

ABSTRACT

The capacitive sensor is designed using a parallel-mounted copper plate. In this research, the application of capacitive sensors is done by measuring the value of soil capacitance. To produce a capacitance value, the capacitive sensor will be connected to the inverting amplifier. The output voltage of the inverting amplifier will be modified to the capacitance value. The capacitive sensor designed has a capacitance value of 66 pF. The frequency used is 1 kHz to 100 kHz. The soil samples used are laterite soil and sedimentary soils. The capacitive sensor that is designed can already be used to measure soil capacitance of sediment and laterite types mixed with copper powder and manganese powder using a frequency of 50 kHz, while the reference capacitor used is 10 nF.

Keynote : Capacitive Sensor, Soil Capacitance