Digital Grain Moisture Analyser (DGMA)

Introduction

It is based on capacitance variation technique. The instrument is based on power efficient, high speed microcontroller (MCU) while 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 which in turn is 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 10 plus crop calibrations can be customized.
- 2*16-character alphanumeric LCD with membrane keypad for user.

Power Saving Feature

- Auto backlight off and auto power off.

Technical Specification

- Principle of measurement : Capacitance variation
- Measuring moisture range :7% to 28 % (can be further customized)
- Precision of moisture :< ± 1%
- Measuring temperature range :0°C- 70°C
- Temperature compensation : Internally compensated
- Calibration through GUI :To calibrate new or existing crops

- RS 232 port :
  - To print crop name, moisture percentage, temperature, date and time
  - To transfer recorded data to PC
  - To calibrate new crop using GUI

Applications/Users

- Procurement Agencies
- Agricultural Universities
- Quality control
- Food Processing Industries

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