

Title (en)

POSITION AND MOTION CAPACITIVE SENSOR AND DEDICATED CIRCUIT FOR DETERMINING X, Y, Z COORDINATES OF THE TRAJECTORY OF A CHARACTERISTIC POINT

Title (de)

POSITIONS- UND BEWEGUNGSKAPAZITIVER SENSOR UND EIGENE SCHALTUNG ZUR BESTIMMUNG VON X-, Y-, Z-KOORDINATEN DER TRAJEKTORIE EINES CHARAKTERISTISCHEN PUNKTS

Title (fr)

SENSEUR CAPACITIF DE POSITION ET DEPLACEMENT ET CIRCUIT SPECIALISE DANS LA DETERMINATION DES COORDONNEES X, Y, Z ET DE LA TRAJECTOIRE D'UN POINT CARACTERISTIQUE

Publication

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Application

EP 06843940 A 20061218

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Abstract (en)

[origin: WO2007069929A1] The invention concerns a three-dimensional intelligent position and motion capacitive sensor, for determining x, y, z coordinates and the trajectory of a characteristic point pertaining to an object located inside the sensor. The technical problem solved by the present invention consists in determining the coordinates and the trajectory of a characteristic point of an object following modification of certain differential capacitances over the three axes, caused by the presence of the object in a certain position inside the sensor. The inventive intelligent sensor consists of a differential capacitive sensor (A) consisting of several fixed armatures (2, 3, 4, 5 and 6) arranged on the surface of a prismatic body, so as to define a first rectangular differential capacitance C_{x} formed by the armatures (2, 4 and 5) between the first armature (2) and the second armature (4) being a right angle, and between the second armature (4) and the third armature (5) being also a right angle, a second rectangular capacitance C_y being defined by the armatures (3, 4 and 6) in the same way as the capacitance C_x , a third simple rectangular capacitance C_z being defined by two armatures (3 and 4) likewise arranged at an angle of about 90°. The differential capacitive sensor (A) is connected to a block (B) for converting the values of the capacitances into digital dimensions, the block (B) being in turn connected to a block (C) for computing data which computes the coordinates x, y, and z of the characteristic point P(x,y,z) pertaining to an object introduced in the inner space of the differential capacitive sensor (A) and transmits same to a terminal block (D).

IPC 8 full level

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