

Title (en)

PRESSURE SENSOR AND METHOD FOR OPERATING A PRESSURE SENSOR

Title (de)

DRUCKSENSOR UND VERFAHREN ZUM BEDIENEN EINES DRUCKSENSORS

Title (fr)

CAPTEUR DE PRESSION ET PROCÉDÉ DE COMMANDE D'UN CAPTEUR DE PRESSION

Publication

EP 3391001 A1 20181024 (DE)

Application

EP 16795097 A 20161115

Priority

- DE 102015121859 A 20151215
- EP 2016077716 W 20161115

Abstract (en)

[origin: WO2017102210A1] The invention relates to a pressure sensor (1) for determining a pressure measurement variable, comprising at least one housing (2), a pressure sensor element (3) which is arranged in said housing (2), a lighting means (4) likewise arranged in said housing (2), and a control/analysis unit (8). The pressure sensor element (3) has a semiconductor material and a measuring membrane, and a first pressure (p1) is applied to a first face of the measuring membrane (5) and a second pressure (p2) is applied to a second face of the measuring membrane (5) such that said measuring membrane (5) undergoes a pressure-dependent deflection. The measuring membrane (5) comprises at least one integrated resistance element (6), and the control/analysis unit (8) detects an electric signal (10) with the aid of the integrated resistance element (6) in order to determine pressure measurement variables. The lighting means (4) optically excites the pressure sensor element (3), and the control/analysis unit (8), using a change in the electric signal (10) resulting from said optical excitation, determines a statistical pressure value inherent to the first and/or second pressure and implements correction or compensation of the pressure measurement variable with the aid of said statistical pressure value.

IPC 8 full level

G01L 9/00 (2006.01)

CPC (source: EP US)

G01L 9/002 (2013.01 - US); **G01L 9/0042** (2013.01 - US); **G01L 9/0052** (2013.01 - EP US); **G01L 19/14** (2013.01 - US)

Citation (search report)

See references of WO 2017102210A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

DE 102015121859 A1 20170622; CN 108474703 A 20180831; CN 108474703 B 20210309; EP 3391001 A1 20181024; US 2018372571 A1 20181227; WO 2017102210 A1 20170622

DOCDB simple family (application)

DE 102015121859 A 20151215; CN 201680073747 A 20161115; EP 16795097 A 20161115; EP 2016077716 W 20161115; US 201616061598 A 20161115