- | | | |
|--|---|--|
| » Principle of measurement | : | capacitance variation |
| » Measuring moisture range | : | 7% to 40 % (can be further customized) |
| » Precision of moisture | : | < ± 1% |
| » Measuring temperature range | : | 0°C- 70°C |
| » Temperature compensation | : | internally compensated |
| » RS 232 port | : | |
| – To print crop name, moisture percent, temperature, date and time | | |
| – To transfer recorded data to PC | | |
| – To calibrate new crop using GUI | | |
| » Calibration through GUI | : | To calibrate new or existing crops |
| » Printer | : | Thermal portable printer |
| » AC mains | : | 9V DC adapter for AC mains |
| » Battery operated | : | 9V battery/3.7V (rechargeable) |
| » Data logging, downloading & erasing | : | |
| – To read saved records which includes moisture percentage, temperature, crop name along with date and time of measurement | | |
| – To download calibrated crop details in DGMA | | |
| – To erase saved records of DGMA | | |

Applications

- Procurement agencies
- Agricultural universities
- Quality control
- Food processing industries
- Mandis
- Storage houses



Latest Model