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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 20816-2006

Vehicle security alarm systems - Passenger cars

车辆防盗报警系统 乘用车

(English Translation)

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Foreword

4.2.1, 4.2.2 a), 4.2.3.2, 4.2.4, 4.2.5.1, 4.2.6, 4.2.7.1, 4.2.8, 4.2.9 and 4.3 in this standard are

mandatory and the others are recommendatory.

This standard is adopted from IEC 60839-10-1:1995 Alarm systems - Part 10: Alarm systems for

road vehicles - Section 1: Passenger cars (English version).

This standard is redrafted according to IEC 60839-10-1:1995. For comparison, the informative

Annex A gives cross references of the clauses between this national standard and the international

standard.

Allowing for the state of the nation and the development requirements of vehicle security protection

and making reference to the relevant international regulation and standard, i.e. Annex VI: Scope,

definitions and requirements for vehicle alarm systems of COMMISSION DIRECTIVE 95/56/EC

of 1995 and British standard of insurance industry Security system evaluation - Passenger cars

(1996 Edition 2), this standard adopts and partially modifies IEC 60839-10-1:1995. These technical

differences have been marked with perpendicular single lines at the margin of relevant clauses. The

summary list for these technical differences and their reasons is given in Annex B for reference.

This standard modifies IEC 60839-10-1:1995 mainly in three aspects: prevention against false

alarms and noise disturbance, improvement of protection level, easy understanding and use, as

detailed below:

-- As prevention against noise disturbance from the warning device of vehicle is a great national

and public concern, this standard cancels the requirements of IEC60839-10-1:1995 regarding

sending out non-warning audible signals by sound signaling device, allows reduction in alarming

sound level, limits the repeated warnings, and adds test on prevention against false alarms (Annex D);

-- Allowing for the current means of vehicle burglary, the anti-theft alarming is to be of higher

requirement, so methods and higher requirements for unsettling, warning and immobilization of

VSAS are added;

-- To adapt to the development of anti-theft alarming technology for vehicles, contents regarding

protection with VSAS and networking are proposed;

-- To evaluate VSAS more accurately and support risk rating for vehicle insurance, protection

classification of product by protection performance is added;

-- Basing on the original IEC 60839-10-1:1995 and referring to relevant international standards,

some contents are detailed and some correlated contents are arranged collectively.

Vehicle Security Alarm Systems - Passenger Cars

1 Scope

This standard specifies technical requirements and test methods for vehicle security alarm systems

(VSAS) intended for installation within vehicles used for the carriage of passengers and having not

more than eight seats in addition to the driver's seat, i.e. M1 category.

The object of the standard is to ensure a high standard of safety, performance and reliability of the

VSAS and the reduction of false alarms.

The standard covers VSAS designed to detect and signal the unauthorized opening of any of the

vehicle doors, boot/luggage compartment, bonnet/engine hood and, in addition, to immobilize the

vehicle when set.

The standard covers VSAS intended both for installation as original equipment and or installation

after delivery of the vehicle.

2 Normative References

The following documents contain provisions which, through reference in this text, constitute provisions of this standard. For dated reference, subsequent amendments to (excluding any corrigendum), or revisions of, any of these publications do not apply. However, parties to agreements based on this standard are encouraged to investigate the possibility of applying the most

recent editions of the standards indicated below. For any undated references, the latest edition of the

document referred to applies.

GB/T 2423.6 Environmental Testing for Electric and Electronic Products - Part 2:

Test Methods - Test Eb and Guidance: Bump (GB/T 2423.6-1995, idt

IEC 60068-2-29:1987)

GB 4208-1993 Degrees of Protection Provided by Enclosure (IP Code) (eqv IEC

60529:1989)

GB 14023 Vehicles Boats and Internal Combustion Engine Driven Devices -

Radio Disturbance Characteristics - Limits and Methods of

Measurement (GB 14023-2006, CISPR 12:2005, IDT)

GB/T 19951 Road Vehicles - Test Methods for Electrical Disturbances from

Electrostatic Discharge (GB/T 19951-2005, ISO 10605:2001, IDT)

ISO 512:1979 Road Vehicles - Sound Signaling Devices - Technical Specifications

ISO 7637-1:1990 Road Vehicles - Electrical Disturbances by Conduction and Coupling

An electrical/electronic device, e.g. remote control and inductive type switch, shall either

Case I -- have a coded transmitter signal with at least 50000 effective combinations and have

a minimum scan time of 24h per 5000 variants; or

Case II -- incorporate automatically changing codes, e.g. rolling codes, jumping codes, such that the mathematical chance of obtaining the correct code within 24 h is less than 4 %; or

Case III -- incorporate codes at least meeting the requirements of Case II and also a transmission mode not imperceptible (e.g. optical transmission of narrow angle).

d) If this is a coded key incorporating directly electrical connection:

It shall incorporate codes at least meeting the requirements of the Case II as specified in the above

c) and such that the mathematical chance of obtaining the correct code within 24h is less than 4%.

If this coded key switch is fitted within the vehicle, the entry period shall be timed, see f);

e) If this is a biometric key:

Since the biometric characteristics of human body constitute the key to identify each authorized

person, the maximum keys accommodated/stored, n_{max} , shall be provided so that at least five

unauthorized person(s), who operate at the fastest identification rates, cannot be identified as

authorized person within 5 min or that the chance of identifying an unauthorized person as