

GF54.21-P-7010GZ	Front SAM control unit, component description	16.12.05
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MODEL 164

Shown on model series 164.1

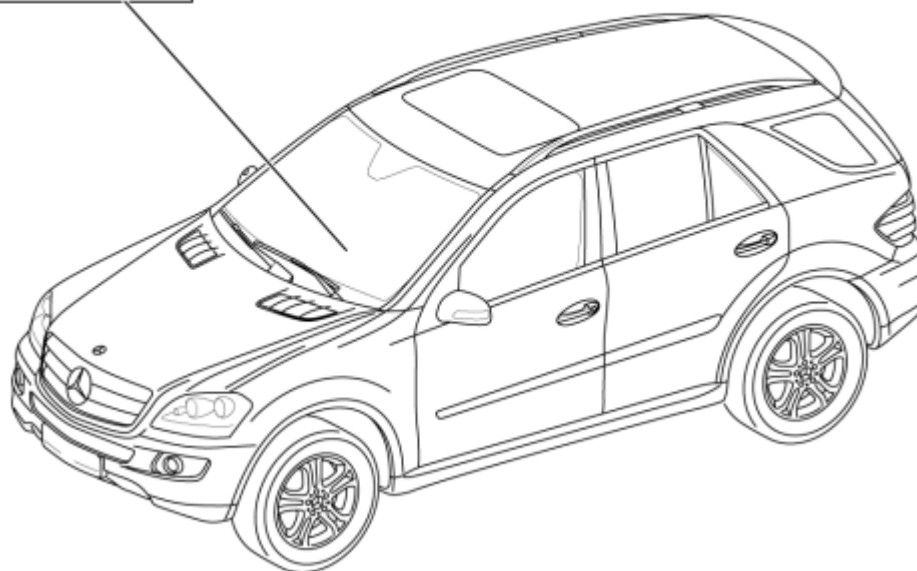
N10 Front SAM ECU

Location

The front SAM control unit is located in the right underfloor assembly below the front seat.

General

For data exchange purposes the front SAM control unit is connected to the Controller Area Network bus class B (interior) (CAN-B).



P54.21-2515-06

Task

The front SAM control unit reads in the following signals, sensors and switches, and actuates the function and switch and controls illumination and then actuates the following relay and consumers by way of semiconductor switches.

Control

- Front exterior lights
- Footwell lights
- Washer nozzle heater
- Front wiper system
- Windshield washer fluid pump

- Headlamp cleaning system (for headlamp cleaning system, code 600)
- Heated windshield washer system (for heated windshield washer system, code 875)
- Heated front seats via a timer control
- Power windows for rear side windows
- Left rear door central locking system
- Additional battery charging process (G1/7)

Reading in and outputting the following signals:

- Circuit 31b
- Circuit 61 (engine 113 only)
- Circuit 58d
- Air suspension wake-up signal

Reading in following switches, pickups and sensors:

- Left rear power window switch (S21/3)
- Right rear power window switch (S21/4)
- Brake fluid indicator switch (S11)
- Parking brake switch (S12)
- Coolant level indicator switch (S41)
- Windshield washer system fluid level indicator switch (S42)
- Right front brake pad contact sensor (S10/2)
- Right rear brake pad contact sensor (S10/4)

Switching of following relay:

- Fanfare horn relay (F58kF)
- Wiper level relay 1/2 (F58kA), Wiper ON/OFF relay (F58kB)
- Circuit 15 relay (F58kH)

Switching internal relay

- Safety relay for switching off heated seats, if an implausible signal is recognized.

Switching consumers via semiconductor switches

- Left high beam (E1e1)
- Left low beam (E1e2)
- Left standing and parking lamp (E1e3)
- Left turn signal lamp (E1e5)
- Right high beam (E2e1)
- Right low beam (E2e2)
- Right standing and parking lamp (E2e3)
- Right turn signal lamp (E2e5)
- Left front fog lamp (E5/1)
- Right fog lamp (E5/2)
- right front footwell lamp (E17/15)
- left front footwell lamp (E17/16)
- Right rear footwell lamp (E17/17) (SA)

- Left rear footwell lamp (E17/18) (SA)
- Additional battery
- Windshield washer fluid pump (M5/1)
- SRA pump (M5/2)
- Left rear power window motor (M10/5)
- Right rear power window motor (M10/6)
- Left rear door CL [ZV] motor (M14/8)
- Left heated windshield washer nozzle (R2/2)
- Right washer nozzle heater (R2/3)
- Left front seat heated cushion (R13/1)
- Left front backrest heated cushion (R13/2)
- Right front seat cushion heater element (R13/3)
- Right front backrest seat cushion heater element (R13/4)
- Air spring wake-up signal
- Left side-marker lamp (E1e6) (for USA version, code 494)
- Right side-marker lamp (E2e6) (for USA version, code 494)

Heated seats actuation

The heating resistors of the seats for driver and front passenger are actuated by the front SAM control unit in accordance with the following tables:

Heating stage	Heater capacity	Duty cycle (on)	Function indicator
1	Low	0 - 40 %	1 LED
2	middle	41 - 70 %	2 LEDs
3	high	71 - 100 %	3 LEDs

Operation of heated seat switch with function indicator

Switch actuation	Actuation	Function indicator
None	Heating OFF	No LED switched on
Once	Heating stage 3 on	3 LEDs
2 times	Heating stage 2 on	2 LEDs
3 times	Heating stage 1 on	1 LED
4 times	Heating OFF	No LED switched on
5 times	Heating stage 3 on	3 LEDs