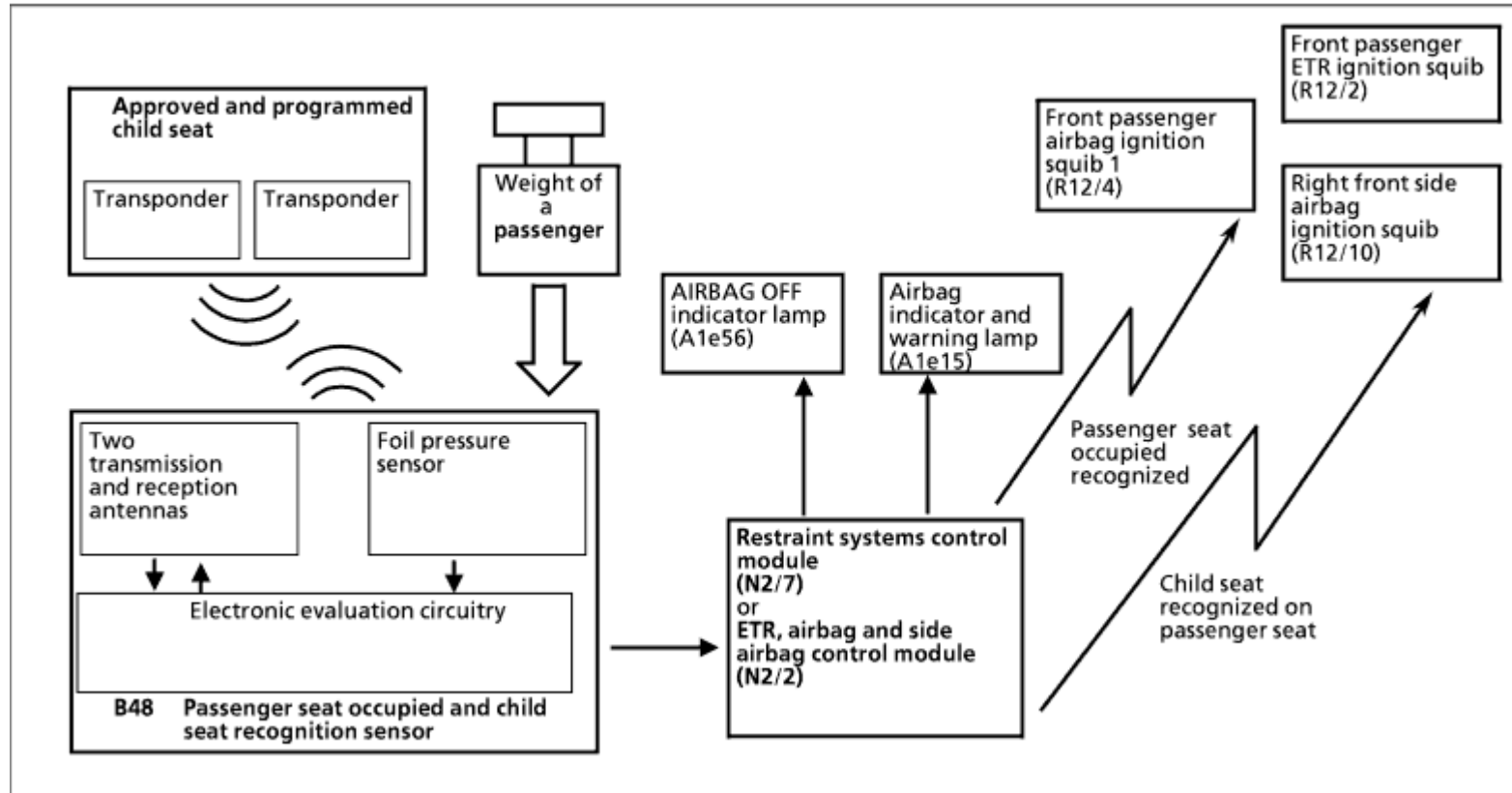


| | | | |
|---------------------|---|------------------------|----|
| GF91.60-P-4008-03GH | Passenger seat occupied and child seat recognition sensor, function | Model 163 as of 1.3.98 | GF |
|---------------------|---|------------------------|----|

Function schematic (left-hand steering vehicle)



Seat occupied recognition

The foil pressure sensor for the passenger seat occupied recognition sensor converts pressure on the seat into an electrical signal. When a load is present on the seat surface, the electrical resistance of the foil pressure sensors changes. The resistance values of the pressure sensors are first detected and evaluated by the electronic evaluation circuitry. If an occupied signal is present, this is transferred to the **restraint systems control module (N2/7)** (up to 11/99 ETR, airbag and side airbag control module (N2/2)) in the form of a digital report for activation of the passenger restraint equipment.

Precise matching between the area under load and the force avoids an occupied signal being caused by a shopping bag, boxes or suitcases. The foil pressure sensor is designed so that a force of 12 kg over an area with a diameter of 120 mm leads to actuation of the occupied signal.

The seat occupied status is checked every 2.5 s. If the load is removed from the passenger seat, the occupied signal is maintained for 2 min. Retention of this signal protects against immediate switch-off of the safety equipment when the load is removed momentarily from the passenger seat.

Child seat recognition

The function of the child seat recognition is ensured only with a child seat approved by Mercedes-Benz which has been coded in the control module. This child seat must be equipped with two transponders (resonators), located in the left and right side in the bottom of the child seat. When the child seat is positioned, signals transmitted by the electronic evaluation circuitry via the transmission antennas in the sensor mat are received by the resonators in the child seat, the phase is changed and the signals are returned. These radio signals from the child seat are received by the corresponding reception antennas in the sensor mat and relayed to the electronic evaluation circuitry. The electronic evaluation circuitry evaluates the signals and informs the **restraint systems control module (N2/7)** via the data bus of the momentary status as:

- child seat present/not present
- child seat installed pointing towards front or rear of vehicle
- child seat positioned incorrectly, etc.

If the child seat is correctly positioned and recognized, the passenger airbag is switched off. The **AIRBAG OFF indicator lamp (A1e56)** comes on.