

Title (en)

METHOD AND DEVICE FOR DETECTING STEERING WHEEL CONTACT

Title (de)

VORRICHTUNG UND VERFAHREN ZUR ERFASSUNG EINER LENKRADBERÜHRUNG

Title (fr)

DISPOSITIF ET PROCÉDÉ DE DÉTECTION D'UN CONTACT AVEC LE VOLANT

Publication

EP 3216127 A2 20170913 (DE)

Application

EP 15823496 A 20151109

Priority

- DE 102014016422 A 20141107
- EP 2015002240 W 20151109

Abstract (en)

[origin: WO2016071002A2] A device for detecting steering wheel contact comprises at least a first electrode (12) which is provided in a steering wheel (10) and which forms, together with a human body acting as a second electrode and a dielectric situated therebetween, at least one sensor capacitor (26). The device also comprises an evaluation circuit (24) having a reference capacitor (30) of known capacitance which can be connected parallel to the sensor capacitor (26), a direct current voltage source (34) which can be connected to the reference capacitor (30), and a measuring device for measuring the voltage at the reference capacitor (30). A method for detecting steering wheel contact using such a device comprises the following successive steps: charging the reference capacitor (30) by applying a known reference voltage, or charging the reference capacitor (30) and subsequently measuring a first voltage at the reference capacitor (30); connecting, in parallel, the sensor capacitor (26) to the reference capacitor (30) so that a portion of the charge of the reference capacitor (30) is transmitted to the sensor capacitor (26); measuring a second voltage at the reference capacitor (30); and determining the capacitance of the sensor capacitor (26) from the known capacitance of the reference capacitor (30), the reference voltage or the first voltage and the second voltage.

IPC 8 full level

H03K 17/96 (2006.01); **B62D 1/04** (2006.01); **B62D 1/06** (2006.01); **H03K 17/955** (2006.01)

CPC (source: CN EP US)

B62D 1/046 (2013.01 - CN EP US); **B62D 1/065** (2013.01 - US); **G01D 5/2417** (2013.01 - US); **H03K 17/955** (2013.01 - CN EP US); **H03K 17/962** (2013.01 - CN EP US); **H03K 2217/960725** (2013.01 - CN EP US)

Citation (search report)

See references of WO 2016071002A2

Citation (examination)

- WO 2013117719 A1 20130815 - IEE SARL [LU]
- US 2013090873 A1 20130411 - LUNDSTRUM ZEKE [US], et al

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)

WO 2016071002 A2 20160512; WO 2016071002 A3 20160630; CN 107107939 A 20170829; DE 102014016422 A1 20160512; EP 3216127 A2 20170913; US 10501107 B2 20191210; US 2017334477 A1 20171123

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