

Title (en)
HIGH LINEARITY CAPACITIVE PRESSURE SENSOR.

Title (de)
KAPAZITIVE DRUCKSENSOREN MIT HOHER LINEARITÄT.

Title (fr)
CAPTEUR CAPACITIF DE PRESSION A HAUTE LINEARITE.

Publication
EP 0662214 A1 19950712 (DE)

Application
EP 94923736 A 19940715

Priority
• EP 94923736 A 19940715
• EP 9402318 W 19940715
• EP 93111832 A 19930724

Abstract (en)
[origin: WO9503534A1] In a first variant of said pressure sensor, a base body (1) and a diaphragm (2) are assembled parallel to each other at a defined distance (d) from each other, forming a chamber (4) which is hermetically sealed at least at its edge. The surface of the base body on the side of the chamber carries a membrane electrode (11) that completely covers it. The surface of the diaphragm on the side of the chamber carries a reference electrode (12) which consists of an outer part (121) that extends along the edge of the chamber and whose capacity is practically pressure-independent, and of a pressure-dependent central part (123) arranged at the centre of the diaphragm and linked by a fin (122) to the outer part (121). The remaining surface of the diaphragm is covered by a measurement electrode (13) located at a constant distance from the reference electrode (12). In a circular second variant or in a rectangular third variant, the reference electrode (22 or 42) consists of an outer part (221 or 421) that extends along the edge of the chamber and whose capacity is practically pressure-independent, and of two pressure-dependent central parts (223, 223' or 423, 423') linked to the outer part (221 or 421) each by a fin (222, 222' or 422, 422'). The central parts lie each in one half of the base body, symmetrically to the centre of the diaphragm, and their marginal curve in one half of the base body is continuously and iteratively optimised. In the third variant, the reference electrode (32) differs from the second variant in that it is not symmetrical in relation to a point, but axially symmetrical in relation to a diameter of the diaphragm.

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CPC (source: EP US)
G01L 9/0072 (2013.01 - EP US); **G01L 9/0075** (2013.01 - EP US)

Citation (search report)
See references of WO 9503534A1

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