

SAS CONTROL MODULE CONSTRUCTION/OPERATION

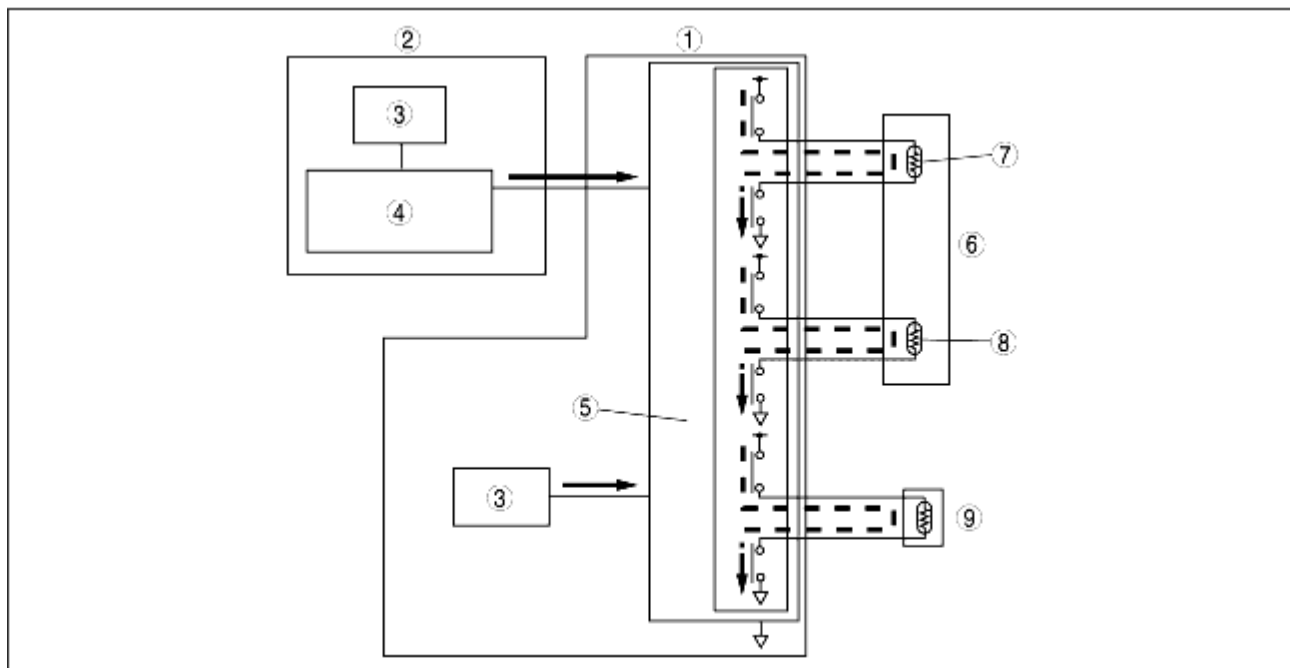
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Front Air Bag System (Two-Step Deployment Control)

1. During a frontal or frontal offset collision, the crash sensors in the crash zone sensor and the SAS control module detect the impact.
2. The degree of impact detected by the crash sensors in the crash zone sensor is converted to an electric signal and sent to the SAS control module.
3. Simultaneously, the SAS control module crash sensor converts the degree of impact detected to an electrical signal.
4. The SAS control module processes the calculations for the two electrical signals at the output control circuit and compares the value to a preset value.
5. The output control circuit determines the degree of impact to the vehicle by the value from the crash sensors, completes an inflator No.1 or inflator No.2 ignition circuit, and sends the deployment signal to the air bag modules.

No.	Degree of collision force	Air bag module deployment force	Inflator deployment pattern
1	Large	Large	Inflator No.1 and inflator No.2 deploy.
2	Small	Small	Inflator No.1 deploys.

6. The SAS control module completes an ignition circuit for the pre-tensioner front buckles that is synchronized to the deployment of the driver and passenger-side air bag modules, and an operation signal is sent to the pre-tensioner front buckles.

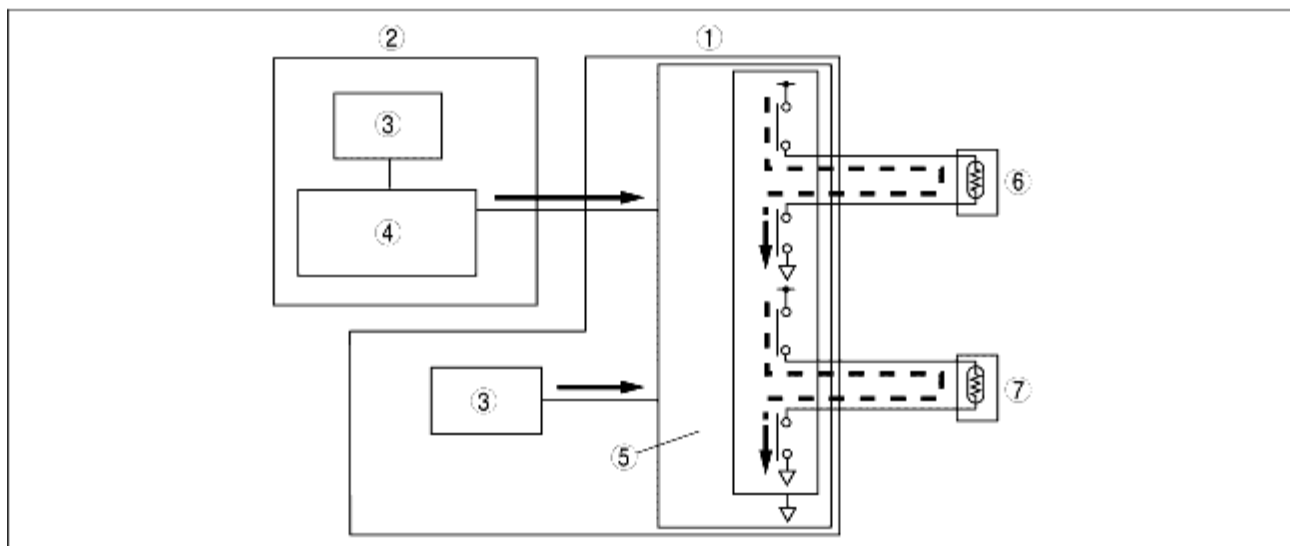


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1	SAS control module
2	Crash zone sensor
3	Crash sensor
4	Signal amplification circuit
5	Output control circuit
6	Front air bag module (driver or passenger-side air bag module)
7	Inflator No.1
8	Inflator No.2
9	Pre-tensioner front buckle

Side air bag system

1. During a lateral collision to the vehicle, the crash sensors in the side air bag sensor and SAS control module detect the collision.
2. The degree of impact detected by the crash sensor in the side air bag sensor is converted to an electrical signal and sent to the SAS control module through the signal amplification circuit.
3. Simultaneously, the SAS control module crash sensor converts the degree of impact detected to an electrical signal.
4. The SAS control module processes the calculations for the two electrical signals at the output control circuit and compares the value to a preset value.
5. The output control circuit determines the degree of impact to the vehicle by the value from the crash sensors, completes a side air bag module and curtain air bag module ignition circuit, and sends the deployment signal to the air bag modules.



BH E08 10T004

1	SAS control module
2	Side air bag sensor
3	Crash sensor
4	Signal amplification circuit
5	Output control circuit
6	Side air bag module

7 | Curtain air bag module

Passenger Air Bag Deactivation (PAD) Switch Operation (Deployment) Control

- When the PAD switch is turned to the OFF position, the SAS control module inhibits operation (deployment) of the passenger-side air bag module, passenger-side side air bag module, and the passenger-side pre-tensioner front buckle even if the degree of impact from a collision is sufficient for normal air bag module operation (deployment). At the same time, the PAD indicator illuminates to alert the driver and passengers (passenger-side seat) of the inoperational (undeployable) condition of the air bag.
- When the PAD switch turned to the ON position, the passenger-side air bag module, passenger-side side air bag module, and the passenger-side pre-tensioner front buckle operate (deploy) normally during a collision and the PAD indicator goes out.
- When the ignition switch is turned to the ON position, the PAD indicator illuminates for **approx. 6 s** while the SAS control module inspects for malfunctions in the circuit. If a malfunction is detected in the circuit, a DTC is displayed.