

Title (en)

Locking system for motor vehicles detecting approach of the user

Title (de)

Verriegelungssystem für Kraftfahrzeuge mit Detektor zum Feststellen der Annäherung des Benutzers

Title (fr)

Système de verrouillage pour véhicule automobile équipé d'un système de détection de l'approche d'un utilisateur

Publication

**EP 0918309 B2 20081210 (FR)**

Application

**EP 98402881 A 19981120**

Priority

FR 9714718 A 19971124

Abstract (en)

[origin: EP0918309A1] A metallic plate (15), electrically isolated from the vehicle is driven by a high frequency generator (16). The plate and the vehicle (V) together form a dipole, the capacitance of which is sensitive to neighboring objects. A module that detects variation in capacitance is attached to this dipole and triggers when a person is close. This in turn initiates the vehicle automatic security system which verifies the identity of the person before unlocking the vehicle.

IPC 8 full level

**G08B 13/26** (2006.01); **E05B 49/00** (2006.01); **G07C 9/00** (2006.01)

CPC (source: EP US)

**G07C 9/00714** (2013.01 - EP US); **G08B 13/26** (2013.01 - EP US)

Citation (opposition)

Opponent :

- US 5682032 A 19971028 - PHILIPP HARALD [US]
- FR 2799490 A1 20010413 - VALEO SYSTEMES DESSUYAGE [FR]
- WO 9723738 A1 19970703 - PHILIPP HARALD [GB]
- DE 3417338 C2 19931007 - LENK FRIEDRICH [DE]
- US 3314081 A 19670418 - ATKINS CARL E, et al
- US 1870181 A 19320802 - MALLORY EDWARD B
- US 5081406 A 19920114 - HUGHES RICKEY D [US], et al
- US 4831279 A 19890516 - INGRAHAM RONALD D [US]
- US 4453112 A 19840605 - SAUER GERD [DE], et al
- US 3588038 A 19710628 - TANAKA TAMEO
- US 3406941 A 19681022 - MASUO ICHIMORI, et al
- US 3333160 A 19670725 - ALFRED GORSKI
- Schullehrbuch Physik 10. Schuljahr, Autor: Werner Damm, 13. Auflage, Ausgabe 1970
- Quantum Research Group, Who developed QProx TM Technology?,FAQ ID: 2003/0/100/6SRB/Date:17.10.2003, [http://www.qprox.com/faq/answer.php?print\\_friendly=1?path\\_stub=..&faqid=20031...](http://www.qprox.com/faq/answer.php?print_friendly=1?path_stub=..&faqid=20031...)
- Antennen und Antennensysteme, Prof. Dr.-Ing. W. Wiesbeck, Universität Karlsruhe (TH), 2.09. Auflage: 2005
- Auszug aus dem Internet: [www.amanogawa.com/archive/docs/antenna1.pdf](http://www.amanogawa.com/archive/docs/antenna1.pdf) Amanogawa, 2001 - Digital Maestro Series
- Chapter2, fundamentals of electrically small antennas, <http://scholar.lib.vt.edu/theses/available/etd-7697-21043/unrestricted/ch1-2.pdf>

Cited by

FR2809132A1; EP1143092A1; FR2807462A1; FR2799490A1

Designated contracting state (EPC)

DE ES GB IT SE

DOCDB simple family (publication)

**EP 0918309 A1 19990526; EP 0918309 B1 20040407; EP 0918309 B2 20081210;** DE 69822970 D1 20040513; DE 69822970 T2 20050414;  
DE 69822970 T3 20090813; FR 2771534 A1 19990528; FR 2771534 B1 20000609; US 6081185 A 20000627

DOCDB simple family (application)

**EP 98402881 A 19981120;** DE 69822970 T 19981120; FR 9714718 A 19971124; US 19013298 A 19981112