

Title (en)

Electronic door lock and key module mechanism thereof

Title (de)

Elektronisches Türschloss und dazugehöriger modularer Schlüsselmechanismus

Title (fr)

Serrure de porte électronique et mécanisme de clé correspondant

Publication

EP 1134336 A1 20010919 (EN)

Application

EP 00302004 A 20000313

Priority

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Abstract (en)

Disclosed is a key module mechanism for an electronic door lock, comprising: a key, a key receiving assembly, and a first circuit board. The key includes an upper and a lower planar surface, wherein the lower surface has two linear, parallel, distant, and raised guide rails. The key is provided with an IC circuit for storing a password therein. The IC circuit extends to form two contacts that are connected to a front end of the key. The key receiving assembly includes a key socket and a socket frame. The key socket is formed with a key opening. The key opening is formed along an inner bottom thereof with two guide grooves that accommodate the guide rails, such that the key opening adapts to allow precise insertion of the key. The first circuit board is placed next to a rear end of the key socket. The first circuit board is provided with circuits for processing password signals received from the key, and two conductive plates secured to the first circuit board. Each of the conductive plates includes a contact located out of a tail end of the key opening, such that when the key is inserted into the key opening and the contacts located at its front end protrude out of the tail end of the key opening, the contacts may be in contact with the contacts of the conductive plates for signal transmission. The above key module mechanism allows for precise unlocking/locking operations between the key and key socket without damaging the electrical contacts due to inadvertently reversed insertion. Furthermore, because the two conductive plates are provided at the tail end of the key opening, it is less likely to damage the electronic components due to environmental static. Further disclosed is an electronic door lock incorporating the above key module mechanism with a lid, a case, and a second circuit board. <IMAGE>

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E05B 49/00

IPC 8 full level

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CPC (source: EP)

G07C 9/00944 (2013.01); **G07C 2009/00761** (2013.01)

Citation (applicant)

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Designated contracting state (EPC)

DE FR GB IT

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