

Title (en)

METHOD AND SYSTEM FOR MEASURING THE DISTANCE FROM A PIEZOELECTRIC ELEMENT

Title (de)

VERFAHREN UND SYSTEM ZUR MESSUNG DER ENTFERNUNG EINES PIEZOELEKTRISCHEN ELEMENTS

Title (fr)

PROCEDE ET SYSTEME PERMETTANT DE MESURER UNE DISTANCE DEPUIS UN ELEMENT PIEZO-ELECTRIQUE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO0013039A2] A method and system for measuring the distance from a piezoelectric substance (10) by transmitting an electromagnetic pulse (14) to the piezoelectric substance so as to generate an acoustic pulse (15) in response thereto. The acoustic pulse is sensed by an acoustic sensor (12) displaced from the piezoelectric substance by an unknown distance, and a time interval between initiation of the electromagnetic pulse and receipt of the acoustic pulse is measured. The distance between the piezoelectric substance and the acoustic sensor is computed by multiplying the measured time interval by the speed of sound, which is known. Upon striking the piezoelectric surface against a surface a modified echo characteristic of the acoustic pulse may be detected. This allows operation of one of a plurality of switches to be detected. By using multiple sensors, the spatial location of the switch can be computed and this allows the specific switch to be identified in a computer keyboard adapted for use with a computer but not physically connected thereto.

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