

AUTOMATIC CHILD SEAT DETECTION

ROBERT BOSCH GMBH.
FCC ID: NF30C-AKSE

This device is put into the seat of a car during manufacturing so that it can detect whether or not a child is in the seat where an airbag may deploy during an accident.

There are no user's instructions due to the fact that since it is installed in the vehicle, the manufacturer will be supplied with installation instructions but the end user does not need instructions. The following page gives a paragraph of what the device does.

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This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTES: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

1. Function of the OC (Occupant Classification) and CSD (Child Seat Detection)

The OC / CSD System has to detect the state of the front passenger seat and provide the information to the Airbag ECU. This information is used to increase the protection of the passenger, by controlling the deployment of multistage Airbags dependent on the weight of the passenger.

If a child seat is detected on the passenger seat, then the airbag deployment must be prevented

1.1 Functions of the subsystem OCCUPANT CLASSIFICATION (OC)

The OC evaluates, in accordance to the installation place and the physical operational mode, the pressure distribution on the seats. The classification is performed by measuring and evaluating the typical shape and pressure distribution of human bodies or other objects. For a better judgement, some auxiliary quantities are determined and linked by a suitable algorithm.

All users can be assigned to an appropriate weight class. Weight classes are defined as follows:

Table: weight classes

Class	Corresponds to the weight of the passenger of
Class 0	0 to 2 kg (applied on the surface)
Class 2	12 to 60 kg
Class 3	60 to 90 kg
Class 4	> 90 kg

Dependent on the tolerances of the system, the following classification table for persons is given.

The distribution follows a Gaussian distribution showing the maximum in the required class.

required class	class 1	class 2	class 3	class 4
class 2a (12kg -30kg)	allowed	allowed	not allowed	not allowed
class 2b (30kg - 60kg)	not allowed	allowed	allowed	not allowed
class 3 (60kg - 90kg)	not allowed	allowed	allowed	allowed
class 4 (> 90 kg)	not allowed	not allowed	allowed	allowed