Title (en)

METHOD FOR DETERMINING A FUNCTION STATE OF AN ULTRASONIC SENSOR FOR A VEHICLE

Title (de)

VERFAHREN ZUM BESTIMMEN EINES FUNKTIONSZUSTANDS EINES ULTRASCHALLSENSORS FÜR EIN FAHRZEUG

Title (fr)

PROCÉDÉ POUR DÉTERMINER UN ÉTAT DE FONCTIONNEMENT D'UN CAPTEUR À ULTRASONS POUR UN VÉHICULE

Publication

EP 4341718 A1 20240327 (DE)

Application

EP 22728467 A 20220510

Priority

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- EP 2022062524 W 20220510

Abstract (en)

[origin: WO2022243090A1] Method for determining a function state (FZ) of an ultrasonic sensor (2) for a vehicle (1), having the steps of: a) applying (S1) an electrical test signal (P) to the ultrasonic sensor (2); b) detecting (S2) an electrical response signal (A) from the ultrasonic sensor (2); c) determining (S3) a phase-frequency response (PF) comprising the phase angle (α) of the detected response signal (A) for the applied test signal (P) on the basis of an excitation frequency (f) of the applied test signal (P); d) comparing (S4) at least a first phase angle (P1) below and a second phase angle (P2) above a resonant frequency (R) in the determined phase-frequency response (PF) with a respective expected phase angle (PE1, PE2); e) correcting (S5) the determined phase-frequency response (PF) on the basis of the comparison; and f) determining (S6) the function state (FZ) on the basis of the corrected phase-frequency response (PFK).

IPC 8 full level

G01S 7/52 (2006.01); **G01S 15/931** (2020.01)

CPC (source: EP KR US)

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