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(57) Abstract :

An integrated handheld soil moisture sensor device comprising a controller for controlling a soil moisture sensor and integrated to the microcontroller, an oscillator to generate an electrical signal of precise frequency and a sensing unit to determine the moisture content of the soil. The controller may be a microcontroller of 8051, AVR, PIC and the like controllers. The controller controls the sensor circuit in accordance to the program dumped in the controller. The soil moisture sensor may be a capacitance sensor, granular matrix sensor and the like sensors. The oscillator may be a crystal oscillator, Hartley oscillator and the like oscillators to provide clock signals based on type of said controller. The sensing unit may be a neutron probes, gravimetric probes and the like sensing units and material of the sensing unit may be a conducting material such as copper, aluminium, metal and thereof. The sensing unit is inserted into the soil to determine moisture content of the soil where in the moisture content is displayed with precise value. The invention consists of portable soil moisture sensor and a common display unit. This makes it possible for the user to observe the moisture level of the soil in multiple locations from a single conveniently positioned display unit.

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