
**Road vehicles — Child seat presence and
orientation detection system (CPOD) —**

**Part 1:
Specifications and test methods**

*Véhicules routiers — Système de détection de la présence d'un siège
enfant et de son orientation (CPOD) —*

Partie 1: Spécifications et méthodes d'essai



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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TS 22239-1 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 12, *Passive safety crash protection systems*.

ISO/TS 22239 consists of the following parts, under the general title *Road vehicles — Child seat presence and orientation detection system (CPOD)*:

- *Part 1: Specifications and test methods*
- *Part 2: Resonator specification*
- *Part 3: Labelling*

Introduction

This part of ISO/TS 22239 specifies a detection system for the automatic recognition of child seat presence and orientation detection system (CPOD) child seats placed on CPOD passenger seats.

The purpose of this detection system is to improve the overall safety performance of passenger restraint systems, particularly by reducing the risk of an airbag being deployed against a child seat placed on a passenger seat.

The CPOD system is not intended to encourage the placing of children on the front passenger seats of cars. However, in view of the fact that the following scenarios do occur in real life, children can be placed on front passenger seats in these cases:

- in 2-seater vehicles, which have no rear seats;
- when there are more than 2 or 3 children in one vehicle;
- when back seats are folded down for the transport of cargo;
- when the installation of a rearward-facing child restraint system (CRS), and the placing of the child in the CRS on the rear seats, is very difficult or impossible (e.g. in 2-door vehicles);
- when the driver wants to see the baby and have easy access to it.

There might be benefit to be gained by encouraging the use of airbags on rear seats.

For the cases cited above, CPOD technology offers a reliable automatic solution for the protection of children against any possible risk caused by non-deactivated airbags.

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Road vehicles — Child seat presence and orientation detection system (CPOD) —

Part 1: Specifications and test methods

1 Scope

This part of ISO/TS 22239 specifies a child seat presence detection system that enables child seats placed on any passenger seats to be automatically detected where a child is at risk from an active airbag. The system provides the option of using additional information about the orientation of the child seat.

This part of ISO/TS 22239 describes the main system functionality, and provides design recommendations and requirements, compatibility measurements and labelling requirements.

Compliance with the requirements of this part of ISO/TS 22239 ensures compatibility between child seat presence and orientation detection system (CPOD) child seats and CPOD passenger seats.

ISO/TS 22239 applies only to child restraint systems in which the child is orientated in the forward or rearward driving direction.

NOTE 1 Throughout this part of ISO/TS 22239, the term “child seat” is used as an abbreviation of “CPOD child seat”.

NOTE 2 Throughout this part of ISO/TS 22239, the term “passenger seat” is used as an abbreviation of “CPOD-equipped passenger seat”.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/TS 22239-2:2009, *Road vehicles — Child seat presence and orientation detection system (CPOD) — Part 2: Resonator specification*

ISO/TS 22239-3, *Road vehicles — Child seat presence and orientation detection system (CPOD) — Part 3: Labelling*

ISO 6549:1999, *Road vehicles — Procedure for H- and R-point determination*

UNECE Regulation No.14, *Uniform provisions concerning the approval of vehicles with regard to safety-belt anchorages, ISOFIX anchorages systems and isofix top tether anchorages*

UNECE Regulation No.16 (2005), *Uniform provisions concerning the approval of safety belts, restraint systems, child restraint systems and ISOFIX child restraint systems for occupants of power-driven vehicles*

UNECE Regulation No.44 (2008), *Uniform provisions concerning the approval of restraining devices for child occupants of power-driven vehicles (“child restraint system”)*