

Title (en)
ANGULAR RATE SENSOR FEATURING MECHANICALLY DECOUPLED OSCILLATION MODES

Title (de)
ROTATIONS-DREHRATENSENSOR MIT MECHANISCH ENTKOPPELTEN SCHWINGUNGSMODEN

Title (fr)
CAPTEUR DE VITESSE DE ROTATION A MODES D'OSCILLATION DECOUPLES MECANIQUEMENT

Publication
EP 1735589 A2 20061227 (DE)

Application
EP 05716556 A 20050407

Priority
• EP 2005003670 W 20050407
• DE 102004017480 A 20040408

Abstract (en)
[origin: WO2005098358A2] The invention relates to an angular rate sensor for detecting a rotation. Said sensor comprises the following components: a substrate, at least one oscillating element that can be excited so as to oscillate rotationally or radially, an anchor structure, one or several detecting elements, one or several joining elements that connect the detecting element/s to the oscillating element, a mechanism for exciting the oscillating element, and a device for detecting a radial or rotational oscillation of the detecting element/s. The inventive angular rate sensor is characterized in that each of the detecting elements can oscillate radially on the same plane on which rotational oscillation of the oscillating element occurs, or vice versa, while the centrifugal force F_z caused by the rotational oscillation can trigger substantially no radial movement of the detecting element/s or the oscillating element/s. Also disclosed are different methods for operating said sensor.

IPC 8 full level
G01C 19/56 (2012.01)

CPC (source: EP US)
G01C 19/5712 (2013.01 - EP US)

Citation (search report)
See references of WO 2005098358A2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2005098358 A2 20051020; WO 2005098358 A3 20051222; DE 102004017480 A1 20051027; DE 102004017480 B4 20090416; EP 1735589 A2 20061227; US 2007194857 A1 20070823; US 7520169 B2 20090421

DOCDB simple family (application)
EP 2005003670 W 20050407; DE 102004017480 A 20040408; EP 05716556 A 20050407; US 57802405 A 20050407