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Lin

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(54) **METHOD, SYSTEM AND APPARATUS FOR CAPACITIVE SENSING**

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(58) **Field of Classification Search**

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(57) **ABSTRACT**

A system for obtaining incremental and absolute displacement measurements using systems of electrodes that interact to form variable capacitors and systems that facilitate implementation of the method along with exemplary embodiments of these systems. The capacitors created by the disclosed method have known physical properties and corresponding known mathematical relationships. These laws are exploited in such a way by our method as to overcome inadequacies in existing systems and create superior systems. These superior systems improve upon the existing art by including economically and reliably made sensors based on the area varying principle which eliminate dead zone issues and increase accuracy through a reduction of the influence of gap variations on capacitive systems through the use of compensatory geometrical arrangements of multiple capacitive systems.

12 Claims, 23 Drawing Sheets

