

Document title Component description for rear SAM control unit with fuse and relay module

Document number gf5421p6030fl

MODEL 212

Shown on model 212.0

N10/2 Rear SAM control unit with fuse and relay module



P54.21-2810-11

Task

The rear SAM control unit has the following tasks:

- **Reading in of sensors, pickups and signals**
- **Evaluation of input factors**
- **Controlling functions**
- **Actuation of components**

Reading in of sensors, pickups and signals

The input factors are read in via the following connections:

- **Direct line**
- **Local Interconnect Network (LIN)**
- **Interior CAN (CAN B)**

Direct line

The signals from the following components are read via direct lines:

- Left rear door rotary tumbler switch (A85/3s1)
- Right rear door rotary tumbler switch (A85/4s1)
- Left fuel level indicator sensor (B4/1)
- Right fuel level indicator sensor (B4/2)
- Trunk lid rotary tumbler switch (M14/7s1) (model 212.0)
- Liftgate rotary tumbler switch (M14/7s1) (model 212.2)
- Rear window roller sun blind motor (M24) (model 212.0 with code (540) Electrical roller blind for rear window)
- Additionally for model 212.2:
 - Right load compartment cover limit switch (M50/2s1)
 - Left load compartment cover Hall sensor (M50/1b1)
 - Right load compartment cover Hall sensor (M50/2b1)
- Handle flap switch on inside of liftgate (S15/2) (with code (844) Folding bench seat in cargo area, opposite direction of travel)
- With model 212.2, model 212.0 with code (287) Through-loading feature:
 - Left rear backrest inclination switch (S54/5)

Location

The rear SAM control unit is located in the rear right of the luggage compartment.

The fuse and relay module of the rear SAM control unit supplies various systems and control units with power through limit switches to match the function sequence.

The following tasks are the responsibility of the fuse and relay module:

- **Voltage supply to components**
- **Power supply and relay switching**
- **Switching consumers using relays**

i Detailed information is available in the "Fuse and relay box, as-built configuration" function description.

- Right rear backrest inclination switch (S54/6)
- Left rear backrest lock switch (S54/7)
- Right rear backrest lock switch (S54/8)
- With code (551) Antitheft alarm system (ATA [EDW]):
 - Engine hood switch pedestrian protection + ATA Hall sensor (A38/1) (with code (U60) Pedestrian protection)
 - Left engine hood contact switch (S62/43) (without code (U60) Pedestrian protection)
- Left rear seat belt buckle switch (S68/5)
- Right rear seat belt buckle switch (S68/6)
- Center rear seat belt buckle switch (S68/14)
- Trunk lid contact switch (S88/6) (model 212.0 with code (887) Valet Parking)
- Trunk lid external operation switch (S88/8) (model 212.0)
- Liftgate external operation switch (S88/8) (model 212.2)
- Trunk lid emergency opening switch (model 212.0 with code (494) USA version)

LIN

The signals from the following components are read in via LIN:

- Battery sensor (B95) over the on-board electrical system LIN (LIN B7)
- Alarm siren (H3/1) (up to 31.5.10 with code (551) Antitheft alarm system (ATA), as of 1.6.10 with code (551) Antitheft alarm system (ATA) and without code (494) USA version) over rear SAM LIN (LINB4)
- Interior protection and tow-away protection control unit (N26/6) (with code (882) Interior monitoring (only with ATA)) over rear SAM LIN

Interior CAN

The signals are read in by the rear SAM control unit over the interior CAN. The functions that use these signals are described in the individual function descriptions (see block diagram or function schematic).

Evaluation of input factors

The input factors are evaluated by the microprocessor and the corresponding components are actuated.

Controlling functions

The rear SAM control unit controls the following functions:

- On-board electrical system management
- Exterior lights (ABL) for vehicle rear
- Heated rear window
- Central locking in rear area

Actuation of components

The actuation of the components takes place via the following connections:

- **Direct line**
- **LIN**
- **Interior CAN**

Direct line

The following components are actuated via direct lines:

- Left rear lamp unit (E3)
- Inner left rear lamp unit (E3/1)
- Right rear lamp unit (E4)
- Inner right rear lamp unit (E4/1)
- Right luggage compartment lamp (E18/4)
- Left trunk lamp (E185)
- Left license plate lamp (E19/1)
- Right license plate lamp (E19/2)
- Center brake lamp (E21)
- Trunk lid ambient lamp (E40) (model 212.0)
- Ambient lamp and left liftgate warning lamp (E40/2) (model 212.2)
- Ambient lamp and right liftgate warning lamp (E40/3) (model 212.2)
- Liftgate wiper motor (M6/4) (model 212.2)
- Trunk lid central locking motor (M14/7) (model 212.0)

- Heated seats (HS) (with code (873) front left and right heated seats)
- Electric seat ventilation (with code (401) Front comfort seats, incl. seat heating and seat ventilation)
- Electric rear window roller blind (model 212.0 with code (540) Electrical roller blind for rear window)
- Antitheft alarm system (ATA [EDW]) (with code (551) Antitheft alarm system (ATA [EDW]))
- Remote trunk closing (HDFS) (model 212.0 with code (881) Remote trunk closing (HDFS))
- Liftgate actuation (model 212.2)

- Liftgate central locking motor (M14/7) (model 212.2)
- Tank cap central locking motor (M14/10)
- Rear window roller sun blind motor (model 212.0 with code (540) Electrical roller blind for rear window)
- Seat adjustment motor for left rear head restraint (M53/1)
- Seat adjustment motor for right rear head restraint (M53/2)
- Seat adjustment motor for center rear head restraint (M53/3)
- With code (401) Front deluxe seats, incl. seat heating and seat ventilation:
 - Left front seat ventilation blower regulator (N29/5)
 - Right front seat ventilation blower regulator (N29/6)
- Rear window heater (R1)
- With code (873) Heated seats, left and right front seat:
 - Left front seat sitting surface heated cushion (R13/1)
 - Left front backrest heated cushion (R13/2)
 - Right front seat sitting surface heated cushion (R13/3)
 - Right front backrest heated cushion (R13/4)
- Trunk lid emergency opening switch (S88/10) (model 212.0 with code (494) USA version)

LIN

The rear SAM control unit actuates the alarm siren (up to 31.5.10 with code (551) Antitheft alarm system (ATA), as of 1.6.10 with code (551) Antitheft alarm system (ATA) and without code (494) USA version) over the rear SAM LIN.

The functions that use these signals are described in the individual function descriptions (see block diagram or function schematic).

Interior CAN

The signals are sent over the interior CAN by the rear SAM control unit.

The functions that use these signals are described in the individual function descriptions (see block diagram or function schematic).

	Wiring diagram for rear SAM control unit with fuse and relay module (N10/2)	MODEL 212Sheet 1	PE54.21-P-2108-97DAA
		MODEL 212Sheet 2	PE54.21-P-2108-97DAB
		MODEL 212Sheet 3	PE54.21-P-2108-97DAC
		MODEL 212Sheet 4	PE54.21-P-2108-97DAD
		MODEL 212Sheet 5	PE54.21-P-2108-97DAE
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		MODEL 212Sheet 9	PE54.21-P-2108-97DAI
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